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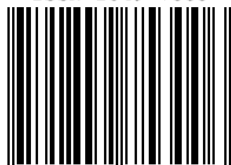
# **Economic and Social Development**

33<sup>rd</sup> International Scientific Conference on Economic and Social Development –  
"Managerial Issues in Modern Business"

Editors:

**Tomasz Studzieniecki, Melita Kozina, Dunja Skalamera Alilovic**

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## MANAGEMENT OF CORPORATE HUMAN CAPITAL IN THE BULGARIAN ECONOMIC UNITS AS AN OBJECT OF THE BEHAVIORAL PARADIGM

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### **ABSTRACT**

*In the context of behavioral economics, topical questions are raised: how the specific features of rationality and of irrationality as socio-psychological characteristics affect the interactions in an organization; how these characteristics affect the economic behavior of individuals, process management and achievement of goals. The "behavioral wave" in the modern economy is the necessary component that is lacking in the conceptual and pragmatic management models concerning Bulgarian economic units. A new look at the status of Bulgarian companies is needed in order to identify the problematic areas of their management and organization as well as a critical assessment of the business practices in them, in order to draw out guidelines for the formation and improvement of micropolicies. Probably, there are some reasons for revealing the controversy about whether that new paradigm is a hidden form of liberal perceptions or a social engineering that leads to excessive constructivism. The goal of the authors, however, is not to be involved in this type of discussion that focuses on the clarification of more specific economic policies, but the impartial perception of what is adequate and relatively sufficient to explain the complex relational charge in the relationship rationality - irrationality, relative to the specific manifestation of corporate human capital. The practice shows that a significant role in the manifestation of corporate culture as well as its interaction with social capital in the context of corporate governance play the well-known social-utilitarianist rules but there are also irrational by definition components such as sympathy, antipathy, ambition, superiority, sense of urge, etc., which, although psychologically determined, prove to be prominent factors as in many cases they obstruct or even block the good and sensible management processes.*

**Keywords:** *Behavioral Economics, Corporate culture, Corporate human capital, Social Anthropology, Motivation*

### **1. INTRODUCTION**

Interpersonal relations as a factor in human behaviour, have an irrefutable role in achieving organizational goals, which predetermines the management's responsibilities for the issues related to the manifestation of the corporate human capital through the promotion of modern corporate culture and the improvement of motivation techniques, applied in the management process. Certain social and organizational rules and norms are considered, as well as irrational influences such as sympathy, antipathy, ambition, sense of superiority, feeling of need, etc., which in many cases hinder or even block rational management decisions and processes. According to the behavioral economics, interactions in an economic unit reflect not only the rationality but also the irrationality of the behavior of individuals and groups of individuals, which influences the manifestation of human capital in the respective organizational structure. The representatives of this school plead to create a favorable psychological climate and a spirit of teamwork, for collegial relationships between managers and employees.



In such circumstances the latter are active not by compulsion but in the belief that they are useful and the organization values their contribution. The active economic behavior can only be manifested by the purposefully motivated individual or team of such individuals, under established organizational rules and cultural values, i.e. behavior is conditioned by the formation of a modern organizational culture. The motivation largely determines the performance of the company and efficiency of decisions, and motivation is seen as a component of human capital and as a multi-faceted and multifactorial phenomenon to assess and build human capital in organizations.

## **2. FROM HETERODOXY IN ECONOMIC SCIENCE TO A DIFFERENT APPROACH IN MANAGEMENT**

According to the neoclassical economic theory, the perfect efficiency of processes is determined by the strict rationality in the economic behavior of the acting subjects (individuals and / or groups of individuals). Such economic behavior is accepted to be called "rational", and it is the starting point for the development of economic models, which, however, are increasingly difficult to withstand under the pressure of modern socio-economic realities. Therefore, a question arises, as to how convincing is the theoretical concept that views man as a logical thinking machine, whether it is possible for people to always make the right economic decisions with maximum personal gain and minimal risk in achieving their goals. The inadequacy of the absolutisation of some of the postulates of the neoclassical theory generates the emergence of alternative trends in economic theory, one of which is popularized as behavioral economics. Its application's aim is to improve the quality of economic analysis with a view to greater realism, explaining the behavior of economic agents and formulating adequate recommendations for management policy (Camerer, et al., 2004).

### **2.1. Behavioral Economics as Non-Standard Economic Thinking**

The Behavioral school, to a certain degree, is compatible with the orthodox economic science - it seeks an explanation of some similar economic phenomena and a solution to the current economic problems, by relying, however, on the principles of cognitive behavioral psychology. Even some neoclassical economists "gamble" the behavioral paradigm to restore the adequacy of economic theory. In the context of the behavioral paradigm, human behavior is seen as a qualitative aspect of economic activities to optimize utility considering that it (the human behavior) combines the subjective specificity of individuals (groups of individuals) with the realization of a specific economic activity. Assuming that economic activities are subject to objective macroeconomic laws, individual and group economic behaviors realize these laws through the subjective determination of individuals, and it is a combination of specific (economic, political, cultural, domestic, moral, etc.) traits and actions reflecting the unity and autonomy of the manifestations on its bearer as subject of economic behavior. The Behavioral School defends the thesis that the subjects of economic behavior are not strictly rational creatures making economic choices to satisfy their personal interest. They are seen as subjects to emotions, intuitions, beliefs, and are often associated with short-sightedness. On the other hand, moral and social norms make them express loyalty, empathy, solidarity, i.e., they are not only aimed at increasing their own economic benefit. That's why Dan Arielli, a professor of psychology and behavioral economics, is looking for the logic behind illogical actions and decisions. He believes that irrational behavior is far from being chaotic, but is rather subordinate to a particular pattern, and is completely predictable. According to him, behind the "seemingly" illogical reactions stay factors whose identification, interpretation, and potentially possible management are tasks of the behavioral economics. In her book, "Predictably Irrational: Who are the forces that make up our decisions" (Arielli, 2012), Arielli emphasizes that one is able to overcome the system of typical behavioral responses imposed on him (by whom or what is

another question) and learn to see the economic reality in the real light. Pivotal inspirers of the psychological approach in assessing economic behavior are Daniel Kanemann and Amos Tversky. In the 1970s, the two American psychologists compile a detailed catalog of cognitive deviations that deform the analysis of a given situation and prompt individuals to make irrational decisions. The perception of behavioral economics as a serious direction in economic science is only possible after modern economists join the behavioral school, such as the American economist Richard Thaler, who began publishing in the 1980s. In their book, *Nudge* (Thaler, Sunstein, 2008) Thaler and Sunstein sum up the notion of nudge as the conscious motif that urges an individual to make his own economic choice, both in accordance with personal and general (in the sense of organizational) interest. The psychology-inspired behavioral economics studies the reactions and the decisions of the people to anticipate and influence them with skillful encouragement. In this sense, a slight "push" is considered sufficient to stimulate and target interactions and economic behavior in business organizations in line with strategic goals. According to the supporters of the behavioral paradigm in the economy, the fact that people are irrational does not mean that their actions are unpredictable. Behavioral economists adhere to the thesis that the so-called irrational behavior is far from being chaotic, but is mainly subject to certain logic. In order to build models for economic decision making, more realistic than those offered by neoclassical economic theory, the behavioral economics establishes the laws and develops the mechanisms to which the behavior of individuals in the conduct of economic activities is subjected. The representatives of the behavioral school plead that Homo Oeconomicus is not rationally perfect, but it is presumed that economic agents are capable of self-perfection in decision-making process. Recognizing irrationality in the economic behavior of individuals directs the search for actions that can "correct" this irrationality and reduce the negative consequences for the individual and the organization. For this purpose, behavioral economics seeks to explain the so-called irrational behavior of actors in different economic formations: what motivates them in their work; what justifies their reasoning under certain conditions; what is the best solution possible and how can it be reached.

## **2.2. Behavioral Economics as New Knowledge**

As pointed out above, behavioral economics raises the explanatory power of economic science by looking at and analyzing more realistic, socio-psychological grounds and incentives for economic behavior and economic activity. It does not completely reject the neoclassical approach, as its research is largely adhered to the basic neoclassical framework. At the same time, alternative methods of thinking with a more reasoned justification are allowed. The theoretical theses in the behavioral economics are assessed on the same three criteria as to assess the traditional (dominating) economic theory: consistency with reality, generality, and operability. However, compared to the majority of formalized models used by modern economists based on the principle of perfect rationality, behavioral patterns may be more accurate than traditional models (models with cognitive algorithms) due to the larger number of parameters evaluated by them, including the availability of empirical evidence of how strongly these patterns deviate from the behavior of people in the real economic environment. The attitude of the behavioral economists to the conventional model of rational choice is not unambiguous. Their attitude to the idea of perfect rationality reminiscent of the attitude towards another fundamental economic idea - the perfect competition. Similarly to behavioral economists, neoclassical economists tend to correct the model of perfect competition as an adequate description of economic reality, but at the same time they adopt it as the normative standard to which they are oriented by economic policy. It is important to point out that one of the founders of modern liberalism, Friedrich von Hayek, attacks in a peculiar way the non-classical attitude towards the absolutisation of rationality and, above all, the status of information.

If neo-classics treat the data as objective, Hayek stresses that information cannot be perfect because of its atomized character. Hayek always stresses that it is a big mistake when, in established economic paradigms, the subjective preferences of individuals, largely deriving from their culture and value orientations and qualified in a number of cases as not particularly rational, are not taken into account. From a methodological point of view, behavioral economists can be defined as methodological eclectics. They identify themselves not on the basis of their research methods but on the basis of their socio-psychological approaches to perceiving and studying economic reality. Taking into account the psychological features of human perception, thinking and action, the behavioral economy classifies decision-making into two categories: judgment and choice. The subject of the judgment study is the approaches used by individuals to estimate probabilities. The subject of the selection study is the process of selecting actions, considering the judgments made by individuals on that occasion. From a methodological point of view, it is interesting to interpret the preference through the prism of the behavioral paradigm. What is important for this is the introduction of the decision-making theory in terms of risk. In the 1940s Oscar Morgenstern and John von Neumann (Morgenstern, Neumann 2004) developed the theory of rational choice in the form of Expected utility theory by introducing and modeling preference. This theory was discussed in the 1950s and was accepted as a standard. It turns out, however, that the experimental approach of behavioral economists deviates from this standard. Numerous studies reveal that the individual's choice often determines the expressed preference, and the method used to determine preference may have unexpected consequences, as it sometimes results in preference reversals - situations where variant A is preferred over option B in one extraction method, but variant A is evaluated as inferior to variant B by another extraction method. In other words, individuals usually evaluate option A higher than option B when the two variants are evaluated independently, but they evaluate option C higher than option A if the two variants are compared and evaluated at the same time (Plott, Zeiler, 2011). Moreover, the choice is characterized by so-called "context effects" that reveal that the preference between different options depends on what the other options in the set are, i.e., contrary to the assumption of "independence of irrelevant (non-essential) alternatives". According to the established preference theory, the different effects show that preferences are not as they are presented in economics textbooks - as predetermined sets of indifference curves. They are not even well defined because they are prone to impacts and influences, but most importantly, they are dependent on the context in which they are drawn. Behavioral economists argue that in the context of increasing information and regulatory complexity, there is limited rationality and tendency towards heuristics. According to them, in simple solutions, people optimize their manner of acting by comparing different behavioral attributes, but with increasing complexity, they increasingly use heuristics (Kahn, Baron, 1995; Reeson, Dunstall, 2009). Heuristics are practical rules or mental procedures that people use in making decisions (Simon, 1955; Kahneman, Tversky, 1974). For example, faced with two or more options, people usually apply the so-called "recognition heuristic," namely that people choose the best known (Goldstein, Gigerenzer, 2002). When making complex decisions, people are reluctant to optimize. They strive for satisfaction, i.e., they look for a solution until they find an option that is good enough for them, although it is not the best option. The harder the decision is, the less competent the people who have to make it are, and the less attention they turn to the information available, the more their behavior follows predictable rules (Heiner, 1983). The application of heuristics by the individual suggests that he considers it useful. Successful heuristics are economical, fast, and adapted to the environment in which they are applied (Gigerenzer et al., 1999). They emphasize that decision-making takes place in the human mind, which is the product of biological evolution, and not a strictly logical mathematical machine. With the increase in complexity, people strive to simplify the decision-making process by applying heuristics.

The greater the uncertainty surrounding the decision is, the more individuals tend to apply heuristics. This, however, means that they will react more slowly or will not respond to changing circumstances at all (Heiner, 1983). Complexity, therefore, can hinder people's adaptation to new information. In addition, in new situations, people tend to "attract" heuristics and strategies from other areas (Payne, Bettman, 2001). The context of the decision determines which heuristics and strategies should be applied. People tend to view simplified presentations of situations and focus on one or several key features that determine how they respond. Changing the way a situation is formed causes people to change their behavior. The more complex the situation, the more people focus on the simplest motivational mechanisms in choosing their strategy. Heuristics enables people to make quick and effective decisions. According to Nobel Prize-winner economist Herbert Simon (Simon, 1956), decision-makers should be considered as being extremely rational, as they have to make good decisions within cognitive limits. According to "limited rationality", people have limited cognitive resources and face multiple decisions. In economic terms, heuristics reduce transaction costs in making decisions. At the same time, heuristics often lead to good decisions - choosing a similar option or doing what others do is often a reasoned and effective choice. Empirical studies show that heuristics cannot only be correct but sometimes also better than cognitively complex decision-making methods (Gigerenzer, Goldstein, 1996; Goldstein, Gigerenzer, 2002).

### **2.3. Behavioral Economics - a Different Approach to the Management**

Behavioral economics reflects current trends in scientific research, both in terms of the objective laws of which the processes and activities are subject to, as well as the subjective mechanisms that determine the economic behavior of individuals; affects the functioning of economic organizations; provokes innovative thinking and entrepreneurial behavior, develops skills for staff selection, and builds effective teams. In this context, current questions are raised: how the limits of rationality and the specifics of irrationality, such as socio psychological characteristics, affect the interactions within an organization which, in turn, are influenced by motivational processes; how these characteristics are reflected on the economic behavior of individuals, process management and achievement of goals. As emphasized, one of the actions to correct irrationality in economic behavior is to stimulate the motivation of economic actors in the process of implementing the activities and in making economic decisions. Emphasis is placed on the motivational process in view of its impact on behavior and relationships in organizations and decision-making. Motivation determines to a great extent the effectiveness and efficiency of operations, since the process of motivation is an important factor in the formation and development of human capital in organizations. The success and the good image of the companies /corporations/ depend on the quality of human capital and the economic behavior of individuals. The explanation of human motivation is generally sought in both extremes: it is taken as a response to external forces and incentives, or refers to the group of absolutely autonomous phenomena, i.e. it is considered as a particular kind of self-activity, in which the individual has an unlimited choice of variants of action, among which he seeks a balance between himself and his surroundings. Behavioral Economics addresses the question of how individual economic behavior affects interpersonal relationships and interactions in the business structure by seeking to explain how these relationships, defined by organizational culture and the motivation process, reflect on the efficiency of the company's work and on the success of the company. Consequently, behavioral economics takes the role of the interpersonal relationships as a motivating factor for increasing labor productivity. In this respect, the views of the American political scientist Mary Follett, who for the first time reveals the need for a scientific study of the psychological aspects of governance (Follett, 1926), are worthy of consideration. She believes that management problems are mainly issues of human relationships, so the government's approach to subordinates must be democratic and humane.

According to M. Follett, the human being is creative and possesses intelligence and imagination; in a well-managed organization people have the opportunity to develop, contributing to the development of the organization. In summary, the behavior of the individual (the group of individuals) can and should be guided by managers according to the company's goals and policy. However, overall regulation of processes and activities is an overwhelming, inefficient, and largely meaningless task. Targeting human behavior in the work process is the ability to motivate staff. It is a core competency of the manager and is based on building a corporate culture, creating a corporate environment in which tolerance, dialogue, partnership, support is manifested. Therefore, adequately selected motivation techniques embedded in the good corporate organization ensure successful management based on modern corporate culture. This finding leads to the hypothesis that the "behavioral wave" in the modern economy is the necessary component that is lacking in our conceptual and pragmatic management models, but this problem will be overcoming if the researchers are aware of the problem, and management teams believe it is urgent to resolve them. Regarding the Bulgarian business specificity: a new look at the status of Bulgarian companies is necessary to identify problem areas of their management and organization in the context of the behavioral economy; a critical assessment of business practices in Bulgarian companies is needed to bring out guidelines that are applicable to the Bulgarian corporate reality to shape and improve policies.

### **3. BULGARIAN BUSINESS UNITS THROUGH THE PRISM OF THE BEHAVIORAL ECONOMICS**

In view of the analysis above and based on the behavioral economics postulates, in-depth interviews were conducted with 22 respondents, representatives of the operational and management segments in various business units, including both industry /pharmaceutical/ business services and education, also representatives of the construction industry. After clarifying the basic concepts, their nature, meaning and manifestations, the conversations are directed to more explicit contextual specificity of the representatives of the defined segments. More detailed or more complicated issues are set with a view to obtaining accurate information tailored to the environment and to the specificities of different segment representatives, as representatives of active corporate human capital. The main thematic blocks are structured as follows:

- BLOCK 1. Identify rational and irrational behavior in the organization: frameworks and determinants.
- BLOCK 2. Impact Assessment of Corporate Culture and Motivation, in the direction of the study of dependencies: Rationality /Irrationality and Logic/ Non-Logic Relationship and Their Interrelationship: Expression and Factor Influences.
- BLOCK 3. Identify and evaluate the manifestation of the corporate human capital through the manifestation of corporate social capital.

In general terms, the specific issues that are outlined above are structured or formulated and, according to the environment and the context can be presented as follows: Where and how do you see the manifestation of rationality and irrationality in your company? Do you find any regularity in existing models for making specific corporate decisions?; Are heuristics rational or irrational? If they are irrational, is there a need for them? ; How do you perceive and evaluate the cultural dimensions? Is their role rational, do you think?; How do you perceive motivation - rational or irrational in its nature?; How do you perceive material and non-material incentives? Which ones are heavier? Do you think that Corporate Social Capital (CSC) is a problem of management only?; Is it possible for the CSC to be perceived as a rational characteristic? What is your opinion - do we really have a reason to associate corporate social capital (CSC) and corporate culture /CC/? Please give examples or suggest your view on this!

It is established how respondents perceive the categories rationally and irrationally, both in principle and in relation to behavior in organizations and management processes (mainly in the segment of managers). Interviewees demonstrate a number of common understandings about the manifestation of the two opposing characteristics, their influence and potential management capabilities, based on the view that irrational behavior is far from chaotic, but subject to certain patterns. The conducted in-depth interviews prove the presence of both close and divergent positions, but at the same time some of the interviewed persons are predominantly their own constructs and perceptions in which they are united and which cannot be determined as directly related to their workspace. At this stage, although a positive dynamics has been established and confirmed, both "strong" and "weak" corporate culture are conditioned by national specificities and it is still quite difficult, national "mind programming" to yield to the company's "software" (especially in the case of Bulgaria). An important point is to assess the vision of experts in that large management problem related to the consolidation of "rational" corporate culture. Experts are firmly convinced that management's "weakness" is the achievement of consistency between personal goals and interests with those of organization. Improving managerial competencies is possible through a vocational training and exchange of positive experience, but to this end, it is necessary first and foremost to understand management teams that irrationality in the manifestation of corporate human capital cannot be overcome but can be realized and perceived as the subject of important and urgent management decisions. With regard to corporate social capital problems, conversations with managers demonstrate a desire to optimize the trust, both horizontally and vertically. Intriguing are the responses and comments of the segment of employees in the different companies who, after necessary clarification, define the category as a result of unpredictable irrationality rather than a manifestation of rational determination. Such an almost unanimous interpretation proves that the microclimate is still built up of predominantly irrational characteristics related to the socio-cultural dimensions, which in turn means that the application of good practices would encounter barriers or, at the very least, deviate in the wrong direction. This fact makes it possible to look for concrete measures in different directions in terms of overcoming the inconsistencies and deviations in the context of behavioral profiling.

#### **4. CONCLUSION**

The emphasis of research in this paper is the qualitative aspect of activities and processes in the organizations expressed through the manifestation of the human capital as well as the role of the interpersonal relationships and interactions in achieving organizational goals. This role is reflected in the behavior of individuals as a function of rational solutions and irrational actions. The thesis we prove is that the power of rationality has a decisive role, but the rational manifestation involves irrational influences that in fact change the direction of the categorical imposition of rationality in social interactions. That is why we are directing our specific research on management processes to the socio psychological context, consistent with and determined by the postulates of the relatively new paradigm of the behavioral economy. One of the fundamental features presented in the previous authors' researches, the business maturity that is relevant to the business culture, is seen as a rational factor for corporate governance, but at the same time, when it is endorsed, irrational behavioral dimensions are also emerging. When one or more specific business organizations are analyzed with their traditional and innovative features, such as status, development and trends, they are dealt with in the context of the findings of corporate culture. These findings are an important prerequisite for the self-determination and the validation of the image of the economic structures in a market environment as well as for the synchronization between the corporate culture and the institutional environment.

With the availability of appropriate specialists, each corporation could develop partial and concrete conceptual models to master and even manage irrational manifestations in a variety of relationships in the business structures, including the social anthropological profile of the structure and its social capital. The goal is to optimize the management of the fundamental human capital, considering the development of a modern business.

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## NEXUS BETWEEN HUMAN CAPITAL DEVELOPMENT AND HUMAN CAPITAL INVESTMENT IN NIGERIA

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### **ABSTRACT**

*Human capital development has been identified as one of the major keys of economic development. This study examines the nexus between human capital investment and human capital development in Nigeria using time series data spanning through 1983 to 2015. The study made use of Phillip Peron to test for stationarity and Vector autoregressive model (VAR) was employed in the study to analyze the complex relationship of human capital investment and human capital development. The study revealed causality relationship between human capital investment and human capital development in Nigeria. The findings also show that both Total Factor Productivity, Education expenditure, Health expenditure and Life expectancy exhibited impact on human capital development in Nigeria. The study recommended that concerted effort should be made to improve on both Education and Health spending in order to increase human capital development in Nigeria. In addition government should make appropriate policy that will increase life expectancy. This will guarantee improvement in Nigeria human capital development.*

**Keywords:** *Human Capital Development, Human Capital Investment and Total Factor Productivity*

### **1. INTRODUCTION**

The major economic challenge of underdeveloped countries is economic development. Global community is also faced with the problem of how to achieve sustainable development. Oluwatobi and Ogunrinola, (2011) opined that economic development, social development and environmental protection are pillars to maintain and enhance the capacity and capability of future generation. This can only be achieved if human capital is strategically cultivated and positioned. Human capital has been recognized globally as one major factor that is responsible for the wealth of nation (i.e. economic development). Human capital refers to the acquired and useful abilities of all inhabitants or members of a given society {Omojimate, Ben, (2010)}. The report of the World Bank in 2010 specifically made it clear that Nigeria has found it difficult to make her economy grow in her effort to become a knowledge-based economy because of the challenges faced in the National Education System. The challenges include teaching with obsolete methods, strikes and administrative incurs corruption in the education sector, lack of infrastructure and other teaching methods and poor funding. World Bank categorized these problems into poor access to education, poor quality of education and poor funding of education. The issue of funding has been a critical issue militating against human capital development. Oluwatobi & Ogunrinola (2011) are of the view that all the challenge confronting knowledge and skill (Human Capital) development in Nigeria is lack of fund and where fund is available, it is not efficiently allocated. The World Bank (2010) also agreed that government funding for university research is too low. Since, it has been identified that there can be no significant economic growth in any country without adequate human capital. Hence, there is need to study the relationship between human capital development and human capital investment. The broad objective of this study is to investigate the nexus between human capital investment and human capital development in Nigeria. However, the specific objectives include:

1. to examine shock transmission among the variables.
2. to investigate the existence of causal relationship among variables of interest.

## **2. LITERATURE AND EMPIRICAL REVIEW**

The role of human capital formation has long been recognized in the literature. According to Habison (1973), human beings are the active agents who accumulate capital, exploit natural resources, build social, economic and political organizations and carry forward natural development. This clearly shows that human capital is key to economic development because it serves as coordinating factor. Therefore, any country which fails to develop the skill and knowledge of its citizen and effective utilization of its human resources will find it difficult if not impossible to develop. According to Todaro (1990), human capital often used to mean education, health and other human capacities that can raise productivity. Schultz (1962) opines that Education is a kind of investment in human being that enables them to acquire skills. Such skills raise the marginal product of the worker itself and also help to raise the marginal product of the other. Human capital development through education is associated with knowledge acquisition. Ramirez, Ranis and Stewart (1997) employing cross country data investigated the channels through which human capital development affects economic growth and vice versa. The study argues that economic growth may lead to human capital development and human capital development could also lead to economic growth. This bi-directional relationship could lead to virtuous or vicious cycles of economic growth. The study finds that countries which promoted economic growth tend to achieve the vicious category while countries which favoured human capital development encounter the virtuous growth. Ogujiuba and Adeniyi (2004) examined the impact of government education expenditure on economic growth. Their result showed a statistically significant positive relationship between economic growth and recurrent expenditure on education, while capital expenditure was wrongly signed and not significant in its contributions. Omotor (2004) analysed the determinants of federal government expenditures in the education sector in Nigeria using the ordinary least squares (OLS) methods. The study revealed that the trend in education expenditure in Nigeria is unstable which reflects the instability in government earning. Government revenue was the only significant determinant of education expenditures as revealed by the results of the regression. The study recommends a diversification of the sources of funding education so as to reverse the unstable trend in that sector. Owioye and Adenuga (2005) investigated the relationship between expenditures on education and health, and economic growth. The study estimated a parsimonious error correction model and found that expenditures on education impacts positively on economic growth. The study recommended that more resources should be channeled towards the level of education where the benefits are higher for the individual and the society at large. The study did not investigate the direction of the link between educational expenditures and economic growth. Babatunde and Adefabi (2005) discovered a long run relationship between human capital development (proxied by schools' enrolments in primary and tertiary institutions and average years of schooling) and economic growth measured by output per worker. Their result showed that education has a statistically significant positive relationship with economic growth. However, they did not give consideration to government health expenditure as a human capital component in the model specified and estimated. Aigbokhan, Imahe and Ailemen (2007) analysed the impact of education expenditures on human Capital development. The study used historical data to establish the correlation between public education expenditure and human capital development in Nigeria and noted that insufficient and uncertain budgetary allocations to education have resulted in the deterioration of its impact on human capital development. Education spending as percentages of annual budgets were low and unstable during the period studied. Lawanson (2009) took this study further by including both the health and education expenditures in her model. Her objective was

to examine the role of human capital investment (proxy by total government expenditure on education and health) on economic growth in Nigeria. After regressing GDP on government expenditure on education, government expenditure on health and the enrolment rates, she found out that a clear relationship exists between human capital development and economic growth. However, unlike the study by Ogujiuba and Adeniyi (2004), the study did not disaggregate expenditure figures on health and education into the recurrent and capital components. Dauda (2010) made use of an adapted endogeneous growth model developed by Mankiw, Romer, and Weil (1992) in the study of human capital and economic growth relationship in Nigeria. However, the study did not include government spending as one of the human capital variables used in the model. Oluwatobi and Ogunrinola (2011) in their study examined the relationship between human capital development efforts of the Government and economic growth in Nigeria. It seeks to find out the impact of government recurrent and capital expenditures on education and health in Nigeria and their effect on economic growth. The data used for the study are from secondary sources while the augmented Solow model was also adopted. The dependent variable in the model is the level of real output while the explanatory variables are government capital and recurrent expenditures on education and health, gross fixed capital formation and the labour force. The result shows that there exists a positive relationship between government recurrent expenditure on human capital development and the level of real output, while capital expenditure is negatively related to the level of real output. The study recommends appropriate channeling of the nation's capital expenditure on education and health to promote economic growth. Omojimite (2010) examines the notion that formal education accelerates economic growth using Nigerian data for the period 1980-2005. Time series econometrics (cointegration and Granger Causality Test) were applied to test the hypothesis of a growth strategy led by improvements in the education sector. The results show that there is cointegration between public expenditures on education, primary school enrolment and economic growth. The tests revealed that public expenditures on education Granger cause economic growth but the reverse is not the case. The tests also revealed that there is bi-directional causality between public recurrent expenditures on education and economic growth. No causal relationship was established between capital expenditure on education and growth and primary school enrolment and economic growth. The study recommends improved funding for the education sector and a review of the primary school curricula to make it more relevant to the needs of the Nigerian society. Ernest (2014) examined the likely impact of government expenditure policy on education and the poverty reduction in Nigeria. An integrated sequential dynamic computable general equilibrium model was used to stimulate the potential impact of increase in government expenditure on education in Nigeria. The result of the study indicated that it will be extremely difficult for Nigeria to achieve the MDG target, in terms of education and poverty reduction by year 2015, because the policy measure in his analysis was unable to meet MDG goal. He recommended that in order to achieve the MDG in both education and poverty reduction, investment in education service should receive the highest priority in public investment portfolio. Many of these previous studies reviewed focused on the impact or link between human capital development and economic growth. These works includes the work of Babatunde and Adefabi (2005); Omojimite (2010) and Oluwatobi and Ogunrinola (2011). There also extensive debates on the relationship between human capital investment and economic growth and these were extensively discussed by scholars like Ogujiuba and Adeniyi (2004); Owioye and Adenuga (2005) and Lawanson (2009). The missing gap here is an assessment of relationship between human capital investment and human capital development.

### 3. METHODOLOGY

#### 3.1. Model Specification

This study seeks to investigate the nexus between human capital investment and human capital development in Nigeria.

The theoretical base for this study is augmented Solow human capital growth model. It is Mankiw, Romer, and Weil (1992) that came up with the augmented Solow model a version of endogenous growth theory. The justification for the inclusion of human capital in the model is the fact of non-homogeneity of labour in the production process due to their possession of different levels of education and skills. The model for this study is an improvement on the Solow growth theory, it is therefore specified as:

$$HCD = Af(HCI).....1$$

Where: HCD means Human Capital Development; A means productivity while HCI means Human Capital Investment.

$$HCI = f(EDEXP, HEXP) .....2$$

Where: EDEXP means Education expenses while HEXP means Health expenses. Substituting equation 2 into equation 1.

$$HCD = Af(EDEXP, HEXP) .....3$$

The expanded model is therefore explicitly stated as:

$$HCD = \beta_0 + \beta_1 TFP_t + \beta_2 EDEXP_t + \beta_3 HEXP_t + \beta_4 LEXP_t + U_t .....4$$

Where:

HCD = Human Capital Development (capture by school enrolment)

TFP = Total factor Productivity (measure productivity).

EDEXP = Education expenditure.

HEXP = Health expenditure.

LEXP = Life Expectancy (Stand as control variable).

#### 3.2. Estimation Technique

The study adopts Vector Autoregressive (VAR) method and it's components to analyze the human capital investment and human capital development in Nigeria during the period between 1981 and 2015.

#### 3.3. Sources of Data

This study relied on secondary data. All the data used in the study were sourced through Central Bank of Nigeria Statistical Bulletin 2016 edition and World Bank database with exception of TFP that was generated. TFP used in the study was obtained through direct estimation using non-parametric approach as established by Ajayi, Ekiran and Awe (2012). This is expressed as:

$$TFP = \frac{\Delta y}{y} - 0.35 \frac{\Delta k}{k}$$

## 4. ESTIMATION AND RESULT ANALYSIS

### 4.1. Time Series Properties of the Variable

The result of the Phillip Peron (PP) unit root test presented in Table 1 showed that Education expenditure (EDEXP), Human Capital Development (HCD) and Health expenditure (HEXP) are made stationary at their first difference while Total Factor Productivity (TFP) and Life Expectancy (LEXP) are stationary at level and second difference respectively. Since, all the variables are not of the same order of integration, this implies that condition for co-integration is not met. The best alternative suggested by Gujarat and Sangeetha (2007) is to resort to the short – run dynamic estimation using Vector Auto regression (VAR) technique.

*Table 1. Phillip Peron unit root test.*

Variables	Level		First Difference		Second Difference		Order of Integration
	P.P Statistics	5% critical Value	P.P Statistics	5% critical Value	P.P Statistics	5% critical Value	
HCD	-0.5322	-2.9571	-3.5459	-2.9571	-----	-----	I(1)
TFP	-3.9343	-2.9571	-----	-----	-----	-----	I(0)
EDEXP	3.5858	-2.9571	-5.1739	-2.9571	-----	-----	I(1)
HEXP	0.5956	-2.9571	-6.5373	-2.9571	-----	-----	I(1)
LEXP	1.7899	-2.9571	-1.9411	-2.9571	-7.8480	-2.9640	I(2)

*Source: Author computation (2017).*

### 4.2. Vector Auto-Regressive (VAR) Results

*Table following on the next page*

*Table 2. Presents the Vector Auto-Regressive estimates*

Vector Autoregression Estimates

Sample (adjusted): 1983 2015

Included observations: 33 after adjustments

Standard errors in ( ) & t-statistics in [ ]

	EDEXP	HCD	HEXP	LEXP	TFP
EDEXP(-1)	0.849434 (0.82523) [ 1.02933]	-1.02E-05 (0.00011) [-0.09157]	0.787108 (0.58943) [ 1.33537]	8.47E-06 (3.7E-06) [ 2.30475]	-4.79E-06 (8.7E-06) [-0.55194]
EDEXP(-2)	-0.888614 (0.98193) [-0.90497]	-0.000224 (0.00013) [-1.68490]	-0.640214 (0.70135) [-0.91282]	-3.87E-06 (4.4E-06) [-0.88552]	3.81E-06 (1.0E-05) [ 0.36887]
HCD(-1)	71.96089 (1197.74) [ 0.06008]	1.127090 (0.16239) [ 6.94048]	370.0082 (855.502) [ 0.43250]	-0.004183 (0.00533) [-0.78452]	-0.022277 (0.01259) [-1.76890]
HCD(-2)	-1252.995 (1142.25) [-1.09695]	-0.408559 (0.15487) [-2.63808]	-951.8473 (815.866) [-1.16667]	-0.002562 (0.00508) [-0.50390]	0.007843 (0.01201) [ 0.65305]
HEXP(-1)	-0.415510 (1.01846) [-0.40798]	-3.86E-05 (0.00014) [-0.27982]	-0.706878 (0.72745) [-0.97172]	-1.93E-05 (4.5E-06) [-4.25930]	1.34E-05 (1.1E-05) [ 1.25474]
HEXP(-2)	1.116476 (1.64264) [ 0.67968]	0.000349 (0.00022) [ 1.56826]	0.325838 (1.17328) [ 0.27772]	6.44E-06 (7.3E-06) [ 0.88041]	-3.62E-06 (1.7E-05) [-0.20976]
LEXP(-1)	31061.73 (58298.1) [ 0.53281]	18.12694 (7.90423) [ 2.29332]	3224.607 (41640.1) [ 0.07744]	2.030041 (0.25951) [ 7.82245]	-0.552373 (0.61299) [-0.90111]
LEXP(-2)	-2952.233 (62798.8) [-0.04701]	-16.78720 (8.51445) [-1.97161]	26076.45 (44854.7) [ 0.58135]	-0.894669 (0.27955) [-3.20039]	0.477045 (0.66031) [ 0.72245]
TFP(-1)	-15069.92 (21379.8) [-0.70487]	-2.649452 (2.89874) [-0.91400]	-1535.037 (15270.8) [-0.10052]	-0.136323 (0.09517) [-1.43237]	0.041080 (0.22480) [ 0.18274]
TFP(-2)	-368.4245 (24468.9) [-0.01506]	10.30819 (3.31757) [ 3.10715]	9664.729 (17477.2) [ 0.55299]	0.116694 (0.10892) [ 1.07134]	-0.449205 (0.25728) [-1.74595]
C	-1135810. (483484.) [-2.34922]	-29.64593 (65.5522) [-0.45225]	-1267342. (345334.) [-3.66991]	-5.377993 (2.15223) [-2.49880]	5.285053 (5.08370) [ 1.03961]
R-squared	0.942381	0.944325	0.921517	0.998147	0.434662
Adj. R-squared	0.913572	0.916487	0.882275	0.997221	0.151993
Sum sq. resids	1.82E+10	334.8815	9.29E+09	0.360991	2.014083
S.E. equation	30180.41	4.091953	21556.71	0.134349	0.317339
F-statistic	32.71099	33.92272	23.48311	1077.529	1.537709
Log likelihood	-356.9575	-80.87383	-346.5259	25.03271	-1.612835
Akaike AIC	23.73920	5.927344	23.06618	-0.905336	0.813731
Schwarz SC	24.24803	6.436178	23.57502	-0.396502	1.322565
Mean dependent	73333.80	122.7065	41459.38	47.44452	0.091613
S.D. dependent	102659.2	14.15972	62827.25	2.548529	0.344607
Determinant resid covariance (dof adj.)		9.25E+13			
Determinant resid covariance		1.03E+13			
Log likelihood		-684.4310			
Akaike information criterion		47.70523			
Schwarz criterion		50.24940			

*Source: Author computation (2017)*

Based on the results presented in table 4.2, it can be vividly reported that all the variables of interest namely: EDEXP, HCD, HEXP, LEXP and TFP have  $R^2$  values of 94.24%, 94.43%, 92.15%, 99.81% and 43.47% respectively. This confirms that EDEXP, HCD, HEXP and LEXP are more exogenous than being endogenous variables while TFP is less exogenous. This result suggests bidirectional causality among the variables.

#### *4.2.1. Impulse Response Analysis among Variables*

VAR models are the best method for investigating shocks transmission among variables because they provide information on impulse responses (Adrangi and Allender 1998). An impulse response function traces the effect of one - Standard deviation shocks to one of the innovation on current and future values of the endogenic variables. The accumulated response is the accumulated sum of the impulse responses. The following deductions could be made from figure 1:

1. The response of EDEXP to feedback is positive.
2. The response of EDEXP to HCD is negative.
3. The response of EDEXP to HEXP is oscillating around zero.
4. The response of EDEXP to LEXP is positive.
5. The response of EDEXP to TFP is negative.
6. The responses of HCD to EDEXP, HEXP, TFP and LEXP are very low.
7. The responses of HEXP to EDEXP and LEXP are positive.
8. The responses of HEXP to HCD and TFP are negative.
9. The responses of LEXP to HCD, HEXP and TFP are negative.
10. The responses of LEXP to EDEXP are positive.
11. The responses of TFP to EDEXP, HEXP, HCD and LEXP are very poor.

The summary of the impulse-response analysis above is very clear and simple. It can be inferred that variables are sensitive to one another. Each one responds to shocks in others in a dynamic sense.

*Figure following on the next page*



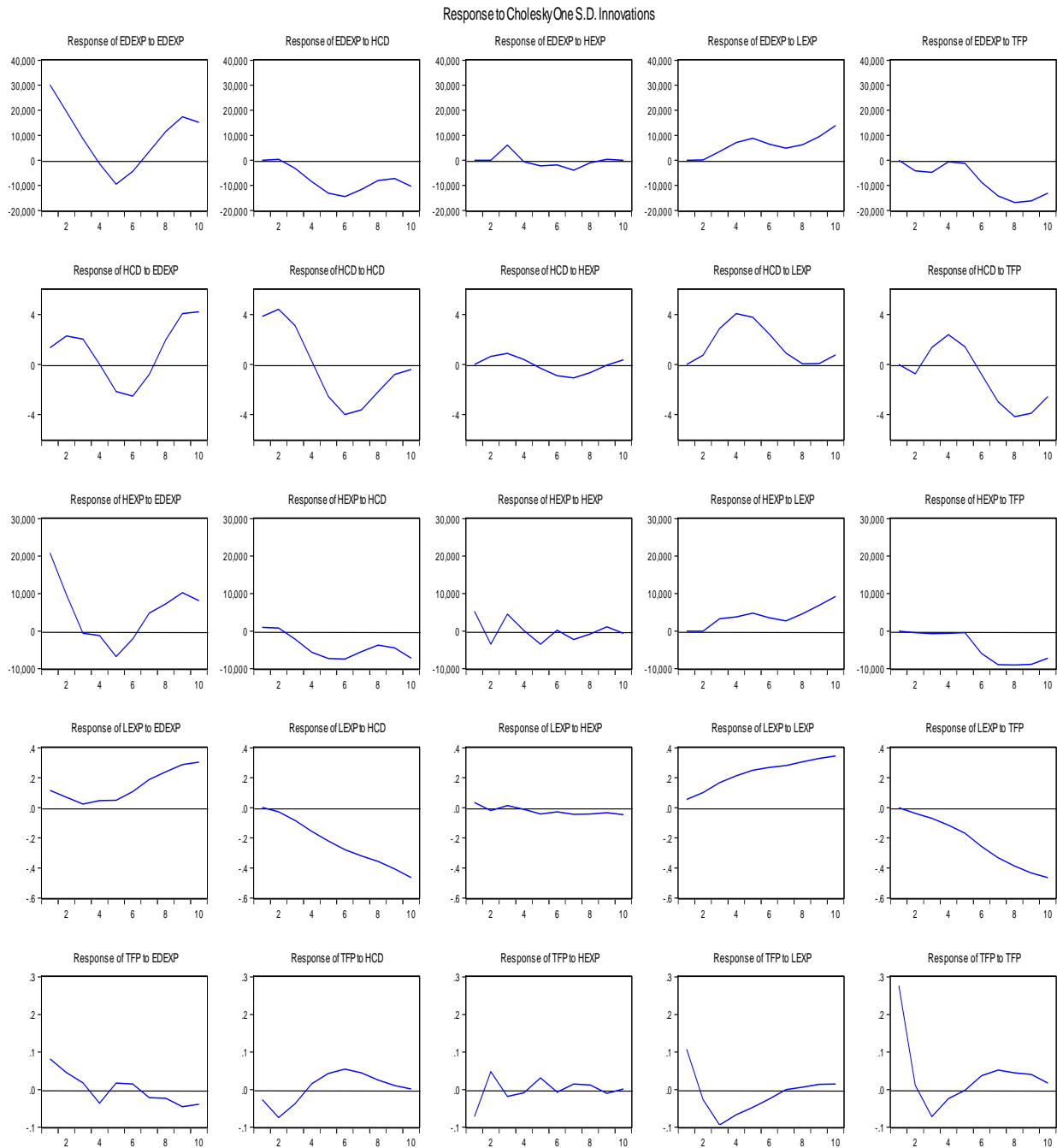
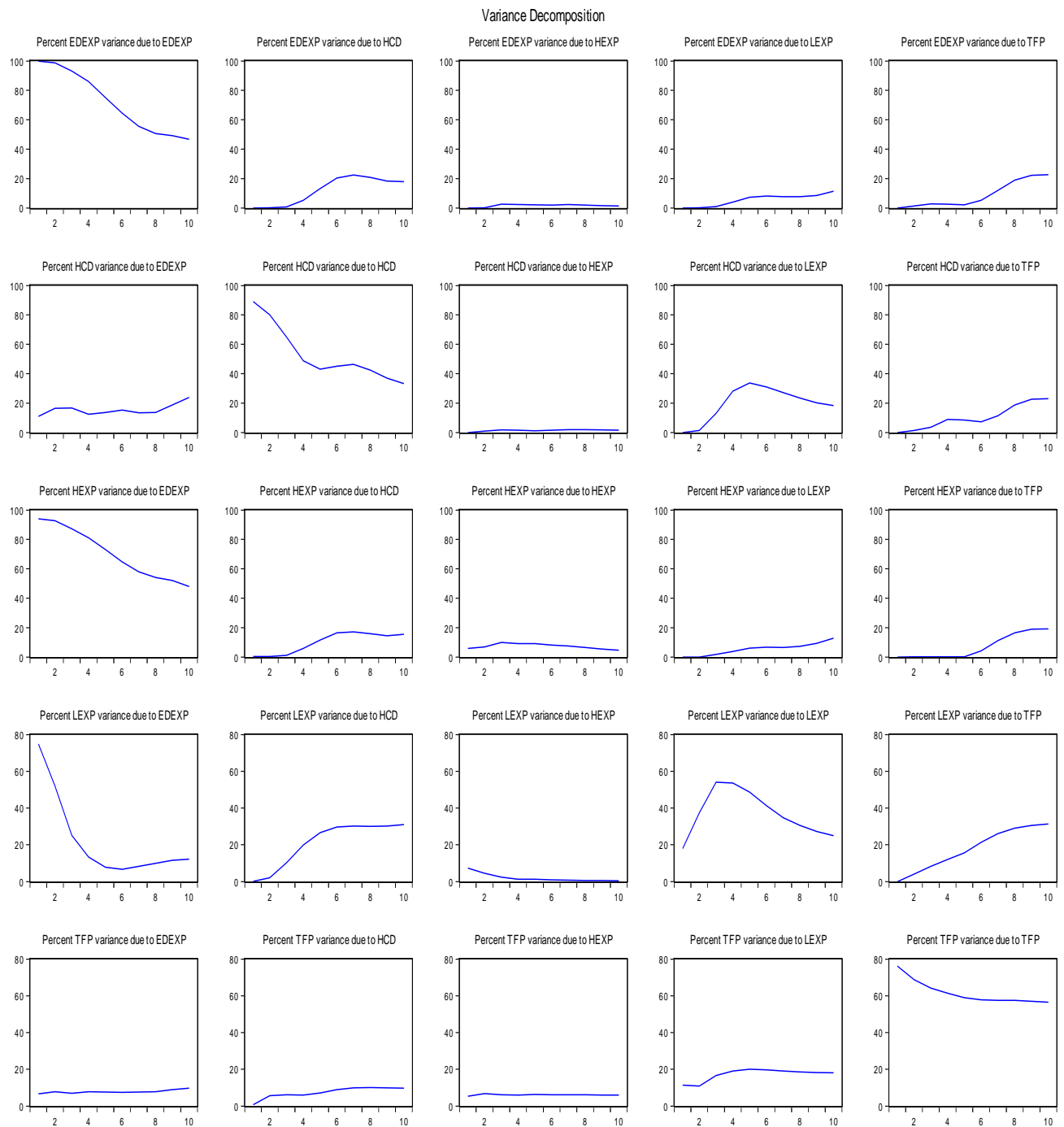


Figure 1. Impulse Response Function

#### 4.2.2. Forecast Error Variance Decomposition Analysis

The results discussed under this subsection provide complementary information on the dynamic behavior of the variables. This analysis decomposes the forecast variance into the contributions by each of the different shocks. It shows the proportion of forecast error variance forecast of HCD, EDEXP, HEXP, LEXP and TFP, that is attributing to its own innovation or shock and to shocks in the other endogenous variables. The results of the variance Decomposition are presented in figure 2 below. The following were observed:

- The contribution of HEXP, TFP, HCD and LEXP to EDEXP are very low.
- The contribution of EDEXP, HEXP, TFP and LEXP to HCD are very low.
- The contribution of HCD, EDEXP, TFP and LEXP to HEXP are very low.
- Major source of shock to LEXP is caused by HCD and TFP.
- The contribution of EDEXP, HEXP, HCD, and LEXP to TFP are very low.



*Figure 2. Variance Decomposition*

### 4.3. Causality Test

*Table following on the next page*

*Table 3. Pairwise Granger Causality Tests*

Null Hypothesis:	Obs	F-Statistic	Prob.
EDEXP does not Granger Cause HCD	33	3.29030	0.0532
HCD does not Granger Cause EDEXP		0.10034	0.9049
HEXP does not Granger Cause HCD	33	3.35867	0.0504
HCD does not Granger Cause HEXP		0.00510	0.9949
LEXP does not Granger Cause HCD	33	6.71071	0.0045
HCD does not Granger Cause LEXP		0.51343	0.6044
TFP does not Granger Cause HCD	33	3.54866	0.0434
HCD does not Granger Cause TFP		0.82367	0.4499
HEXP does not Granger Cause EDEXP	33	0.00034	0.9997
EDEXP does not Granger Cause HEXP		0.77477	0.4712
LEXP does not Granger Cause EDEXP	33	4.33431	0.0237
EDEXP does not Granger Cause LEXP		7.13138	0.0034
TFP does not Granger Cause EDEXP	33	0.51116	0.6057
EDEXP does not Granger Cause TFP		0.14495	0.8658
LEXP does not Granger Cause HEXP	33	6.81342	0.0042
HEXP does not Granger Cause LEXP		16.7423	2.E-05
TFP does not Granger Cause HEXP	33	0.20572	0.8154
HEXP does not Granger Cause TFP		0.23667	0.7909
TFP does not Granger Cause LEXP	33	0.23839	0.7896
LEXP does not Granger Cause TFP		1.06686	0.3587

*Source: Author computation (2017)*

From table 3 it is established that bidirectional causality exist between LEXP and EDEXP; also LEXP and HEXP. Furthermore, the following unidirectional causality was observed:

- EDEXP granger caused HCD.
- HEXP granger caused HCD.
- TFP granger caused HCD.
- LEXP granger caused HCD.
- It is also established that causality does not exist between TFP and HEXP; LEXP and TFP; EDEXP and HEXP; and also TFP and EDEXP.

## 5. CONCLUSION

Based on the result and finding so far in the study, the study hereby concludes as follows: Education contributes poorly to human capital development. This indicates poor educational funding in Nigeria. This is supported by the studies carried out Aigbokhan et al (2007) and by Omojimite (2010), they found that insufficient and uncertain budgetary allocations to education have resulted in the deterioration of its impact on human capital development.

It was also revealed that health expenditure contributes positively to human capital development. This indicates that Nigeria spending on health will improve human capital development in Nigeria. This was in agreement with works of Lawanson (2009) and Oluwatobi and Ogunrinola (2011). Life expectancy which shows the health situation of the labour force, has revealed from the result has positive impact on human capital development in Nigeria. Finally, since Education expenditure and health expenditure capture human capital investment. Therefore, there is causality between human capital investment and human capital development.

### 5.1. Recommendations

From the findings of this study, it was concluded that human capital investment has impact on human capital development in Nigeria during the period under review. Based on the findings, the following recommendations were made:

1. Concerted effort should be made to improve on both Education and Health spending, by increasing budgetary allocation in that regard, in order to increase human capital development in Nigeria.
2. Government should make appropriate policy that will increase life expectancy of labour force most especially those in education sector of the economy. This will guarantee improvement in Nigeria human capital development.

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## TECHNOLOGICAL QUALITY ASSESSMENT IN ONLINE COMMERCIAL SERVICES

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### ABSTRACT

*In article it is defined the e-commerce service and its quality, especially in technological dimension. There are presented foregoing commercial online services quality measurement but Authors suggest that this methods do not sufficiently consult aspects related to the technology of designing Internet services. The authors explain that the study of the commercial services on-line quality in the technological aspect will enrich the current methods of measuring quality. Contribution of the paper is catalogue of proposed determinants to get the measure of online commercial services qualities in technological dimension. The core of this article is discussion of selected commercial sites in maritime e-commerce branch audit results, that point to a poor technological quality of commercial services. The aim of the practical research is to assess the extent to which selected internet stores meet the criteria for the technological quality of on-line commercial services. The audience of proposed in this paper method for measuring the quality of e-commerce, should be a sales website owners. The research results prove the need to shape the quality of on-line commercial services in the technological dimension. The article proves the need for tracking, knowledge and the application of ICT to support current business activities, especially in e-business.*

**Keywords:** *commercial on-line service, e-service quality assessment, maritime e-commerce technological quality*

### 1. INTRODUCTION

The quality of e-commerce is increasingly important for customers. Online retailers also recognize the importance of quality in shaping their competitive position. The quality of e-commerce refers not only to the goods and services sold but also to the entire on-line commercial service. The quality of on-line commercial services has been studied in many dimensions. This article focuses on its technological aspects. Authors of that article proposed a model for assessing the technological quality of on-line commercial services which was empirically verified. This article discusses the results of the audit of selected commercial sites, that point to a poor quality of commercial services in this dimension. Presented results of the study show that the demand to include technological dimensions to evaluate the quality of on-line commercial services on-line seems to be well founded.

### 2. ONLINE COMMERCIAL SERVICE AND ITS QUALITY

Online commercial services should be perceived by the means of their value added, which an Internet shop delivers to the purchaser together with the object of transaction. Thus, the final effect of a commercial service delivered through the Internet are not only the purchased goods, but also benefits for the buyer, which vitally influence their satisfaction level (Dobski, 2012).

The quality of commercial services delivered through the Internet may be defined in many ways, as the notion of quality is multidimensional. The quality of online commercial services may be understood as:

- the accordance between the online commercial service and the customer's demands,
- the level of satisfaction of the recipient's expectations of that service,
- all features of the service, which form its ability to satisfy clearly described or predictable needs,
- the level of preference of a given service against others in the user's opinion.

J. Santos (2003) defined e-service quality as overall customer assessment and judgment of e-service delivery in the virtual marketplace. E-service quality is a function of how the web facilitates effective shopping, purchasing and delivery of products and services (Zeithaml et.al., 2000). The quality of e-services was repeatedly the subject of research, this studies were also undertaken in relation to online trade. The table below summarizes selected, various quality assessment attributes proposed by different researchers.

*Table following on the next page*



*Table 1. Commercial online service quality attributes (own research)*

<b>Researchers (year)</b>	<b>Attributes of quality</b>
P. Schubert, D. Selz (1997)	information, agreement and settlement
B. Yoo, N. Donthu (2001)	ease of use, design, processing speed and security
S.J. Barnes and R. Vidgen (2002)	website usability, information quality, service interaction quality
Z. Yang, M. Jun (2002)	reliability, access, ease of use, personalization, security and credibility
J. Van Iwaarden et al. (2003)	clarity of purpose, design, communication, reliability, service and frequently asked questions, accessibility and speed, product or service choice, order confirmation, product purchase, user recognition, extra service and frequent buyer incentives
J. Santos (2003)	ease of use, appearance, linkage, structure and layout, and content – the incubative dimension; reliability, efficiency, support, communication, security, and incentives - the active dimension
L. Burgess (2004)	ease of navigation, ease of use, simplicity, site design aesthetics, intuitiveness, technical reliability, speed system response time, availability, accessibility, responsiveness, service reliability, completeness, reputation, flexibility, customization, usefulness, presentation, accuracy, data integrity
G.G Lee and H.F. Lin (2005)	website design, reliability, responsiveness, trust and personalization
A. Parasuraman et al. (2005)	efficiency, fulfillment, system availability, privacy
E.T. Loiacono et al. (2007)	informational fit-to-task, tailored information, trust, response time, ease of understanding, intuitive operations, visual appeal, innovativeness, emotional appeal, consistent image, on-line completeness and relative advantage (in comparison to traditional methods of contact with a company)
E. Cristobal et al. (2007)	web design, customer service, assurance and order management
H.F. Lin (2007)	system quality (specific variables: website design and interactivity), information quality (informativeness and security), service quality variables (responsiveness, trust, and empathy)
C.Ch. Yen and H.P. Lu (2008)	privacy protection, efficiency, contact, fulfillment and responsiveness
H. Li and R. Suomi (2009)	website design, reliability, responsiveness, security, fulfillment, personalization, information and empathy
G.J. Udo et al. (2010)	perceived risk, web content and service convenience
R. Ladhari (2010)	reliability/fulfillment, responsiveness, web design, ease of use/usability, privacy/security, and information quality/benefit
R. Ramanathan (2010)	satisfaction with claims, comparative prices, management accessibility, payment process and privacy experience
M.H. Chen et al. (2013)	interaction quality (ease of use, responsiveness and information quality), environment quality (visual appearance, clarity of layout), and outcome quality (order fulfillment, reliability, emotional benefit)
H.R. Dolatabadi, J.K. Pool (2013)	reliability, responsiveness, access, ease of navigation efficiency, assurance/trust and security/privacy, flexibility, site aesthetics and customization/personalization, price knowledge
Y.K. Cho (2014)	overall retail website (called a retailer's order-procurement quality) and retailer's order fulfillment quality
W.T. Wang, C.C. Lu (2014)	technical, psychological, and product-characteristic perspectives of a website

Clearly it shows that foregoing commercial online services quality measurement methods do not sufficiently consult aspects related to the technology of designing Internet services. That is why Authors of this article are postulating, that the technological dimension of online commercial service quality assessment should contain the following determinants: type of used technologies, service accessibility and security. It is proposed that each dimension should include specific assessment attributes (see table 2).

*Table 2. The determinants of technological quality in online commercial services (own compilation)*

Quality determinants	Specification
Type of technology	<ul style="list-style-type: none"> <li>• conformity of used technology to current standards,</li> <li>• version of used website design language,</li> <li>• use of a specialized designing language to create dynamic pages,</li> <li>• use of a dedicated e-commerce framework for website designing,</li> <li>• use of databases,</li> <li>• use of business platform (software) for shop keeping,</li> </ul>
Accessibility of sales service	<ul style="list-style-type: none"> <li>• availability of the shop 24/7, low failure frequency and efficiency,</li> <li>• visibility in search engine search results and sponsored links,</li> </ul>
Security	<ul style="list-style-type: none"> <li>• use of data encryption (using SSL and https protocol),</li> <li>• SSL protocol class,</li> <li>• use of backup copies and event registers,</li> <li>• use of antivirus protection and firewalls, and monitoring of network threats.</li> </ul>

### 3. EVALUATION OF TECHNOLOGICAL QUALITY OF ON-LINE COMMERCIAL SERVICES ACCORDING TO THE SURVEY – METHODOLOGY

The aim of the study is to assess the extent to which selected internet stores meet the criteria for the technological quality of on-line commercial services. In the view of the above objective, the following hypothesis has been formulated:

[Hypothesis 1] The quality of on-line commercial services in the technological dimension is unsatisfactory.

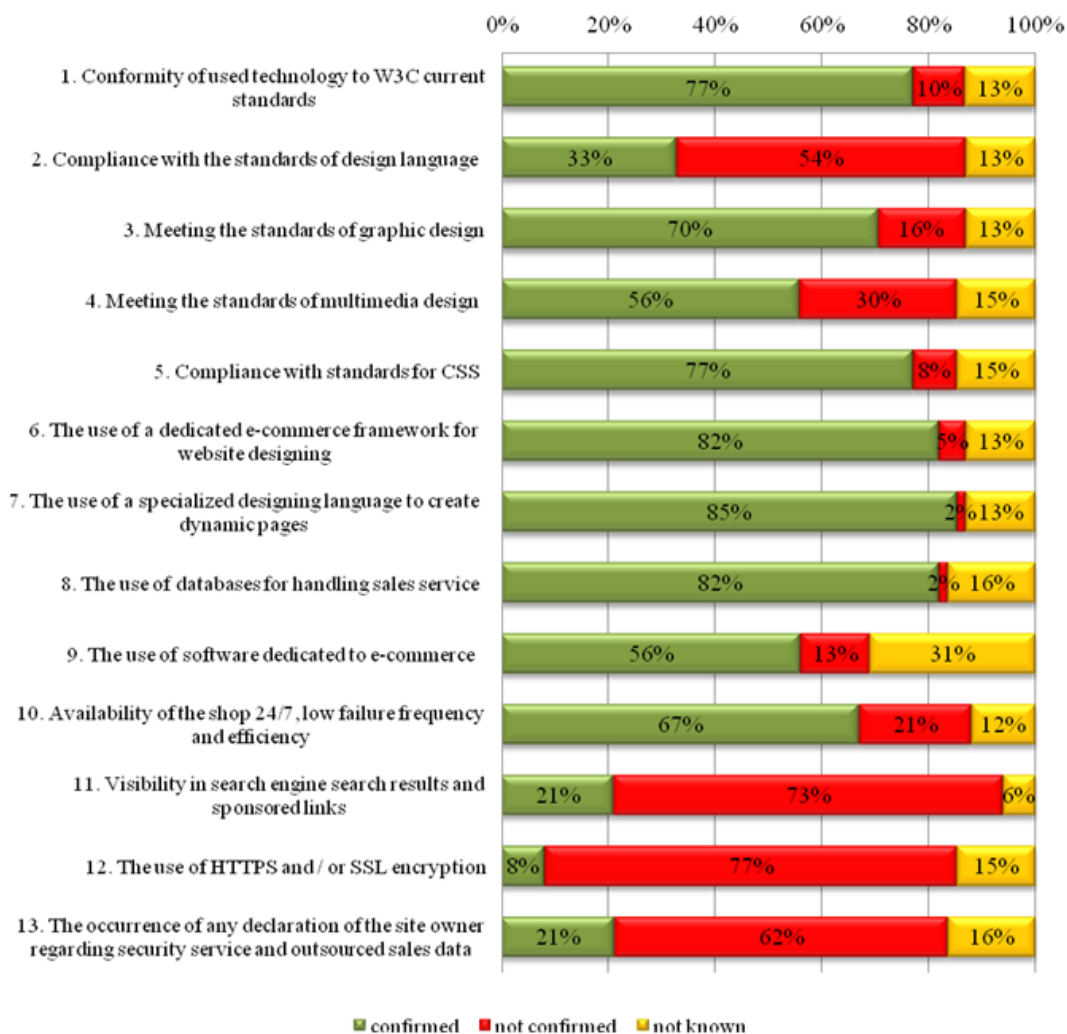
The survey population consisted of internet shops of maritime e-commerce. This sector was chosen in relation to the Authors wider research. The study included websites of only Polish online stores, which offer included: electronic equipment, specialized clothing and footwear, fishing equipment, boat equipment, navigation equipment, maps, water sports and motorboat equipment, diving equipment, boats, kayaks, inflatables, spare parts, equipment to ensure safety at sea, yacht chemistry, sanitarium and nautical literature and marine articles. Complete list of websites of Polish maritime e-commerce online shops is not available, hence the attempt to create such sampling. The study shops sites were selected from Internet addresses that appeared in search results for Google queries with the phrases: "sailing shop", "store for sailors", "shop with a sailing assortment", "shop with marine assortment", "marine shop", "store for seafarers", "sailor shop", "motorboat shop", "maritime ecommerce". Finally, the study included 61 addresses of online stores, and it can be concluded with high probability that the identified population was over during the survey. The source code audit was extended to all identified sites, so the research can be regarded as exhaustive. A significant part of the on-line commercial services technological quality determinants can be verified by making audit of the sites source code. The analysis covered 10 criteria (attributes) of commercial services defined in the technological dimension of quality assessment: meeting the standard of websites design, design language version, using style sheets, using design dynamic languages, using databases, software type, the type of data encryption, security key length, the occurrence of any information

confirming owner's care about the safety of the site and data service. Intricacy and difficulty of the above discussed issues from the point of view of a perspective customer makes expert knowledge (information technology specialist) desirable to assess online commercial services quality.

#### 4. RESULTS OF RESEARCH

Using W3C validator (as an auxiliary tool) it was checked if standards in sites design technology are met (see Fig1, point 1). In the case of 77% of online stores compliance with the standards was confirmed. The requirements were not met in 10% of the stores, and as many as 13% failed to confirm this (stores were temporarily closed for maintenance). Thereafter it was analyzed whether the site was written using the latest version of the design language. In the case of HTML valid version it is 4.01 or 5.0, while in XHTML - 5.0. Only every third store was designed based on the latest versions of the design language (see Fig1, point 2). More than half of the stores (54%) were written in earlier version of XHTML - it was version 1.0 or 1.1. In 13% of online shops the design language could not be determined. HTML code of the sites was also checked for graphics (see Fig1, point 3). In the case of 70% of the online stores the use of guidelines for graphics was found. 16% of the stores did not achieve standards in this respect, and in 13% of the sites it was not possible to establish this fact. Another criterion was to meet W3C standards in the field of multimedia (see Fig1, point 4). More than half of online stores (56%) contained media in accordance with the recommendations of the W3C. As many as 30% of shops did not fulfill the guidelines for the media, and as many as 15% failed to establish. Another point of interest was whether CSS style sheets at least in version 2.1 were used to design sites. (see Fig1, point 5). In 77% of online shops style sheets are confirmed in version recommended by the W3C. 16 shops used even unofficial version of CSS 3.0 (about 1/3 of shops using style sheets). Older versions of CSS were used in 8% of stores and in 15% of cases, this fact was not established clearly or it was not possible to state due to the temporary suspension of service activities. Also it was checked whether the sites projects use any framework (e.g. CMS), dedicated to e-commerce (see Fig1, point 6). As many as 82% of online shops used these templates, usually Prestashop. In 5% of the stores there were not any CMS and in 13% the verification was impossible. Another issue to verify was the use of dynamic languages like PHP, ASP.NET, or similar to the website design (see Fig1, point 7). As much as 85% of online stores actually used such languages. In 2% of sites did not show any typical html tags in the code, and in 13% of the sites it was impossible to determine. The aim of the analysis of HTML code of the sites was also determine whether a database was used to handle them (see Fig1, point 8). Elements confirming cooperation with the databases were identified in 82% of online stores. In the source code of only 2% of the shops no elements of this fact were found. In As many as 16% of the stores it was not possible to establish connections with databases. Of interest was also software used to support the sales site (see Fig1, point 9) – 56% of the shops had software dedicated to the e-commerce. In that group of the shops, 43% of the shops had purchased finished software (from a box). 13% of stores also were using purchased but dedicated software, which included custom functions. The same number of stores were using open source solutions, usually free. As many as 31% of online stores, could not determine the type of software used. Then checked the accessibility of the sales service - the only dimension of technological assessment, which customer could be aware of. It was checked the availability of the shop 24/7, low failure frequency and efficiency (see Fig1, point 10). On only 67% of the tested sites, there were no problems with the entrance to e-shop, all the pages operated correctly and the site was available at different times of the day. Up to 21% of the sites were not available or did not work correctly. In 6% of cases it failed to assess the availability and operation of the service. Next characteristic it was assessed in availability of internet shops was visibility in search engine search results and sponsored links (see Fig1, point 11). Only 21% of online stores

was displayed on the first page of search results, or appeared in the sponsored links (tested with different keywords). As many as 73% shopping sites not found on the first page of search results, and they were not their sponsored link. In 6% of sites failed to verify this dimension of evaluation. Then it was checked if in the website used encryption (see Fig1, point 12) by means of the appropriate protocols (SSL and /or HTTPS). The vast majority of online stores did not use this protection (77%). The encryption was checked in particular on the subpages, where forms for ordering (the basket), forms of queries, booking or registration and login were implemented. Only 8% of stores used the protection of encrypted HTTPS and/or SSL. The encryption key was only of 256 bits, which in the face of the recommended 2048 bits (Certyfikaty SSL) is a weak security. This means that the data left by customers for e-commerce sites are not sufficiently protected, vulnerable to theft and abuse - the risk of using them in inappropriate purposes by unauthorized persons is enormous. In 15% of cases this fact was not clearly established. Following testing sites for safety, it was checked whether their content contained any information confirming owner care about the safety of the site and data services – e.g. from network attacks, data loss, etc., or confirming the use of firewall, backing up, network monitoring, etc. (see Fig1, point 13). At 77% of stores such confirmation was not found. Description of the procedures or activities to ensure the safety was found in only 8% of sites. 15% of online shops could not clearly determine the presence of information in that respect.



*Fig1. Meeting the criteria for the technological quality of on-line commercial services  
(own research)*

## 5. CONCLUSION

To sum up, in the case of online shopping sites, there is a failure to meet the standards for the design of websites on the basic compliance with the requirements for the language version of the design and multimedia. Fulfillment with standards for graphics and use of dedicated to e-commerce software was confirmed only on half of websites. The use of CSS , frameworks dedicated to e-commerce, databases and language to create dynamic web pages can be assessed satisfactorily, but not fully. The results of the evaluation in terms of access to the site sales are disappointing - both in terms of correct operation of the service 24/7 and its visibility in the search results and sponsored links. There is amazing carelessness leading online stores in the area of data security - encryption takes place probably by opened text, instead of using the security protocol (HTTPS or SSL). Even where its occurrence was confirmed, the security level proved to be low. The pages of online stores lack information whether the purchase transactions are safe. The results obtained in the study of the sites source code clearly show that the websites of most maritime e-commerce stores do not meet the standards for web design and security. Hence it can be concluded that the presented results support the hypothesis, which found that the quality of commercial services on-line in the technological dimension is not fully satisfactory – technological quality is particularly poor in terms of shopping website security and accessibility, in regarding design language and technology also found deficiencies. The hypothesis was supported in a group of online stores defined as maritime e-commerce. Technological aspects of online commercial services quality assessment seems to be essential, since they constitute the source of functionality and utility of a sales website and customer care quality. Using technological aspects as a determinant of the quality of trading services provided through the Internet, can be considered as a new look on assess the quality of commercial services on-line, which differs significantly from previous methods of measurement. Undoubtedly, including the technology of designing e-commerce services in commercial services online quality assessment may enrich and develop currently known and used methods if its measurement. The measurements suggested herein should subsequently be tested in analysis of quality of commercial services provided through Internet websites, by means of which goods and services may be purchased. Existence of these measurements would prove high technological quality of online commercial services. Verification of suggested attributes of sales website as quality quantifiers would constitute basis to their wider use not only in commercial services online research, but also to quality assessment of Internet services. Audit of the quality of on-line commercial services on the basis of the proposed measures showed that technology standards are not met sufficiently, which may to affect the customer satisfaction as it has been postulated. In summary, it can be stated that the technological aspects should be taken into account by website designers as important attributes in improving the quality of on-line commercial services. The above conclusions were based on the selected research material with maritime ecommerce. Future studies may focus not only on the comparison of the technological quality of commercial services in other competing sectors of e-commerce. Research will also be extend to studies on the assessment of customer awareness related to the use of technology in e-commerce. Clients if had the ability to identify the determinants of technological quality, certainly could more comprehensively and fully perceive the quality of the commercial service on-line. It would be interesting to compare the results of studies of assessing the commercial services on-line quality in conditions when customers are not aware of the importance of technological aspects with those when clients would be instructed how they should verify e.g. data encryption, secure site and whether the site meets the latest technological standards. Probably the assessment of on-line commercial service quality would be dramatically different.

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## FAMILY VIOLENCE

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### ABSTRACT

*Family violence is a major problem today. It represents a violation of fundamental human rights of all victims irrespective of age, gender, status, education, race, nationality, sexual orientation or material situation. The forms of violence are psychological, physical, sexual and economic. The most common victims of violence are children, women, elderly people and persons with special needs. Family violence is defined as a set of behaviors whose purpose is to establish power and control over others by using force, intimidation and manipulation. Includes physical, psychological, sexual and economic violence.*

**Keywords:** *family, violence, victims, prevention, recognition*

### 1. INTRODUCTION

Domestic violence is a widespread phenomenon that has been constantly present in the society for a long time. It is about some kind of more dangerous form of violence than any other form of violence, because it usually remains hidden. Domestic violence is a broad term that encompasses the violence between partners, as well as violence against children, against the elderly and against the relatives. The protection against domestic violence in the Republic of Croatia is regulated by the national and international regulations and documents. The most important Croatian regulations are Constitution of the Republic of Croatia, Law on Domestic Violence Protection, Family Law and Criminal Law. International Covenant on Civil and Political Rights, Convention on the Rights of the Child, Convention on the Elimination of All Forms of Discrimination against Women and its Protocol, Declaration on the Elimination of Violence against Women and some other are also legally relevant for the international treaties. (details of the legislation further in the paper). Victims of violence often hide domestic violence because of fear that their security will be even more at risk if someone entrusted, because of shame that they live in such a family as well as because of many other reasons. The doctors are also reluctant to start a conversation about the problem of domestic violence. Therefore, there is doctors legal obligation to recognize and to report domestic violence. In particular, the police, the social welfare centers, the health institutions, the educational institutions and the judicial bodies have to cooperate together and act and also prevent such violence in the family. In addition, physicians have a number of other obligations towards victims of domestic violence, as discussed further in this paper. In the whole vicious cycle of domestic violence, the most important step is first to identify the violence, and finally to help the victim, in cooperation with the institutions in charge to prevent further violence.

### 2. DEFINITIONS OF DOMESTIC VIOLENCE

Domestic violence is usually defined as a set of behaviors whose goal is to control the members of the family using the force, the intimidation and the manipulation. The syndrome of an abused child was already recognized in the 60's of the previous century. Very soon after that, the awareness about the prevalence and the health consequences of physical violence against children was developed. Then violence against women in intimate relationships was actively investigated, and in the 80's the problem of sexual abuse of children was mentioned. In the 90's the violence against the elderly in the family was also recognized. These facts represent that scientific knowledge on the devastating effects of domestic violence became available and



socially relevant only in the second half of the 20th century. Different research in different countries have shown that the family itself can be very violent environment and also that that problem cannot be either ignored or tolerated<sup>1</sup>. Due to all these findings and research, the development of legislation that allows the intervention of society and limiting family privacy when it comes to violence clearly specifies the responsibility of all professionals to report domestic violence. In the Republic of Croatia, it is primarily related to the following regulations: Constitution of the Republic of Croatia<sup>2</sup> (the provisions of the Constitution specifically emphasizes the protection of the marriage and the family and it is emphasized that the state protects the children and the youth, and that the parents are obliged to bring up, to support and to educate their children and that they are all obliged to protect the children and the weak, Law on Protection from Domestic Violence<sup>3</sup> (it regulates what the violence in the family is, the persons who are considered as family members, and also the types and purposes of misdemeanor sanctions for committing the domestic violence), Criminal Law<sup>4</sup> (the old version of Criminal Law had the domestic violence as the criminal act – the act when the family member uses violence, abuses or particularly rudely behaving puts the other family member into a humiliating position; unfortunately, violent behaviour in the family no longer exists in the new Criminal Law, which is a detrimental factor for the victims of domestic violence) and Family Law<sup>5</sup> (sets the principles underlying family relationships: the principle of equality between women and men, mutual respect and assistance of all members of the family, the principle of protecting the welfare and rights of the child, the responsibility of both parents for the upbringing and raising children, and the principle of guardianship for children without parental care and adults with mental disabilities). Besides national regulations, the family protection is also ensured by international regulations and documents as well: United Nation's documents about human rights (International Covenant on Civil and Political Rights, Convention on the Rights of the Child, Convention on the Elimination of All Forms of Discrimination against Women and its Protocol). International Covenant emphasizes that the family is "the natural and the fundamental group unit of society and is entitled to protection by the society and the State". The Convention on the Rights of the Child mentions the family "as the basic unit of society and the natural environment for the growth and well-being of all its members, and especially children, need to ensure them the protection needed and the help in order to take over the total responsibility in general in the society." By ratifying this Convention, the Republic of Croatia is committed to the comprehensive protection of children's rights: the protection of children from all forms of physical and mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse. Also notable was the Convention on the Elimination of All Forms of Discrimination against Women and its Optional Protocol. Ratified the Convention, Croatia is committed to taking appropriate measures to eliminate all forms of discrimination. Optional Protocol to the Convention for victims of the possibility, that after they have exhausted domestic remedies, their protection realized by submitting a complaint to the Committee on the elimination of discrimination against women. The Declaration on the Elimination of Violence against Women is also very important, which defines violence as any act of violence based on gender and sex, and which as a result has, or is likely to have, physical, sexual or psychological harm or suffering of women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life. The Republic of Croatia is obliged to provide legal protection of the family pursuant to the Convention for the

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<sup>1</sup> Marina Ajduković i Dean Ajduković: Nasilje u obitelji: što zdravstveni djelatnici mogu učiniti, *Medicina Fluminensis*, Vol.46 No.3, 2010., str. 293.

<sup>2</sup> Ustav Republike hrvatske (NN 56/90, 135/97, 8/98, 113/00, 124/00, 28/01, 41/01, 55/01, 76/10, 85/10).

<sup>3</sup> Zakon o zaštiti od nasilja u obitelji (NN 137/09, 14/10, 60/10).

<sup>4</sup> Kazneni zakon (NN 125/11, 144/12).

<sup>5</sup> Obiteljski zakon (NN 116/03, 17/04, 136/04, 107/07, 57/11, 61/11).

Protection of Human Rights and Fundamental Freedoms and its Protocols that prescribe the right of everyone to respect for private and family life, the right to have marriage and family and arranging the relations between the parents and the children. Highlighted the Protocol on Non-Discrimination Act prescribes the obligation of States to incorporate provisions on non-discrimination in their national legislation and the protection of that right before the European Court of Human Rights<sup>6</sup>.

### **3. FORMS OF DOMESTIC VIOLENCE**

It is very important to emphasize that the Republic of Croatia in respect of the protection of family violence has regulations on the level of high standards, even better than in many EU member states. In addition to the above mentioned law, the Rules of Procedure in Cases of Domestic Violence and the National Strategy for Protection against Domestic Violence were also adopted. According to the Law on Protection from Domestic Violence, forms of domestic violence are: psychological violence, physical (corporal) violence, sexual (gender based) violence, economic violence and labor exploitation.

#### **3.1. Psychological violence**

The first form of domestic violence refers to forms of emotional abuse that aims to achieve power and control over the victim. Psychological violence also includes various prohibitions that are not appropriate for the age of the victim (e.g. socializing with friends, employment), threats to the victim or her loved one, abuse and humiliation, ridicule, public contempt, declaring the victims of mentally ill or unstable, blackmail, restriction and control motion, spying, constantly checking (e.g., directly or by telephone), isolation from social networks, manipulation of feelings of the victims and the like. Destruction of important personal belongings of the victim or abuse of important companion pets - animals is also a form of the threat. This kind of behavior is particularly harmful to the mental health, self-image, self-esteem and personality of the victims<sup>7</sup>.

#### **3.2. Physical (corporal) violence**

Physical (corporal) violence includes any form of physical abuse such as shoving, nudging, choking, pulling hair, pushing (e.g. against the wall, in the corner of the room), hitting with hands, feet or any kind of objects, causing injuries and burns, throwing out of the house, locking into a room. Physical violence can vary from relatively mild impact into the serious injury, attempted murder and even murder<sup>8</sup>. Therefore, physical violence or the use of physical force exists whether the physical injury occurs or not. Physical violence also applies to corporal punishment and other methods of degrading treatment of children in the educational purposes.

#### **3.3. Sexual (gender based) violence**

Sexual (gender based) violence or harassment includes any unwanted sexual behavior of other person who humiliates and threatens the dignity and security of the victim. Sexual violence includes physical contact such as touching, smoothing, pinching, clinging to the body, but also verbal behavior (persistence in persuading sexual intercourse, suggestive remarks that women are defined as sexual objects), leaving pornographic and sexually suggestive pictures at accessible places. The ultimate form of sexual violence is certainly rape (sexual contact without the voluntary consent that is extracted by force and / or threats) and sexual abuse of

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<sup>6</sup> Grozdanić, Velinka et al: Nasilje u obitelji u svjetlu promjena Kaznenog zakona, Hrvatski ljetopis za kazneno pravo i praksu, Vol.17 No.2, 2010., str. 672.

<sup>7</sup> Marina Ajduković i Dean Ajduković, loc. cit.

<sup>8</sup> Ibid.

children. This form of violence leaves deep harmful psychological effects on the victims, which in most cases require professional psychological and psychotherapeutic help<sup>9</sup>.

### **3.4. Economic violence and labor exploitation**

Economic violence and labor exploitation includes damage, denial and deprivation of financial resources to the victim, disabling the use of their property and livelihoods, petty controlling spending, manipulation, blackmail and forcing victims to give up the property in favor of a violent family member, disabling employment or work, forcing the economic dependence, denial of funds for the maintenance of common household and care of children or other dependents common household and others. Among the various forms of violent behavior does not draw a clear distinction, so that physical or sexual violence exist in close relationships and they are always accompanied by psychological and emotional violent behavior. It should be emphasized that exposure to violence between parents is nowadays recognized as a specific form of violence against children in the family<sup>10</sup>.

## **4. VICTIMS OF DOMESTIC VIOLENCE**

Unlike some other forms of violence, domestic violence is usually hidden and invisible. These victims are fragile and weak, and too young or too old people, who cannot confront the offender or some social expectations or own fears and attitudes force them to remain silent. Domestic violence is a broad term that encompasses the violence between partners, as well as violence against children, the elderly, the relatives. The worst possible outcomes of domestic violence are rapes and murders, it made headlines in recent years<sup>11</sup>. The damage of domestic violence is first manifested by children's behavior or by their development and after by their functioning in adulthood, by their partnerships in the family, by the relations between parents and children. The consequences of family violence are manifested in the physical and psychological exposure to violence, the high social costs, particularly in the infringement of human rights. It is hard to avoid the fact that in recent years the number of interventions for domestic violence is raising, where police and social welfare centers had to participate actively. In the social security system, 72% of all cases the victims were female while 87% of the perpetrators were male out of the total number of cases registered. According to the previously conducted research on the territory of Croatia, the most frequent victims of domestic violence are children, women and the elderly.

### **4.1. Violence against children**

According to the research of the Child Protection in the city of Zagreb, the young retrospectively estimated that during their childhood, they were in 15.9% of cases subjected to physical abuse, 16.5%, to emotional abuse, while 14.8% of respondents had witnessed domestic violence, and 14% stated that they were sexually abused. A sample survey conducted on the group of same age that showed something different, but still worrying facts of exposure to violence in their childhood: 12% of young people expressed the experience of physical violence in families, 20% psychological, while 10% witnessed physical violence the father against the mother. Victims of sexual violence were 2%. Research on adult women showed that children in 36% of Croatian families witnessed physical violence fathers over mothers<sup>12</sup>. Signs that may indicate exposure of children to violence are: serious problems with outbursts of anger, the tendency to physical aggression at school or with their brothers or sisters at home, destroying things at home and beyond, cruel or abusive behavior in the family, threats of violence younger

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<sup>9</sup> Ibid.

<sup>10</sup> Ibid.

<sup>11</sup> Grozdanić, Velinka et al, op. cit., p. 670.

<sup>12</sup> Marina Ajduković i Dean Ajduković, op. cit., p. 294.

brothers and sisters, effort to gain the attention of those present beating, banging and similar gestures, imitating the abusive behavior. As to the consequences of violence in children, they may include: anxiety, depression, poorer school performance, low self-esteem, disobedience, nightmares, or even complaints of physical interference. They also investigated and confirmed the consequences of violence in adolescents, as follows: fear and trauma such as PTSD, complaints about health problems, aggression, difficulty in creating close relationships in adulthood, increasing the risk of wandering, injuries which are causes of protection of the abused parent, or intergenerational transmission of violence.

#### **4.2. Dating violence**

Research on the prevalence of violence in partner relationships has shown that the most commonly present violence is psychological violence, and then physically (physical), which is more common than sexual violence. Although some studies have shown the existence of mutual violence between partners, most other studies, police reports and data Welfare finds a significantly lower incidence of men as victims, but far more as perpetrators of violence. This is most likely a reflection of the fact that the male partner is often physically and sexually violent, with severe consequences that are more easily to reveal, and the fact that the partner violence as perpetrators dominated by men than women in a ratio of about 9: 1. Regarding research on the international level, the Council of Europe in 2002 published the fact that 20-50% of women in Europe during life were victims of domestic violence, and thus violence against women is the most common form of violation of human rights in Europe. In the document, the World Health Organization "report on violence and health," the results of 48 studies conducted between 1982 and 1999 in different populations around the world have shown that between 10 and 69% of women at some point in life were physically abused by an intimate partner. At the same time about 20% of women said they were sexually abused in the family. An international study of violence against women found that in some European countries women were throughout life in a number subjected to physical violence (Czech Republic 35%, Denmark 30%, Poland 15%, Switzerland 9%) and sexual violence (Czech Republic 11%, Denmark 8 %, Poland 5% and 3%, Switzerland). World Health Organization study conducted in 2003 in Serbia on 1,456 women aged 14-49 years showed that 23% of women who have ever had a partner experienced physical violence, 6% partner's sexual violence, and 4% of the women experienced violence in the last 12 months. The same study showed that among women who have been victims of violence from 13 to 50 % of the women were beaten for the first time during pregnancy. Of those respondents who were victims of partner violence before pregnancy, 8-34% stated that violence during pregnancy became even more brutal. This is in line with earlier data which showed that the risk period for the start of the violence of men over women is the period of her first pregnancy<sup>13</sup>. The research in Croatia showed the prevalence of exposure of women to violence in intimate relationships approximately 29%. On a representative sample of 600 nurses working in the region of Zagreb, it was found that 15.7% of women were abused by their parents, that every eleventh (9.3%) had been abused in the former matrimonial / partner relationships, while 2.8% of them were still in violent partnerships<sup>14</sup>.

#### **5. COMMITMENT SUBMISSION OF DOMESTIC VIOLENCE**

According to the Law on the Protection of domestic violence, health care workers, professional workers in social welfare activities, family prevention and protection, education and professional workers employed in religious institutions, humanitarian organizations, civil society organizations within the scope of children and families are required to report to the

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<sup>13</sup> Ibid., p. 294.

<sup>14</sup> Ibid., p. 294.-295.

police or the state attorney's office the domestic violence that they found out during their work<sup>15</sup>. Although the prescribed obligation is to report every kind of domestic violence, other facts make problems. Namely, in the health sector there is no adequate standardized record, making it impossible to obtain reliable data on the treatment and hospitalization of victims of domestic violence. So, in addition to the implementation of legal obligations, it is necessary to undertake a series of other measures to act on the prevention of domestic violence as well as to ensure timely assistance to all victims of violence, by encouraging continuous cooperation between all competent authorities. "Every person has a right to their privacy and the privacy of the family, and since the domestic violence is under the strong social condemnation, it is understandable that members of the family where this kind of violence exists are reluctant to talk. Accordingly, there is the point of view that the victim has the right to withhold the violence, because it stays in the area of their privacy. Health care professionals can play a key role in the recognition and prevention of domestic violence, especially against children and women because they are the only institution in which all of them throughout life come and where there is an opportunity to interact in a trusted environment. The fact is that many children and women diminish and conceal the fact that they are exposed to domestic violence"<sup>16</sup>. On the other hand, studies have shown that physicians themselves contribute to the failure to recognize domestic violence. Namely, the point is that many family doctors in practice do not ask adequate questions to their patients that help them to talk about their exposure to violence in the family. Just family doctors know their patients but should bear in mind some of the characteristics of the history of specific persons which indicate possibilities of domestic violence, such as e.g. eating disorders, chronic fatigue, headaches, unconvincing explanation for the resulting injuries, anxiety, unplanned pregnancy, abortion, frequent visits to emergency care, and many others reasons. Also, research suggests that an injury to a woman's body is one of the key signs that indicate domestic violence. Place of injury can be very indicative: victims usually have an injury to the central part of the body which includes breast, abdomen and genitals, head injuries and neck resulting from blows open palm or strangulation. The wounds on the upper arms usually occur while the victim tries to defend. Bruises various colors and ages indicate the existence of repeated violence. Physically abused women have thirteen times more injuries to the chest, breasts, abdomen and face. When sexual abuse of 40% of patients come with physical injuries such as abrasions and contusions on the chest, nose and face, vaginal and perineal damage, sexually transmitted diseases such as chlamydia and gonorrhea, and in 5% of cases of unplanned pregnancy<sup>17</sup>.

### **5.1. Obligations of the authorities in the case of domestic violence**

Rules of Procedure in Cases of Domestic Violence set out the obligations of competent bodies and other factors involved in detecting and preventing violence and providing assistance and protection to persons exposed to family violence. The competent authorities are: police, social welfare centers, health institutions, educational institutions and judicial bodies. According to this Protocol, the police are obliged to work to combat domestic violence, to protect the victim and family health, and to prevent intergenerational family violence. Social welfare centers should constantly work to improve the protection of victims of domestic violence, to prevent new violence in the family and to the development of measures to protect the rights and welfare of persons exposed to family violence. Health care providers need to provide the offering comprehensive health care in order to preserve physical and mental health of the victim and recovery from injuries and psychological traumas.

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<sup>15</sup> A fine in the amount of HRK 3,000.00 shall be imposed on the persons who do not report to the police or public prosecution committing domestic violence that are learned by doing your activity.

<sup>16</sup> Marina Ajduković i Dean Ajduković, loc. cit.

<sup>17</sup> Ibid., p. 297.

The goal of treatment of educational institutions is to sensitize employees of educational institutions for the family violence experienced by children and students and take measures to detect and report problems and help the child. The goal of treatment of the judicial bodies is that more efficient use of all legal possibilities prescribed by the applicable laws of the Republic of Croatia in order to protect family members subjected to domestic violence and enable them to judicial protection in order to protect their physical and mental integrity and the fundamental right to live without violence.

## 6. CONCLUSION

Domestic violence is a form of discrimination, as well as a grave violation of fundamental human rights and freedoms. Domestic violence is a serious social problem and cannot be treated as a private matter between spouses. It is an indisputable fact that the abuser causes violence and has to be responsible for his actions. A child growing up in a family in which the violence happens, leaves a very bad effect on the child, and in the worst case, the child also becomes violent and applies seen behaviors. Even worse situation is when there is the violence against the child. The consequences are inevitable and the worst. The physicians certainly have the most important role in helping victims of domestic violence, because of identifying the violence, interviewing the victims of and giving helpful advice. Therefore, it is very important that the health workers are trained to recognize the signs of violence, and that they know what to do with such a person and that they are willing to help to stop the violence. They are required to report the violence to the police and to the public prosecution. The most common signs of violence are: injuries to face, injuries to the chest, breasts and abdomen, bruises and scratches on the body, sprains, cracks or broken bones, burns, knife injuries or other objects injuries, internal injuries (bleeding), traces of strangulation on her neck (fingers, wire, belt, towel), knocked out teeth, a violation of the eardrum, injuries to the genital area. From the above, it is easy to conclude that domestic violence is recognized as a public health problem because it causes profound health, social, and economic consequences for individuals, families and the entire community. The entire protection system should work so that all competent authorities cooperate with each other and try as efficiently and speedily as possible to solve each case of domestic violence. Yet the family is sacred, which is the most important value in human life and it should be treated that way.

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11. Zakon o zaštiti od nasilja u obitelji (NN 137/09, 14/10, 60/10).

## IMPLEMENTATION OF THE SIX SIGMA METHODOLOGY IN A-ROSA HOTEL

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### ABSTRACT

*This study shows a complete analysis of some business processes in a hospitality services company, the Hotel resort “A-ROSA”, Germany. The company is working to continuously improve business processes by developing the Total Quality Management (TQM) philosophy in order to meet the needs and expectations of customers, while making the company profitable. In the paper, the Six Sigma Methodology is applied in order to find an optimal solution for the execution of the business processes and common satisfaction of all parties involved. Other tools and techniques have also been applied such as: Pareto diagram, Ishikawa diagram, Trend Map, etc. The practice of the Six Sigma methodology has strengthened the company's brand and increased the number of tourists and customers.*

**Keywords:** *Six Sigma Methodology, Continuous Process Advancement, TQM Philosophy, Pareto Diagram, Ishikawa Diagram, Trend Map*

### 1. INTRODUCTION

For a hospitality services company, such as the Hotel resort “A-ROSA” in Germany strengthening the brand and increasing the number of tourists and customers, using some of the leading methodologies such as Six Sigma is a must. To execute the Six Sigma methodology in the hospitality services means to make progress in all business processes, i.e. performing of services without error. This concept differs from others because of the following (Mitreva et al., 2014):

- all employees are entirely focused on meeting the needs and expectations of the guests;
- managers are changing their way of thinking, their new paradigm is to work smarter not harder;
- It allows quick return on investment.

### 2. METHODS IN THE RESEARCH

#### 2.1. The core of the Six Sigma methodology concept

Six Sigma for many authors is the advancement of processes by finding and eliminating errors, as well as detection of the causes of errors or defects in the processes, with a separate analysis of the output parameters that are important for customers or users (Markarian, 2004a; Kivela, & Kagi, 2009). Six Sigma is a method for all processes, products and companies. It was first developed in Motorola in 1986, whose products are known as the market brand. The application of six sigma today has become a worldwide trend driven by Motorola's economic achievements, oriented towards enhancement of the processes and product quality (Kumar, 2008). Allied Signal Company announced the effect of \$ 800 million realized in the period 1995-1997 as a



result of the developments based on the principle of 6 sigma (Sulaiman, et. al. 2006). In the third quarter of 1997, General Electric (GE) generated an effect of \$ 600 million (an increase of 13.8% to 14.5%) thanks to the implementation of the 6 Sigma strategy. In 1999 it secured an effect of \$ 2 billion, which made the company to emphasize that 6 sigma is a vision of quality expressed by only 3.4 defects per million opportunities for each product or service. In 2000, Ford Motor Co. announced that it was the first "automaker" in the automotive industry to use the six sigma method to enhance business processes and the quality of its products (Krishna, et. al. 2008; Shaheen, et. al. 2015). The measure of perfection of any process is its dispersion. Processes are executed in different ways, according to technological patterns who are influenced by: man, materials, machines, methods, internal and external factors. If the unauthorized deviations are identified at early stage, the costs for additional work on the process is reduced. When defects pass the entire business process cycle, they are complemented by new defects, so that the possibility of modification, customer attrition and hesitation towards the product increase with geometric progression. All this falls under the low quality price (Koshki, et. al. 2014). Therefore, one of the tasks is to fight the deviations of the process and to keep the deviations within minimum limits by applying the 6 sigma methodology (Mitrevva, et. al. 2016a; Mitrevva, et.al. 2016b). The emphasis on the 6 sigma approach is not so much on the number of defects per million opportunities but the application of the methodology for systematically reducing the dispersion of the process itself. Processes are executed in different ways according to the technological schemes, and they are influenced by: employees, material, technology, methods, internal and external factors. If deviations from the original are identified earlier, the costs for additional processing and development of defective products are reduced (Oyewole, 2013). The concept 6 of the sigma is a conception of continuous improvement and is closely related to the financial performance of the enterprises (Manual, 2006; Markarian, 2004b). The condition for successful implementation of the 6 sigma program is the existence of modern management, especially strong leadership. Leadership includes initiative from the top, attachment to the approach 6 sigma with active participation in it, consent of all employees, brainstorming, proactive work style, teamwork, training, support for successful actions and achievements (Mitrevva, et. al. 2016a; Mitrevva, et.al. 2016b).

## **2.2. How to apply the 6 sigma method**

The basic concept of the six sigma is defined in Motorola, according to the classical pattern of continuous upgrading and improvement of quality by applying the PDCA cycle (Deming cycle) (Mitrevva & Filiposki, 2012). Today, most commonly used is the DMAIC cycle, (Define - Defining or Determining, Measure - Measurement, Analyze - Analysis, Improve - Improvement or Advancement, and Control - Control or Management) (Miles, 2006; Mwijarubi, 2015). Apart from this methodology, the IDDOV cycle is used. This cycle consists of the following stages: identification, definition, design, optimization and validation and is intended for creating a new product or process (Sokovic et. al. 2005). Both methodologies define the steps to run the six sigma improvement program and help the team in focusing on meeting the primary goal (Aliyu, 2017; Lahap, et. al. 2014).

## **3. IMPLEMENTATION OF THE SIX SIGMA METHODOLOGY TO THE HOTEL RESORT "A-ROSA" IN GERMANY**

The management of the company A-ROSA is experienced on business and organizational plan, with the main goal of transferring to the employees the new dynamic way of work, standards, culture, access and responsibility towards the work. The beginning is difficult, but the effects and results have increased satisfaction of all stakeholders. The main activity of the company is directed towards the hospitality services, so for these reasons, precisely in these processes, the

Six Sigma methodology is applied through the DMAIC (Define, Measure, Analyze, Improve and Control) steps.

### 3.1. Steps in implementing the Six Sigma methodology

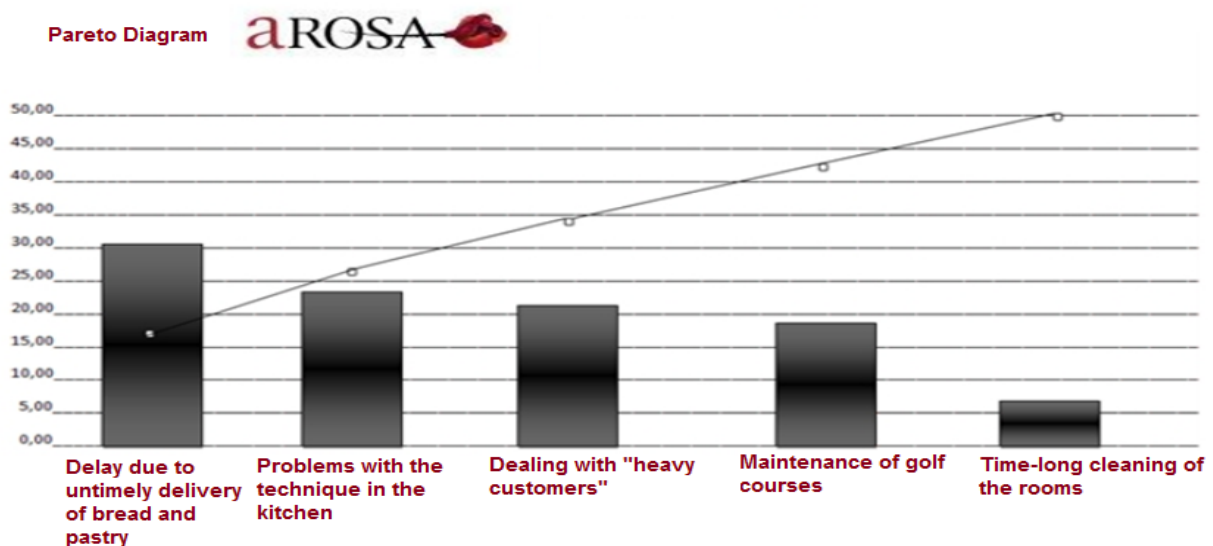
#### 3.1.1. Define the problem (Define)

The process itself began with detection of the problem, measuring its depth based on the collected databases. Errors are recorded in tables and diagrams and are subject to analysis by managers. Based on the information obtained from the daily reports, the responsible manager can easily detect the complaints made by the client, and depending on the type of problem, they are being identified, defined and recorded in the checklist, Table 1.

*Table 1: Checklist of delays and errors in the process of service*

Location	Delays and errors in the process of quality service	Nov.	Dec.	Jan.	Feb.	Mar.	April.
aROSA	Delay due to untimely delivery of bread and pastry	////	///	///		/	//
	Problems with the technique in the kitchen	/	//		//	//	/
	Dealing with heavy customers	/	///		//		/
	Maintenance of golf courses	//		//		//	/
	Time-long cleaning of the rooms	/	//	//	/		

Based on the total operational errors, as well as complaints from the clients, the Pareto diagram is being prepared from the checklists. This diagram should show which complaints are of the most frequent and important and in which direction the management team should move and seek a solution to overcome the problem, Fig. 1.



*Figure 1: Pareto diagram in relation to the frequency of irregularities in operation*

From Fig. 1 it can be seen that the number of complaints is the highest in the delays by deliverer's of bread and other bakery products. The first pillar of the diagram shows the delays of bread and other bakery products for the use in the hotel. The hotel complex does not produce its own and depends on the delivery by the suppliers. The proposal of the management team is to employ people with the necessary skills and to supply equipment for their own production for internal use. The second pillar of the diagram shows complaints due to frequent break-down of the kitchen equipment (malfunction of the ice machine, refrigerators, and stoves). The proposal of the management team is solving the problem by replacing existing ones with new technical equipment. The third pillar of the diagram gives the frequency of complaints by "VIP" clients in relation to hotel services, especially during the seasonal months or holidays when the hotel operates at full capacity. The guests' revolt arises as a consequence of the strict rules and regulations of the hotel regarding the code of conduct of the guests. The fourth pillar of the diagram gives the frequency of problems related to the current maintenance of golf courses as a result of the widespread area and the need for daily maintenance and irrigation. The proposal for a management solution is to increase the number of staff for horticulture (especially in the golf course and for organizing golf tournaments) and purchase of more mowers. The fifth pillar of the diagram gives the frequency of problems related to the equipment and cleaning of the rooms due to lack of necessary staff (housekeeping attendants). The management solved this problem by employing seasonal workers. By analyzing the operations that give the highest number of irregularities in the process, the management should find appropriate solutions to solve the problem without allowing disruption to the company's image.

### *3.1.2. Measuring (Measure) the quality of services by using methods and techniques for operation with no mistake*

Statistical Process Control (SPC) is a methodology for reducing process variability as part of the TQM strategy for the continuous improvement of quality. The essence of statistical process control is to ensure process stability and predictability. The use of SPC in the hotel is one of the requirements of ISO 9001: 2008 and its use has helped in the process of selecting data that is of great importance to the management. The use of tools and techniques for operation without mistake has helped to maximize knowledge in order to avoid inconsistencies, as well as analysis of the current problems. The quality system in which the concept of statistical process control (SPC) is not developed and applied, will not provide sufficient guarantee for sustainable development. For all of this, highly trained teams are essential. By applying some SPC tools to the Hotel "A-ROSA", the following has been achieved:

#### **A) Measuring customer satisfaction from hotel services**

Paying attention to the needs and expectation of the guests and the management's effort to satisfy them will enable increased satisfaction and competitive edge over others (Qin, et.al. 2009; Wihuda, et.al. 2017; Vaijyanthi, et.al. 2014). Visitors experience different levels of satisfaction or dissatisfaction after every service they receive at the hotel, depending on whether their expectations are met or not. The collection of data on the quality of services by measuring the satisfaction of the guests should show which measures should be taken by the management for their improvement. As sources for measuring guest satisfaction, in this study are used reviews of the guests left on the website of the hotel and the customer satisfaction survey, which is carried out daily on checking-out at the hotel. In Fig. 2 are given summary results in terms of measuring guest satisfaction / dissatisfaction with regard to the hotel services.

*Figure following on the next page*



Figure 2: Measuring guests' satisfaction in terms of services provided at the hotel

From the received data and comments by the guests, analyzed as positive and negative reviews, it turned out that the positive reviews are in relation to the interior of the rooms, kindness of the personnel, hygiene, comfort, location, the view. While the negative comments refer to the insufficient equipping of the rooms and their size, as well as the amount of prices regarding restaurant services and quality of food. Marketing management in charge of customer relationships should regularly monitor guests' complaints and strive to build lasting relationships through increased positive communication, increased competitiveness, profitability and value of shares. By using some of the SPC tools in the hotel "A-ROSA", the following was achieved:

#### B) Measuring the sources of information of the guests regarding their choice of the hotel

Figure 3 shows the Trend Map for the more significant sources of information to the guests regarding their choice of hotel. The conducted guest satisfaction survey showed that guests are informed about the hotel via web portals, friends and family, as well as social networks, newspapers and magazines.

Figure following on the next page

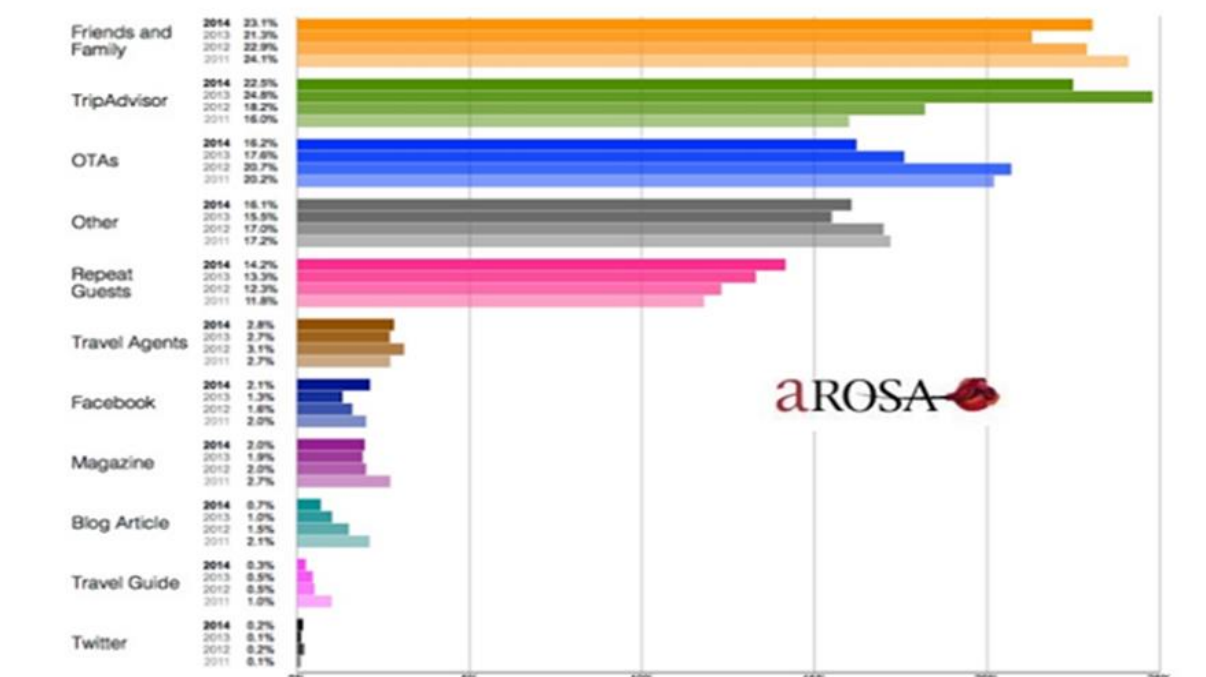


Figure 3: Trend Map for more significant sources of information of the guests regarding their choice of a hotel

The hotel works continuously on its promotion, but it has been shown from the conducted research that guests receive information about the hotel most often through exchange of personal experiences or viral marketing. The users of hotel services share their personal experience of staying in the hotel, and their impressions are passed on to relatives and friends who are further potential guests. We should not neglect the number of loyal and regular guests who visit the hotel for years. From Fig. 3 it can be seen that the information provided by Trip Advisor is highly rated as a portal to share the experiences gained. On the other hand, other sources that are less listed on the Trend Map are also of great importance, such as travel agencies, travel guides, newspapers and magazines. While in the domain of using the Internet and social networks like Facebook, Twitter, Blog Article, the smallest results are achieved, which can disturb the management in terms of the awareness and the great attention that social networks have today. The marketing sector in charge of promoting the hotel, should give a stronger emphasis on promoting through these tools that can really be of great benefit because of their constant contact with a large number of potential users. By using some tools in the hotel "A-ROSA", the following was achieved:

#### C) Measuring the business results of the hotel

A-ROSA is a hotel tourism complex that is progressing rapidly, transforming itself into a major regional brand. Fig. 4 shows the earnings and profits earned by the hotel in relation to its largest competitor in the region - Hotel AJA - through monitoring of profits in recent years.

Figure following on the next page



Figure 4: Earnings and profits of the hotel complex A-ROSA in relation to a competitor through monitoring the profit in the recent years

There is no doubt that the hotel A-ROSA jumps with its competitive advantage (more than 18%) in recent years compared to its competitors. The management of the hotel is of the view that it will continue to create values in all segments, to maintain the great leadership role and to strengthen the dominant power in the region and beyond. When conducting a survey based on the statistics of the hotel in relation to the other partners of the chain of the A-ROSA group, increased making in relation to the other hotels in this brand in Germany can be seen, Fig. 5.

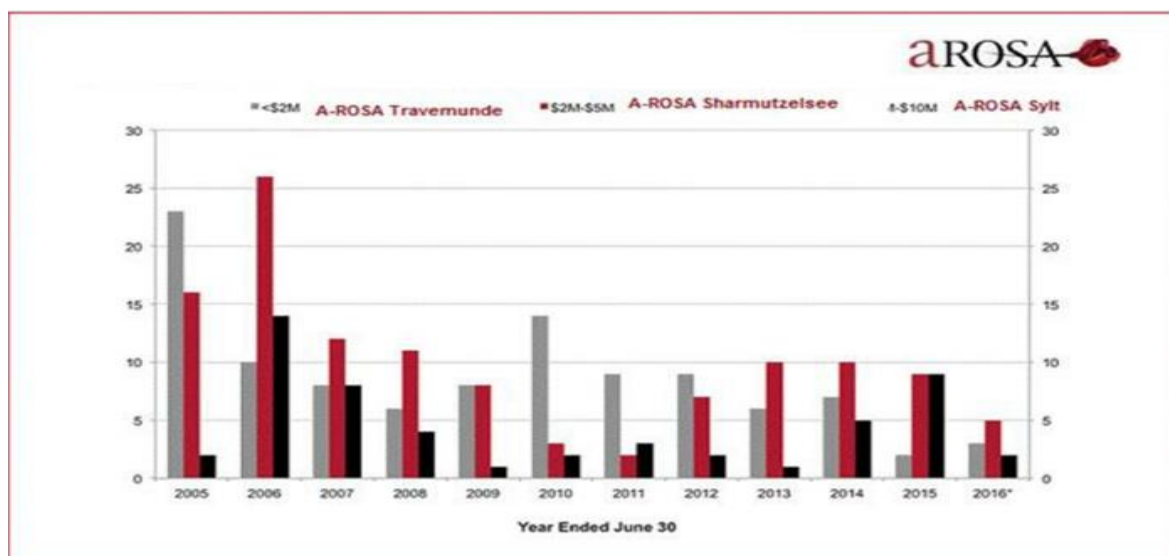


Figure 5: Earnings and profits of the hotel complex A-ROSA with respect to other hotels of this brand in Germany

From the collected statistics in recent years and subsequent analysis, it turns out that the hotel A-ROSA (red) shows positive results and successfully exceeds its partners from the chain of

the A-ROSA Group in terms of the achieved success. This is due to the good organizational set-up and functionality of the management team dominated by the team spirit, the positive attitude towards employees and their contribution to building a business culture at a high level. Such an advantage is a great incentive and serves as a motivation for achieving higher results in future.

### 3.1.3. Analyzing (Analyze) the causes of the problems

The Ishikawa diagram is an opportunity for managers to see the cause-and-effect relationships of some of the factors that cause problems. The application of the Ishikawa diagram helps managers of the A-ROSA hotel complex to make a detailed analysis of the problems and factors that influence the quality of the service. In order to find and identify the factors that lead to these defects and delays Fig. 6 is highlighting the more important causes that lead to consequences.

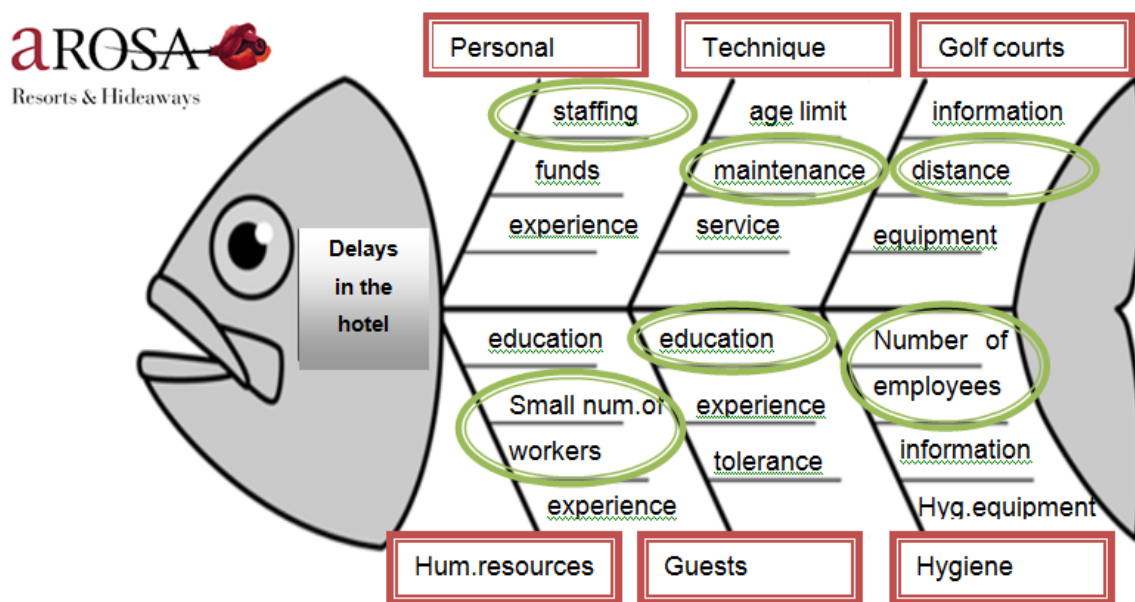


Figure 6: Ishikawa diagram for the important causes that lead to work irregularities

The reasons that lead to the appearance of complaints and delays relate to: poor training of staff, defectiveness of technique, maintenance of golf courses, lack of human resources, handling of "VIP" guests and hygiene. Analyzing these factors and penetrating deeply into it looking for the source of the problem, has helped management in finding solutions.

### 3.1.4. Improvement (Improve)

By applying the Six Sigma methodology, a new approach was introduced in the work of the hotel complex, business culture was improved, the image of the company got improved, and new standards were set up with which employees were trained to respond to new challenges, thereby improving the quality of services.

### 3.1.5. Control of the implemented corrective measures for improvement (Control)

The control showed whether the measures undertaken contributed to the elimination of errors, whether continuous monitoring of business processes was ensured. Business processes are re-monitored, data is recorded in the checklists and frequency is monitored. Other irregularities as a result of the steps taken are possible with the control mechanisms. The results are visible, which is the main feature of the Six Sigma methodology.



The control found that in some processes the work was improved and complaints and delays were reduced, and in some processes there were almost no irregularities in the operation as a result of the successfully implemented steps of the Six Sigma methodology.

#### 4. CONSLUSION

From this study we can conclude that the quality of hotel services is a strategic goal of the company, and the adoption of the philosophy of TQM, Six Sigma methodology and internal standardization is the real key to success. A successful company cannot achieve results without these three key elements. Management and employees have adopted this concept in a very simple way. Namely, the company cannot survive on the market without quality control at all stages of the process, without applying ISO standards, without the full commitment of the management and employees. Standardization is a way of delivering quality. The importance of the development of the hotel industry, which is based on the quality of the services, is taken as the imperative in paper. These imperatives are created by the new class of tourism managers and professionals in the hotel industry which contributes to improving the quality of services and satisfying the needs of the users, as well as building profitable relationships on the road to perfection.

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## THE FUTURE OF MANAGERIAL EDUCATION

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### ABSTRACT

*The book "Shut down the business school. What's wrong with management education" by Martin Parker (2018) professor who had worked for 20 years at Bristol University has started an important debate. The author claims that business schools need to stop teaching most of the standard curriculum. I would argue stronger – in the era of digitalization and internet they need to change the way of teaching. As an example: Student Teacher Evaluations (SET) should not be treated as measures of teaching quality because: (1) it encourages students to view themselves as customers/consumers of education, while the quality of their learning depends both on their and teacher's efforts; (2) as it was shown in the conducted by Michałowicz (2016) under my supervision analyses of more than 130 thousand of SET forty percent of students NEVER deliver their feedback via SET; (3) that younger lecturers contrary to old ones believe that students reciprocate good grades by giving the teacher good evaluation (Michałowicz, op.cit. ). As a consequence teachers could inflate their demands and grades; (4) the metanalysis conducted by Uttl, B., White, C., A., Gonzalez D. W. (2017) has shown that students do not learn more from highly rated professors. There was no relationship between SET and students achievement. Students expect to receive practical knowledge. They do not realize that the results of the managerial research conducted in the "ceteris paribus" paradigm are difficult to use in practice and in teaching.*

**Keywords:** cognitive overload, educational reforms, managerial education, student evaluation of teaching (SET)

### 1. INTRODUCTION

The following technological changes that appear in faster speed cause changes in ourselves that we do not see, because the process of breaking up with the past is NOT accompanied by any spectacular events. (Marody, 2015). We live in time of technological breakthrough. Do we feel an uniqueness of this change? No, because the changes occur gradually – we can talk about the effect of a boiled frog that can die when the temperature in a shallow aquarium will be heated very slowly while throwing the frog to the hot water would make it to jump out immediately. Our information environment becomes dense slowly, so we do not jump out. (Wieczorkowska, Król, Wierzbinski 2016).

### 2. CHANGED INFORMATION ENVIRONMENT

We live in an era of excess where valid slogans are: MORE, FASTER and consequently MORE and MORE SHALLOW. Shallow thinking manifests itself in excessive submission to influences of eye catching stimuli, categorical opinions, excessive generalizations, shortening the time of the focusing on the stimulus (for example growing rate changing threads in TV series), more scanning than reading the text, lack of questions and doubts. (Wieczorkowska, 2011). Since copying information is practically costless, the information is mass – reproduced. The news published by press agency is within tens of minutes broadcasted by tens, if not hundreds of information portals. If in the original an error appeared, it will be multiplied and most likely will remain uncorrected in most copies of the original information. In the internet nothing is lost....As the Noble prize winner Simon (1971) said: „In an information-rich world, the wealth of information means a death of something else: a scarcity of whatever it is that

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<sup>1</sup> In the text I use large fragments of article published in Polish language: Wieczorkowska, Król, Wierzbinski (2016). Past, Presence and Future of the University Education.

information consumes. What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it." Therefore overabundance of the information has to cause dramatic deficit of attention. Instead of reading (not even mentioning thinking through) we scan the text (unfortunately, I am convinced that some of the readers do exactly that to this text) and we draw some cursory conclusions. We do not have willingness or time for deeper reflection about what we read very often. This result in increased tolerance for mistakes. Today, the most desired information is the one which is easy to absorb and to understand in a split second. New media change us and the reality that surrounds us. Internet meets our evolutionary needs – just like the hunters we are throwing at the information that attract our attention and just the gatherers we collect often unread pieces of information ( papers, books, movies etc.) with the hope that we will use them later (Carr, 2013).

### 3. CHANGED STUDENTS

The permanent state of distributed attention is characteristic of our time. An information overload is due not only to quantity. The fundamental problem is the lack of "total visions of the world, which make sense of the events around us, control and categorize the information flow that surrounds us (Marody 2015, pp. 111)". Binary criterion : LIKE or DISLIKE (liking or hating) plays a dominant role. However, the fact that we like something does not mean that it is good for us. Most of us love the sweet taste, despite of the fact that in the era of easy to get cookies, eating sugar is not good for us. We like to have a great choice, not realizing how much of our cognitive resources it consumed by choice making (e.g. Vohs, 2008). A feature of modern people (including the author of this text) is automatic desire of avoiding discomfort: physical (e.g. we are too eager to use elevators, cars, painkillers), intellectual (e.g. using cognitive stereotypes), emotional (e.g. instead of meeting friends who potentially can criticize us or make us bored, we turn on the TV that cannot hurt us). The feeling of emotional proximity with e.g. favorite actors, athletes, TV presenters who are not aware of our existence has been called <mediated quasi-interactions>. This phenomenon of „unreciprocated emotional proximity at distance”<sup>2</sup> allows us to enjoy the benefits of interaction and play interpersonal relationships in your imagination without the need to engage in mutual commitment. In these types of relations we are not threatened with rejection, and if we do not like something, we can change it at no cost ...just by switching the channel. The young generation, raised in the information smog, is less willing to use logical strings of reasoning, preferring associative thinking (Stasiak, 2010 quote for: Marody, 2015). There is no data showing that young generations better deal with parallel tasks (multitasking) than the elders though they think they are. Students of management and other social sciences do not seek out a deep knowledge, they ask the lecturers for easy recipes for success. They love shortcuts and are eager to learn easily applicable models, methods..... Such a path of shallow thinking cannot, however, provide a good basis for professional success in long term. Scruton (2010) bluntly criticizes striving for the applicability and the latest scientific reports ( which can be disqualified with the further research ) by saying that (i) avoiding difficult topics, (ii) multiplication of ephemeral subjects (iii) teaching methods that strive to maintain students' interest at all costs are the recipes for the disaster that dominate in our educational systems. In his opinion „there is no doubt that we have entered a period of deepening collapse of the education system as a result of which some students assimilate the mass of knowledge, but the masses acquire little or nothing." In his opinion the current curriculum is the one from which the difficult core of knowledge has been removed. We seem to forget that knowledge, which seems impractical, may prove necessary in unforeseen circumstances. Computers are using the "impractical" Boolean algebra and the logic

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<sup>2</sup> Thompson, 2001 quote for: Marody, 2015.

of Frege."Impactical" learning of Greek, Latin and ancient history allowed British university graduates to manage the Empire..... We have to remember that scientific knowledge in social sciences is created in a paradigm „ceteris paribus" (we examine the relationship between variables assuming other things being equal). This is why it is difficult to use in real situations, because in reality ceteris is never paribus. The research that we conducted (Wieczorkowska, Król, Wierzbński 2016) has shown that among 186 employed<sup>3</sup> students of Master's Degree Program in Management:

- 74% think that the emphasis of the curriculum should be put on practical skills, so they will be prepared for specific professional role.
- 16% is aware that specific professional roles requirements change very often and therefore, the master's degree program should put emphasis on general theoretical and methodological knowledge, so they will be prepared to learn new skills in the future.
- 10% chose option „It is difficult to say".

Majority of our students prefer classes that are focused on gaining practical skills needed on the CURRENT labor market. They do not realize that to succeed in global and competitive market they need to master their ability to think at different level of abstractness, self-discipline and eagerness to learn new skills.

#### **4. THE FUTURE OF MANAGERIAL EDUCATION: MENTAL GYM MODEL**

Lecturers complain on students' cognitive laziness. The same young people with full engagement sculpt their bodies while exercising at the gym. When the effects of confidence in specialists (personal trainers at the gym, surgeons when we are ill) are quickly visible (we improve our scores, we recover), we are ready to submit to their recommendations (and suffer because of soreness and postoperative pain). Results of mental muscle training (the managerial university education serves it) are not noticed quickly, so in students' minds the connection „big mental effort & big benefits" is not easily made. The goal of the managerial education should be training of minds - "mental muscles". The material on which it is made is of secondary importance. Here we can give numerous examples of physicists successful in business, historians (not specialists of political science) who hold the highest state offices and public functions. One can complain that students are getting worse prepared (forgetting about variance, because some of the motivated young people have better knowledge and skills than some of the lecturers), but the truth is that the role of the teacher is changing: from the PROVIDER of the knowledge s/he should become a MANAGER of the educational process. Managerial process is based on four basic functions: planning, organizing, managing (leading and motivating) and control. The most important of these functions is control. In the learning process feedback from the teacher plays the key role. We cannot get it on the internet. Overload of faculty causes unfortunately, too little student's work is read and commented by them. It would be very beneficial to separate the learning phase from external certification. As in the production of economy of scale is replaced by the economy of diversity (economy of scope), in education we can notice similar trend manifesting in the increasing percentage of elective courses. Individualization of programs causes the loss of motivational support that other learners are providing to us. Education is a social activity and we cannot change that. The mass of money invested - without taking into account psychological constraints. Investment in multimedia learning disc brings to mind a huge amount of dust-covered training equipment that are stored in private houses. When people want to learn something, they look for a teacher or trainer who will take over responsibility for the educational process and the group that will be the reference point for progress made. Evolution shaped in us sensitivity for acceptance others. The survival depended (and it happens that now depends) on help provided by others, often

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<sup>3</sup> 91% of them combines study with work

complete strangers. Therefore, disregarding what other people will think about us is burdened with a sense of discomfort (often seemingly drowned out by rationalization). Classes in regular student groups cause that we care about our reputation. If in every class we meet totally different people we do not care so much what they think about us. This is not favorable motivational situation, because „student should feel ashamed of being stupid”<sup>4</sup>. Studying in groups has been invented thousands years ago not in order to save the teacher's time, but to use psychological power of the group to strengthen motivation. Presence of other people raises the level of our arousal – it is much harder to fall asleep while reading the book in the library than in an empty room. A spectacular example of the role of presence of others is studying in silent groups in monasteries. Although, interaction is limited to 15 minutes talk with the master per day, learning in the silent presence of others is more efficient than studying alone. It has been shown that the effectiveness of group therapy can be higher than the individual one. This has been nicely reflected in the Nigerian proverb which says that "it takes a whole village to raise a child". A good lecturer is flexible and can adjust the course to the capabilities and aspirations of students – s/he sets the bar high enough to draw students out of the comfort zone (effortless learning) but not enough to demotivate them. The ability to acquire knowledge is not a constant, but variable in time. A good lecturer recognizes when s/he can „turn up” the pace of classes, introducing more difficult issues when s/he should tell an anecdote and when to take a break. Standardization of the course would require moving to the third topic even when we know that the students have not mastered the subject of the second topic yet. Expectation of standardization associated with a lack of trust in teachers also result from ignoring research results (Spitzer, 2007) showing that for optimal learning is not the absolute value of the reward, but the fact that it is unexpected. Too much predictability reduces the vigilance of the mind necessary for efficient information processing. Good lecturer/teacher also recognizes how much s/he can require from the student. Setting the same requirements for everyone can lead to feelings of learned helplessness. For the weaker, we need to give a barbell with less weight, so that they can build a sense of power. They will have their little successes, while their colleagues will sweat, lifting more weights. This is the individualization of requirements. Students stop rebelling when they understand the analogy of mental muscle exercises for sports activities. When we asked in anonymous questionnaire 186 students of management (1st year of graduate students) if they would trade-off the part of their courses in the class for individual work at home, 41% said YES, 49% chose NO. Presence of „companions of misery” strengthens motivation. The presence in the class cuts off series of temptations that we are exposed when studying at home. That is why, even if it is not justified economically (expensive commuting) stationary classes still will be the basic form of education. What should we train in the mental gym? Critical thinking, analysis, synthesis, synopsis..... that is, advanced cognitive functions. School of the future will be primarily a place to gain an experiences. Our advantage is that students can gain this experience under safe controlled conditions. For example, they can learn to work under different types of bosses, practice relationships with different types of clients, test their skills in managing difficult employees. When they go to work, the range of their experiences will be much more limited. It is at the university that they should learn about their strengths and weaknesses, practice discipline and fortitude. At the moment, universities do not pay attention to character education. Example: about 30% of students asking for an additional date of passing the test, does not appear on it. This is interesting if we compare it with reports that a similar percentage of jobseekers does not come without prior notice to previously confirmed meetings. Are academic lecturers aware of the need to change their role and willing to learn a "new profession"? The effect of inertia is enormous. Since we were taught in a traditional way, why should we change it?

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<sup>4</sup> The authorship of this postulate is assigned to an outstanding sociologist prof. Klemens Szaniawski.

## 5. WHAT NEEDS TO BE CHANGED IMMEDIATELY?

It is an absurd to say that universities provide educational services, since the quality of this "service" depends equally on the effort of lecturers ("service providers"?) and students ("recipients"?). Student Teacher Evaluations (SET) shouldn't be treated as measures of teaching quality because: (1) it encourages students to view themselves as customers/consumers of education, while the quality of their learning depends both on their and teacher's effort; (2) as it was shown in the conducted by Michałowicz (2016) under my supervision analyses of more than 130 thousand of SET forty percent of students NEVER deliver their feedback via SET; (3) that younger lecturers contrary to old ones believe that students reciprocate good grades by giving the teacher good evaluation (Michałowicz, op.cit). As a consequence teachers could inflate their demands and grades; (4) the metanalysis conducted by Uttl, B., White, C., A., Gonzalez D. W. (2017) has shown that students do not learn more from highly rated professors. There was no relationship between SET and students achievement. SET in the current form should be given up. Student whose progress will not be assessed has no chance for development. Lecturers should also receive feedback. But by building the university community you need to build relationships on the basis of trust. So since the lecturer evaluates the student not anonymously and justifies his assessment, the student's identity can be hidden from the lecturer, but not against the person appointed by the rector, that acts as an ombudsman. So since the lecturers don't evaluate students anonymously and justify their evaluations, the student's identity can be hidden from the lecturer, but not against the person appointed by the rector (that acts as a an ombudsman). Students need to know that they are not capricious consumers and must feel responsible for their opinions. The survey should be carried out in mid-class – so that the lecturer has a chance to respond the remarks: the introduction of changes or clarification students' reasons why their ideas cannot be taken into account. At the end of the course you can introduce mandatory and anonymous<sup>5</sup> evaluation surveys consisting of only **one question**<sup>6</sup> with a numerical scale of: „Would you recommend this class for other students” and one open question: (1) Why would you recommend the course or why would you not recommend it? What was the most important thing that you remember from this course?..... etc.?

## 6. DO WE NEED ANOTHER REFORM ?

Is this text an invitation to the reform of university system of managerial education ? Unfortunately no, because too many reforms have been behind us. We believe in beautiful programs of changes listening to the candidates for the highest offices, neglecting not only the financial costs of reforms, but also psychological costs. Unfortunately, more and more decision makers' ideas are being introduced without being carried out previous pilot studies. Scruton warns against the false assumptions that reform devotees sell:

- People can be organized in the same way as the military with the hierarchical system of orders and obligations, ensuring effective coordination of the activities of a huge number of people who are involved in a plan designed by a few.
- The world is treated as constructed from graphs and indicators symbolizing the distance from an imaginary goal (effectiveness of the education process measured by the semantics of studies, place in rankings, etc.).

The realists know that :

1. The system of education is not a building that we can destroy and build a new, better one. According to a better plan<sup>7</sup>. The custom that survive the test of time is built on accumulated

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<sup>5</sup> Computer systems can provide anonymity of the responses with the evidence if the student completed the survey.

<sup>6</sup> Analyses of more than 130,000 surveys made by Michałowicz under my guidance showed a halo effect - there is no point asking a set of questions, because students' answers are very highly correlated - if the lecturer is liked s/he receives high evaluations on all dimensions, if s/he is not liked all scores are low.

<sup>7</sup> An example may be the call of prof. Nawrockiej: "Let's think of universities from the beginning, how

experiences of past generations and serves as a dam for illusions that we can do everything better, from the beginning according to 100 percent of rational plan.

2. We need to remember that every system should consider moral weaknesses of the people who create it.
3. A rational plan introducing a collective goal where it cannot be reasonably adapted to changes in the desires and needs of individuals always results in unforeseen and unfavorable consequences that lead to collapse if the system of changes does not contain mechanisms to correct the plan.
4. Effective solutions to collective problems are not imposed, but discovered and negotiated in the long term perspective.
5. When someone proposes serious changes promising enormous benefits, it is in his/her obligations to show that the probability of achieving these benefits is high.

Unfortunately, more often we submit to the plans of the reformers who think that they can present collective goals and later invent the way how to achieve them. No one will be surprised if we tell that Scruton in addition to standard examples of implementing the only one true political (it is a note for young readers: this way was described socialism) gives examples of the European Union actions. Polish adaptability even to absurd law regulations trained in the previous political system – has led the Bologna process being implemented very efficiently (program signed in 1999 by ministers of 29 European countries). A noble objective: European comparability of education. How does its implementation look like in Poland? Student that holds a bachelor of Japanese studies enrolls and pays for a master's degree studies in management. This means that students study statistical methods together with others who hold bachelor's degree in management. Absurd. Simply the legislator has forgotten about introducing the obligation of compensatory courses for students changing the educational profile. Knowledge and skills of two masters alumni with and without the bachelor of management is incomparable, but the diplomas are the same. This problem occurs on all two – level studies. Uniform learning outcomes are a great idea, but in the absence of standardization of measurement, these effects translate into paying with words. Even the best program without a plan of its implementation is a recipe for absurd results. Scruton writes that the basis for peaceful coexistence is not the realization of common vision, but the acceptance of self-restraint. For millennia, the ten commandments are made in a large part of the prohibitions, not a vision of universal happiness. Therefore, instead of the next reformatory vision it would be more important to get a consensus for self-restraint in education (e.g. we do not promote anyone who does not meet the requirements).

## 7. CONCLUSION

Realizing that this text as thousands of others can perish in the information smog I will repeat 5 most main thoughts:

1. In maintaining the motivation to learn the most important are interactions between people: By individualizing the program, we lose the effect of the group. Education is a social activity with a not transferable role of a teacher, who will take control over the course of the learning process and a relatively constant group, which will be the reference point for the progress made.
2. The role of an academic teacher has changed from the provider of the knowledge to the manager of the learning process, who should do the same as the trainer: plan the education

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in '68 '(quote for: Pezda A., Alert for the university: heated debate about the factories of the unemployed, Gazeta Wyborcza; 02.05.2012).

- taking into account student's abilities, motivate and control the effects. An university of the future will be primarily a place where students gain experience under controlled conditions.
3. The Mental GYM Model assumes that the individualization of the education process should be understood as the differentiation of requirements, not subjects. Everyone should learn mathematics, although some should require a minimum, while the more able ones should be "burdened" with more.
  4. It is an absurd to think that universities provide educational services, since the quality of this "service" depends equally on the effort of faculty ("service providers"?) and students ("recipients"?). SET in its current form should be abandoned, because it encourages students to view themselves as PASSIVE customers/consumers of education. It is worth it to implement middle semester surveys that will consist of open questions.
  5. The pressure from students for classes focused on gaining practical skills needed on the job market should be resisted. Students need to be persuaded that in order to succeed on the global market, they have to learn thinking on different level of abstractness, which can be acquired only by taking not very exciting classes and doing many dull exercises.

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## **FROM EL BOUAZIZI TO ISIS: PAST SEEDS AND PRESENT HARVEST (TOWARDS UNDERSTANDING THE CAUSES OF THE SHIFT FROM CLAIMS FOR FREEDOM TO VIOLENCE)**

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### **ABSTRACT**

*The spark of the so-called “Arab spring” was initiated when a Tunisian hawker, called Mohamed El Bouazizi, set fire to himself in response to a humiliating and unjust reality. Events unfolded, and the spark spread to other countries, although to varying degrees. However, what was expected to be spring turned into a bloody winter. The present article tries to show that the sad shift from claims for freedom and social justice into violence and intellectual defection is not due to the current sad reality; instead, it is the harvest of the seeds ploughed throughout the history of the Arab world. Education programs, preaching and media contributed to the emergence of these takfiri and violent groups, especially the group called ISIS.*

**Keywords:** Arab Spring, Arab world, ISIS, Takfiri, identity, illiteracy, resurrection

### **1. INTRODUCTION**

The spark of the so called “Arab Spring” was initiated when a Tunisian hawker, called Mohamed El Bouazizi set fire to himself in response to a humiliating and unjust reality. Events unfolded (events followed), and the spark spread to other countries, although to varying degrees. Five years after this sad incident, Houssam Al Abdelli, one of Al Bouazizi’s compatriots living in one of the poorest neighborhoods of Tunis embracing the violent takfiri jihadist thought, blew up a presidential security bus (This happened on November 26, 2015, while Al Bouazizi burned himself on December 17, 2010). What was it that triggered this shift from claims for freedom and social justice to not only the adoption of violence, but intellectual defection as well? Various considerations and interpretations were put forward to account for the events that have taken place in the Arab countries during the last seven years. Were they a blooming spring, a sad autumn, a freezing winter or a sweltering summer? Observers wonder whether that was a revolution, an uprising, an organized social movement or simply a night plot staged in the form of different rebellious movements, which, in essence, were but cinematic tricks and special effects, meant to reproduce the current reality in its worst misery and darkness. The questions observers put forward were related to the desire to understand what actually happened and seek whether this was an objective and logical consequence of a process, of which the fruition conditions had matured, or just a sudden rise. In any case, many people think that what happened was not a well thought internal and intentional or spontaneous act. Instead, they think it was the result of foreign spurs and goads used to assert and protect specific interests and strategies. Alongside with this, the word ISIS (Islamic State in Iraq and Syria) has become one of the most frequently used words nowadays. Scholars are not agreed as to the appearance of this violent organization and its incubating environment. Some of these scholars argue that its appearance was the result of the American invasion of Iraq and the dissolution of the Iraqi army; others, however, think it was a creation of the USA to help destabilize regimes opposing the American project of the New Middle East

and to redraft the geography of the region, and produce the new edition of the Sikes-Pico agreement and map. Other scholars went even further to link this not only to the variables of the present, but also to the references, texts and ancestors. This very issue tempted many scholars to draw a line between ISIS and Al Qaida, not in terms of ideology, but in terms of program and priorities. While the first organization (ISIS) gave priority to the cleaning of its house from inside by fighting Shiaa first and considered this as a warm up for the most important fight against Christians and Zionists, Al Qaida believed that the priority lied in cutting ‘the head of the snake’, a term by which they indicate the United States of America, after which the Zionists will be deprived of their support, become weak and ultimately easily vanquished. What the two organizations had in common, apart from sectarian and referential dimensions, was violence to the extent that excessive violence has become the standard for mobilizing and rallying supporters. The question, therefore, pertains to the reason why the Arab structure has become like quick sands or shifting sands, a situation which was made worse by the consequence of the “fleeing of Benali”. This was paralleled by the emergence of masses of humans, in whose heads ISIS thought was deeply rooted, and who did not believe in civil and non violent action. They wanted to put Abou Tammam’s statement into reality: Swords speak louder than books; their edges distinguish between seriousness and joking. Such was the language that these people excelled at during the last five years, from Chaabni Mount in Tunisia to Mosul in Iraq and from Aden in Yemen to Jisr Al Choghaur in Syria. ISIS’s chosen slogan was “remain and expand to gain momentum among its supporters; however, the Syrian film director, Najdat Isamel Anzour, soon came up with the answer through a film entitled “transient and dissipate’, which was a contradiction to ISIS’s symbol. The present paper does not seek to investigate the current situation of ISIS and measure the extent to which it will remain or dissipate, nor does it claim to explore its future and its ability to expand or disperse. Instead, it tries to shed light on the history of the issue in order to understand the circumstances, based on the French historian Pierre Renouvin’s (1964) concept of “deep forces”, which he used to explain the complexities of international relations that underlie events and help explain them. These forces can be summarized as follows.

## **2. NATIONAL STATES AND INTERNATIONAL LEGITIMACY**

The years 1916, 1917 and 1918, the centenary anniversary of which we are commemorating, constituted marks of identification (distinguishing features) in the history of the region and its relationship with international deciding factors. After the tailor-made redrafting of the region’s map by Mark Sikes and François George Picot to suit the interests of the then two most important super powers (i.e., Great Britain and France) subsequent to the collapse of the influence of Ottoman Empire, the next episode of the intertwined colonial plan started by the Belfour statement in 1917 and the creation of the Zionist entity in this space that was prepared for scattering. The last episode in this sequence was the former American President, Thomas Woodrow Wilson’s, fourteen principles in 1918, which were meant to be the roadmap to achieve world peace and international conflict resolution. Following this, the idea of the creation of the League of Nations matured and, ironically, the United States was not a member of it. After World War II, what was plowed during World War I started to bear fruit. The League of Nations proposed in 1918 was converted into the Organization of the United Nations in 1945. The Belfour statement of 1917 was converted into the declaration of Israel in 1948, with the British colonization having prepared the conditions necessary for this creation on the land of Palestine. The USA, then, took over and set for itself the task to take care of this newly implanted state and sent its war ships to the region to protect it, within the framework of the cold war’s attractions and balances. The theory of “Dam”, brought forward by the American president Truman, may be considered as the first step towards America’s foothold in the Mediterranean Sea. In 1947, during the Greek civil war and face to the incapacity of the British to stop the Soviet pressure on Greece and Turkey, he seized the opportunity and flooded these

two countries with economic and military aids to coax them into becoming allies, especially within the context of the tough competition and rush for allies. This existence was consolidated with the coming of the US sixth fleet to the Mediterranean Sea in 1949. In addition to this, the failure of the French and British forces during the Suez Canal war in 1956 signaled the decrease in the traditional role of Europe in the Mediterranean region in favor of another more effective and more influential power called the USA. The first signs and indications of geostrategic change in the game of role swapping as well as the alternation of leadership and hegemony appeared in 1947 when the American Secretary of state General George Marshal made a presentation at Harvard University where he talked about a plan with his name which, on the surface, was destined to heal the wounds of Europe, enfeebled by the pricks and pains of World war II, but which deep down was intended to take over the world leadership from a Colonial Empire on which the sun was said to never set. In the midst of this international transformation, the Arab region was longing for the creation of a regional Bloc, including all its components, based on the common denominators to press the rows, consolidate each other and have an effective positioning on the international map of balances. A framework was, therefore, established called the League of Arab Nations in 1945. The Arab countries that were still under colonization successively gained their independence. However, the results were very disappointing because (1) those countries could not cut the umbilical cord connecting them to their former colonizers and became totally dependent on and submissive to them and (2) because the adopted public policies, which were merely a reflection of a country's strategic choices, left high and dry and ignored investment on human capital and eventually proved to be a complete failure. Therefore, poverty indicators and illiteracy rates were very disappointing. Besides, the positions of Arab counties vis-à-vis regional and international affairs reflected their utter weakness and failure to defend themselves against foreign threats. What happened in Iraq first and then Libya are cases in point, among others. This resulted in injustice stemming from internal as well as external sources. Internal injustice led to people's despair and frustration, and gave birth to citizens ready to serve as fuel to any fire set in the region. External injustice, however, came in the form of a tailor-made international legitimacy using double standards, punishing peoples of a region, of which the leaders failed to choose the right positioning on the international scene since the creation of the Arab League. After sixty years, the new world balances considered them as peoples of a region that they called the Middle East and North Africa. Part of the population of this region lost direction. They started looking for salvation in the past and, therefore, became easy to manipulate within a game of big nations, where not only were they victims, but also had to pay the bill of their sufferings and destruction.

### **3. THE STRONG RETURN TO HIDING BEHIND IDENTITY**

In a study entitled “Political Islam, from extremism to more extremism”, the Egyptian scholar Rifaat Al Sayeed (1991:pp12-30) said that “The question that surely comes to the reader's mind now is whether there is an end or not to this extremism. Until when will political Islamist groups remain qualified to tend toward more extremism? According to the findings of this study, the answer was that extremism would increase sharply (...) as long as these groups refused to accept reality and as long as reality remained unable to face them and counter them intellectually, politically and socially”. A quarter of a century after the publication of this study, which drew our attention to the fact that the more opening and creation there was on the part of the West, the more extremist and fanatic thoughts these groups would have. The present shows that Al Sayeed's predictions have proved to be true. Muslims were under the influence of the culture of Oumma (nation) and Caliphate for a long time, and created a space of their own that distinguished them from the other. The confrontation with this other represented an opportunity for them to consolidate this sense of common belonging, from the fall of Andalusia to modern colonialism, without forgetting the crusades, the Tatar and Mongol invasions and wars. This

space used to be called 'Dar Assilm' (the home of peace) as opposed to the house of war, or the house of Islam as opposed to the house of disbelief and apostasy; the country of Muslims as opposed to the shore of Christians or the Europeans (Al ifranj). This sort of 'container', weakened and enfeebled as it might be, continued during the rule of the Ottoman Empire and remained governed by this feeling of connection with and belonging to the spiritual home, of which the capital is Mecca and which called for a jihadist jargon to fight the colonizer. However, little by little, this feeling of belonging to a big nation including all the Muslim peoples started to lose ground in favor of the creation of smaller nations with geographical borders, even if these countries themselves belonged to the same spiritual country referred to as the Islamic world. More attention was then given to geographical affiliation than to religious affiliation, without there being any mutual exclusion or contradiction. Both affiliations relied on each other and used the slogans of each other for rallying and mobilization purposes, although sometimes this was done under the name of nationalist movements fighting for independence. After Arab countries gained independence and new countries created with the current names they now have, the majority of Arab peoples expected to get the fruit of this independence, have better living conditions and better education and health care systems, freedom and dignity. However, the only thing they got was total disappointment. They discovered that their sacrifice was in vain. This fostered the feeling of identity and nationalism, embodied by the Nasser and Baath movements, and then local ethnic movements as a reaction to the disappearance of several entities. These movements later developed into religious movements and new concepts were created, such as jahilia (pre-islam) and God's rule, as an indication of a new nation in which the ruler or the Imam was seen as a representative and successor of God on earth and was, therefore, ruling by divine right.

#### **4. AN EDUCATIONAL SYSTEM WHICH BANNED REASON AND CRITICISM: WHEN ILLITERACY BECAME A MORE MERCIFUL CHOICE**

The allusion here is to the educational systems in the Arab countries, although to varying degrees depending on each country. The mental and intellectual environment that prevailed was one, whose semantic field is full of terms and expressions like "Souls subdued to him", "The sword was unsheathed and the pen got dry", "I see ripe heads which are ready for the harvest". Instead of fostering the belief that "culture and education are weapons, so let's arm our peoples", the different governments struggled to spread ignorance and calcification of the brains of successive generations, hence the frustrating rates of illiteracy. They stuffed school curricula with teaching methods that ran counter to reason, knowledge and development. The outcome of such curricula was an example of man who was nostalgic for the period of cutting bellies open, and tearing eyes out, uprooting noses, cutting off heads in the name of defending Islam; a man who did not believe in sciences and scientists, and hostilely opposed creativity, art and artists. The answer for him to each and every question was very simple: we lost direction when we no longer followed our ancestors' straight path; the solution was, then, to go back to those periods of cleanliness and adopt our ancestors life style, regardless of the changes and developments that have taken place since then. The changes should be adapted to our traditions, rather than we adapting ourselves to the changes. These were the results of educational systems that banned reason and criticism and made learning by heart a priority, reproducing thus the scholar/learner, Cheikh and disciple or follower dichotomy in the educational system. The educational system drove away Espinoza and his rationalism, Descartes and his skepticism, Einstein and his relativity and gave free reign to the hegemony of charlatanism and sheer blind confidence. A narrow centralized identity was promoted to the detriment of the centrality of sciences and the power of knowledge. The result was a series of educated people with no critical thinking, and pseudo-educated people with shallow, superfluous and superficial thinking. These people's main concern was resting at road milestones ((Sayeed Qotb, 1983), worrying about

the punishment of the grave ( Taybi Okacha, 1989) in order not to be said ( Aid Qarni, 2002). For them, exploring the course of the development of sciences between Adam’s apple and Newton’s apple was not worth the trouble. If we knew that despite their illiteracy, our ancestors were tolerant and life loving, can’t we say that illiteracy was better and more merciful?

## **5. THE ISLAM OF BELIEF OR THE ISLAM OF HISTORY?**

People lost direction amidst uncertainty and confusion between Islam as religion and Islam as history. Muslims, therefore, became enchained and shackled by the burden of tradition (legacy) and humans’ opinions and judgments. Interpretations by people like Elghazali, Alachari, Ibn taymimia and Mohamed Ibn Abdelwahhab, inter alia, represented a binding reference and a deterring hindrance from any direct access to the Koran and the Sunna. This confusion became more complex when it was overlaid with the overlapping between Islam as religion and Islam as rule and authority (Caliphate, imamate (leadership), mahdawiya, sheikhdome...). This took place at a time when the West was establishing its systems and institutions based on a creative accumulation and on a productive interaction between people and their environment and thought. Plato dreamed of a Utopian city ruled by men of wisdom (philosophers) and then followed Aristotle, who became conscious of the reality of the Cities-States and the requirements of their rule. Thomas of Aquino then came to renew and reinvigorate the Christian theological thought, before Machiavelli came up with the principle of pragmatism in ruling. It was the beginning of the tug of war to destitute the priesthood from ruling humans in the name of God, especially with the emergence of the works of scholars like Thomas Hobbes, John Locke and Jean Jacques Rousseau. These works signaled the beginning of organized contractual rule, after which Montesquieu concentrated on the spirit of legislation. All this was paralleled by a full scientific renaissance (thanks to the sacrifices of Galileo), an economic renaissance (Bourgeoisie) and intellectual renaissance (the age of enlightenment or the age of reason). The developments resulted in the West creating its modernism, achieving its revolution and declaring the principles of human rights, of course, after breaking with the central rule of the Church in the name of God in favor of the centrality of the individual, of reason and science. Face to this difficult parturition, and while Arabs and Muslims were plunging in the deep slumber under the rule of the Ottoman Caliphate, an elite of this West moved to a world that they called new, but which, in fact, was the West of the West and the master of the West, from whose womb came a strong entity called the United States of America. After self- structuring and laying strong foundations, this strong State went to impose itself on the rest of the world. During the cold war, the term “terrorism” was coined and an alliance was then built with a section of Easterners, who lived in confusion as to their religion and their worldly existence and were ‘made use of’ to fight the apostate enemies in Afghanistan. The story ended as a caricature, where jihadists fought other jihadists. Yesterday’s ally soon turned into the number one enemy worldwide, after the 9/11 attacks. The same scenario took place, with new, but worse staging and directing with the appearance of ISIS and Al Nosra front and other similar factions and death squads. These death legions were presented in the media as a clean and blessed rebellion. This was accompanied by the fuelling of sectarianism due to the tendency of the then dominating media empires to add fuel to the fire. The result was a new version of war between Jihadists and other jihadists.

## **6. DISSENSION/ SEDITION MEDIA AND “MARRIAGE (OR SEXUAL) JIHAD**

A quick shift from official media channels to a full flood of TV channels, a fact which makes questioning its context, causes and purposes legitimate. In the absence of accurate and convincing answers, it is possible to investigate this type of media, the nature of programs and the time span devoted to education, thought, reason and knowledge. The findings of such an investigation will certainly be frustrating and disappointing, especially with regard to news

outlets with programs that not only spread sedition, hate speech and strange fatwas, but also instigated fanaticism, sectarian and doctrinal mobilizing. Humans had no importance whatsoever in these media programs. They became witnesses who committed perjury on what was happening; they also became destruction machines through presenting fake news and fabricated videos and through tailor made 'specialists and analysts', who contributed to a tragic drama, of which the facade was the call for democracy when, in essence, it was a war of interests whose victims were mainly poor and ordinary people. Thus, such media contributed to the legitimization of killings, violence and fanaticism. Instead of inviting real and open-minded scholars and preachers, haunted by humanisms and peace, they opened their doors to pseudo thinkers and preachers who stirred up hatred and promised jihadists that they would have virgins on earth and after death.

## 7. CONCLUSION

This shift came as a result of the fact that nature shuns emptiness and void, and that any revolution or aspired change is supposed to be backed by an idea and a comprehensive social project as well as an inspiring commander. Due to the aforementioned reasons, these conditions could not be satisfied, and advantage was taken of the material and intellectual poverty and deprivation suffered by angry and vengeful people, who, at the beginning thought they were carrying out a revolution. When the fog cleared and the dust settled, they discovered that they were amidst a storm whose strong winds and deep forces were sowed a long time ago, to use Peirre Renouan's (1964) words. The destroyed buildings and infrastructures may be reconstructed and new and modern cities may emerge. However, the beauty of the stones can never hide the truth of this dangerous social fissure. In this respect, El Moatassim (2008: 25-30) was so deep and right when he ascribed the weakness of the southern bank of the Mediterranean Sea to three main reasons, namely decline, scars of colonization and the humiliation of defeat. If ISIS has been defeated militarily, the thoughts, ideas and seeds that led to its emergence are still there. Even worse, this phenomenon of violence is likely to emerge again in more extremist, violent and barbaric forms. Hence, the importance of the subject is that it does not examine whether this phenomenon has disappeared and put an end to or not, but focuses more on the possibility of its disappearance as physical humans as well the possibility of its resurrection as long as it still exists as ideas and as the thought constructs that have first spawned such ideas and such thought constructs.

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## IMPACT OF THE ORGANIZATION OF THE ASSOCIATION OF COMPANIES ON THE ECONOMY OF ITS PARTICIPANTS

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### ABSTRACT

*The paper deals with the functioning of the association of companies in the civil engineering and its impacts on particular participants within their economic results. The association of companies represents the kind of the co-operation, where there are associated at least two participants. This type of company is founded mainly for a purpose of the participation in the tender procedure. In the frame of its working there must be assessed contractual conditions between parties, which are connected not only with the organization, but also with the financial conditions (the share on revenues and costs of particular participants within the association of companies). The objective of the paper is to describe the functioning of the association of companies in civil engineering and on the case study to demonstrate the influence of functioning of the association of companies on economic results of particular participants. The case study will come out from the zero (real) variant, which will be supplemented with next models characterizing different variants of the financial management of the association of companies with impacts on particular participants. Results of the case study will be commented within the total conclusions.*

**Keywords:** *association of companies, construction companies, financial management*

### 1. INTRODUCTION

At present time it is more and more usual to enter the tendering procedures in the position of the supplier not only as a construction company itself but also as an associations of companies. The association of companies introduces the connection of two or more partners, which can bring into this type of co-operation e.g. technological advantages, capacity benefits or it could be only purpose connection of construction companies from the reason of the fulfilment of conditions of the tendering procedure. During the foundation of the association of companies it is very important the determination of contractual conditions. These contractual conditions are connected mainly with the organization of the association itself. It concerns mainly about the determination of the leading participant of the association, the determination of the form of the association, the dividing of the volumes of work, the determination of way of communication between participant or in the face of external companies, the way of accounting and the circulation of documents and mainly the determination of shares on the financial participation on costs and revenues of the association. From the point of view of the financial management it is the most important to agree the percentage shares of the financial participation on costs and revenues connected with the construction order. The objective of the paper is to point out the impact, which is caused by the financial participation on costs and revenues, on the economy of participants within the association of companies.

## 2. LITERATURE REVIEW

General principles of the financial management of the company are dealt in the monograph (Valach, 1999). This issue is consequently in detailed accent on modern methods and trend solved in the monograph (Nývtlová, Marinič, 2010). The economic evaluation used to be very often based on the cash-flow analysis. This issue in the area of the liquidity of the company and the planning of cash flows is described in the monograph (Sedláček, 2010). As mentioned in the monograph (Kubičková, Jindřichovská, 2015), when the performance and the competitive ability are given to the equality, the company must disposal with adequate tools, which diagnose and indicate the reliability of the company and serve to the comparison of the real situation of the company on the market. One of ways of the increase of the competitive ability is the establishment of the association of companies, which consequently disposes with competitive advantages of all participating subjects. The paper is focused on the area of the co-operation in the frame of the construction engineering. The professional literature in not interested in the issue of the association of companies a lot, it is oriented more on the financial management of construction companies (Antošová, 2016) and the assessment of the performance of construction companies (Horta, Camanho, Moreira da Costa, 2012). The development of key financial performance indicators for construction companies in the environment of Great Britain is in detail solved in the publication (Hegazy, Hegazy, 2012). Siew, Balatbat and Carmichael in their publication (Siew, Balatbat, Carmichael, 2013) describe the relationship between sustainable practices and financial performance of construction companies. Financial management of the construction projects is the subject of the paper (Purnus, Bodea, 2015).

## 3. METHODOLOGY

The methodology of the research can be divided into two parts. The first part is focused on the description of the functioning of the relation between participants within the association of companies and the working of the relation between the association of companies versus suppliers of construction works, materials and services. The second part of the research is oriented on the modelling of costs and revenues of the partial subject as a participant of the association of companies and concurrently as a supplier of construction works, materials and services. At present time it is possible within the public procurement to see the trend of the establishment of associations of more construction companies. The association of companies used to be usual mainly in the case of bigger construction orders in the sense of the range and the volume of delivered works and can be founded due to:

- needed references in the public procurement,
- the requirement of the contractor to carry out the certain amount of works with own capacities,
- the decrease of risks,
- the elimination of the competition,
- the technical qualification and the professional competence in the sense of the law about the public procurement,
- future references.

The partnership within the association of companies is based on the definition of conditions in the Contract on the association of companies. This contract usually defines following points:

- contract parties,
- the purpose of the contract,
- the name and the seat of the association of companies,
- the purpose of the association of companies,
- the leading member of the association of companies,



- contributions of participants of the association of companies,
- principles of the co-operation of participants of the association of companies,
- common selection of sub-suppliers,
- the foundation and the end of the association of companies, the end of the participation in the association of companies,
- the bank account of the association of companies,
- the interdict of the competition.

The paper is focused mainly on the evaluation of the financial impact on the participant of the association of companies within economic activities of the association of companies. It is necessary to focus mainly on the redistribution of the economic result of the association of companies among particular participants. The economic result comes out from the activity of the association of companies. In the frame of this activity there arise revenues of this organization, which are mostly displayed on investor invoices. The invoice is usually completed by the job logging to prove the works carried out. Revenues can be expressed as outputs in monetary units. Within the activity of the association of companies costs also arise. Costs can be defined as a consumption of particular production factors. Based on the percent share defined in the contract on the association of companies, particular members of the association of companies participate in the economic activity, thus revenues and costs. Mentioned percent share is defined for purposes of the assessment of the share on revenues and costs and does not have any direct connection with amount of works carried out by partial participants. Basic theoretical steps consist in the modelling and testing of variants of the share between two participants of the association of companies and its impact on partial participants of the association of companies within the case study. The modelling and testing of variants between two participants of the association of companies is based on the sensitivity analysis. Sensitivity analysis is a way to predict the outcome of a decision, if a situation turns out to be different compared to the key prediction (Sakaguchi, Kodama, 2009). The sensitivity analysis is related to determining how much investment must be made in order to bring an implementation of the scenarios back to the base line values (Bowling, Rabadi, Khasawneh, Shearer, 2013).

#### **4. RESULTS**

The case study is focused on the financial management of the association of two participants, which was founded for the purpose of the realization of the construction "Additional building of laboratories and computer centre". The case study proceeds in the following two steps:

- the characteristic of the zero variant (real state according to the Contract on the association),
- the determination of particular variants differing in the agreed financial shares of the participants.

##### **4.1. Characteristic of the zero variant**

Within the Contract of association there were agreed conditions of financial shares of particular participants of the association of companies. The basic share among participants of the association of companies (Company A and Company B) is 51 %: 49 %. The financial share on the economic result of the association of companies of particular participants is displayed in following table 1.

*Table following on the next page*

*Table 1: Financial contribution on economic result (own elaboration)*

Month	Revenues (CZK)	Costs (CZK)	Economic Result (CZK)	Company A (CZK)	Company B (CZK)
April 2012	433,125	879,653	-446,528	-227,729	-218,799
May 2012	380,745	834,344	-453,599	-231,335	-222,263
June 2012	369,587	824,693	-455,106	-232,104	-223,002
Totally	1,183,457	2,538,690	-1,355,233	<b>-691,169</b>	<b>-664,064</b>

*Note: 1 € = 26.50 CZK*

Both participants of the association of companies are suppliers of construction works within the solved construction order. Their overhead costs, which were agreed in the contractual conditions (see Contract on the association) in relation to the construction order, are displayed in the table 2.

*Table 2: Agreed overhead costs of participants of association (own elaboration)*

Month	Company A (CZK)	Company B (CZK)
April 2012	429,331	75,000
May 2012	429,331	75,000
June 2012	429,331	75,000
Totally	<b>1,287,993</b>	<b>225,000</b>

*Note: 1 € = 26.50 CZK*

In the table 3 there are displayed real overhead costs of particular participants of the association of companies.

*Table 3: Real overhead costs of participants of association (own elaboration)*

Month	Company A (CZK)	Company B (CZK)
April 2012	281,331	80,000
May 2012	281,331	80,000
June 2012	281,331	80,000
Totally	<b>843,993</b>	<b>240,000</b>

*Note: 1 € = 26.50 CZK*

In the table 4 there is displayed additional economic result, which presents the saving (or the loss) caused by the difference between agreed overhead costs (invoiced to the association by particular participants) and real overhead costs of particular participants.

*Table 4: Additional economic result of participants of association (own elaboration)*

Month	Company A (CZK)	Company B (CZK)
April 2012	148,000	-5,000
May 2012	148,000	-5,000
June 2012	148,000	-5,000
Totally	<b>444,000</b>	<b>-15,000</b>

*Note: 1 € = 26.50 CZK*

The real economic result expressing the impact of the organization of the association of companies on the economy of particular participants within the financial management is displayed in the table 5.

*Table 5: Real economic result of participants of association (own elaboration)*

Month	Company A (CZK)	Company B (CZK)
April 2012	-79,729	-223,799
May 2012	-83,335	-227,264
June 2012	-84,104	-228,002
Totally	<b>-247,169</b>	<b>-679,064</b>

*Note: 1 € = 26.50 CZK*

From information mentioned above is evident that regarding the setting of financial shares of participants of the association of companies, which are agreed in the Contract on the association, and regarding agreed overhead costs of participants, the real overhead costs are the most important from the aspect of the impact on the economy of particular participants. From presented tables is evident that the Company A, which should contribute on the loss with the amount of 691,169 CZK, following its financial management finally contributes with the amount 247,169 CZK, what is 64.24 % less. The Company B should contribute on the loss with the amount of 664,064 CZK, following its financial management it finally contributes with the amount 679,064 CZK, what is 2.26 % more.

#### **4.2. Determination of particular variants**

To be able to evaluate impact of the organization of the association of companies on the economy of particular participants within the financial management, there were elaborated particular model examples. Model examples are based on the sensitivity analysis. These models include changes in financial shares of particular participants of the association, which are in all cases defined in the Contract on the association. In the case study there were taken into account following four variants:

- financial share Company A: Company B, 60:40,
- financial share Company A: Company B, 80:20,
- financial share Company A: Company B, 40:60,
- financial share Company A: Company B, 20:80.

In the table 6 there are displayed financial shares on the economic result of the association in the case of the 1<sup>st</sup> variant, the financial share 60:40.

*Table 6: 1<sup>st</sup> variant – Financial contribution on economic result (own elaboration)*

Month	Revenues (CZK)	Costs (CZK)	Economic Result (CZK)	Company A (CZK)	Company B (CZK)
April 2012	433,125	879,653	-446,528	-267,917	-178,611
May 2012	380,745	834,344	-453,599	-272,159	-181,440
June 2012	369,587	824,693	-455,106	-273,064	-182,042
Totally	1,183,457	2,538,690	-1,355,233	<b>-813,140</b>	<b>-542,093</b>

*Note: 1 € = 26.50 CZK*

The real economic result expressing the impact of the organization of the association on the economy of particular participants within the financial management in the case of the 1<sup>st</sup> variant is displayed in the table 7.

*Table following on the next page*

*Table 7: 1<sup>st</sup> variant - Real economic result of participants of association (own elaboration)*

Month	Company A (CZK)	Company B (CZK)
April 2012	-119,917	-183,611
May 2012	-124,159	-186,440
June 2012	-125,064	-187,042
<b>Totally</b>	<b>-369,140</b>	<b>-557,093</b>

*Note: 1 € = 26.50 CZK*

From presented tables is evident that the Company A, which should contribute on the loss with the amount of 813,140 CZK, following its financial management finally contributes with the amount 369,140 CZK, what is 54.60 % less. The Company B should contribute on the loss with the amount of 542,093 CZK, following its financial management it finally contributes with the amount 557,093 CZK, what is 2.77 % more.

In the table 8 there are displayed financial shares on the economic result of the association in the case of the 2<sup>nd</sup> variant, the financial share 80:20.

*Table 8: 2<sup>nd</sup> variant - Financial contribution on economic result (own elaboration)*

Month	Revenues (CZK)	Costs (CZK)	Economic Result (CZK)	Company A (CZK)	Company B (CZK)
April 2012	433,125	879,653	-446,528	-357,222	-89,306
May 2012	380,745	834,344	-453,599	-362,879	-90,720
June 2012	369,587	824,693	-455,106	-364,085	-91,021
<b>Totally</b>	<b>1,183,457</b>	<b>2,538,690</b>	<b>-1,355,233</b>	<b>-1,084,186</b>	<b>-271,047</b>

*Note: 1 € = 26.50 CZK*

The real economic result expressing the impact of the organization of the association on the economy of particular participants within the financial management in the case of the 2<sup>nd</sup> variant is displayed in the table 9.

*Table 9: 2<sup>nd</sup> variant - Real economic result of participants of association (own elaboration)*

Month	Company A (CZK)	Company B (CZK)
April 2012	-209,222	-94,306
May 2012	-214,879	-95,720
June 2012	-216,085	-96,021
<b>Totally</b>	<b>-640,186</b>	<b>-286,047</b>

*Note: 1 € = 26.50 CZK*

From presented tables is evident that the Company A, which should contribute on the loss with the amount of 1,084,186 CZK, following its financial management finally contributes with the amount 640,186 CZK, what is 40.95 % less. The Company B should contribute on the loss with the amount of 271,047 CZK, following its financial management it finally contributes with the amount 286,047 CZK, what is 5.53 % more. In the table 10 there are displayed financial shares on the economic result of the association in the case of the 3<sup>rd</sup> variant, the financial share 40:60.

*Table following on the next page*

*Table 10: 3<sup>rd</sup> variant - Financial contribution on economic result (own elaboration)*

Month	Revenues (CZK)	Costs (CZK)	Economic Result (CZK)	Company A (CZK)	Company B (CZK)
April 2012	433,125	879,653	-446,528	-178,611	-267,917
May 2012	380,745	834,344	-453,599	-181,440	-272,159
June 2012	369,587	824,693	-455,106	-182,042	-273,064
Totally	1,183,457	2,538,690	-1,355,233	<b>-542,093</b>	<b>-813,140</b>

*Note: 1 € = 26.50 CZK*

The real economic result expressing the impact of the organization of the association on the economy of particular participants within the financial management in the case of the 3<sup>rd</sup> variant is displayed in the table 11.

*Table 11: 3<sup>rd</sup> variant - Real economic result of participants of association (own elaboration)*

Month	Company A (CZK)	Company B (CZK)
April 2012	-30,611	-272,917
May 2012	-33,440	-277,159
June 2012	-34,042	-278,064
Totally	<b>-98,093</b>	<b>-828,140</b>

*Note: 1 € = 26.50 CZK*

From presented tables is evident that the Company A, which should contribute on the loss with the amount of 542,093 CZK, following its financial management finally contributes with the amount 98,093 CZK, what is 81.90 % less. The Company B should contribute on the loss with the amount of 813,140 CZK, following its financial management it finally contributes with the amount 828,140 CZK, what is 1.84 % more. In the table 12 there are displayed financial shares on the economic result of the association in the case of the 4<sup>th</sup> variant, the financial share 20:80.

*Table 12: 4<sup>th</sup> variant - Financial contribution on economic result (own elaboration)*

Month	Revenues (CZK)	Costs (CZK)	Economic Result (CZK)	Company A (CZK)	Company B (CZK)
April 2012	433,125	879,653	-446,528	-89,306	-357,222
May 2012	380,745	834,344	-453,599	-90,720	-362,879
June 2012	369,587	824,693	-455,106	-91,021	-364,085
Totally	1,183,457	2,538,690	-1,355,233	<b>-271,047</b>	<b>-1,084,186</b>

*Note: 1 € = 26.50 CZK*

The real economic result expressing the impact of the organization of the association on the economy of particular participants within the financial management in the case of the 4<sup>th</sup> variant is displayed in the table 13.

*Table following on the next page*

Table 13: 4<sup>th</sup> variant - Real economic result of participants of association (own elaboration)

Month	Company A (CZK)	Company B (CZK)
April 2012	58,694	-362,222
May 2012	57,280	-367,879
June 2012	56,979	-369,085
Totally	<b>172,953</b>	<b>-1,099,186</b>

Note: 1 € = 26.50 CZK

From presented tables is evident that the Company A, which should contribute on the loss with the amount of 271,047 CZK, following its financial management finally contributes with the amount - 172,953(the Company A achieved positive economic result) CZK, what is 163.81 % less. The Company B should contribute on the loss with the amount of 1,084,186 CZK, following its financial management it finally contributes with the amount 1,099,186 CZK, what is 1.38 % more.

## 5. DISCUSSION

Model cases took into account three basic criteria:

- change of the financial share of participants on the economic result of the association,
- constant agreed overheads costs of participants of association,
- constant real overheads costs of participants of association.

Based on the sensitivity analysis there were worked out four variants, which reacted on the change of the financial share of particular participants of the association and in each of variants there were monitored the impact on the economy of participants caused by the change of the financial shares on the economic result of the association.

In the case of the Company A following changes thanks to modelling were detected:

- if at the Company A the financial share on the economic result of the association arises, then due to this influence finally the loss arises as well,
- increase of the loss at the Company A due the increase of the financial share on the economic result of the association is not linear,
- rate between the value of the economic result of the Company A and the value of the financial share of the Company A on the economic result of the association is in the zero variant 35.76 %,
- the rate is non-linearly changing depending on the change of the financial share, at 1<sup>st</sup> variant, comparing to zero variant, is the increase 9.64 percentage points, at 2<sup>nd</sup> variant, comparing to zero variant, is the increase 23.29 percentage points, at 3<sup>rd</sup> variant, comparing to zero variant, is the decrease 17.64 percentage points and at 4<sup>th</sup> variant, comparing to zero variant, is the decrease nearly 100 percentage points.

In the case of the Company B following changes thanks to modelling were detected:

- if at the Company B the financial share on the economic result of the association arises, then due to this influence finally the loss arises as well,
- rate between the value of the economic result of the Company B and the value of the financial share of the Company B on the economic result of the association is in the zero variant 102.26 %,
- the rate is non-linearly changing depending on the change of the financial share, at 1<sup>st</sup> variant, comparing to zero variant, is the increase 0.51 percentage points, at 2<sup>nd</sup> variant, comparing to zero variant, is the increase 3.28 percentage points, at 3<sup>rd</sup> variant,

comparing to zero variant, is the decrease 0.41 percentage points and at 4<sup>th</sup> variant, comparing to zero variant, is the decrease nearly 0.88 percentage points.

## 6. CONSLUSION

The paper is focused on the issue of the impact of the realization of the construction order in the form of the association of companies on its particular participants. Mainly the issue of the setting of percentage shares of the financial participation of partners on costs and revenues of the construction order is solved. The objective of the paper was to point out the impact, which is induced by the financial sharing of costs and the economic result of the association. The impact is presented on the case study of the construction order carried out by the association with two partners – the Company A and the Company B. The basis of the case study is the analysis of the zero variant, where there are firstly assessed economic results of particular participants in the association depending on agreed financial shares. In next steps there are consequently taken into account overhead costs officially presented by participants of the association and compared with costs really achieved. In the last step there are considered differences between overhead costs in economic results of particular participants within the association. From the zero variant there are consequently derived four variants differing in financial shares of particular participants. Results of particular variants are elaborated in tables in the chapter Results and commented in the chapter Discussion. From results of the case study is evident that in the case of the realization of the construction order in the form of the association it is for participants very important the setting of financial shares on revenues and costs of the association, which should reflect mainly amount of construction works carried out by particular participants and expected overhead costs of particular participants.

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## INNOVATIONS AND SAFETY IN PASSENGER RAILWAY TRANSPORT - THE TRAVELERS' PERSPECTIVE

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### ABSTRACT

*Rail transport is particularly demanding when it comes to safety of passengers and cargo. Ensuring adequate security would not be possible without the implementation of various innovations related to fire risk prevention, communication between train staff and passengers, or the functioning of the train itself. The purpose of this article is to determine the scope of innovation on the example of EN57 and ED78 vehicles, as well as to get to know travelers' opinions on modifications introduced on trains. The methodology applied included an in-depth interview with a railway expert, plus a survey of 115 passengers, as well as an analysis of secondary statistical data on safety of passenger rail transport. The results of the analyses show that passenger trains have changed a lot, and the introduced changes concern both the aesthetics of vehicles, amenities for travelers, and innovations that affect the safety of travel. Travelers' opinions also confirm that passenger transport has undergone a major metamorphosis, but passengers do not notice many of the changes related to safety; this should be attributed to carriers' insufficient communication about innovations, and consequently in building a positive image of the company and rail transport as such.*

**Keywords:** competitiveness, electric multiple units, passenger transport, railway development

### 1. INTRODUCTION

Railway transport has existed since antiquity, although not everyone is aware of it. Initially, it was associated only with industrial transport, e.g. to relocate minerals. Naturally, first tracks were made of wood, not iron. The creation of the railway – understood as means of transport on iron tracks – was initiated in England during the first Industrial Revolution, in the 18th century (Myszczyzyn, 2010). Since then, the railway industry has been experiencing constant development, both organizationally and technically. Rail transport is particularly demanding when it comes to safety of cargo and passengers (<https://www.utk.gov.pl>). Therefore, the guidelines of the Polish Rail Transport Office clearly stress that '(...) every entity operating in the railway business should maintain and increase the level of security as part of its operations' (<https://www.utk.gov.pl>). It should be noted that transport safety is not only dependent on carriers, but also on entities responsible for infrastructure maintenance, manufacturers of the rolling stock and railway equipment, and even certification bodies and scientific units. Safety development would not be possible without implementing broadly understood innovations. For these innovations to be implemented, the managers must not only possess certain technical knowledge, but also know the skills of company staff and have legal, technological and marketing knowledge (Sindakis, Depeige and Anoyrkati, 2015, pp. 559-578; Baruk, 2012, pp. 14-17). Thus, the process of implementing innovation is multi-faceted and depends on many factors. Innovativeness and modernity of a company can be the basis of competitive advantage, because they help achieve better competitiveness by focusing on quality and innovative solutions for clients (Romanowska 2015, p. 7). But at the same time, they must be emphasized in promotional activities. Innovations change the way railway services are provided, and thus

shape the safety of employees and passengers, as well as create carrier's image. Therefore, this article addresses the issue of implementing safety-related innovations and the perception of safety by passengers. We also want to point out to the unused chances – in our view – of shaping a good image of Przewozy Regionalne (Regional Transport Company), whose vehicles were analyzed in terms of the implemented innovations. So, this article is devoted to the above mentioned issues, and we place here the thesis that railway companies in Poland have developed in a wide range, however passengers cannot point to many innovations which results from the lack of information about the changes being made.

## **2. INNOVATIONS IN THE LITERATURE**

Innovations are defined – as Kalinowski says (2010, p.18) among others – as any positive change put to practice, which is considered 'new' from the point of view of the organization which introduces the innovation. Innovations in transport may lead to intelligent transport systems, i.e. systems which use IT to inform, monitor, control or charge the traveller, or provide him with services, such as pre-booking (Bonsall, 2007). Research of Sindakis, Depeige and Anoyrkati (2015) show, that the development of innovations and technologies in the transport sector requires knowledge management practices, which enable the access to knowledge about users' needs, so connection innovation-user is essential. Of course new services design and development are difficult to plan, execute, measure and evaluate (Narayanaswami, 2017), but lately industrial marketing is improving and transport is being better sold because of competitive challenge, and because of consumer and technology-led changes. Despite the fact that implementing innovations is a complicated process (Lin, Chen & Su, 2017), not only the satisfaction of travelers, but also their safety depends on their presence. Increasing expectations of passengers force railway companies to modernize the entire infrastructure and rolling stock, which translates into more reliable transport services, travelling longer distances in a shorter time, more comfortable conditions, and various additional services. All this is associated with the introduction of innovation. As noted by Janasz (2016, p. 31), nowadays, a permanent change is necessary.

## **3. RESEARCH METHODS**

Innovations are an immanent part of every branch of transport, including rail passenger one. However, it seems that the average traveler is not able to notice some of these introduced changes. Hence, our goal is two-fold:

- 1) to determine the range of innovations introduced in recent years in railway vehicles used for transporting passengers, with the example of EN57 and ED78 vehicles;
- 2) to determine whether passengers notice these innovations and how they evaluate them.

The methodology applied included an in-depth interview with a railway expert, a survey of 115 passengers, as well as an analysis of secondary statistical data on safety of passenger rail transport.

## **4. PASSENGER RAIL TRANSPORT IN POLAND - CHARACTERISTICS**

Railway transport began to develop in the present area of Poland in the 19th century on the initiative of the economic circles of Silesia. Thanks to them, the first railway line was opened in 1842 (Golik, 2016). Three years later, the first Warsaw-Grodzisk line started to operate in Mazowieckie voivodships. According to the Central Statistical Office (Transport. Wyniki ..., 2016, p. 92), currently railway lines used in Poland have a total length of 19,132 km (as of 31 December 2016). The longest tracks are in Silesian voivodship (1,964 km), followed by Wielkopolskie and Mazowieckie voivodships. 1814 electric locomotives, 2190 diesel and 1223 eclectic traction units, along with 87,598 freight wagons and 6,975 passenger cars, including

wagons for transporting passengers and wagons in traction units, are used (Transport. Wyniki..., 2016, p. 95). Rail transport is the second means of transport (after the car) that carries the largest number of passengers (Figure 1). In 2016 in Poland, 291,981 passengers were transported by rail, including only 1,143 in international transport (0.4%); hence, passenger rail transport focuses mainly on domestic transport, which is illustrated in Fig. 1. In rail transport, a potential accident may endanger passengers, their property and employees. Due to the use of modern technologies (control, communication), the risks may also be related to cyberspace. Thus, the issue of safety in rail transport – as already mentioned – is both very wide and extremely important (Savage, 2001, pp. 229 - 240).

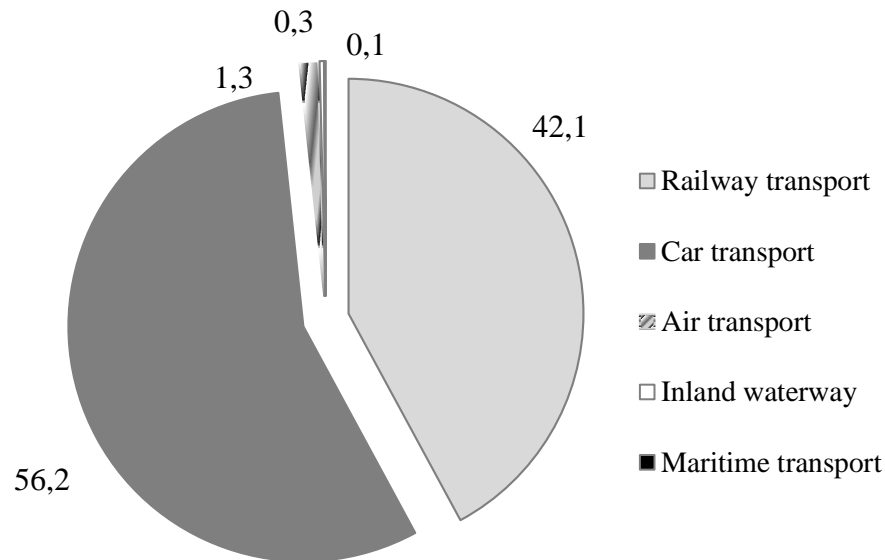


Figure 1: Passenger transport by type of transport in 2016 [in %] (Transport. Wyniki działalności w 2016, Warsaw: GUS, p. 92)

Investigations into accidents in Poland are carried out by the State Commission on Railway Accident Investigation, acting on behalf of the Minister responsible for transport (currently, the Ministry of Infrastructure and Construction). In the 2016 Commission's report, the total of 1,543 railway incidents were reported and registered, including two serious accidents, 688 accidents and 853 incidents<sup>1</sup> (Raport roczny..., 2016, p. 11). The total number of accidents in rail transport in 2010-2016 is shown in Fig. 2, while Fig. 3 shows data concerning injured persons. It can be noticed that accidents may be caused by internal factors (e.g. the condition of the rolling stock) and conditions related to the transportation system (e.g. suicides); therefore, railway services cannot always anticipate and counteract these accidents. Luckily – as shown by statistical data – the number of railway accidents and the number of injured persons is decreasing. However, railway accidents do occur on daily basis, and their effects are felt both by companies involved in transport, as well as by employees and passenger, which is why innovations improving the safety of rail transport are so vital.

<sup>1</sup> Serious accident – an accident caused by a collision, train derailment or other similar event, with at least one fatality or at least five seriously injured persons, or causing a significant destruction of the railway vehicle; 2) Accident – an event or sequence of events involving a railway vehicle causing negative consequences for human health, property or the environment; 3) Incident – any event other than an accident or serious accident related to train traffic and affecting its safety. Source: Raport roczny..., p. 10, 11.

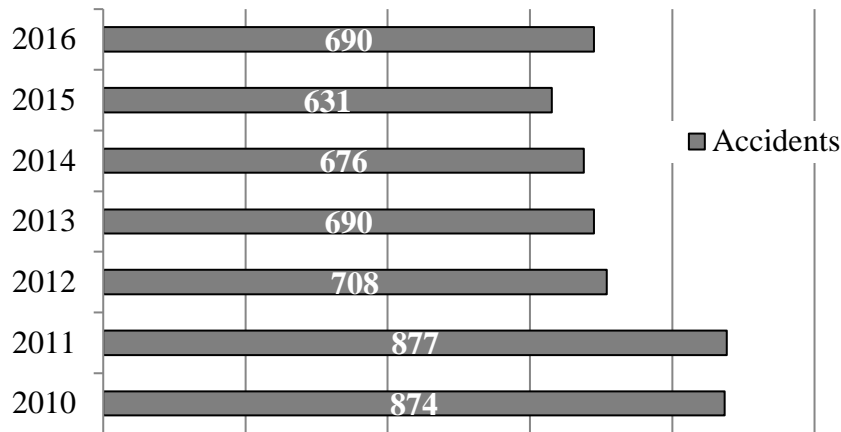


Figure 2: Number of accidents in rail transport in 2010-2016\* (own study based on the annual reports of the State Committee on Railway Accident Investigation, Retrieved from <http://mib.gov.pl/2-Raporty.htm> (2.07.2018))

\* No data for 2017

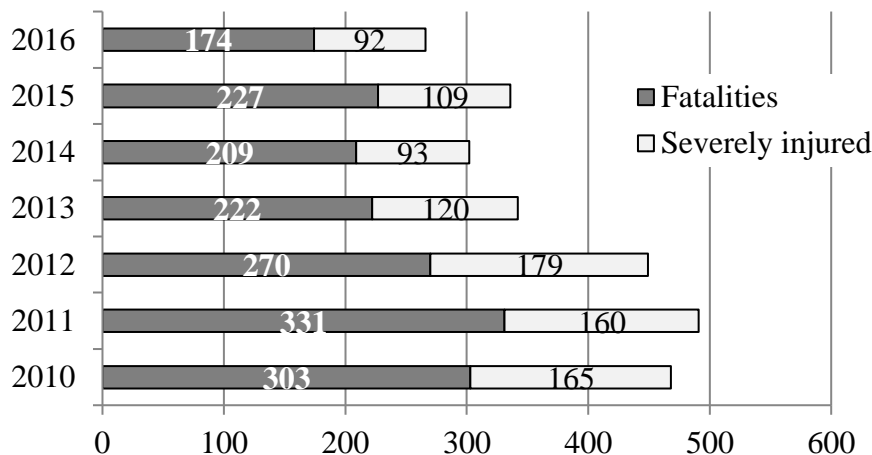


Figure 3: Persons injured in railway accidents in 2010-2016\* (own study based on the annual reports of the State Committee on Railway Accident Investigation, Retrieved from <http://mib.gov.pl/2-Raporty.htm> (2.07.2018)).

\* No data for 2017

Even the simple observation – a so-called reality check – leads to the conclusion that certain areas are inherently less susceptible to innovation (e.g. mining industry) than others (e.g. IT industry). The explosion of innovations related to modern technologies, including software, with a relatively moderate development of innovation, for example in opencast mining, is therefore not caused solely by the greater or lesser innovativeness of the people employed in these industries. Rail transport may be treated as prone to innovations for several reasons. First of all, railway operations require advanced infrastructure, consisting of railway lines, stations, stops, traffic posts, marshalling yards, railway traffic control devices, power supply, etc. (Koźlak, 2008, p. 34). Therefore, the variety of railway infrastructure offers enormous opportunities for innovation. Secondly, advanced rolling stock is required, which is divided into normal and special rolling stock (Obwieszczenie Ministra..., 2015):

- a) Normal rolling stock is understood as railway vehicles adapted to run as part of a regular train, intended for the carriage of persons and goods. In particular, these are: 1) all types of locomotives, multiple units and other motor vehicles, called traction vehicles; 2) passenger

and cargo wagons, including semi-trailers on railway bogies, each of which is treated as a separate wagon.

- b) Special rolling stock are railway vehicles intended in particular for renovation, construction or rescue works, whose construction allows for self-driving or being included into a train; there need to obey certain conditions concerning, in particular, the location of the vehicle in the train composition and the speed of travel.

If the company wants to be successful, it should strive to set a forward-looking strategy that will anticipate likely changes in the environment and formulate strategies to gain competitive advantage. Certainly, modern railway transport vehicles are very technologically advanced: they have different systems for more economical use, offer less unreliability, plus ensure a higher comfort and safety for passengers (later in the article the solutions used in EN57 and ED78 vehicles are discussed). It should be added that an innovation-centered audit may be very helpful to recognize the potential of innovations in rail transport. According to S. Olko (2017, p. 39), the innovation audit follows no standard pattern, as it results from the adopted concept of innovation management. However, it may be used to examine the organization's innovative capabilities. The aim of the internal audit is, therefore, to indicate innovative areas and ultimately bring the organization to a higher level. The internal audit should help achieve company goals through permanent activities aimed at assessing and improving the efficiency of the organization management processes. In case of rail transport, such an audit may indicate areas which should be improved in order to offer more varied, efficient and safe transport services. To certain extent, the division of transport services implies the kind of innovation. It may be seen that to some extent they may be common to all means of transport; however, there will also be innovations that are specific to just one type (e.g. cargo transport). In the further part of this paper, attention will be paid to innovations in passenger railway transport. It may be said that an audit is an interlude to innovativeness. Ultimately, innovative rail transport companies should be able to create innovations, implement them in continuous manner and provide increasingly modern and safe services. In addition, they should employ creative staff and provide them with development opportunities: they should acquire, collect and use knowledge resources; they should conduct research and development; they should cooperate with the local communities, including clients in order to get to know their expectations and needs (Sopińska, Wachowiak, 2016, pp. 18-19). It should be emphasized once again that innovativeness is a chance to gain a competitive advantage and more stability for the enterprise on a demanding market.

## **5. ELECTRIC MULTIPLE UNIT AS A TRACTION VEHICLE**

The rolling stock used in rail transport may be classified from different points of view. One of the basic criteria is its intended use: for transporting goods/people (or universal use), or for construction and renovation works. Additionally, these may be stand-alone vehicles or ones included into a train-set. An example of a rolling stock designed for transporting people are traction units, i.e. vehicles consisting of several wagons, equipped at both ends with control cabins (Słownik pojęć, 2014, p. 7). Traction units (electric or diesel) are most often used in urban and suburban traffic. The first electric traction unit appeared in Berlin in 1900. It was powered by the so-called third rail and reached a speed of 55 km/h. In 1914, however, vehicles powered from the overhead network emerged, which then reached a maximum speed of 70 km/h. In Poland, the first traction units powered from the overhead power grid began to be manufactured in 1936. The longest-produced vehicle of this type was EN 57 – it was produced in the years 1961-1993 (Photo 1). In 1993, the production of long-distance ED units (Photo 2) began, which are now gradually replacing the EN series. Modern traction units are intended for agglomeration and regional traffic.

They have 208 seats (spread across 4 units) and can reach speeds of up to 160 km/h. They are equipped with hermetic toilets with a closed water circulation system and are adapted to the needs of the disabled. Finally, they have ergonomic desktops and armchairs, as well as air conditioning and Wi-Fi connectivity. Currently, such traction units are manufactured in Bydgoszcz (Pesa), Nowy Sącz (Newag), Siedlce (Stadler) and in Chorzów (Alstom Konstal).



*Photo 1. The electric traction unit EN 57 (Retrieved on 29.06.2018 from <https://bialy65.flog.pl/archiwum/tag/wroclawglowny>)*



*Photo 2. Electric multiple unit ED 78 (Retrieved on 29.06.2018 from <https://bartmeces.flog.pl/wpis/11043922/ed78009-regio-88322-do-swinoujscia--30--04-2016--szczecin-glowny>)*

## **6. THE ANALYSIS OF INTRODUCED INNOVATIONS BASED ON EN57 AND ED78 VEHICLES**

Innovations are an essential part of every branch of transport, including passenger rail transport. However, it seems that a large part of the introduced changes goes unnoticed by the average passenger because they either are not aware of their presence, or the innovations appear gradually and are taken for granted. Thus, the aim of this paper is to determine the range of innovations introduced in recent years in railway vehicles used for transporting passengers, using the example of EN57 and ED78 vehicles. Based on the conducted in-depth interview with a railway expert, a list of safety-related differences between the said vehicles was prepared (Table 1).

*Table following on the next page*

*Table 1: Differences between EN57 and ED78 (own study based on an in-depth interview)*

No.	Feature	EN57	ED78
1.	Monitoring	No	Cameras placed on the train
2.	Fire hazard	Fire extinguishers	Automatic detection + fire extinguishers
3.	Communication between the driver and passengers	No	The driver can inform the passengers about the dangers through the loudspeaker system
4.	Communications between passengers and the driver	No	Intercom – a communication system for passengers in the vestibules
5.	Supported wheel track adhesion	No	Sandboxes – sand-spreading improves traction (prevents slipping) Anti-slip devices regulating the braking intensity Cleaning blocks removing dirt from wheels
6.	The construction of the train's forehead	Flat – the driver and the conductor team near the event	Elongated forehead of the train - the front absorbs the effects of impact (so-called absorbers)
7.	Heating	Conventional radiators under plastic seats; No air conditioning	Blow-heating system, not reaching high temperatures; Air conditioning
8.	Windscreens	Tempered glass – on impact, the glass breaks into pieces	Double-layer glued glass – the layer on the inside of the vehicle remains intact
9.	Windshield wipers on the forehead of the train	Pneumatic drive, unreliable	Electric drive, with adjustable speed
10.	Lights on the forehead of the train	Headlights with two options - full and dim light	LED lights – brighter, smooth regulation of intensity
11.	Mirrors for observing the platform	Side mirrors for the driver, non-movable (prone to dirt, damage)	Movable mirrors – they hide when the door is closed; adjustable angle of inclination
12.	Ingress-egress	The door could be opened by the passenger while the train was on the move; The steps under the door were immovable; The door could close, even though the passenger was still on the steps The train could move with the door open	The doors are blocked while the train is on the move – they cannot be opened; The steps under the door are movable – they extend when the train stops; The train cannot start to move with the door open; Each door has a separate (audible) closing signal
13.	Lighting inside the vehicle	Constant fluorescent light	Various lighting options with graded intensity
14.	Features for the disabled	No	Movable platforms for wheelchairs; in the wagons, the straps to secure the passenger on a wheelchair while the train is on the move; toilets for the disabled

The differences indicated in the table show how the vehicles have changed in recent years. Naturally, changes related to aesthetics and comfort of travel are the most important to the passengers, but other changes that are more difficult to notice, are also vital. These include monitoring and communication between passengers and the driver through the so-called Intercom, door lock while the train is on the move, or movable mirrors which allow for better observation of the platform and passengers. Even Wi-Fi, seen by passengers as a private communication channel, may in fact be used for quick communication with security services. The modified design of the train is also noteworthy, as it allows for absorbing potential collisions, while sandboxes support safe braking, especially in autumn and winter.

Thus, many changes were introduced, but among the 14 features listed in Tab. 1, only 5 (36%) were noticed by passengers. This means that majority of innovations relevant to passenger safety (such as automatic fire detection or door-locking while the train is on the move) go unnoticed.

## 7. TRAVEL SAFETY IN PASSENGERS' OPINION

In order to determine whether passengers notice innovations in trains (and how they evaluate them), a survey was used to ask 115 people who declared traveling by trains. They were asked whether train travel had changed, what they thought about the introduced changes, and whether rail travel was safe. The subject group consisted of 77 women and 38 men; the average age was 29 years; almost 60% of respondents had higher education degrees. The selection of subjects was deliberate (we rejected the questionnaires of respondents who indicated that they did not travel by train), but due to the small sample and lack of information on the characteristics of railway passengers in Poland, these results should be treated with caution. The main question was whether passengers noticed innovations introduced on trains to make them feel safer. It turned out that 90 people (78.3%) perceived the railway as a safe means of travel (Fig. 4).

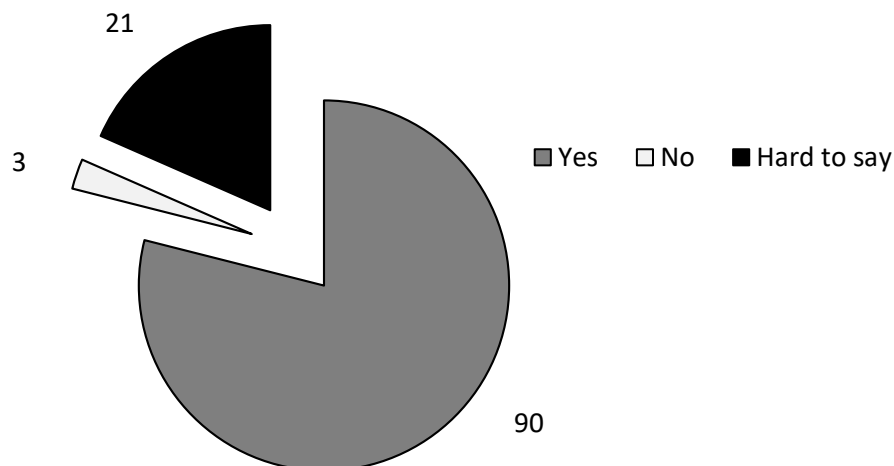
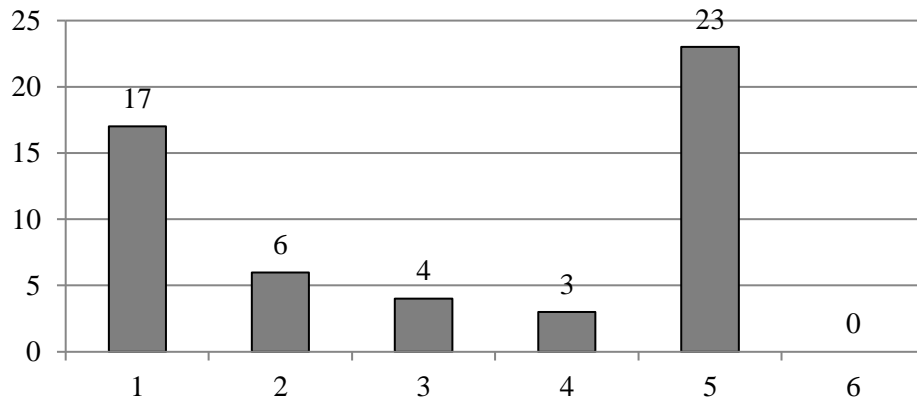


Figure 4: Are train journeys safe? (own study)

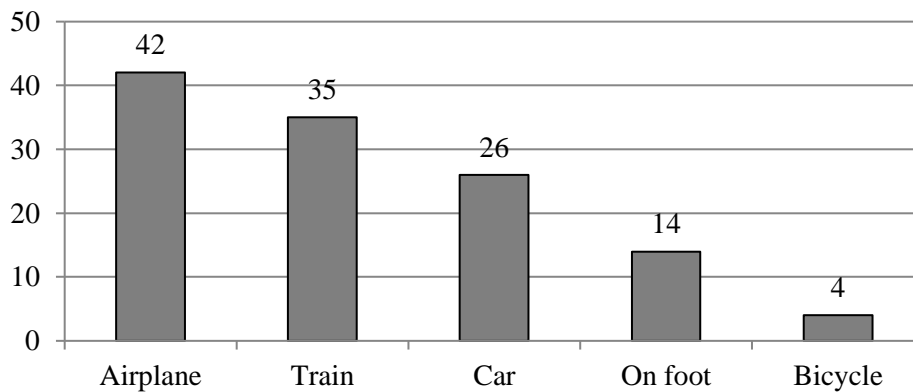
In response to the question about recent changes in trains and their increased security, 90 people indicated a positive reply (78.3%), but apart from Wi-Fi and cameras inside the trains, they were unable to indicate any specific changes. This confirms our thesis that passengers are not aware of the improvements, and the belief in greater safety stems from the generally modern appearance of the train. However, in terms of the postulated changes, the respondents said that monitoring should be installed everywhere, and that travelers and their luggage should be safety-screened. The respondents also complained about unguarded railway crossings, as well as unprotected gaps between the wagon and the platform. They also suggested more control of passengers at railway stations, better lighting at small stations, as well as the modernization of luggage space, which make it difficult to put bags on the shelves. Only 24.3% of respondents did not expect any changes and were satisfied with the current state. 42 respondents (36.5%) indicated that they had witnessed a dangerous situation while traveling by train (Fig. 5). Most often, these were situations caused by travelers (23 indications), followed by train failures (17), as well as caused by animals, railway workers and road users (rail crossings). Answers provided by respondents indicate that it is passengers that most often lead to dangerous situations.





*Figure 5: Causes of dangerous incidents during train travel (own study)*  
*Legend: 1) train failures, 2) behavior of road users (crossings), 3) behavior of railway employees, 4) forest animals, 5) other travelers, 6) others.*

The improving statistics on railway accidents (Fig. 2 and 3) are accompanied by a fairly high conviction that rail journeys are safe. Respondents asked about the safest means of transport, placed the railway in second place (Fig. 6). Air travel was considered the safest – 42 respondents (36.5%) indicated this answer, while 35 responders (30.5%) pointed to railway.



*Figure 6: The safest means of transport according to respondents (own study)*

Railway transportation is seen as one of the safest – just behind airplanes. Certainly, other means of travel, such as the car, will never match the trains. This may be treated as a big advantage of railway transport. In the opinion of respondents, the greatest threat to safety is other travelers behaving irresponsibly, hence the greater control of passengers is the main postulate to improve travel safety.

## 8. CONCLUSION

Innovations are important in the development of every mode of transport, as they affect the safety and comfort of travel. The aim of this paper was to determine the range of innovations introduced in recent years in railway vehicles used for transporting passengers, on the example of EN57 and ED78 vehicles, as well as determining passengers' opinions about the innovations, especially in terms of safety. It was found that changes in trains included observation of passengers' behavior (monitoring, mirrors, intercom, lighting), fire protection (automatic detection, better seat materials, blow-heating), as well as improvements in ingress/egress of passengers (locking the door while the train is on the move, movable steps to facilitate disembarkation, special platforms for the disabled).

Many innovations also focus on functioning of the train and the conductor team, such as: modern anti-skid sandboxes or direct communication between the team and the driver. It may be noticed that although passengers cannot point to many innovations, they perceive train journeys as quite safe and notice that the quality of travel has improved. It seems, however, that carriers do not take advantage of this strength when building a positive image of the company (which confirmed our thesis), focusing more on price competition and punctuality of trains, forgetting that the key incentives for passengers may be the safety and standard of travel.

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## COMPARATIVE ANALYSIS OF BUSINESS EXCELLENCE MODELS

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### **ABSTRACT**

*In Nowadays competitive world every organization seeks for Business excellence and for the mutual benefits of the parties involved in it, such as, employees, customers and others Several Business Excellence models are applied throughout the world. Exist rising trend of implementing different Business Excellence frameworks also known as Quality Models for the improvements of organizational business performance. Models are also known as Quality Award Models and are used in recognising the best practices in the various sectors. A lot of countries of the world are integrating these models as their quality improvement tools for business assessment with competitors. On the research is focused on the review of the major Bussines Excellence Models such as European Foundation for Quality Management, Malcolm Baldrige National Quality Award and Australian Business Excellence models and their influence. The aim of research was to find out the commonalities and differences among these models on the basis of their emphasis on the criterions of the frameworks. The research is based on theoretical approach that has applied comparative analysis as a measurement tool to identify the emphasis of different Quality Excellence models.*

**Keywords:** *Business Excellence Model, Comparative analysis, Deming Prize, European Foundation for Quality Management, Malcolm Baldrige National Quality Award*

### **1. INTRODUCTION**

In the conditions of constantly increasing competition both in the global and European markets, the competitiveness of the companies to a great extent depends on feasibility of efficient process and resource management, while striving to achieve the results that comply with the aims of the companies. First, the company should start with the overall assessment of the current situation, identification of the problems and areas of indispensable improvements, bearing in mind that the direct copying of the operational methods applied by successful and renowned companies, never guarantees the success; on the contrary, it often leads to fail. The company in need of improvements must understand the operational methods used by successful and recognized companies and adapt them to the given conditions. The aim of research was to find out the commonalities and differences among these models on the basis of their emphasis on the criterions of the frameworks. The research is based on theoretical approach that has applied comparative analysis as a measurement tool to identify the emphasis of different Quality Excellence models.

### **2. DISCUSSION**

There are companies striving to improve their own business performance and efficiency along with the business performance and efficiency of their region. One of the strategies consists of application of quality improvement methods to achieve the growth of the business results. One of the instruments used to pave the path to success is application of various Business Excellence Models (Hewitt, S.1997). Thürer M., et al, pointed out that the companies tend to apply Business Excellence Models being aware that these models stimulate the adoption of the best practice and the usage of instruments that require the introduction of quality strategy, self-assessment and continuous improvement (Thürer M., et al, 2018). Such scholars as K. B. Hendricks and V. R. Singha (Hendricks, Singha, 1996) have verified the hypothesis that the application of efficient quality management programs helps to improve the operational results of the company.

Considering this statement, the companies that have received Quality awards considerably exceed the companies with no awards, comparing the revenue-based indices. The authors have analysed the impact of the receipt of the Quality awards to the market value of the company, concluding that the stock market reacts positively to the award communication mainly due to the quality improvement of the goods caused by the introduction of Business Excellence Model (Mavroidis V., Toliopoulou S., Agoritsas C., 2007, p. 458). Most of the Business Excellence Models in the world base on three Business Excellence Model Fundamental concepts (See Table 1) characterized by slightly different approaches to quality excellence assessment in the USA, Japan and Europe. Namely, Malcolm Baldrige National Quality Award – MBNQA) excellence model widely applied in the USA, Deming Prize model, which is particularly popular in Japan, and the European Foundation for Quality Management (EFQM) model that sets the core criteria to many European quality awards.

*Table following on the next page*

*Table 1: Fundamental concepts of the 3 most popular Business Excellence Models in the world (Ghicaianu, Irimie, Rares, 2015 ; Mann, Tickle, Ad banjo, 2011)*

EFQM Business Excellence Model Fundamental Concepts	MBNQA Baldrige Business model Fundamental Concepts	Fundamental Concepts of Deming Business excellence model
Leading with vision, inspiration & integrity Excellent organisations have leaders who shape the future and make it happen, acting as role models for its values and ethics.	Visionary leadership: Organization's senior leaders should set directions and create a customer focus, clear and visible organizational values, and high expectations for the workforce. The directions, values, and expectations should balance the needs of all stakeholders.	Management Vision and Leadership: Senior executives' leadership
Managing with agility Excellent organisations are widely recognised for their ability to identify and respond effectively and efficiently to opportunities and threats.	Agility: Success in today's ever changing, globally competitive environment demands agility a capacity for rapid change and flexibility.	Mapping Out and Deploying Strategies
Succeeding through the talent of people Excellent organisations value their people and create a culture of empowerment for the achievement of both organisational and personal goals.	Systems perspective: Managing whole organization holistically and understands how its components interact, and are aligned to achieve success.	Understanding and Interaction with Customers and Markets: Quick response to market/customer needs
Sustaining outstanding Results Excellent organisations achieve sustained outstanding results that meet both the short and long term needs of all their stakeholders, within the context of their operating environment.	Focus on the future: Ensuring an organization's sustainability requires understanding the short and longer term factors that affect your organization and marketplace.	Human Resource Development and Learning Environment: Education and training of human resources, and development of skills aligned to strategy
Harnessing creativity&innovation Excellent organisations generate increased value and levels of performance through continual improvement and systematic innovation by harnessing the creativity of their stakeholders.	Organizational and personal learning: Achieving the highest levels of organizational performance requires a well-executed approach to organizational and personal learning that includes sharing knowledge via systematic processes. Organizational learning includes both continuous improvement of existing approaches and significant change or innovation, leading to new goals and approaches.	Process Management: Continuous improvement of systems and processes
Adding value for customers Excellent organisations consistently add value for customers by understanding, anticipating and fulfilling needs, expectations and opportunities.	Valuing workforce members and partners: An organization's success depends increasingly on an engaged workforce that benefits from meaningful work, clear organizational direction, and performance accountability and that has a safe, trusting, and cooperative environment.	Results of Enterprise Activities: Customer Satisfaction: Quality as judged by the customers; Partnership and teamwork, Commitment to environment protection and public responsibility
Developing organisational capability Excellent organisations enhance their capabilities by effectively managing change within and beyond the organisational boundaries.	Managing for innovation: Making meaningful change to improve an organization's products, services, programs, processes, operations, and business model to create new value for the organization's stakeholders.	
Creating a sustainable future Excellent organisations have a positive impact on the world around them by enhancing their performance whilst simultaneously advancing the economic, environmental and social conditions within the communities they touch.	Customer-driven excellence: Performance and quality are judged by an organization's customers. Thus, Organization must take into account all product features and characteristics and all modes of customer access and support that contribute value to the customers.	
	Management by fact: Organizations depend on the measurement and analysis of performance. Such measurements should derive from business needs and strategy, and they should provide critical data and information about key processes, outputs, and results.	
	Societal responsibility: An organization's leaders should stress responsibilities to the public, ethical behaviour, and the need to consider societal well-being and benefit.	
	Focus on results and creating value: An organization's performance measurements need to focus on key results. Results should be used to create and balance value for key stakeholders.	

In general, the comparison of the core values of three Business Excellence Models allows concluding that some of the core values are similar: a clear vision facilitating the implementation of business strategy; compliance with the long-term and short-term succeeding conditions; involvement of the employees, their assessment and provision of trainings in order to achieve better results; process management etc. The author believes that there are some imperfections regarding the Core values of the Business Excellence model. For example, some of the core values regulating the Deming Quality Prize contain very wide scope of criteria that are worth to consider separately making the model more suitable. For instance, the results of the company's operational results should include the customer satisfaction, partnership and teamwork, environmental commitment and social responsibility. The author believes, that the splitting of the aforementioned core values into separate criteria, such as customer satisfaction, building of partnerships, social responsibility and environmental commitment (similar to those of *EFQM* business excellence model and Baldrige model) adding due explanations, could be more suitable. The users of the model would have a clearer idea of each of the core values and the related requirements to comply. Kim, Kumar, Murphy pointed out that the core values of Baldrige model resemble more the core values of *EFQM* business excellence model, keeping their own specifics and accentuating different kinds of results not taken into account in *EFQM* (Kim, Kumar, Murphy, 2010). Nevertheless, the author believes that the core values of *EFQM* business excellence model are explicitly defined and include many significant aspects of the contemporary business practice to achieve the excellence in performance: processes, employees, orientation to the customer, added-value creation, responsibility for sustainable future etc. Among other the author concludes, that the responsibility for sustainable future predicting a clear principle of ethical action and implementation of corporate behaviour standards and compliance with them in the framework of company's quality culture, contributing to the common economic, social and ecologic sustainability, appears as core value of excellence exclusively in *EFQM* model. Kalfa pointed out that partially, in the framework of particular contexts, it is included also in the *MBNQA* model (i.e. responsibility before the community), but not as clear as in *EFQM* model (Kalfa, 2018, pp.714). The author states that the sustainability should be an important criterion and part of the business operations for any company striving to excellence and aiming to receive the Quality award. The sustainability means sustainable development satisfying the actual needs without threats to the same satisfaction of needs in next generations. (Core values of the sustainable development in Latvia, 2016). The sustainability is a very wide concept, and therefore the society needs long-term solutions that would ensure the sustainability in terms of environment, economic activities and the society. The companies more and more face the necessity to elaborate the competitive action policy in order to keep in balance the environment, the economics and the society. Understanding the formulated core values of excellence, the company is able to assess its compliance to the *EFQM* criteria comprehensively. This model is the totality of guidelines available for the companies striving to excellence in their business in order to assess the initial condition, to plan the improvements and to implement gradually the principles of excellence. Since the model does not contain any direct indications regarding the adoptable measures to achieve the excellence, it is the company, who chooses the necessary measures to achieve stable top-quality results according to the specifics of the company, current conditions and the possibilities of the company (European Excellence model and Latvian Quality award: contest of small and medium enterprises, 2013) The Union of Japanese Scientists and Engineers (JUSE) founded Deming quality award in 1951 to award the companies or their departments, who have achieved notable operational improvements applying the Total Quality Management (*TQM*). (Sampaio P., Saraiva P., Monteiro A. 2012) It is one of the first most important quality awards in the world. Deming Prize is the symbol of quality improvement efforts of the company, symbol of continuous improvement and the development of quality management in relation with the

suppliers. (Guidance For Deming prize, 2018). This totality of guidelines requires the usage of fixed principles and methods, for instance, the process analysis, statistical methods and quality circles. Therefore, most of the criteria closely relate to the application of the required principles and methods.( Guide for The Deming Prize The Deming Grand Prize,2018). Such criteria as management of policies, development of human resources, management system, information analysis and application of IT directly affect the implementation of quality measures and the results of quality improvement.(Talwar, 2011). See model’s criteria entering into force since 2018 in Figure 1. Model’s criteria relate to the performance assessment of quality management system indicating its core role in the achievement of excellence.

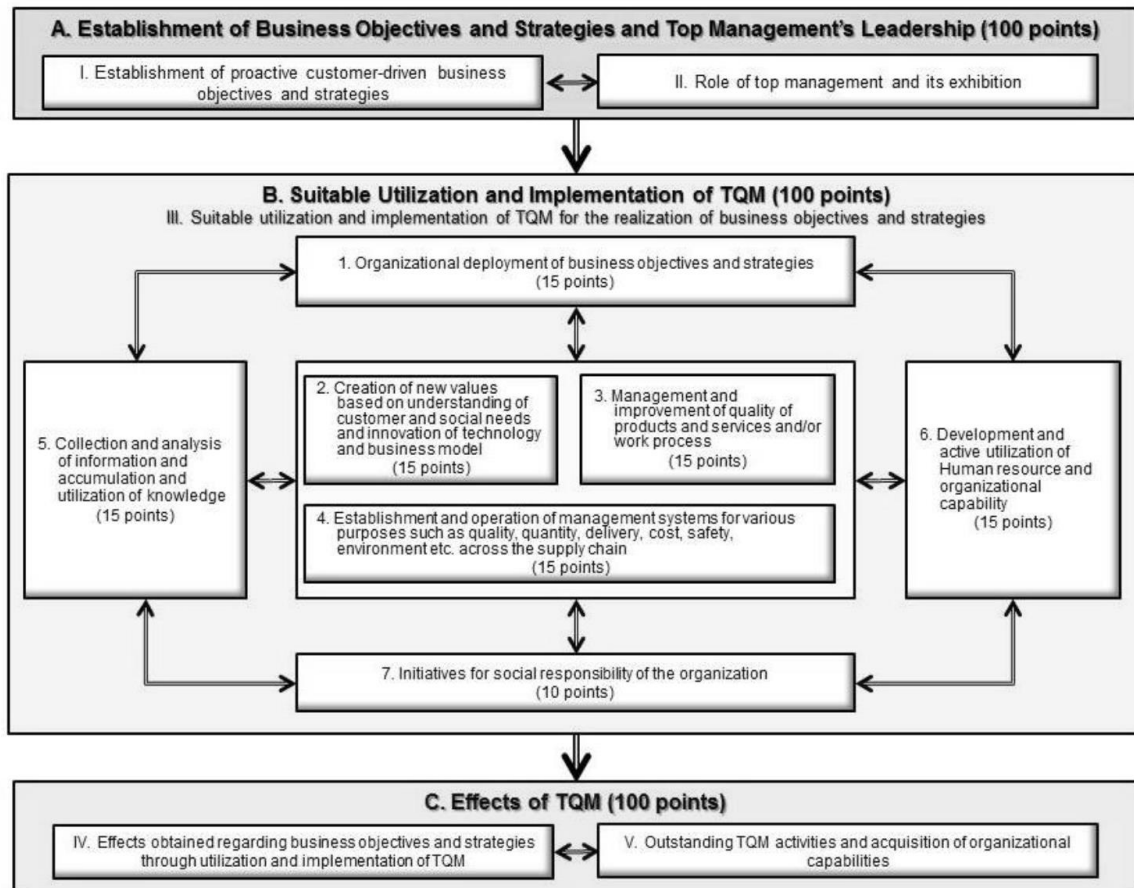


Figure 1: Criteria of Deming Prize excellence model[Guide for The Deming Prize The Deming Grand Prize,2018].

As for the model’s criteria disclosed in the picture, the Union of Japanese scientists and engineers indicated that it is not the compliance to the standards set by the Committee of Deming Prize required from the candidates.(Breja, Banwet, Iyer, 2016). Instead, the Committee expected the ability of the candidates to evaluate the current situation in their company, to set the aims and related tasks, to improve and reform the operations in the framework of company’s daily routines.(Guidance For Deming prize, 2018). The evaluation includes not only the achieved results and applied processes, but also the predictable efficiency in future. The assessors evaluate whether the tasks set by the candidate are compatible with the current situation in the company and whether the applied measures comply with the existing conditions and accomplished activities are oriented to higher goals in the future (The Deming Prize and Development of Quality Control/ Management in Japan, 2017).



*MBNQA* excellence model was introduced in 1987, when Ronald Reagan, the President of the USA of the time wished to improve the quality management practice and competitiveness in American companies by signing the Malcolm Baldrige National Quality Improvement Act. This Quality award was established with the aim to encourage the quality awareness, define the criteria of quality excellence and distribute the information about successful quality strategies and related benefits. (Sampaio, Saraiva, Monteiro, 2012, p.183). *MBNQA* excellence model consists of seven categories that ensure the strategic progress of the management. Figure 2 shows the interconnections of all categories.

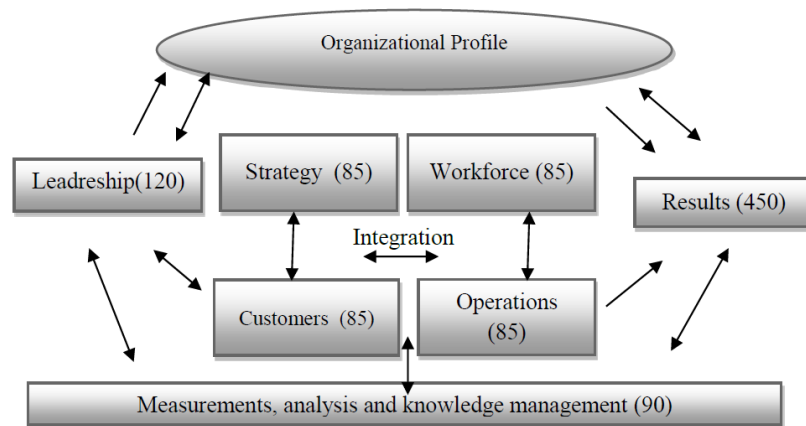
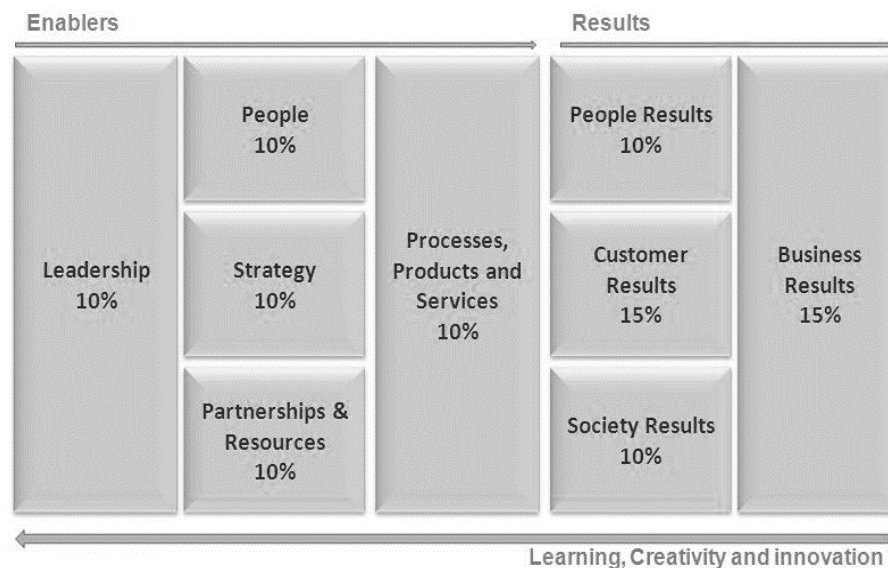


Figure 2: *MBNQA* excellence model [Sampaio, Saraiva, Monteiro, 2012, p.183]

Picture 2 represents the *MBNQA* excellence model, continuously improved every two years after collecting the opinion of the users of the model regarding the deficiencies. In the USA, it is particularly popular system to maintain the organizational self-assessment. The National Institute of Standards And Technology (*NIST*) of the USA acknowledges that thousands of companies use the criteria of this model in their self-assessment procedures. However, this model has been widely criticized, especially in the USA (Jaeger, Adair, Al-Qudah, 2013, p. 120). The critics claim that *MBNQA* excellence model is static and does not reflect the quality of goods in point of fact, stressing out that the high scores in self-assessment alone do not testify the high quality of goods. *MBNQA* is just a totality of guidelines, not a rule that makes companies to comply with every indication without research and interpretation of its contents. (Kanji, 2002, p.24). Apart from the aforementioned arguments, the significant deficiency is an unproportioned division of points for the criteria (Kumar, 2007). Considering the importance of quality management, at the end of the 1980-ies the largest European companies successfully established a common European Foundation for Quality Management. In 1991, the organization founded the European Quality Award (*EQA*) programme aimed to praise the excellence of the European enterprises. This award is similar to the *MBNQA* award. The European Foundation for Quality Management offers several approaches to implement the *EFQM* model, since it is rather impossible to indicate a single best approach due to the differences in application for different companies. It is very important for the company to estimate the priorities of the benefits achievable with the implementation of the model. According to Bovaird T. and Löffler E. *EFQM* is a powerful instrument of diagnostics providing to the stakeholders the training opportunities aimed to localize the strengths of the company and the potential of improvement. Besides, this model provides to the company the opportunity to see the difference between the best practice and actual performance. It gives a rational justification for the assessment of the performance and progress on the way to the defined aims and tasks (Bovaird, Löffler, 2009).

Author has chosen the model as the basic instrument for the detailed research and practical case study due to its popularity, practicableness and wide scope of application. The Figure 3 represents the EFQM business excellence model composed of 9 criteria and 32 sub-criteria.



Picture 3: EFQM Business Excellence model (Excellence Model, 2013)

The model consists of two parts: Approach and Results. The criteria divide into 100 points each except „customer-related results” and „the main operational results”, where the value of the criterion is 150 points out of 1000. It is rather impossible to receive 1000 points, because no company is able to comply with all requirements of the criteria. In order to qualify for the EFQM business excellence model award the candidate has to collect 750–850 points. Only the companies able to collect such a score can receive the highest evaluation in Europe or in the world in quality matters: the Quality award. Table 2 made by the author shows the application of business excellence models in different regions of the world.

Table following on the next page

*Table 2: Business excellence model awards in different countries (as of 12.04.2018)*  
(Ghicajanu, Irimie, Rares, 2015 ; Pathak, 2014)

No.	Model Used	Country - Name of Award	Region
1	EFQM Excellence Model	Czech Republic - Quality Award of the Czech Republic; Hungary- Hungarian National Quality Award; Poland - Polish Quality Award and Business Fair Play Award; Romania - Romanian Quality Award; Russian Federation - Russian National Quality Award; Ukraine - Ukrainian National Quality Award; Danmark - Danish Quality Prize; Estonia - Estonian Quality Award; Ireland - Irish Business Excellence Award; Latvia- Latvian National Quality Award; Austria - Austrian Quality Award; Lithuania - Lithuanian National Quality Prize; Northern Ireland - Northern Ireland Quality Award; Scotland - Scottish Award for Business Excellence; Sweden - Swedish Quality Award; United Kingdom - UK Business Excellence Award; Wales - Wales Quality Award; Italy - Italian Quality Award; Portugal - Portuguese Quality Award; Slovenia - Slovenian Business Excellence Prize; Austria - Austrian Quality Award; Belgium - K2 Award; Germany - German National Quality; Switzerland - Swiss Quality Award for Business Excellence.	Europe
2	National model	India - CII-EXIM Bank Award for Business Excellence United Arab Emirates; Turkey(developed from EFQM Excellence Model) France - French Quality Award Slovakia - The Slovak Quality Award Norway - Norwegian Quality Award Netherlands - Dutch Quality Award Greece - Athens Chamber of Commerce and Industry Awards(developed from Deming Prize Model) Hungary - IIASA SHIBA Award Ireland - Q-MARK National Quality Award	Asia  Europe
3	National model (unique)	Sweden - Swedish Quality Award Greece - ECO-Q Recognitions Luxembourg - Prix Luxembourgeois de la Qualite Canada - Canada Awards for Excellence Japan - Deming Prize Korea, Taiwan, India Australia - Australian Business Excellence Award	Europe  Northern America Asia Australia
4	Baldrige Criteria for Performance Excellence	Sweden - Swedish Quality Award United States of America - Malcolm Baldrige National Quality Award (MBNQA) New Zealand - New Zealand Business Excellence Award Hong Kong - Hong Kong Management Association Quality Award Indonesia, Sri Lanka, Philippines, Thailand	Europe Northern America  Oceania Asia
5	National model (developed from Baldrige model)	China - China Quality Award Japonia - Japan Quality Award Vietnam, Mongolia Egypt	Asia  Africa

According to the collected data, in most Asian countries, except Japan, awarding the Deming quality award, apply the models that combine the business excellence models of the USA and/or Europe (including the Singapore excellence model). In addition, there are several countries applying unique business excellence models, such as Canada, Sweden, Spain, Greece etc. The author concludes that the companies tend to choose either widely applicable and/or easy-to-

adapt business excellence models as well as try to create their own models taking into account the particularities of the country in question. Table 3 represents the comparison of criteria accents in different business excellence models.

*Table 3: The comparison of criteria accents in different business excellence models (Mohammad, 2010).*

<b>Award</b>	<b>Region/ Country</b>	<b>Criteria Emphasis</b>
Japan Quality Award	Japan	The major emphasis is on the result where as customer and market falls under the second and also social responsibility of management have been taken into consideration along with the value creation process.
MBNQA	USA	The emphases are result oriented through effective leadership.
European Quality Award	Europe	The emphasis on effective leadership, customer focus and through meeting people(stakeholders) expectations.
FNCCI BE Award	Nepal	The model emphasis on the performance results and customer satisfaction. Therefore the model is basically a result oriented model.
Singapore Quality Award	Singapore	The emphasis of the criteria is on results and the criteria contain features of the criteria for the MBNQA, the EQA and the ABEM. Also there is more emphasis on leadership, customer and People. People here represents the stakeholders.
Australian Business Excellence Award	Australia	The emphasize on the sustainability of the business through effective leadership, sound process, breakthrough innovation and also emphasis is given to stakeholders and customers plus results. Overall the model has prioritize every factors more or less in equal manner.

The author chose the models containing significant differences, because there is no sense to compare the models among several European countries, where they often are adapted from EFQM business excellence model and do not contain many differences. Analysing the criteria provided by different business excellence models, the author concluded that the results are particularly important for the business excellence models of the USA and Japan, the sustainability is the most important in Australia, meanwhile in European model, the excellence is oriented towards the customers. In 2010, 86 countries had EFQM model-based national awards aimed to stimulate the companies to achieve better operational results. Forty out of eighty-six countries used the EFQM model directly or in adapted form, 17 countries used MBNQA model directly or in adapted form, 18 countries had unique models, but the rest of the countries applied combined models or unidentifiable models. Pathak S. pointed out that total exists 96 number of the business excellence models in the world, EFQM 39, MBNQA (Baldrige) 17, Deming 2, EFQM & MBNQA 4, MBNQA & DEMING 4, Unique 17, Australian BE Model 1, not known 10. (Pathak, 2014). The author concluded that 68 models base on Malcolm Baldrige business excellence model, EFQM model and Japanese quality award models, which help to achieve certain level of business excellence. Is also a small quantity of seldom-applied models used according to the specifics of the company in limited cases.

### 3. CONSLUSION

- Business excellence models are the instruments, which help the companies to improve the performance and the general business performance and efficiency of the country.
- Core values of Baldrige model are similar to the core values of *EFQM* model. However, they conserve a certain specifics accentuating different results in comparison to *EFQM* model focused on customers' satisfaction.
- Core values of *EFQM* business excellence model contain many aspects that are important for the contemporary business practice in order to achieve the excellence: processes, employees, orientation to customers, added-value creation, responsibility for the sustainable future etc. The model is the totality of guidelines. The company wishing to achieve the excellence in performance can apply this model to assess the current situation in the company, to plan the improvements and to implement the principles of excellence basing on compliance with the set criteria.
- The Deming Prize evaluates the ability of the company to assess the current situation, the aims and tasks, improvement of the operations and transformations in the framework of the company. This award does not require rigid compliance with the criteria as in case of *EQFM*.
- Most Asian countries, except Japan, awarding the Deming quality award, apply the models that combine the business excellence models of the USA and/or Europe (including the Singapore excellence model). Besides, there are also countries, who have elaborated unique models applied in assessment of performance excellence.
- Core values of Deming model are divided into separated categories – customers' satisfaction, establishment of partnerships and the responsibility before the society and environmental commitment with a proper explanation as in *EFQM* business excellence model and Baldrige model are more suitable, because they better represent the requirements of each core value for users of the model and other interested stakeholders.

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## DECISION ENGINEERING: SETTLING A LEAN DECISION MODELING APPROACH

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### ABSTRACT

*Despite several decades of advances in information- communication technologies (ICT) supporting decision makers, basic spreadsheet modeling and statistics are still the dominant modeling approaches in supporting decision making (Ranyard et al, 2015.; Ackerman et al, 2014.; Turban et al, 2015; Davenport, 2009.). The usage of "lightweight" analytical tools can be explained by the observation that simple methods disrupt minimally established organizational decision-making processes and modeling of routine decisions usually seek to enhance the efficiency and effectiveness. (Luoma, 2016). Herchel (2007) identified so-called "the execution gap" showing that corporations' ability to collect data is increasing faster than ability to use the data. Decision management systems (DMS) try to fill that gap by incorporating descriptive, prescriptive and predictive analytic models in order to automate operational and some tactical business decisions. Resulting models standardized routine decisions with inserting programmable logic into automated business processes, presenting explicit form of institutional default heuristic. Decision engineering can be considered as an activities' assemblage that involve discovering and modelling decisions, building and deploying ICT components that combine advanced analytics with business rules and optimization. Decision engineers are a new kind of facilitators, who build decision requirements models of operational decisions in business processes. These models serve as a foundation for managers' and modelers' understandings when and which type of modeling should or should not be made part of organizational decision making process. Bearing in mind that humans shape their tools and then that tools shape humans and that ICT will always support "the how and not the what", we try better to understand the ways that the modern decision management tools influence the decision making behavior. Differently put, could the design and implementation of decision management systems in organizations serve as a lean decision modelling approach that improve behavioral fit of modern managers?*

**Keywords:** *Decision making, Decision management system, Business analytics, Business intelligence system, Operations management*

### 1. INTRODUCTION

Standard business intelligence (BI) and Performance management (PM) systems solutions offer visualization and presentation of large amount data from various sources about business partners, customers and internal business processes. As an upgrade of BI, PM systems add applications that connect business processes' information with key performance indicators. The emphasis of their functioning is the support of decision-making process through retrieval, manipulation and visualization of data. In order to create instant insight into past business performance or a current condition, they "conquered" and unified the large amounts of data from different sources in an unique user interface. As an "automated visualization prosthesis" BI dashboard reports overwhelming human cognitive disadvantages in manipulating a large amount of quantitative data from different sources in the daily management. Their design is heavily focused on user interface requirements and does not consider any decision model that can be applied on that basis. The data presented there is used as an affirmation or background for a decision that manager makes. According to Parasuraman& Sheridan's model of automatization (2002) with four stages of automation for different function of systems:

information gathering, information analysis, decision-making and action implementation, BI portals have a high level of information gathering and information analysis automatization and they have not reached their third and fourth stage. As a response to such information automatization, managers in supporting their operational and tactical decision support, use what they know best and what is available to them. The basic spreadsheet modeling and statistics are still the dominant modeling approaches in supporting decision making (Ranyard et al., 2015.; Ackerman et al., 2014., Turban et al., 2015; Davenport, 2009.). Davenport (2009) described current state of the art in development of decision support systems " with existence of large number of different tools, a lot of data and "we say to users: "Ok, go at it, have fun, play, make better decisions. But we never actually ensure that they do." The usage of "lightweight" analytical tools can be explained by the observation that simple methods disrupt minimally established organizational decision-making processes. A modeling of routine decisions usually seek to enhance the efficiency and effectiveness (Luoma, 2016). It can be said that in such operational decision making situations, the executive has a poor behavioral fit. They do not want to experiment with other analytical tools. Decision management systems (DMS) incorporate descriptive, prescriptive and predictive analytic models in order to automate operational and some tactical business decisions. These systems standardized routine decisions with inserting programmable logic into automated business processes, presenting explicit form of institutional default heuristic (Rosenberger and Nash, 2009). Bearing in mind that humans shape their tools and then that tools shape humans and that ICT will always support "the how and not the what", we try better understand the ways that the modern decision management tools influence the decision making behavior. Differently put, could the design and implementation of decision management systems in organizations serve as a led decision modelling approach that improve behavioral fit of modern managers? The rest of this paper is organized as follows: the section 2 is a portrayal of modern executives and actual ICT tools capabilities in supporting their activities, followed by section 3 where was offered a presentation of decision management system architecture and functions. Section 4 describes activities of decision engineering and a decision modelling example, and section 5 presents conclusions.

## **2. ICT SUPPORTING SHALLOWS` EXECUTIVES**

From a managerial perspective (Turban et al., 2015), decision makers in a digital age are under constant pressure to keep up, they are too often sacrificing the quality of decision making on behalf of speed. They don't use the most of available tools for converting data from different source into the action at the "speed of thought". They are often unable to gather sufficient information from the constantly changing source, they not share information and they are failing to involve the right people in the decision process. When asked specifically where information-communication technology (ICT) has become the most valuable as a source of information for decision making, they have listed: budgeting/ finance, purchasing and customer service, daily product management, quality/productivity, human resource and process improvement. Usage of ICT accelerate decision making in many way, from providing instantaneous access to vital information, to facilitate communication, and to compress time in a number of areas. New generations of managers have learned how to execute queries, create and drill down data in cubes without the help of IT people and they know how to include important data into analytical models and they do that daily, almost as a routine. The majority of executive management respondents say that their teams are using between one or two BI tools today (The state of BI 2018, Forbes.com, 2018.). According the same source, executive management, operations and sales are three primary roles driving BI today, and dashboards, reporting, end- user self-service, advanced visualization and data warehousing are the top five most important BI technologies.



BI and PM systems integrate and present data from different sources in standard forms which are easy for manipulation and reporting past business performance and current conditions. They can trigger decision making or for simpler business components and basic operational decisions, they incorporate business rules and elements of decision logic through programming logic in business processes management systems. These systems integrate data that has been hidden in transactional systems and made it accessible by people in organization. Their development has been focused on analyzing and presenting the past trends to human users. Users, according to their knowledge and experience, are making decisions based on this data through usage of different but standard applications and services. Whenever the business environment changes require a change to business decision logic and the effort to do these changes is frequently unfeasible and extremely complex. Analytics in these systems are kept separate from transactional systems, limiting the ability of the analytic team to apply their insights in day-to-day activities. Herchel (2007) identified so-called "the execution gap" showing that corporations' ability to collect data is increasing faster than ability to use the data. During these years, thanks to big data and data storage capacities this gap became even deeper. As a result, the executives feel "paralyzed about their data": they think that data is not "clean" for advanced business analytics' tools. Another aspect of the same problem described Davenport (2009) as an evidence of "rampant decision making amnesia" of management teams. He showed that large amount of organizations are not effective at preserving their decision making experience and the decisions made have rarely been the focus of systematic analysis inside the firm. Organizations don't evidence their mistake, they don't learn from them. Nowadays, only several large organization start to perform "lookbacks" on major decisions in order to assess not only outcomes but also how the decision might have employed a better process or addressed uncertainty better.

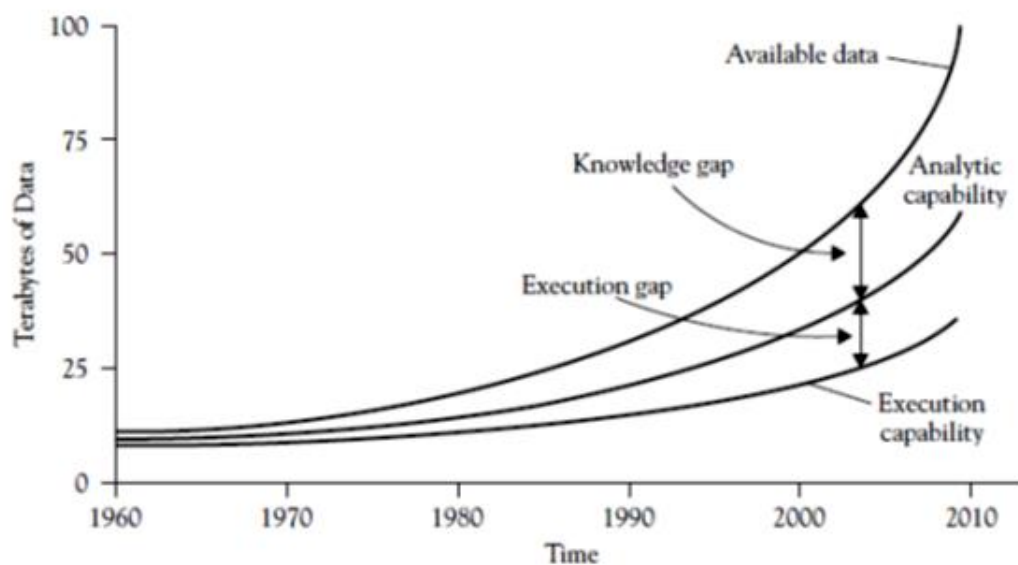


Figure 1: The "Execution gap" between available data and what the company use (Herschel, 2007.)

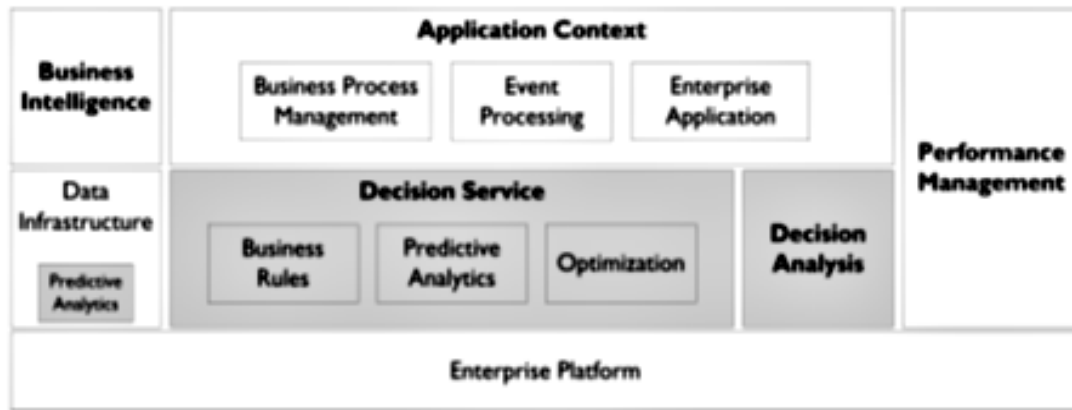
As a path to close the execution gap, the initiatives for building new kind of decision support system that automates routine and operational decisions through usage of analytical models, become louder and more significant. These systems try to incorporate different kinds of descriptive and predictive analytics with decision models in order to automate decisions all the way through to an operational action to be taken. Decision modeling can increase the efficiency and effectiveness of routine decision making, but also may lock actors into narrow problem

framings that cause failures to recognize change (Luoma, 2016). Keeping in mind an argument of Barlas, (Barlas, 1996, pp.184) that it is "impossible to define an absolute notion of model validity divorced from its purpose", we can accept that automatization of routine decisions can be justified in specific situations where currently decision making likely suffer from biases, consumes human resources which would be needed elsewhere or the decision making is based on ad hoc usage of performance feedback rather than systematic tracking of important indicators (Luoma, 2016). The last mentioned author introduces the concept of "behavioral fit" that helps in understanding why some decision methods are more readily adopted than others. It is defined "as a scale to which the method minimizes the disruptions that it brings to the manner in which decision makers are accustomed to make decisions". The behavioral fit of sophisticated analytical approaches is low. Their usage consume extra time/effort and disrupt established decision processes. Application of some sophisticated forecasting or optimization models require resources and changes in organizational decision making processes which imply that attempt to make such change is risky and with possible internal resistance. The usage of simple methods/ tools such as spreadsheets does not jeopardize the performance status quo. It disrupts minimally established decision processes and imply high level of behavioral fit. The main question of this paper appears as: could it be possible to develop tools supporting decision maker that led adoption and usage of preferred methods in specific situations? Apart from reducing execution gap, some of the reasons for such engineering system effort could be:

- increasing behavioral fit of decision maker in specific situations (creating "smarter" executives and decisions!);
- acquiring knowledge in corporate knowledge bases for experience learning; or
- introducing complete automation over time of some operational decisions (eliminating the human intermediary from transactional system in order to create smarter system).

### **3. DECISION MANAGEMENT SYSTEM**

Decision management appears as a new systematic approach to automating and improving operational business decisions toward increasing the efficiency and effectiveness of decision making. It is an approach to develop a decision management system (DMS) through modeling decisions, building and deploy IT components that combine advanced business analytics with business rules and optimization models. DMS tries to improve effectiveness of a decision flow observed as a set of alternatives/ choices associated with an operational task in specific work flow. At this point it is necessary to emphasize the word "specific" decision, because these systems try to automate certain repeatable operational and micro decisions mostly about: customers, their churn, direct marketing, retail assortment planning, fraud detection, customer service, credit risk, price optimization, human capital management etc. Applying this approach, it is useful to break down decisions identifying one-off strategic decisions, consisted from repeatable tactical decisions related to management and control of highly repeatable operational decisions made at the front line of the organization that addressed single customer or transaction. For such a decision, DMS adds elements of different business analytics: descriptive, predictive or decision models integrated with explicit business rules or/and optimization models. DMS use a "decision taxonomy" (Rosenberger and Nash, 2009) to differentiate whole spectrum of decision making; from "Expert driven" decision that is empirical judgment relies on expertise and experience, via "Data- informed" decisions that relies on the expert to interpret information from report, "Data- guided" decision where a predictive analytic model replaces unproven assumptions with information, to "Data- driven" decision that can be fully automated with running of analytic models and automatic execution of decisions. The core of DMS system is Decision service component (Figure 2.) that run on the standard enterprise platforms in use today.



*Figure 2: Decision management system architectural context  
(Taylor, J. 2016)*

The data infrastructure supplies operational data to the Decision Services and can also provide in-database analytic. Business intelligence system typically use the same data infrastructure provided insight to human decision makers and often complements function of decision service by handling the exceptions. With link to performance management, it is possible to track and analyze effect of some decision to key performance indicators (KPI). Decision service can be integrated with existing Business Process Management Systems (BPMS) where it is triggered with the task in processes; or with Event Processing System, where triggering some action on detected patterns of data through a variety of external connections. The decision itself, in decision service, is made by executing generated code on the underlying platform, business rules on a deployed business rule engine, optimization models on a solver and predictive analytic models on a model execution engine. Decision Services also need to be able to log what happened each time a decision was made-which rules were fired, what model scores were calculated and which outcomes were selected by the optimization model.

#### **4. DECISION ENGINEERING: A LEAN DECISION MODELING APPROACH**

The author named process of DMS development as a "decision engineering", as a parallel to knowledge engineering activities used in developing knowledge-based systems. Decision engineers are a new kind of facilitators, who build decision models of operational decisions in business processes. Actually, corporate demand is rising for that facilitators who have knowledge/skills about analytics, information technology and business, with practicing activities of building decision management system. Decision engineering consists of three groups of activities: decision discovery and modeling, decision service construction and decision analysis (Figure 3). The first step in building DMS is to find, in organization's decision inventory, the repeatable, non-trivial decisions that have measurable impact, and are therefore candidates for automation. That is in most cases, data-driven decision that addresses, in front end enterprise's application, single customer or transaction. They can often be found by interviewing business experts; or analyzing key performance indicators to see what choices will make a change in defined metrics. Some complex decisions can be decomposed in a decision flow in order to provide necessary detail on how these decisions are daily made.

*Figure following on the next page*

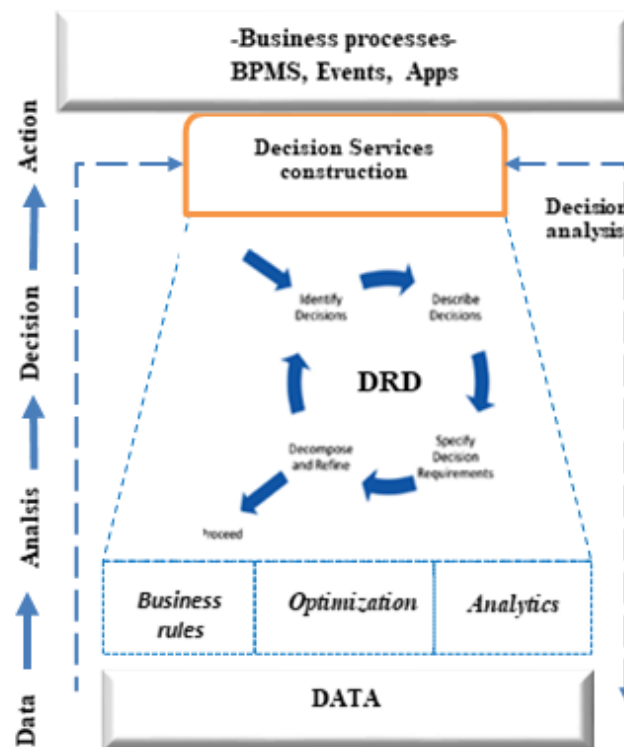
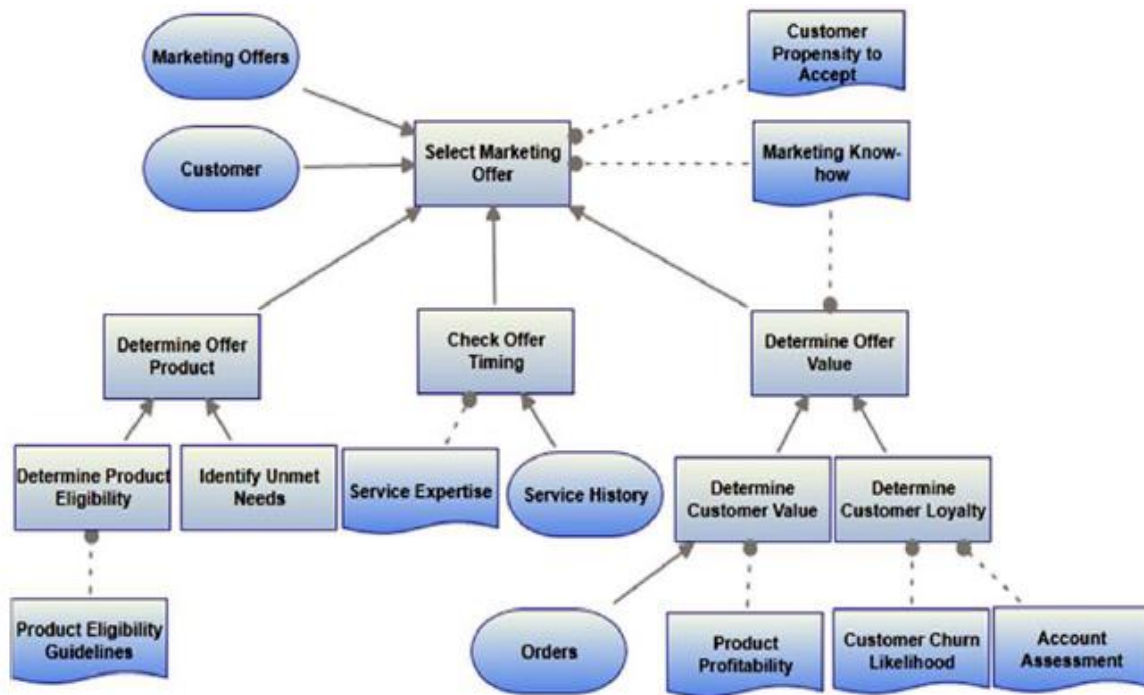


Figure 3: Decision engineering activities

After identification of appropriate decisions, decision modeling activities continue with description of those decision in order to answer the question how automation of these decisions will impact the business metrics and specifying details of information and knowledge required to make the decision. At this stage, decision engineer(s) create and refine Decision Requirements Diagram (DRD) using new industry standard for Object Management Group's Decision Model and Notation Standard. DRD provides a mechanism for modeling the decision in a Task within a given process model. Also, it can act as a specification for business rules implementation or for the development of predictive analytics and data mining algorithms. DRD identifies decision requirements in detail about: the data a decision requires, knowledge about how the decision is to be made and other related or component decisions. An excerpt of Decision Requirement diagram for a well known decision of "Selecting Marketing Offer" is shown in Figure 4.

Figure following on the next page



*Figure 4: Decision Requirement Diagram for "Selecting Marketing Offer"*  
(Taylor, J. 2016)

In figure 4 diagram shows a decomposition of main decision "Select marketing offer to specific customer" into related decisions: checking appropriate time to make an offer, determining which product to offer and determining how value the offer should be. The diagram shows also additional knowledge (Service expertise, marketing Know-how, etc.) and input data (Orders, Customer, etc.) sources with Customer loyalty analytics at the bottom of DRD. It clearly shows the sequencing and structure of decisions and the business rules, predictive analytic models and optimization models required to develop in next phase of design. As a step further, DRD serves as an implementation map in decision service construction activities. Decision service is well defined component that makes an operational decision triggered in other processes or events. Its construction followed the decomposition and sequencing the decisions flow with business rules, predictive analytic models and optimization model already identified in DRD. From this point, the aim activities are building a specific decision task within decision flow that can be executed: as a set of business rules, or an optimization model or as a predictive analytic model. Completed details DRD serve as a basis for generation of formal requirements documentation of DMS and for extending requirements to business rules using decision tables. The common product category name for managing decision logic is a Business Rules Management System. This system executes business rule as a statement of what action should be taken if a given set of conditions are true, in a form of near- natural language structured statements and it is based on a vocabulary that uses business terms. The sources of business rules can be very different, for example from legacy systems, policy and regulations, expert or from data. Once, a rules embodied, it is very important to enable their simple maintaining and updating according to organizational changes. Building a predictive analytic model requires access to historical data from different sources, their understandings and preparing, then applying various predictive techniques, building, testing and deploying specific data mining method. It is a set of software components designed to enable the analysis of a set of data sources to determine the mathematical relationships within the data and to produce model that embodied those relationships. A predictive analytics workbenches can support different data mining techniques like: rule induction, decision trees, linear regression, clustering, K-means, nearest neighbor,

neural networks etc. Beside the business rules and predictive analytical models, mathematical optimization is applied to a specific task by modelling the objectives and constraints, instantiating the model with actual data in order to find near optimal solutions. Optimization allows organizations to either find a feasible solution to a heavily constrained problem or to maximize the value gained from a constrained set of resources by finding the most profitable, quickest or cheapest combination of resources that are allowed. Optimization and simulation can be applied to single transaction or can be used to find feasible combinations of products and services to offer to some customers' segment. It allows a modeler or business analyst to define a business objective and a set of constraints and then “solve” this problem to see how best to run the business. This component is very likely to a classical decision support system as known from previous information systems taxonomies in supporting decision making. After deploying and integration of decision services components into overall systems, they have to be monitored for changes that might improve performances. These activities are part of decision analysis phase in decision engineering approach. An important requirement for DMS are that they have to be adaptive, built to respond to changing conditions and to support a process of continuous improvement through testing and experimentation how automatization affect organizational performance. The title of this article alludes to research made by Taylor (2016) on led role of DMS in improving execution capabilities of modern enterprise. At this stage of DMS development, this role is not recognized yet. These systems try to automatize routine operational decision using complex business rules, optimization techniques and data mining techniques; establishing organizational operational decision-making processes with enhancing their effectiveness and efficiency. Application of lean management in organization focuses on understanding customer value and its key processes to continuously increase it. The ultimate goal of this approach is to provide perfect value to the customer through a perfect value creation process that has zero waste. To accomplish this, lean thinking changes the focus of management from optimizing separate technologies, assets, and vertical departments to optimizing the flow of products and services through entire value streams that flow horizontally across technologies, assets, and departments to customers. Decision modelling approach described above, creates processes that need less human effort, capital and time to make services at less costs and with much fewer defects, compared with traditional BI systems. Companies are able to respond to changing customer desires with high variety, high quality, low cost, and with very fast throughput times. Decision engineering achieves unintentionally the basic principle of lean operational management, throughout continuous improvement of decision services. By analysing repeatable decisions involving the end customer, identifying each step in a business process, eliminating those that do not create values and making the value creating occur in tight sequence; serve as a lean decision modelling approach for operational decisions.

## **5. CONCLUSION: SMARTER SYSTEMS SUPPORTING HOMO CALCULATOR**

DMS try to automatize some specific, routine and operational decision using business rules, optimization techniques and data mining techniques. Indirectly, behavioral fit of decision engineering teams is embedded as a best practice through DMS design. In that way, through decision engineering, it is possible that organization wants to build default heuristics as an implicit recommendations how to behave and make decision in specific situations. It is proven to be particularly helpful in situations in which the actors have a little knowledge (Gigerenzer and Gaissmaier, 2011). Deploying DMS as a part of organizational information system infrastructure, the role of operational decision maker is replaced from front end activities that involve customers, and left him/her to deal with exceptions, controlling and changes of business rules or models. These specific operational decision have almost nothing with individual knowledge or preferences of a decision maker. The automatisations provides consistency in dealing with large number operational decisions concerning concrete customer

or segment. It is arguable to claim that automatization that partly replaces human, increases its behavioral fit of using complex analytical/ operational research models. It seems correct to say that it has been created a prerequisite for further improvement of individual behavioral fit. Baracskai and Dorfler (2017) recognized Homo calculator as a decision maker who follows algorithms, relies on data analytic and big data. The Homo calculator has a conviction that "the way to improve decisions is through analyzing more data, rather than by doing more thinking". DMS serves as a tool for Homo calculator decision maker type. These question will cease to debate with further decision making automatization steps: introducing a self service analytical requirements to DMS design. New versions of DMS have a wider goals than automation of some specific data- driven repeatable decisions and go to the direction of adaptive decision support in order to fill the execution gap. Actual research indicates (Halpel, 2017) that there is a revolution happening in analytics, moving towards to self- service analytics. These new tools try to embedded advanced technologies, such as a machine learning, into intelligent portal that tries to suggest methods of decision analysis according to knowledge and experience of business user in tailored visual interface. It is realistic to expect a feedback loop of influences of these tools to managers` behavioral fit. As a prerequisite for adoption of self- service analytics in organizations, a new problem appears in form of building a broad "analytics culture" where analysis plays an important role in decisions as a fundamental basis for knowledge engineering, business collaboration and learning.

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# METHODICAL APPROACH FOR THE ECONOMIC EVALUATION OF SPECIFIC PROJECTS ON WATERWAYS

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## **ABSTRACT**

*The paper is focused on the area of the economic evaluation of specific projects carried out within the waterway. As specific projects are for purposes of this article considered mainly projects of service and safety anchorage, which have no direct impact on the capacity of the waterway or its navigability, however they are increasing the safety and the comfort of the navigation for all participants. The objective of the paper is to evaluate the suitability of partial approaches for the economic valuation, the attention will be paid mainly on the utilization of the Cost-Benefit Analysis (CBA) and Multi-Criterial Analysis (MCA), which has been already used as a part of qualitative and quantitative analysis. The legal part of the problem will be also taken into account. The legal part solves mainly the duty of the elaboration of the specific analysis (CBA or MCA) for evaluation of specific projects on waterway. Results and conclusions following the research will be presented and verified on case studies of projects consisting in the realisation of service and safety anchorage carried out on the waterway Bata Channel in the Czech Republic.*

**Keywords:** *Economic Evaluation, MCA, CBA, Anchorage, Methodology*

## **1. INTRODUCTION**

Public investments in the area of the transport infrastructure are crucial for the healthy development of the national economy and the society as a whole. Regarding the fact that they are usually investment projects with big investment costs and the important amount of public resources intended to their financing it is important to carry out only those projects with the biggest socio-economic benefit. The paper is focused on the economic evaluation of investment projects on trafficly important waterways and the evaluation of the suitability of methods intended to their economic and social evaluation.

## **2. LITERATURE REVIEW**

The issue of the economic and the financial evaluation of public investment projects is based on the precise determination of the subject of the investment and its financial and economic impacts on the society. The basic groundwork for the elaboration of the economic and financial evaluation of the projects financed from the public resources is the Guide to Cost-Benefit Analysis (Sartori, 2014) published by the European Commission. This methodology deals with the general determination of rules for the financial and the economic evaluation and the risk analysis of projects financed from the public resources and it also includes practical case studies as examples of specific economic analyses. This methodology serves as an essential document for the determination of specific processes of the economic evaluation of transport

infrastructure projects in the Czech Republic. These processes are published in the Departmental Guideline for the Evaluation of Economic Effectiveness of Transport Construction Projects (MOT CR1, 2017) for constructions of roads and highways, railways and trafficly significant water structures. The utilization of the Departmental guideline for the economic evaluation of transport infrastructure projects is defined in the Implementing Guideline for the Evaluation of the Efficiency of Transport Infrastructure Projects (MOT CR2, 2017). The solved issue is the subject of many other expert and scientific publications. The broader economic consequences of transport infrastructure investments are solved within the publication (Lakshmanan, 2011). The decision making process in the area of urban transport projects is in detail described in publication (Jajac, Marović, Hanák, 2015). The economic evaluation of projects in the area of the personal transport on waterways is the subject of the publication (Asic, Asic, 2011). Big amount of papers deals with the issue of the intermodal transport also including the transport on waterways, e.g. (Sahin, Yilmaz, Ust, Guneri, Gulsun, Turan, 2014), the intermodal ferry transport is the subject of the publication (Stinga, 2016). In the publication (Mommens, Macharis, 2014) there is mentioned the issue of the location analysis for the modal shift of palletized building materials. Very important issue is also the economic evaluation of environmental impacts of projects on trafficly significant water structures. This problem is the subject of the publication (Oztanriseven, Nachtmann, 2017). Impacts of projects on the development of regions are solved in the publication (Vaňková, Kocourková, Chovancová, 2017).

### 3. METHODOLOGY

The main methodological groundwork for the evaluation of investment projects on the trafficly important water structures is the Departmental Guideline for the Evaluation of Economic Effectiveness of Transport Construction Projects (MOT CR1, 2017), which utilization comes out from the Implementing Guideline for the Evaluation of the Efficiency of Transport Infrastructure Projects (MOT CR2, 2017). These two guidelines determinate basic methods for the elaboration of the economic analysis of solved projects:

- Cost-Benefit Analysis (CBA),
- Multi-criterial Analysis (MKA),
- Qualitative and Quantitative Analysis (QQA).

The CBA is a standard method for the economic evaluation of public investment projects and is intended for the economic evaluation of the most of projects of transport structures. In principle it is based on the quantification and the evaluation of key impacts of the evaluated project in particular phases of its lifecycle respecting the time factor. The main structure of benefits is as follows (MOT CR1, 2017):

- Investment and operating costs of the infrastructure including reinvestment,
- Change in the general cost of transporting goods or persons, i. e.
  - Savings in vehicle operation costs,
  - Time savings,
- Changing external transport costs in areas
  - Reduction in accident rate,
  - Reduction in noise emissions,
  - Reduction in greenhouse gases emissions,
  - Reduction in emissions of non-greenhouse gases including dust particles,
- Other, previously undefined, impacts.

The Multi-criterial Analysis (MCA) is the method, which is within the “Departmental Methodology” defined as a “different way of the evaluation of the efficiency of projects”, resp.

simplified method for the evaluation. This simplified method can be used e.g. for following kinds of projects (MOT CR1, 2017):

- Projects with expected investment costs till 10 mil. CZK (app. 337 thousands EUR) serving primarily for needs of the ferry transport and personal and recreational navigation,
- Reconstructions of parts of sailing measures caused by the bad technical state,
- Projects of acquisitions of information, telecommunication and managing technologies.

The basic steps for the MCA elaboration are as follows:

- Objectives of the MCA assessment,
- Identification of evaluated variants.
- Identification of objectives of the project and criterions,
- Description of the fulfilment of criterions,
- Scoring of partial variants,
- Assessment of weights of partial criterions,
- Combination of weights and points,
- Verification of results,
- Sensitivity analysis.

The Qualitative and Quantitative Analysis (QQA) consists in the justification of information and indexes, which express specific benefits of the project for users, population and economy. QQA can be used e.g. for following kinds of projects (MOT CR2, 2017):

- Removing of consequences of accidents, landslides and floods,
- Individual construction measures for removing of accidental and operationally dangerous parts,
- Acquisitions of lands, re-cultivation, geodetic mensuration and geotechnical explorations,
- Measures for the maintenance of transport structures and ways,
- Navigation signs and safety measures.

The subject of the paper is the evaluation of possibilities of the realization of the economic analysis with above mentioned methods for particular projects on the waterway Bat'a channel in the Czech Republic, which consist in the realization of service stands for anchoring of service vessels and vessels of the integrated rescue system. Particular projects are in lower extent with investment costs till 10 mil. CZK (337 thousands EUR), the total value of projects is 54 mil. CZK (app. 2 mil. EUR). Regarding the character of projects the variant to elaborate the economic analysis using the MCA or the QQA approach appeared. However based on the recommendation of the Ministry of Transport of the Czech Republic and based on the interpretation of the Implementing guideline (MOT CR2, 2017) the project were evaluated together as a set of measures using the CBA approach.

#### **4. RESULTS**

The process of the economic evaluation of service stands is presented on the case study in the form of the realization of seven partial projects of service stands on the Bat'a channel. The structure of impacts entering the economic analysis of the project comes out from the appendixes of the Departmental Methodology (MOT CR1, 2017) elaborated in the software MS Excel and is as follows:

- Total investment costs,
- Residual value,
- Operating costs of infrastructure,
- Operating costs of vessels,

- Time savings,
- Externalities,
- Personal and recreational navigation,
- Incomes,
- Other benefits of the economic analysis.

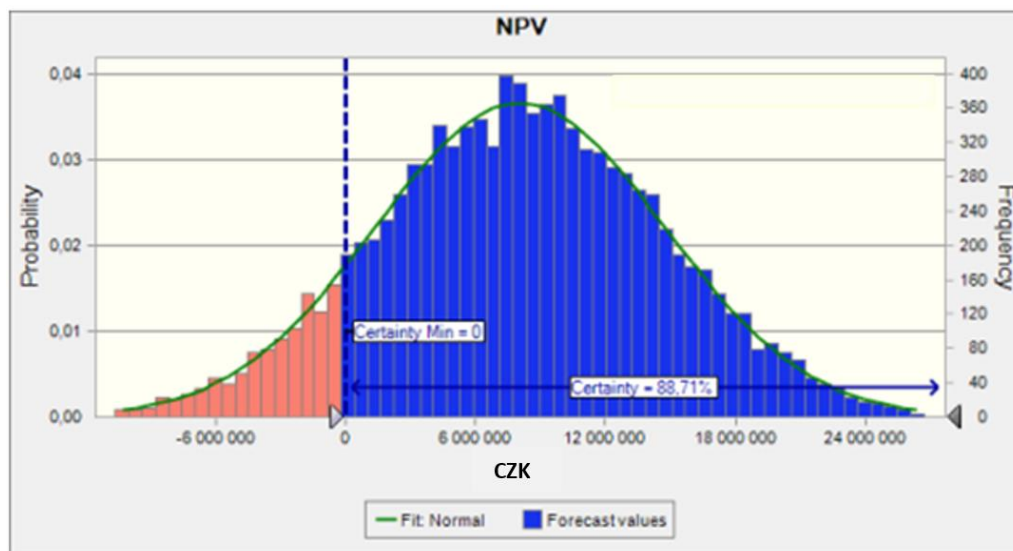
Impacts are divided into impacts connected with the newly realised infrastructure and impacts connected with the operation of subject measures. Basic impacts connected with the newly realized infrastructure are investment costs, which are assessed individually by the designer of the construction based on the available project documentation. Investment costs in general include costs for the project documentation, costs for land acquisitions or annexations, costs for construction, costs connected with machines and equipment, costs for the technical assistance and promotion and costs for the technical supervision. From calculated investment costs there is consequently derived the residual value of the project, which corresponds with net discounted cash flows of the project realized after the end of the evaluated period till the achievement of its average economic lifetime. Operation costs of the infrastructure include all costs for the operation and the maintenance. For some kinds of constructions are particular costs assessed with the methodology, in other cases they are assessed individually, e.g. as a percent from investment costs. Impacts connected with the operation of subject measures comes out, in the case the solved case study, from saved kilometres spent by service vessels on the waterway of the Bat'a channel by the maintenance. This saving comes out from the possibility of anchoring of the service vessel at the one of the subject service stand without the necessity to return back to the default stand. This saving is also connected with other impacts in the form of operating costs of vessels, time savings, externalities and personal and recreational navigation. Savings on operating costs of vessels are given by the savings on wages of the crew on vessels and saving in the consumption of fuel due to the decrease of number of kilometres realised during the maintenance of the channel. The fuel consumption is calculated individually in the amount 3.5 l/km. Time savings and connected next benefits were not within the solved case study taken into account. The savings of external costs are generally connected mainly with the decreasing of the number of accidents, noise emissions, pollutants emissions and emission of greenhouse gases. In the frame of the solved project there are relevant only savings coming from emissions of pollutants and carbon dioxide. The calculation of savings comes out from the number of saved kilometres and connected decrease of the fuel consumption. The price saving is assessed using input data defined in the Departmental Methodology (MOT CR1, 2017). Benefits within the personal and recreational navigation result from the difference between revenues connected with providing of tourist services in the location of the Bat'a channel in the case of the projects variant and the zero variant (variant without project). The difference between revenues is caused by the decreasing of number of hours, which the service vessel spends in the channel to do the maintenance and during that the Bat'a channel must be for the recreational and personal transport closed. The total benefit is calculated as an addition of the added value (36 % from revenues) and effect of the intermediate consumption (25 % from revenues), how is defined in the table annex of the Departmental Methodology (MOT CR1, 2017). The increase of the revenues was assessed from the average daily revenue on the Bat'a channel and the number of saved days. The number of saved days was calculated individually based on the evidence of the operator. Average daily revenues come out from the average daily number of visitors of the Bat'a channel and the average daily spending of one visitor. Other benefits were not in the economic analysis in the calculation of criterial indexes taken into account. Results of the economic analysis of the subject project are displayed in the table 1.

*Table 1: Economic results of the project (own elaboration)*

Economic Internal Rate of Return	6.09 %
Economic Net Present Value (CZK)	7,281,193
Benefit-Cost Ratio	1.16
Economic Net Present Value (€)	283,757

*Note: 1 € = 26.50 CZK*

From the results of the economic analysis is evident that taking into account socio-economic benefits of subject measures the project is from the economic point of view efficient. Results of economic analysis are consequently supported with the results of the quantitative analysis carried out using the Monte-Carlo simulation. The simulation was carried out for two independent input variables, the total investment costs of the project and the daily number of visitors of the Bat'a channel. The probability distribution of the Net Present Value is displayed in the Figure 1.



*Figure 1: Statistic outputs of the simulation (own elaboration using the SW Cristal Ball)*

*Note: 1 € = 26.50 CZK*

The qualitative risk analysis confirms the high probability of the positive Net Present Value of the project and the mean value is close to the value calculated within the economic analysis.

## 5. CONCLUSION

The objective of the paper was to evaluate the suitability of partial approaches for the economic valuation of investment project on trafficly significant waterways, the attention was paid mainly on the utilization of the Cost-Benefit Analysis (CBA) and Multi-Criterial Analysis (MCA), which had been already used as a part of qualitative and quantitative analysis. From the literature review is evident that the legal possibility to use both approaches for the economic analysis has already existed, the utilization of partial approaches is dependent on the kind of the analysed project. In the paper is solved the issue of the economic evaluation of the project of service stands of service vessels on the Bat'a channel in the Czech Republic. Based on the literature review and the consultation with the Ministry of Transport of the Czech Republic it was finally decided that the economic evaluation will be carried out using the CBA approach. It was suggested the structure of impacts, which should be included into the economic analysis. Consequently it was on the case study verified the functionality of the defined model and

elaborated economic analysis and quantitative risk analysis using the Monte-Carlo simulation. The case study proved the functionality of the model and the efficiency of the evaluated project. Within the solved issue it is possible to recommend next research focused on the refinement of the quantification of benefits, mainly regarding the economic benefit of the project for specific territory, and the refinement of input data for the simulation, mainly regarding the probability distribution of random variables.

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# THE INFLUENCE OF FEMALE CEOS ON PERFORMANCE AND INDEBTEDNESS: AN EMPIRICAL ANALYSIS OF SPANISH HOTEL COMPANIES

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## ABSTRACT

*One of the most detailed areas studied in business is female presence on boards of directors. There are many factors that affect the situation of women in society and stop them from having a career, but for sure the recent access of women to university studies, their preference for studying social sciences, and the difficulty of combining family and work commitments should be mentioned. Additionally, there is a deep-rooted cultural phenomenon, called 'Glass Ceiling', which gives social acceptance for inequality of genders. On the other hand, nowadays women are present in almost every area of the economy, and they start to perform many responsible functions. This is due to different factors, such as industrialization, the First and Second World War, many technological advances, but also declining birth rates, and women's access to education. Considering such a background, this paper analyzes the influence of gender diversity in management on the profitability and degree of indebtedness, on a sample of 4347 companies from the hotel sector. The purpose of this article is to show the relationship between presence of women in the top management and the level of profits and indebtedness of companies. Apart from the financial analysis, different theories and empirical evidence regarding the relationship between women in senior management and profitability of the company have been discussed. The results obtained in the research show that hotels run by women generated lower financial results, such as profitability, ROA or ROE. This may be related to greater caution of women in making decisions. The study focuses on the Spanish market, where there is currently an open debate about the importance of women's presence in business management, driven by the creation of legislation on gender equality, which is also observed in other European countries. Thus, the discussed topic is important both from the economic and social point of view.*

**Keywords:** *code of good governance, gender equality, hospitality, social changes, Spain, stereotype of a woman*

## 1. INTRODUCTION

It is evident that incorporation of women into the paid labor market represents one of the most important events that has taken place in the last two centuries. However, it is a slow process that has been conditioned by a series of demographic, economic, social, and above all historical factors. In Spain, one hundred years ago education was usually taught by religious orders or by individuals, since the state offered public education only to men. The situation of women in this period varied according to the social group to which they belonged. Women from the middle and upper classes enjoyed a better economic and social position, living within puritan mentality:

their life was basically spent at home and they were dedicated to attending religious and social events and doing charitable work. Woman did not have any political rights and the legislation of that time established legal inferiority of women and their dependence on fathers and husbands. This was reflected in the Spanish Civil Code of 1889 in its Article 57 and following, where it was stipulated that 'woman must obey the husband', that 'the husband is the representative of a woman' or 'is the administrator of the property of the conjugal society', among other things (Civil Code). All this has its origin in the influence of Catholic Church in society, presenting women as a weakling who must be submitted to a man, as well as philosophers, moralists and doctors, who have preached an idea of both physical and mental inferiority of woman compared to men. The evolution of women's rights at that time is closely linked to feminist movements, and although they had a lesser presence and social influence in Spain than in the rest of Europe, still they were important. Feminism in Spain was based on social claims, such as the right to education or work, rather than political demands, such as the right to vote. During the Second Spanish Republic (1931-1939), important reforms were carried out in the field of private law. Among the most relevant was that the marriage was based on equality of rights of both spouses, the admission of consensual divorce, equality of marital children and extramarital ones in the eyes of the law, suppression of religious orders, and separation of church and state. However, the most significant development was the approval of the Spanish Constitution of 1931, which recognized civil marriage and divorce, and granted the right to vote to women, which led to the emergence of the most important social changes of that time. During almost forty years of the Franco dictatorship (1939-1976), the Spanish economy experienced a remarkable growth. But unfortunately, it was a very authoritarian regime in which women were relegated back to their traditional role. The mixed-sex school was abolished and the law that allowed for civil marriage and divorce were repealed, forcing women to stay at home until they got married. The situation of women since the 1980s. has improved in social and legal aspects, if we compare it with the previous two decades. The abortion was legalized in 1985 and in 1981 the right to divorce was approved. However, despite the fact that the new legislation recognized important rights of women in Spain, they continued to play the role of mothers and housewives, which placed them in an inferior position, compared to men. The equality of opportunities and rights of men and women is one of the most important legal principles in today's societies and a universal right recognized in many international publications. In business, gender equality and diversity has become very important in recent decades not only as a result of the human rights principles, but also because of enhanced corporate social responsibility and sustainable development. So, the participation of women in economy is fundamental for strategic reasons. Therefore, belittling and discriminating against half of the population means an inefficient allocation of resources that leads economies to lower growth and competitiveness. As is known, discrimination against women due to gender in terms of promoting and occupying positions in the top management of companies, although illegal, is a fact. This should be evaluated from an economic point of view, and many works, such as Carter et al. (2003), or Ehrhardt et al. (2003), show a relationship between the presence of women in the management teams and economical results of enterprises. Due to importance of this topic and its repercussion for the economy, in this work an analysis of gender diversity in the top company management of the Spanish hotel sector is made. It is worth noting that this sector constitutes ca. 11% of Spanish GDP, which is why it has always been of great importance to the economy (Cuenta Satélite del Turismo de España 2010-2016). Moreover, as it generates large revenues in other sectors, e.g. in transport, it is considered even a strategic area. However, according to a study 'Glass Roof in the Hotel Industry' prepared by the Insular Foundation for Training, Employment and Business Development (Eifede), and the General Foundation of the Universidad de la Laguna, women occupy 36% of management positions in the hotel sector, which is less than the 40% suggested by legislation for effective equality between genders (Ley



Orgánica 3/2007, from 22 March 2007, for the effective equality of women and men). This insufficient level can be explained by influence of social factors such as the traditional belief of women's role in the family and society, the lack of social support on which women count, as well as an unequal distribution of household chores. Besides, due to its seasonality and reduction of employees in the off-season time in the tourism sector, women find greater difficulties in comparison with other sectors, and, as a consequence, there is a high risk that they will abandon their professional career soon, staying at home or looking for another job. Considering the above circumstances, we analyzed the presence of women in management positions of hotels in Spain. The main purpose of the research was to explore profitability and indebtedness of hotel companies in relation to women's presence as the CEOs. The connection of the gender of CEO to various variables related to profitability and indebtedness has been studied as well. We put forward the thesis that because women are more cautious than men, their position of a CEO is important for profitability and debt – companies are less profitable, but also less indebted.

## 2. REVIEW OF LITERATURE AND CONCEPTS

In 1998, the Ethical Code, prepared by a commission chaired by Manuel Olivencia, addressed to listed companies was published in Spain (Lozano, 2000, pp. 175–180). It was a code that did not contain any legal norms but simple recommendations whose application was totally voluntary, with the aim of guaranteeing a more transparent behavior of boards of directors. However, companies were asked to explain their reasons for not following provisions of the Code. Some years later, on January 9, 2003, a report of the Special Commission for the Promotion of Transparency and Security in the Financial Markets and Listed Companies was published in Madrid. That report introduced the expression 'Corporate Governance' in Spain and included the same views as the Olivencia Code but with a new approach, more specific in some aspects. Finally, in June 2013 the Conthe Code of Good Governance of the Listed Companies was published, which on February 24, 2015 was replaced by the new Code of Good Governance of the Listed Companies. That new code contained 64 recommendations; its content was voluntary, but was a subject to the principle of 'comply or explain'. One of the most important assumptions was that at least 30% of the members of a board of directors be made up of women before 2020. Moreover, one of the articles said that: When there are few or no female directors, the board should explain the reasons and the initiatives adopted to correct this situation; and that, in particular, the appointments committee should ensure that when new vacancies are provided (Galan Zazo, 2014, pp. 212-213):

- a) selection procedures do not suffer from implicit biases that hinder the selection of female directors;
- b) company deliberately seeks, and includes among the potential candidates, women which meet the professional profile sought.

First of all, an appointment committee should favor the diversity of knowledge, experiences and gender. Moreover, the director selection policy should promote the goal that in 2020 the number of female directors will represent at least 30% of the total number of board of directors. The appointment committee should annually verify compliance with the director selection policy and should inform of this in the annual corporate governance report. The number of 30% is based on research carried out in Germany by Joecks, Pull and Vetter, (2013, pp. 61–72), in which 151 companies were analyzed. The results show that from that number of women in management boards the performance of a company is higher than the one obtained when members are entirely men. At present, in Spain an average percentage of women in managerial positions is 19.15% (ATREVIA 2018), compared to the average of 20.2% in Europe. Although in Spain progress has been significant, the country is still below European leaders, such as

Norway and France, with percentages close to 40% and 30% respectively. It should be noticed that the European Commission proposed an objective of 40% of the women's presence in boards of directors of listed companies (excluding small and medium-sized companies), so Spanish law is in line with recommendations of the EC. The arguments defending women representation in the boards of directors can be divided fundamentally into two categories: ethical and economic. The first of them argues that it is immoral to exclude women from boards of directors because of gender, and that companies should increase the presence of women in their governing bodies to achieve a more equitable outcome from a society perspective. Therefore, this type of argument suggests that companies should consider greater women representation not as a means to an end, but as a desirable end in itself (Brammer et al., 2007). On the other hand, economic arguments are based on the theory that companies which do not select the most capable candidates for their boards of directors, damage their financial performance (Bravo et al. 2018; Hernik, Minguez Vera, 2017). Results of the analysis of the relationship between gender diversity in boards of directors and the performance of companies show that women can play significant role in this area. There are different studies discussing female presence on boards and their influence on significant improvements in working conditions, as well as the economic, social and cultural balance of the company (Ghosh, 2018; Fregidou, 2004; Gómez, 1998). The various financial scandals of recent years (Lehman Brothers, Madoff, Tyco, Enron... etc.) have generated an atmosphere of concern in this area, which is why there was a need for different stable measures, such as creation and development of regulations related to a good code of corporate governance in companies, both private and public. Therefore, in the last decades codes of good corporate governance have acquired a great importance in domestic and international business. This is mainly due to the fact that they generate a certain level of confidence for the rule of law. The Organization for Economic Cooperation and Development (OECD) defines it as follows: 'Corporate Governance is the mechanism of the shareholders that serves as a counterbalance and guides the administration of the business to ensure efficiency, equity, transparency and results through executive actions followed by the organization, in order to achieve reasonableness, accountability, results, transparency and responsibility.' Code of corporate governance is a key element in increasing economic efficiency and boosting company growth, as well as improving investor confidence. Hence, corporate governance covers a whole series of relationships between the company management board, its shareholders and other interested parties (OECD Principles of Corporate Governance 2004, p. 11). Codes of governance are strongly influenced by the ownership structure and by the structure of management boards – including the presence of women (Pass, 2006; Garegnani, Merlotti and Russo, 2015).

### **3. HOTEL INDUSTRY IN SPAIN – CHARACTERISTICS**

More than half (52 %) of the 2.4 million enterprises in the tourism industries in the EU in 2016 were located in four Member States: in Italy, France, Spain, and Germany. In 2016, Spain was the most frequently visited country by foreign tourists, who purchased 295 million nights at accommodation facilities, which constituted 22.2% of the total number of nights in the EU-28. Moreover, in Spain tourists leave the most money, compared to other EU states: in 2016 receipts came to 54,660 million EUR, while in EU-28 the income amounted to 112,299 million EUR. Tourists come to Spain mainly from Great Britain, Germany and France (Spain Tourist Arrivals). According to Eurostat, in 2017 the increase in tourist traffic was the strongest in Africa (+9%) and Europe (+8%), followed by Asia and the Pacific (+6%), the Middle East (+5%) and the Americas (+3%). It is worth noting that the tourism sector in EU, measured by the number of enterprises, grows faster than the economy in general (Fig. 1).

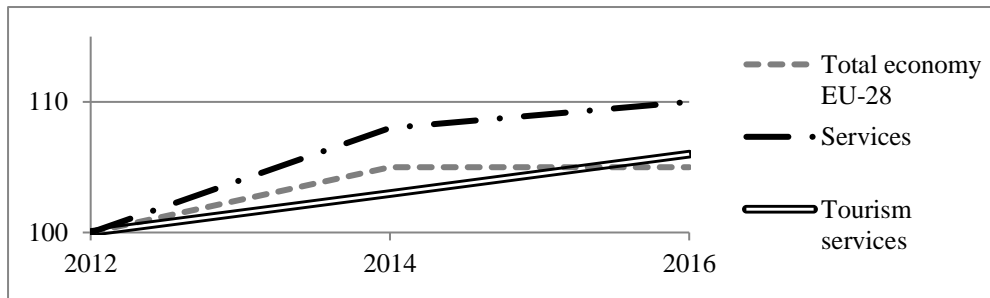


Figure 1: Number of enterprises: evolution for selected sectors of the economy, EU-28, 2012-2016 (Eurostat: Tourism statistics [http://ec.europa.eu/eurostat/statistics-explained/index.php?title=Tourism\\_industries\\_-\\_economic\\_analysis](http://ec.europa.eu/eurostat/statistics-explained/index.php?title=Tourism_industries_-_economic_analysis))

The hotel industry in Spain is very well developed. As it was mentioned, along with such countries as Greece, Italy and Germany, Spain has one of the most-developed tourism infrastructures. The number of hotels operating in Spain is almost 20,000 (in 2016: 19,524), and in most cases these are small hotels with no more than 25 rooms (Eurostat).

#### 4. METHODOLOGY, RESEARCH SAMPLE AND RESULTS

We put forward a thesis that female presence as CEOs is important for profitability and debt – companies are less profitable, but also less indebted. To verify this thesis, a study of 4,347 Spanish hotels was carried out. Data was obtained in 2015 from the SABI database (Iberian Balance Sheet Analysis System), which provided information on more than 2.5 million of Spanish and more than 700,000 Portuguese companies. We have chosen the hospitality industry, as this sector is constantly booming and in recent years it has become one of the branches of greater relevance and economic impact, occupying a key role in the output of the crisis (Gómez and González, 2014). In this paper, as we already mentioned, we studied the influence of CEO's gender on various variables related to profitability and indebtedness. As a measure of gender, a dichotomous variable indicative of the presence of a woman as CEO was included (dummy variable). Furthermore, measures of performance that were studied included: 1) Return on Equity (ROE) or financial return, calculated as net profit between the net of liabilities; 2) Return on Assets (ROA), showing how profitable a company is, relative to its total assets; 3) the profit margin, understood as the difference between the sale price without VAT and costs. Subsequently, measures related to indebtedness included: 1) the debt percentage ratio (%), which indicates the proportion of debt that a company has (long and short term) with respect to total liabilities; 2) the average cost ratio of external financing (%), which shows how much a company pays for financing with external resources, calculated as the quotient between the payment of interest and the total debt; 3) the interest coverage ratio, calculated as interest divided by earnings before interest and taxes, which is used for assessing cash flow balance generated by the company to meet its financial obligations; 4) the degree of financial leverage calculated as the absolute value of the quotient between the operating profit minus the financial charges (interests). Next, we obtained descriptive statistics of each of enumerated variables: mean, median, standard deviation, minimums and maximums, which are shown in Table 1.

Table following on the next page

VARIABLES	mean	median	standard deviation	min	max
Dummy CEO = 0 man	0,25	0	0,43	0	1
Profit margin (%)	-7,03440	0,25500	31,534131	-215,384	181,381
ROA (%)	-0,04274	0,91300	12,461958	-97,450	97,472
ROE (%)	6,22336	1,97000	110,782950	-3565,996	4898,140
Debt percentage ratio	50,17	48,72	30,904	0	100
External financing ratio	0,07	0,03	0,519	0	17
Interest coverage ratio (%)	0,19157	0,94350	42,784611	-328,673	328,071
Degree of financial leverage	5673,00	83,80	7608,319	0,00	460742,00

*Table 1: Descriptive statistics (own study)*

In the first place, we note that only 25% of the 4,347 companies analyzed was run by women. First calculations also show that the financial profitability was 6.22%, while the economic profitability was negative (-0.0427%), and the indebtedness of the companies was 50%. Profit margin took values between -215.4 and 181.4, and the degree of financial leverage presented a minimum value of 0 and a maximum of 460,742 in absolute value. The leverage in company's finances allowed it to achieve an above-average economic effect, and the calculations showed that some companies obtained such results. To carry out the comparative analysis, first of all, we used the Kolmogorov-Smirnov test in order to check the normality of the variables of the two groups of companies (with women as CEOs and without). It turned out that our samples did not follow a normal distribution, thus we finish our analysis with non-parametric tests for two samples, specifically the Mann-Whitney U Test. Table 2 shows the results of the normality tests.

VARIABLES	DUMMYCEO=1	DUMMYCEO=0
Profit margin	6,164	10,879
ROA	5,753	10,350
ROE	10,210	14,801
Debt percentage ratio	2,170	3,233
Time of CM of external financing	13,954	25,677
Interest Coverage Ratio	9,252	15,537
Degree of Financial Leverage	10,727	23,892

*Table 2: Statistical comparison of two samples (DUMMYCEO=1 is a group with women as CEOs) (own study)*

As we see in Table 2, none of the obtained samples was normal, therefore to calculate the significance test for two means, the Kolmogorov-Smirnov non-parametric test was used. Table 3 presents main results obtained regarding the difference between these two samples.

VARIABLES	CEO WOMAN	CEO MAN	STATISTICAL. Z
Profit margin	2029,17	2165,69	-3,123***
ROA	2080,69	2204,35	-2,796**
ROE	2110,73	2194,58	-1,896**
Debt percentage ratio	2211,75	2161,72	-1,132
Average cost ratio of external financing	2119,57	2191,71	-1,633
Interest coverage ratio	1870,99	1985,38	-2,719***
Degree of Financial Leverage	2092,19	2200,61	-2,453***

\* significance at 10% level

\*\* significance at 5% level

\*\*\* significance at 1% level

*Table 3: Difference of means (own study)*

In this table we can see that the majority of differences in means is significant, between 5 and 10%, and generally in favor of companies run by men. Thus, we observe that the companies with masculine CEOs obtain a higher financial return (ROE), and this is statistically significant at 5%. This can be explained by the theories analyzed in previous sections which argue that companies run by women are less profitable because, in general, they are more averse to risk. In terms of economic profitability (ROA), again we see that it presents higher levels for companies run by men. Likewise, it is observed that there is a greater profit margin, with a significance of 10%, for companies managed by men. These results coincide with those obtained by Adams and Ferreira (2009) whose studies reveal that, on average, the effect of gender diversity on the performance of the company is negative. In this sense, we can prove theories that argue that women expect less benefit than men. Among them there is Romani et al. (2012), who concluded that women invest less money in their businesses and expect fewer benefits than men; Lundeberg, Fox and Puncochar (1994) argued that women were less secure than men in their investment decisions, so they were more cautious. These differences in confidence with respect to men can cause dissimilar risky behavior. On the other hand, Table 3 shows lack of significant differences between the debt ratio of companies run by men and that of companies run by women. The same may be said about the average cost of external financing ratio. In effect, no differences are observed, but it is shown that companies run by men have a greater degree of financial leverage, and therefore, run greater financial risk. Finally, it is observed that the interest coverage ratio is higher for companies run by men. This may be due to the higher profitability presented by these companies, a conclusion that coincides with the one found by authors such as Böhren and Ström (2005), among others.

## 5. CONCLUSION

Many theories and evidence show that there are differences between women and men when running a company and show the consequences of having women at the head of the top management. These consequences, as we have seen, can be both positive and negative. Thus, there are several studies that show that the presence of women in the management positions of a company increases their profitability by increasing the company's competitive advantage, boosting innovation and creativity. There are also studies which have shown that the diversity of gender in the company leads to a reduced level of indebtedness. However, our analysis showed that in general, companies in hotel industry which are run by men as CEOs are more profitable and have a wider profit margin than the companies run by women. Other indicators were also better for men-CEOs – ROA, ROE debt percentage ratio or Degree of Financial Leverage. Although high financial leverage means greater financial risk, because of partial financing of business activities with external capital, this indicator may be evaluated negatively. The obtained results confirm the thesis that women are more cautious than men, which is probably why their companies are less profitable, but also less indebted with external capital. This means that they have gained the current situation by themselves, and this may be due to the overall strategy of the company's owners. The general assessment of female CEOs depends on a larger number of variables, as well as their dynamics over time. E.g. we do not know the situation of hotels in the past, perhaps the female CEOs improved their financial situation and this trend will continue in the future. We also do not know external market factors. Taking all of this into account, it should be said that more reliable and universal results might be obtained in wider time and sample. In addition, more complex statistical data analyses could have been made, and finally the study could be extended to other sectors.

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## DETERMINANTS OF INTRA-INDUSTRY TRADE: AN INVESTIGATION WITH BMA FOR THE EUROPEAN UNION

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### ABSTRACT

*The empirical literature on determinants of intra-industry trade (IIT) is vast and comprehensive, yet as the authors failed to properly account for model uncertainty it has brought inconsistent and conflicting results. To resolve this issue, Bayesian model averaging was applied to investigate the robustness of 48 potential determinants of bilateral IIT for the panel of 26 European Union countries over the 1999-2011 period. Application of BMA demonstrated that 11 of them are robust determinants of IIT, namely real GDP product, trade openness, membership in the European Union and the Euro area, corruption, and differences in factor abundance. Among the factors of production, the key role in the determination of IIT patterns can be assigned to the differences in human capital. Yet, transportation cost and cultural similarity have no impact on the IIT patterns.*

**Keywords:** intra-industry trade, Bayesian model averaging, European Union

### 1. INTRODUCTION

Intra-industry trade (IIT) is at the heart of European integration. A high degree of IIT promotes more symmetrical distribution of economic shocks and, in turn, tighter business cycle synchronization. Only when business cycles of a given group of countries are fairly synchronized, can the countries give away their independent monetary and exchange rate policy to a supranational institution in order to constitute an effectively functioning currency union. For these reasons, IIT should be one of the main concerns of the Euro area current as well as potential members. For many years the authors have been trying to establish what factors are the determinants of intra-industry trade (e.g.. Sharma, 2004; Thorpe and Zhang, 2005; Zhang and Clark, 2009; Jensen and Lüthje, 2009; Sawyer *et al.*, 2010; Dautovic *et al.*, 2014), yet none of them took into account model uncertainty, which leads to many conflicting and inconsistent results. For this reason, this paper presents the results of the sensitivity analysis of the determinants of IIT with Bayesian model averaging (BMA). Thus far, there has been only one attempt at sensitivity analysis of determinants of IIT (Torstensson, 1996). Using a rather outdated (by current standards) methodology, the author analyzed 17 determinants of IIT on the Swedish data and found that only physical capital intensity and transportation cost are robust. The paper is organized as follows. The first two sections describe data and estimation strategy, while the other two present results and conclusions.

### 2. DATA AND MEASUREMENT

The analysis covers 26 European Union countries, namely: Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Netherland, Poland, Portugal, Romania, the Slovak Republic, Slovenia, Spain, Sweden, and the United Kingdom. All variables are in bilateral form – for 26 countries, it amounts to 325 country pairs. The time span of the research covers the period between 1999 and 2011. As most of the variables used in the research are characterized by unit root<sup>1</sup>, first differences were used. Consequently, the balanced panel consists of 3900 observations.

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<sup>1</sup> Results of the unit root tests are not reported here for brevity, but available upon request from the author.



The dependent variable is the first difference of the natural logarithm of intra-industry trade measured by the sum of imports and exports of intermediate goods within the same sector between a pair of countries in each year. IIT is measured with the division of the economy into 35 different sectors and the data for IIT comes from World Output-Input Database (WOID). The list of the independent variables along with their descriptions and data sources are given in Table 1. The set of regressors is made up of variables describing differences in absolute and relative factor endowments, gravity variables, structural similarity, as well as macroeconomic, institutional and cultural indicators. In total, the set amounts to 48 regressors.

### **3. ESTIMATION STRATEGY**

To find a set of robust determinants of intra-industry trade, Bayesian model averaging (BMA) under different prior specification was applied. A detailed description of BMA (Hoeting, *et al.*, 1999; Beck, 2017) and prior structure (Fernández, *et al.*, 2001; Ley and Steel, 2009 and 2012, Feldkircher and Zeugner, 2009, Eicher, *et al.*, 2011) is left for references. The particular estimation strategy, customized for the problem at hand, along with the key BMA statistics is described in this subsection. As a high degree of multicollinearity among the regressors is possible, an appropriate prior structure has been employed to deal with this issue.

*Table following on the next page*

*Table 1: Data description*

VARIABLE	DESCRIPTION	SOURCE
ARABLE	$\Delta$ absolute value of the difference in arable land	WB
ARABLEpw	$\Delta$ absolute value of the difference in arable land per worker	PWT& WB
B	common border dummy	-
BCIDIFF	$\Delta$ absolute value of the difference in Bayesian corruption Index	BCI
BCIPROD	$\Delta$ product of the values of Bayesian Corruption Index	BCI
CAP	$\Delta$ absolute value of the difference in capital	PWT
CAPAREABLE	$\Delta$ absolute value of the difference in capital to arable land ratio	PWT & WB
CAPLAND	$\Delta$ absolute value of the difference in capital to land ratio	PWT & WB
CPW	$\Delta$ absolute value of the difference in capital per worker	PWT
CPWARABLE	$\Delta$ absolute value of the difference in capital per worker to arable land ratio	PWT & WB
CPWLAND	$\Delta$ absolute value of the difference in capital per worker to land ratio	PWT & WB
EMPL	$\Delta$ absolute value of the difference in employment	PWT
EMPLARABLE	$\Delta$ absolute value of the difference in employment to arable land ratio	PWT & WB
EMPLLAND	$\Delta$ absolute value of the difference in employment to land ratio	PWT & WB
EPCpc	$\Delta$ absolute value of the difference in electricity consumption per capita	WB
EU	membership in the European Union dummy	-
FDID	absolute value of the difference in FDI flows	UNCTAD
GOV	$\Delta$ absolute value of the difference of government shares in GDP	PWT
HUMAN	absolute value of the difference in human capital	PWT
HUMANARABLE	$\Delta$ absolute value of the difference in human capital to arable land ratio	PWT & WB
HUMANCAP	absolute value of the difference in human capital to capital ratio	PWT
HUMANEMPL	$\Delta$ absolute value of the difference in human capital to employment ratio	PWT
HUMANLAND	absolute value of the difference in human capital to land ratio	PWT & WB
IUp100	$\Delta$ absolute value of the difference in number of internet users per 100 inhabitants	WB
DKSI	$\Delta$ KSI for value added under the division of the economy into 35 sectors	WOID
L	common language dummy (at least one official common language)	-
LAND	absolute value of the difference in land	WB
LANDpc	absolute value of the difference in land per capita	WB
LNDGEO	natural logarithm of geographical distance between capitals (shortest way) in km	Google Maps
LNPOPPROD	$\Delta$ natural logarithm of population product	PWT
LNRGDPPROD	$\Delta$ natural logarithm of real GDP product	PWT
MA	dummy variable for a pair of countries sharing a marine border	-
MB	dummy variable for a pair of countries with access to the ocean or the sea	-
MIGR	absolute value of the difference in net migration per 1000 inhabitants	Eurostat & PWT
MU	membership in the Euro area dummy	-
OILpc	$\Delta$ absolute value of the difference in number of internet users per 100 inhabitants	WB
OLDEU	dummy variable for a pair of countries that were members of the EU before 2004	-
OPEN	$\Delta$ absolute value of the difference of imports+exports shares of GDP	PWT
PATENT	$\Delta$ absolute value of the difference in number of patents per 1 million inhabitants	WB
POPDIF	absolute value of the difference in population	PWT
RGDPDIFF	$\Delta$ absolute value of the difference in real GDP	PWT
RGDPpc	$\Delta$ absolute value of the natural logarithm of the difference in real GDP per capita	PWT
RGDPpcPROD	$\Delta$ value of the real GDP per capita product	PWT
TRADE1	value of the ratio of imports and export to the sum of two countries GDPs	DOT & WB
TRADE2	value of the ratio of imports and export to the sum of two countries total trades	DOT
TRANS	dummy variable for a pair of transition countries	IMF
URBAN	$\Delta$ absolute value of the difference in the urban population	WB
URBANshare	$\Delta$ absolute value of the difference in share of the urban population	PWT & WB

Abbreviations:  $\Delta$ - first difference; KSI-Krugman specialization index; BCI-Bayesian Corruption Index (Standaert, 2015)  
PWT-Penn World Tables (Feenstra et al., 2015); WB-World Bank; DOT – International Monetary Fund Directions of Trade;  
UNCTAD-United Nations Conference on Trade and Development.

*Source: Author's own elaboration*

A uniform model prior (Ley and Steel, 2009) is supplemented with a function accounting for multicollinearity (George, 2010) to obtain prior model probabilities:

$$P(M_j) \propto |R_j|^{0.5} \left(\frac{1}{2}\right)^K, \quad (1)$$

where  $K = (48)$  is the number of covariates, while  $|R_j|$  is the determinant of the correlation matrix for all the regressors in the model  $j$ . The uniform model prior implies equal probabilities assigned to all the models ( $P(M_j) \propto 1$ ), so the  $|R_j|$  component of (2) determines the distribution of the prior probability mass. The higher the multicollinearity between the variables, the closer the value of  $|R_j|$  to 0, and the lower the prior ascribed to a given model. Model space is reduced with MC<sup>3</sup> (Markov Chain Monte Carlo model Composition) sampler (Madigan *et al.*, 1995). The convergence of the chain is assessed by the correlation coefficient between the analytical and MC<sup>3</sup> posterior model probabilities for the best 10000 models. The application of BMA requires the specification of g prior. Benchmark prior rule (Fernández, *et al.*, 2001) dictated the choice of unit information prior (UIP) (Kass and Wasserman, 1995) for the dataset at hand. Additionally, risk inflation criterion (RIC) put forward by Foster and George (1994) was employed in the main results. The combination of prior model probabilities with the values of likelihood function allows to calculate posterior model probability as:

$$PMP = p(M_j|y) = \frac{l(y|M_j) * p(M_j)}{p(y)} = \frac{l(y|M_j) * P(M_j)}{\sum_{j=1}^{2^K} l(y|M_j) * P(M_j)}, \quad (2)$$

where  $l(y|M_j)$  denotes model specific marginal likelihood,  $y$  given data set, and because  $p(y) = \sum_{j=1}^{2^K} l(y|M_j) * P(M_j)$  model weights can be treated as probabilities. Then the posterior mean (PM) of the coefficient  $\beta_i$ , independent of the space of the models is given by:

$$PM = E(\beta_i|y) = \sum_{j=1}^{2^K} P(M_j|y) * \hat{\beta}_{ij}, \quad (3)$$

where  $\hat{\beta}_{ij} = E(\beta_i|y, M_j)$  is the value of the coefficient  $\beta_i$  estimated with OLS for the model  $M_j$ . The posterior standard deviation (PSD) is equal to:

$$PSD = \sqrt{\sum_{j=1}^{2^K} P(M_j|y) * V(\beta_j|y, M_j) + \sum_{j=1}^{2^K} P(M_j|y) * [\hat{\beta}_{ij} - E(\beta_i|y, M_j)]^2}, \quad (4)$$

where  $V(\beta_j|y, M_j)$  denotes the conditional variance of the parameter for the model  $M_j$ . To better capture the relative impact of the determinants on the intra-industry trade standardized coefficients were calculated and BMA statistics based on their values. SPM denotes the standardized posterior mean, while SPSD denotes standardized posterior standard deviation (Doppelhofer and Weeks, 2009). The posterior probability of including the variable in the model – posterior inclusion probability (PIP) – is calculated as:

$$PIP = P(x_i|y) = \sum_{j=1}^{2^K} 1(\varphi_i = 1|y, M_j) * P(M_j|y), \quad (5)$$

where  $\varphi_i = 1$  signifies including the variable  $x_i$  in the model. In all applications of BMA here, prior inclusion probability is 0.5, and a variable is classified as robust if PIP is above that value. The posterior probability of a positive sign of the coefficient in the model –  $P(+)$  – is calculated in the following way:

$$P(+) = P[\text{sign}(x_i)|y] = \begin{cases} \sum_{j=1}^{2^K} P(M_j|y) * CDF(t_{ij}|M_j), & \text{if } \text{sign}[E(\beta_i|y)] = 1 \\ 1 - \sum_{j=1}^{2^K} P(M_j|y) * CDF(t_{ij}|M_j), & \text{if } \text{sign}[E(\beta_i|y)] = -1 \end{cases} \quad (6)$$

where  $CDF$  denotes cumulative distribution function, while  $t_{ij} \equiv (\hat{\beta}_i / \widehat{SD}_i | M_j)$ .

#### 4. RESULTS

The results of the application of BMA to the data set are depicted in table 2. BMA specification included 0.1 million burn-ins and 1 million iterations, which resulted in correlation coefficient between the analytical and MC<sup>3</sup> posterior model probabilities for the best 10000 models above 0.999 in both cases, *ergo* the convergence of the chain was achieved. The first variable classified as robust is the natural logarithm of the real GDP product (LNRGDPPROD) with PIP equal to one for both g prior specifications. The posterior mean indicates that one percent increase in LNRGDPPROD is associated with an increase in IIT by approximately 0.69 percent. This confirms that gravity works in case of the IIT, just as in the instance of the total trade. On the other hand, geographical distance (DGEO), border dummy (B), and common language dummy (L) are fragile, which suggests that transportation costs and cultural similarities are not important for the determination of the intra-industry trade. Change in the degree of the openness (OPEN) is the second variable with posterior inclusion probability higher than prior. OPEN is characterized by a positive posterior mean, which indicates that more open countries are generally more involved in IIT. This could be explained by the fact that more open countries are more integrated into global value chains, which can account for the significant part of the intra-industry trade in intermediate goods. The product of Bayesian Corruption Index (BCIPROD) is characterized by posterior inclusion probability equal to 1 under both g priors. The regressor is characterized by a negative posterior mean, which suggests that the higher degree of corruption is associated with lower IIT. This result should not come as a surprise, as companies moving part of their production abroad will try to avoid risk and additional costs associated with corrupt administration. Membership in the European Union (EU) as well as in the Euro area (MU) are classified as robust regardless of the used g prior specification. In a rather unexpected turn, values of the posterior mean for both EU and MU are negative, suggesting that countries in either of these associations are trading less with one another. In other words membership in the EU and the Eurozone is associated with lower intra-industry trade growth by around 5% a year. This result is the consequence of the analysis of the growth rates. Old members of the EU and the Euro area are characterized by higher levels of IIT. Application of OLS or BMA at level results in the positive values of coefficients or posterior mean respectively. This in turn indicates that intra-industry is growing between old EU members and the new member states, and it shows that these countries are consecutively more interlinked in European value chains. It should be underlined that dummy variable EU and MU takes the value of 1 only if both countries are members of the European Union or the Euro area respectively. The last six robust variables are differences in absolute or relative factor endowments.

Four of them involve human capital, which indicates that this is the key factor of production for intra-industry trade. The absolute value of the difference in human capital to employment ratio (HUMANEMPL), human capital to land ratio (HUMANLAND), and human capital to physical capital ratio (HUMANCAP) are all characterized by the negative value of the posterior mean. The negative posterior mean indicates that countries characterized by a similar level of human capital to other factors ratios are engaged in more IIT. This suggests that traded goods are characterized by similar human capital intensity, and they must compete with the foreign counterparts. Accordingly, one can expect that human capital intensive goods account for the sizable part of intra-industry trade (product of human capital in two countries is positively and significantly correlated with IIT). Additionally, these results give support to theories associated with horizontal IIT (e.g., Krugman, 1981). On the other hand, the absolute value of the difference in human capital to arable land (HUMANARABLE) is characterized by a positive posterior mean. This result points to vertical integration, where human capital abundant countries are moving low skilled parts of the value chains to countries with abundant natural resources and arable land. Alternatively, the negative posterior mean can be explained by theories associated with vertical IIT (e.g., Flam and Helpman, 1987). Differences in absolute levels of employment (EMPL) are characterized by posterior inclusion probability of 0.94 and 0.96 for UIP and RIC respectively. A positive posterior mean indicates that higher differences in the level of employment are related to higher growth rates of IIT. This result can be attributed to vertical integration, as countries' scarce labor force might search for the location of labor intensive parts of the value chain in the countries that are labor abundant. Finally, differences in arable land per worker (ARABLEpw) are the last variable classified as a robust determinant of IIT. It is characterized by a negative posterior mean, which implies that differences in arable land to labor ratio are deteriorating intra-industry trade. Accordingly, one can expect that arable land abundant countries will engage in trade in agrarian products, but depending on their particular location the exact nature of the products will be different.

*Tabele following on the next page*

*Table 2: BMA statistics under UIP and RIC*

g prior	Unit Information Prior						Risk Inflation Criterion					
VARIABLE	PIP	PM	PSD	SPM	SPSD	P(+)	PIP	PM	PSD	SPM	SPSD	P(+)
LNRGDPPROD	1.00	0.69	0.13	0.17	0.03	1.00	1.00	0.69	0.13	0.17	0.03	1.00
OPEN	1.00	0.42	0.05	0.13	0.02	1.00	1.00	0.42	0.05	0.13	0.02	1.00
HUMANEMPL	1.00	-0.40	0.05	-0.19	0.02	0.00	1.00	-0.40	0.05	-0.19	0.02	0.00
BCIPROD	1.00	0.00	0.00	-0.09	0.02	0.00	1.00	0.00	0.00	-0.09	0.02	0.00
HUMANLAND	1.00	-131	36.5	-0.13	0.03	0.00	1.00	-135	37.3	-0.13	0.04	0.00
MU	0.99	-0.05	0.01	-0.07	0.02	0.00	1.00	-0.05	0.01	-0.07	0.02	0.00
EU	0.97	-0.05	0.01	-0.07	0.02	0.00	0.97	-0.05	0.01	-0.07	0.02	0.00
EMPL	0.94	0.00	0.00	0.06	0.02	1.00	0.96	0.00	0.00	0.06	0.02	1.00
HUMANCAP	0.79	-751	458	-0.05	0.03	0.00	0.83	-786	442	-0.05	0.03	0.00
HUMANARABLE	0.79	1.25	0.75	0.05	0.03	1.00	0.77	1.20	0.75	0.05	0.03	1.00
ARABLEpw	0.64	-0.01	0.00	-0.04	0.03	0.00	0.70	-0.01	0.00	-0.04	0.03	0.00
CPWLAND	0.35	0.01	0.02	0.02	0.03	1.00	0.42	0.02	0.02	0.03	0.03	1.00
LANDpc	0.33	0.00	0.00	-0.01	0.02	0.00	0.37	0.00	0.00	-0.02	0.02	0.00
RGDPpcPROD	0.20	0.00	0.00	-0.01	0.03	0.00	0.24	0.00	0.00	-0.02	0.03	0.00
ARABLE	0.14	0.00	0.00	0.01	0.02	1.00	0.16	0.00	0.00	0.01	0.02	1.00
CPWARABLE	0.09	0.00	0.00	0.00	0.01	1.00	0.09	0.00	0.00	0.00	0.01	1.00
CAPARABLE	0.07	0.00	0.00	0.00	0.01	0.00	0.09	0.00	0.00	0.00	0.01	0.00
RGDPDIFF	0.05	0.00	0.00	0.00	0.01	1.00	0.06	0.00	0.00	0.00	0.01	1.00
URBAN	0.05	0.00	0.00	0.00	0.01	0.00	0.06	0.00	0.00	0.00	0.01	0.00
MIGR	0.04	0.00	0.00	0.00	0.01	1.00	0.05	0.00	0.00	0.00	0.01	1.00
DKSI	0.03	0.01	0.06	0.00	0.00	1.00	0.04	0.01	0.07	0.00	0.00	1.00
UIp100	0.03	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
MA	0.03	0.00	0.00	0.00	0.00	1.00	0.04	0.00	0.00	0.00	0.00	1.00
OLDEU	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
B	0.03	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
GOV	0.02	-0.01	0.06	0.00	0.00	0.00	0.03	-0.01	0.06	0.00	0.00	0.00
TRANS	0.02	0.00	0.00	0.00	0.00	1.00	0.03	0.00	0.00	0.00	0.00	1.00
POPDIFF	0.02	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.01
FDID	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
MB	0.02	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
CAPLAND	0.02	0.00	0.00	0.00	0.01	1.00	0.03	0.00	0.00	0.00	0.01	1.00
HUMAN	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
LAND	0.02	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
BCIDIFF	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
TRADE1	0.02	0.00	0.07	0.00	0.00	1.00	0.02	0.01	0.08	0.00	0.00	1.00
EPCpc	0.02	0.00	0.00	0.00	0.00	1.00	0.03	0.00	0.00	0.00	0.00	1.00
LNDGEO	0.02	0.00	0.00	0.00	0.00	0.99	0.02	0.00	0.00	0.00	0.00	0.99
PATENT	0.02	0.00	0.00	0.00	0.00	0.96	0.02	0.00	0.00	0.00	0.00	0.96
RGDPpc	0.02	0.00	0.01	0.00	0.00	1.00	0.02	0.00	0.02	0.00	0.00	0.99
URBANshare	0.02	-0.01	0.12	0.00	0.00	0.00	0.02	-0.01	0.13	0.00	0.00	0.00
EMPLARABLE	0.02	0.00	0.00	0.00	0.00	0.13	0.02	0.00	0.00	0.00	0.00	0.15
L	0.02	0.00	0.00	0.00	0.00	0.97	0.02	0.00	0.00	0.00	0.00	0.98
CPW	0.02	0.00	0.00	0.00	0.00	0.37	0.02	0.00	0.00	0.00	0.00	0.33
TRADE2	0.02	0.00	0.02	0.00	0.00	0.21	0.02	0.00	0.03	0.00	0.00	0.22
CAP	0.01	0.00	0.00	0.00	0.00	0.13	0.02	0.00	0.00	0.00	0.00	0.13
LNPOPPROD	0.01	0.00	0.00	0.00	0.00	0.91	0.02	0.00	0.00	0.00	0.00	0.87
OILpc	0.01	0.00	0.00	0.00	0.00	0.19	0.02	0.00	0.00	0.00	0.00	0.16
EMPLLAND	0.01	0.00	0.00	0.00	0.00	0.41	0.02	0.00	0.00	0.00	0.00	0.46

*Source: Author's own elaboration*

Turning to standardized posterior means, the product of GDPs and differences in human capital to employment ratios have the strongest impact on the growth rate of IIT. Second in line are the degree of openness and differences in human capital to land ratios followed by product of Bayesian Corruption Index. Next in line are memberships in the Euro area and the European Union succeeded by differences in employment, the differences in human capital to arable land and human capital to physical capital ratios. Finally, differences in arable land per worker have the lowest impact on intra-industry trade among all the robust variables. All the above-mentioned results turned out to be robust to manipulation in g prior and model prior specification. Additional robustness checks are not reported here for brevity, but are available upon request.

## 5. CONCLUSIONS

Application of BMA to the panel data for 26 European Union countries over the 1999-2011 period allowed for the identification of 11 robust determinants of intra-industry trade. Out of traditional gravity model variables, only product of real GDP turned out to be robust, while transportation cost and cultural similarity proxies are classified as fragile. Corruption seems to provide strong impairment on IIT as additional risk and costs associated with it disincentivize potential investors from moving part of the production abroad. The general level of openness is positively related to the intra-industry trade with more open countries being better integrated into global value chains. Memberships in the EU and the Eurozone have a positive impact on the level of IIT, but negative on the growth rate of intra-industry trade. This result suggests that new member states are getting more entangled in old EU value chains. Finally, the analysis showed the crucial role of the differences in the factor abundance of the trading countries. Out of all the analyzed factors of production, the most important part in the determination of intra-industry trade patterns is played by human capital.

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## THE ROLE OF PROCESS IMPROVEMENTS TOOLS IN BUILDING RELATIONSHIP BETWEEN SUPPLIERS AND INDUSTRIAL CLIENTS

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### **ABSTRACT**

*The purpose of this research paper is to present the role of process improvements tools in building relationships between clients and suppliers on the industrial goods market. Their identification was based on an analysis of the literature, as well as on the results of empirical research conducted by the CATI technique and covered 300 producers that were suppliers for enterprises from the chemical, metal and automotive industry sectors operating in Poland. The results of the conducted research indicate that the main supplier requirements relating to technical quality of products, shortening cycles of process implementation and willingness of the supplier to reduce costs. One could also observe that for many industrial clients, their relationships with suppliers are not just confined to fulfilling rigorous requirements. Increasingly, they recognize that building their competitive advantage also requires building partnerships with suppliers that are manifested in joint projects in the field of effective application of the requirements of tool (like quality, environmental and safety management systems, Toyota Production System or Lean Management concept), which have an impact on the improvement of the products and processes in the supply chain.*

**Keywords:** *Industrial Goods Market, Process Improvement Tools, Supplier Requirements, Supply Chain Management*

### **1. INTRODUCTION**

Building relationships with partners in the B2B sector is largely the result of the evolution from those repeated transactions based only on trust to becoming a primary source of purchase and true partnership. When building relationships with suppliers, enterprises pay particular attention to the following:

Periodic evaluation and monitoring of the indicators of supplier performance,

- Instigating projects related to improving processes and reducing operating costs (by assisting in the implementation of operational improvement tools),
- Conducting both on-line communication and joint research and development with suppliers in order to improve the quality of products and their positive impact on the environment.

Recurring transactions are often transformed into long-term relationships in which mutual relations are governed by contracts. If the parties are satisfied with the implementation of the provisions contained within, then such co-operations can turn into close-partner relationships. These can lead to many mutual benefits, such as improving product quality and service, shortening order fulfillment cycles, purchasing efficiencies, improved communication between the supplier and the recipient or joint research and development. The observation of business practice shows that many enterprises improving the processes in a supply chain focus on the implementation of quality, environmental and safety management systems which conform to ISO organization standards requirements as well as operational excellence tools, like Toyota Production System, Lean Management and Six Sigma methodologies. Many companies who are clients in the industrial sectors often define to their suppliers individualized requirements through specifications to determine not only issues related to quality assurance, but also organizational performance related to an increase in efficiency (cost reduction) and reducing

the negative impact on the environment. By adapting to these requirements, suppliers create a platform for building partnerships with their clients operating in the manufacturing sector, based on the mutual benefits (Lofti, Sahran, Mukhtar, Zadeh, 2013, pp. 471-488).

## **2. BUILDING RELATIONSHIP IN THE SUPPLY CHAIN**

Supply Chain Management is a fundamental concept of current economy, which has evolved to enable organizations to improve efficiency and effectiveness in the global and highly competitive environment of the twenty first century. This comprises processes connected with planning, completion and evaluation related to the flow of materials, equipment, information and human resources among organizations to ensure effective and fast delivery of tangible products and services between the supplier and the customer. Building a competitive advantage in the manufacturing sector is, in particular, subject to the shaping of long-term partner relationships between companies. An individualized, trust-based approach towards the establishment of contacts, interests and possibilities of cooperation allow the negotiation and execution of transactions with parties, guaranteeing their equal standing (called win-win). A positive evaluation of these activities, through which each party can see a number of measurable benefits, is essential in maintaining relationships, and a sign of readiness for further cooperation (Katiyar, Meena, Barua, Tibrewal, Kumar, 2018, pp. 303-316; Neutzling, Land, Seuring, do Nascimento, 2018, pp. 3448-3458). A condition of this is that effective communication, in its form and content, should meet the expectations of each partner. The activities of multinational corporations which introduced the concept of sustainable development are heavily focused on collaboration with their partners in the supply chain (suppliers and customers). Large manufacturing corporations are increasingly offering support through joint ventures, such as deployment projects, operational improvement tools (environmental and safety management systems, Lean Management, Six Sigma, TPS), or developing concepts for new products. Building partnerships with industrial customers and suppliers can bring the supply chain many important benefits such as:

- Shortening the time for new products (thereby reducing associated costs);
- Ensuring business continuity, together with the methodology developed for identification, analysis, and hazard mitigation (associated with the product and the processes implemented in the supply chain);
- Increased flexibility, efficiency and effectiveness of the processes through efficient and rapid communication (aimed at forecasting demand, joint planning of resource use; use of a compatible infrastructure and the use of operational improvement tools like quality management systems / environment / safety, as well as Toyota Production System based on Kaizen philosophy, Lean Management, and Six Sigma);
- Promotion of ethics in economic activities, through the avoidance of corruption, discrimination (using monopolistic practices), the discharge of contracts (including trade secrets), and compliance with regulatory requirements, design and analysis of product lifecycles according to the guidelines contained in ISO 14 040 series standards (Aboelmaged, 2010, pp. 268-317; Su, Dhanorkar, Linderman, 2015, pp. 31-44).

A partnership comprises a process in which the customer and the supplier gradually build strong and extensive social, economic and technical relations. Creating partnerships usually is a result of some kind of evolution, beginning with repeated transactions, based on loyalty to the source of purchase, and related to the positive image of a particular partner. These repeated transactions often transform into long-term connections in which relations are regulated by agreements. If parties are content to keep to the arrangements set out in the agreements, their cooperation may transform into a close partnership (Wagner, 2011, pp. 277-283), which has the potential to produce many benefits for the partners.

These are: improved quality of products and services, prompter processing of orders, preferential prices, improved communication between the supplier and the recipient (quicker and more complete exchange of information), joint research and development (Quigley, Walls, Demirel, MacCarthy, Parsa, 2018, pp. 932-947). The benefits gained enhance the positive image of the partners in each other's eyes. In certain cases, a partnership between a supplier and a customer may transform into a strategic alliance which is based on the joint achievement of specific long-term goals.

### **3. THE ROLE OF QUALITY AND ENVIRONMENTAL MANAGEMENT STANDARDS WHEN COOPERATING WITH SUPPLIERS**

Building a partnership with suppliers is dependent on clearly specifying the requirements they must meet and on the efficiency of the tools employed to ensure the fulfilment of the requirements, e.g. audits, supplier evaluation sheets (which are based on an indicator analysis concerning meeting requirements in the area of technical quality, meeting deadlines, price competitiveness and providing services). Significant conditions shaping this partnership are the speed of information exchange and individualization of approach, e.g. by means of offering an ever wider range of services by the supplier and involvement in joint research and development of new products. The most common organizational standard used by companies to ensure the required quality and raise its level in line with the expectations of the buyers are the guidelines contained in ISO 9001. The guidance in this standard includes criteria for the implementation of operational processes (related to product design, purchasing, production, transportation, storage and delivery of goods, on-site installation of equipment and after-sales service). The standardization of these processes is achieved through standard operating procedures (SOP) and/or employee training programs, provision of resources (personnel qualifications, maintenance of facilities, supervised environment), and the use of monitoring and measurement methods which allow the quality level of provided services to be reached and improved (Boonitt, Wong, Wong, 2017, pp. 1-11). The selection of suppliers is usually preceded by an audit, during which clients focus primarily on the evaluation of the capacity of the suppliers. This assessment includes the following elements: infrastructure (buildings, manufacturing equipment), maintenance, and the efficiency of IT equipment. The periodic classification of suppliers is carried out through continuous monitoring and measurement using indicators relating to the quality of the products, dependable supply (free of damage, theft, or shortage), timeliness of delivery (no delays in deliveries), responsiveness to complaints, compliance with delivery documents, and flexibility (the possibility of changes in the size and timing of deliveries). Periodic client-run surveillance audits at suppliers' plants include more than the verification of compliance with organizational standard requirements. These audits also provide opportunities for process improvement by reducing the level of risk, e.g. the risks associated with the quality of products, improving the environmental impact and the exchange of information (including documents and records). Some international companies require regular reports on the progress made in the improvement of management systems (feedback report cards) from suppliers, which contain data on cost reduction, reduction of non-compliance, improvement of efficiency and effectiveness indicator processes, reduction of energy consumption, a lessening of process cycle times, and optimization of capacity utilization (Zhao, Huo, Sun, Zhao, 2013, pp. 115-131). More and more customers on the B2B market before starting collaboration with suppliers also take into account the introduction of environmental management standards, based on the monitoring of environmental aspects. These standards emphasize the objectives and programs to reduce the impact on the environment, as well as legal compliance in this area. During the audit, suppliers are assessed for compliance with the requirements of international environmental management standards ISO series 14000 and legal requirements for the protection of the environment (in particular, Directives of the European

Union (MacDonald, 2005, pp. 631-643; Igarashi, de Boer, Fet, 2013 pp. 247-263; Wiengarten, Pagell, Fynes, 2013, pp. 18-28). Original Equipment Manufacturers commonly also assess suppliers on the basis of their level of management, focusing on the requirements conforming to ISO 9001 and ISO 14001 standards. Many international companies publish their own holistic requirements (in the form of supplier quality requirements manuals, supplier quality and excellence manuals, customer-specific requirements), which are relevant to a wider range than those of international standards. Compliance with these requirements is verified by the client through audits and the self-assessment of suppliers. The criteria which may determine temporary evaluation of a supplier include: the level of the technical quality which is offered, advantageous price conditions, ability to meet delivery deadlines, favourable payment grace, having a quality system, the level of assistance and responding to complaints. Original Equipment Manufacturers also audit suppliers periodically. Some international companies require regular reports on progress made in the improvement of management systems while monitoring suppliers. Monitoring is also regularly conducted by means of performance feedback report cards, which contains data on lowering costs, reducing incompatibility, improving effectiveness indicators and process efficiency indicators, reducing energy consumption, shorter cycles of process completion and optimization of production capabilities. The above-described behaviour may be considered a cycle of constant improvement. Companies that implement management systems which conform to quality and environmental organisational standards complete self-assessment questionnaire, which consists periodical evaluation indicators. Creating partnerships with suppliers allows the recipient on the B2B market to transform what was a commercial cooperation into various types of alliances, thus gaining a range of benefits:

- Time saving connected with choosing a supply source;
- Reduced risk, which is connected with not having to choose a new supplier or a new product;
- Quicker and more effective flow of market information;
- Joint solving of technical and, occasionally, organisational problems, which allows greater effectiveness in the use of resources in process enhancement.

Increasingly, institutional clients (especially producers) are concentrating on the selection of key suppliers, shaping long-term relations with them based on the advancement of the technical quality of product solutions (running research and development projects together) and reliability of deliveries (based both on their flexibility and shortening of the order cycle). These actions, executed by both sides, lead to decreased costs (Krause, 1997, pp. 12-19; Casadesús, de Castro, 2005, pp. 345-357; Arumugem, Derakhshan, Boon, 2011, pp. 35-43; Garfamy, 2011, pp. 240-255; Tolonen, Haapasalo, Harkonen, Verrollot, 2017, pp. 237-245).

#### **4. THE ROLE OF OPERATIONAL IMPROVEMENT TOOLS WHEN BUILDING RELATIONSHIPS BETWEEN PARTNERS IN THE SUPPLY CHAIN**

Institutional purchasers, particularly large multinationals companies, increasingly attach importance to ensuring continuity flows in the supply chain (exchange of products and information) and to improving efficiency. They use operational improvement tools such as elements of the Toyota Production System (which includes, Kaizen, 5S, Total Productive Maintenance), the concept of Lean Management, and Six Sigma methodologies to improve the efficiency and effectiveness of processes. The implementation of these tools is often seen as a collaborative project by the partners in the supply chain. Through the introduction of TPS, one can avoid discrepancies relating to the flow of information (in case of hardware or a computer network failure), as well as products in the process of production, storage, transport and related losses (non-compliance, failure of goods, or delays in the timely performance of the contract and delivery to the buyer).

Enterprises wanting to further eliminate possible losses associated with the flow of products and information decide to implement the concept of Lean Management (Konecka, 2010, pp. 23-31). This concept is often introduced by using the Six Sigma methodology. The most commonly used methodology is DMAIC (Define-Measurement-Analyze-Improve-Control), which focuses on improving existing processes and products. A second methodology is DMADV (Define-Measurement-Analyze-Design-Verify), which is used in the implementation of new processes and products. Joint implementation projects, Lean Six Sigma and Six Sigma allow supply-chain partners to achieve many benefits, such as improving the technical quality of products, shortening cycles, improved efficiency of processes, increased effectiveness of internal and external communications, as well as helping to improve the safety of processes and reducing any detrimental environmental impact (Aboelmaged, 2010, pp. 268-317; Jauhar, Tilasi, Choudhary, 2012, pp. 67-74).

## 5. THE METHODOLOGY OF THE EMPIRICAL RESEARCH

The subject of the conducted research was the criteria affecting the building of relations with suppliers on the B2B market. The research was carried out between October and November 2017 through the use of the Computer Assisted Telephone Interview (CATI) technique. The research covered 300 producers who were suppliers for enterprises from the automotive, metal and chemical sectors operating on the Polish B2B market. The selection criteria for suppliers have been assigned a rank on a scale from 5 (the most important criterion) to 1 (least significant). The study was commissioned to a specialized research agency that conducted a targeted selection of companies registered in the Kompas database, which is a search platform of a business directory. Detailed results of the research are presented in the tables below:

Criteria	General N=300	Automotive N=99	Metal N=104	Chemical N=97
Quality of products	3.83000	3.75757	3.69230	4.05154
Shortening process cycles	3.77666	3.76767	3.87500	3.68041
Cost reduction	3.61333	3.54545	3.55769	3.74226
Improvement of QMS	3.59333	3.56565	3.65384	3.55670
Timely deliveries	3.56000	3.74223	3.45192	3.49494
Flexibility of supply	3.47000	3.67010	3.25961	3.49494
Improvement of EMS	3.33333	3.40404	3.23076	3.37113
Product innovations	3.31666	3.39393	3.19230	3.37113
Eco-friendly products	3.16000	3.16346	3.13131	3.18556

*Table 1: Criteria affecting building relations with suppliers; general results and a comparison between the segments depending on the sector, rank correlations (results of empirical study, 2017 )*

The results of the conducted research indicate that the main criteria affecting the building of relationships with suppliers are the technical quality of products (no defectiveness), shortening cycles of process implementation and willingness of the supplier to reduce costs. The following criteria are also important in building relationships; Improvement of the Quality Management System (QMS), timely deliveries, providing emergency supply plans (recovery plan) and supplier's flexibility. Whereas the least important are: improvement of the Environmental Management System (EMS), product innovation, as well as limiting the negative impact of products on the environment. When analyzing the detailed research results and the differences between the individual segments considered, it can be noticed that the technical quality (product safety) as a criterion affecting the building of relations with suppliers on the B2B market is particularly important for manufacturers of chemical products and companies with Polish

capital. It can be seen that shortening cycles of operational processes is of particular importance to car manufacturers and metal producers as well as to large enterprises with Polish capital. Cost reduction is key for manufacturers of chemical products and small and medium enterprises with Polish capital.

Criteria	Polish N=120	Foreign N=180	-250 N=223	251- N=77
Quality of products	3.91666	3.77222	3.71748	4.15584
Shortening process cycles	3.90833	3.68888	3.73094	3.90909
Cost reduction	3.70833	3.55000	3.67264	3.44155
Improvement of QMS	3.55000	3.62222	3.52914	3.77922
Timely deliveries	3.65000	3.50000	3.51569	3.68831
Flexibility of supply	3.59166	3.38888	3.45739	3.50649
Improvement of EMS	3.30000	3.38333	3.30493	3.41558
Product innovations	3.27222	3.38333	3.28251	3.41558
Eco-friendly products	3.10833	3.19444	3.14798	3.19480

*Table 2: Criteria affecting building relations with suppliers; general results and a comparison between the segments depending on capital and number of employees, rank correlations (results of empirical study, 2017)*

Improvement of the QMS as a criterion affecting building relations with suppliers on the B2B market is particularly important for metal product manufacturers and large enterprises with foreign capital. One can also observe that ensuring timely deliveries and flexibility of supply are most important for car manufacturers and large enterprises with Polish capital. Improvement of the EMS, product innovations and eco-friendly products have meaning for car and chemical product manufacturers and large companies with foreign capital. The research results clearly indicate that the expectations of customers towards suppliers is the focus on improving products and processes. To meet these customer expectations, suppliers are increasingly implementing process improvement tools such as quality and environmental management systems as well as Toyota Production System tools and Lean Management projects.

## 6. CONCLUSION

Recapitulating, it should be noted that manufacturing buyers define customized requirements to their suppliers through detailed specifications, which determine not only the issues related to ensuring the quality (ensuring technical quality), but also related to the increase in organizational efficiency (shortening implementation cycles), efficiency (cost reduction), safety (working conditions, information management), reducing any negative impact on the environment, and implementation of product and process innovations (We, Wu, 2009, pp. 335-341; Wiengarten, Pagell, 2012, pp. 18-28). This approach is an important incentive for companies to improve the management system by introducing environmental and safety organizational standards, as well as other excellence tools that require more active involvement of employees in order to improve the performance of operational processes. The actions taken by companies in the field of continuous improvement has a significant impact on ongoing globalization. The international expansion of many companies, especially global companies, increases the importance of technical standardization (to ensure the consistent quality required), and organization standardization. This is particularly important in countries where investments are due to lower labor costs, like Central and Eastern Europe and Asia. In these countries, one may perceive a gap in the field of organizational solutions between international corporations and indigenous businesses. In many cases, this gap is the introduction of the concept of sustainable development.

International companies implementing this concept focus on cooperation with their partners in the supply chain (suppliers and customers), offering them support through joint projects. These initiatives are aimed at improving common processes and developing concepts for new products. For many companies, relationships with suppliers are not limited to imposing their stringent requirements and continuous improvement on sustaining development (Huq, Stevenson, Zorzini, 2014, pp. 510-638; Fabbe-Costes, Rousst, Taylor, Taylor, 2014, pp. 664-669). It is increasingly being recognized that the creation of a competitive advantage requires industrial customers to build relationships with suppliers, which manifests itself in joint projects. These projects focus on the implementation of product innovations (improving the technical parameters of existing and implementation of a completely new product) and contribute to the improvement of organizational performance as well as process efficiency through reducing costs by increasing employee productivity, infrastructure capacity, and eliminating wastes.

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## THE STRATEGY OF NOSTALGIC BRAND – EXPERTS' STUDY

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### ABSTRACT

*Nowadays, the customers often feel in danger in current unstable and unpredictable period of industrial, political, social and economic transition. In this environment, the weakened individuals find themselves in search of security references, identity, well-being, dream, emotion and re-enchantment, and consequently they want to return to the past and their memories, yearning for a sense of security and stability. They become nostalgic, seeking values of authenticity. On this basis, enterprises develop a strategy of nostalgic brands that appeal to the emotions, experiences and memories of the consumers. As a result, the basis of relations between the consumer and the brand is nostalgia, which is a positive attitude towards brands that are directly or indirectly related to the consumer's past. The aim of this article is to evaluate the possibilities of implementation of the strategy of nostalgic brand. The results of own empirical research conducted in 2018 on a group of 16 international experts are presented. Both French and Polish experts positively evaluated the potential of nostalgic brands. Some differences in the opinions of the French and Polish experts are visible. The proposition of model of the nostalgic brands positioning is also presented. According to the experts, the basic principle for positioning of the nostalgic brand is having a strong brand history. Nostalgic brands are recommended for the following sectors: fashion, food, cosmetic (especially perfumes), luxury products, automotive, high-tech (music), entertainment and decorative. The results can serve as a guide for managers in implementing the strategy of nostalgic brand and can help identify the crucial elements needed for positioning of the brand based on the nostalgic feelings.*

**Keywords:** *nostalgia, nostalgic brand, brand strategy, brand positioning*

### 1. INTRODUCTION

The developing strategy of nostalgic brand, incorporating the codes and symbols of the past, is increasingly popular. This strategy responds to the consumer yearning for their roots, their past, their youth and happiness, diving into their memories. Individuals seek to be reassured by secure affective values in the fleeting and aggressive context of society. They are attracted by products evoking reminiscences. The society moves to the point where the consumer loses their bearings and seeks those one, more stable, soothing and reassuring, resulting from the past. Consequently, in our postmodern environment, consumer expectations are rational, emotionally charged and nostalgic. The aim of this article is to evaluate the possibilities of implementation of the strategy of nostalgic brand. Due to the fact that the problem of the implementation of the strategy of nostalgic brand is complex and depends on numerous factors, the experts' study was applied. The results of own empirical research conducted in 2018 on a group of 16 international experts are presented. The research is a part of a project funded by the National Science Centre (project Opus 9, No. 2015/17/B/HS4/00945, "Nostalgia in brand management") for the period 2016-2019.

## **2. LITERATURE REVIEW**

### **2.1. Modernity and post-modernity – the background for the behaviour of modern consumer**

The modernity was the product of a constant effort to break away from traditions, arbitrary hierarchies, obscure beliefs, maintaining an ideal of progress in knowledge, techniques and social relationships. The modernity was related with the cult of the individual. This generated a weakening of the social bond, parallel to the erosion of traditional values (like family, corporations, church). Modernity was characterized by a constant stream of events that break up and dissolve at the same moment they emerge. In consequence, the individuals were agitated on all sides, busy with multiple activities, without completing any of them. For Charles (2006), the founding principles of modernity were the liberation and valorisation of the individual, the pre-eminence of democracy as the only viable political system, the promotion of the market as an economic system and the technical-scientific development. The salient feature of modern thought was the autonomy of reason in breaking with earlier traditions and cultures. It was to enable the progress of science and knowledge as well as that of the human sciences, “the promise of a bright future” (Cova, 2015). The societies are swept away by the ever faster, ever more extreme escalation in all spheres of social and individual life: finance, consumption, communication, information, urban planning, sport, shows. With the persistent need for short-term results, achieving more in the shortest time possible, to act without delay: the competition leads to prioritizing the urgent over the important, the immediate action on the reflection, the accessory on the essential. Since the mid-1970s, we observe development of the trend of postmodernity. In consequence, Lipovestky’s individualism has often been contrasted with Maffesoli’s tribalism (1998, 2011). For Lipovetsky (2004), postmodernity is a historical moment of disintegration of traditional structures and desynchronization of rhythms and individual paths. By the loss of confidence in the values of progress and emancipation (typical for the modernism), Lipovetsky (2004) embodies a deep reaction of disenchantment with the modern world. The postmodernity, called often “modernity of a new genre”, has accelerated in the 80’s and 90’s. We observe that the emotional cues develop from a local rehabilitation, secure traditional practices and stabilize the vulnerable individual in search of identity. It is connected with the reversal of tendencies such as the valorisation of the collective in relation to the individual, of the emotion and affectivity in relation to the rational. There are conflicting needs that should be reconciled, e.g. (Marchal, 2014):

- Mobility, nomadism, looseness of the link with the company, autonomy versus need of belonging to the collective, references.
- Intensive and informal collaborative work versus the need for individual concentration.
- Permanent connectivity versus privacy.
- Globalisation versus localisation.
- Reason versus emotion.

A society is therefore being constituted on the ruins of the belief of freedom and progress. The myth of progress is nuanced, completed, corrected, while it is not outright denied. People believe less and less that they can change the world and change their life through progress; change from progress to “regress” or at least a rebalancing of the values of progress by that of regress. Progress becomes old-fashioned and traditional. What makes customers fantasize today is the lost world that they idealize. The attraction of the past and the proximity seems to prevail more and more over that of a glitzy future on an interconnected planet: the traditional today is modernity and progress, the modern is the tradition and regress. The best definition of postmodernity given by Maffesoli (2011) is that it is the synergy between archaism and techno-development. Lyotard in 1979 described postmodernity as the opportunity of societies disappointed by the promises of modernism.

It is a period opened by the loss of confidence in the values of modernity. Sociologists of postmodernity describe our era as the imminent advent of classless societies, without a fixed job and without a dominant culture. Networks, tribes, distance interactions and consumption styles would then serve as benchmarks for everyone. The next stage of the postmodernity period will come. The postmodern order would be, from this point of view: a post-scarcity economic system, a system of the humanisation of technology. In contrast to modernity, postmodernity is defined by the cult of the present, emphasizing the sensitive, the imaginary, the emotion, the affective, the well-being. Paradoxically, the postmodern era also contributes to the fragmentation of the individual and his identity. The customers feel in danger in unstable and unpredictable period of transition (industrial, economic, sociological, ecological, political, etc.). In this environment, the weakened individuals find themselves in search of security references, identity, well-being, dream, emotion and re-enchantment, and consequently they want to return to the past, to memories, seeking a sense of security and stability. They become nostalgic, seek values of authenticity. On this basis, enterprises develop a strategy of nostalgic brands.

## 2.2. Strategy of nostalgic brand

Nostalgia is a sentimental longing for the past and is experienced when one reminisces about positive events in the past that are unlikely to reoccur (Sedikides, Wildschut, Baden 2004; Zauberman, Ratner, Kim 2009; Huang, Huang, Wyer 2016). The interest of academic and research communities focuses primarily on the analysis of the impact of nostalgia on consumers behaviours in the context of demand for the products associated with the past, the impact of nostalgia on consumers' behaviours for certain product categories or the impact of nostalgia on the attitudes towards brands (e.g. Holbrook & Schindler, 1991; Holbrook, 1993; Kessous et al., 2015; Kessous & Roux, 2008, 2010; Lambert-Pandraud & Laurent, 2010; Loveland et al., 2010; Rindfleisch et al., 2000; Sierra & McQuitty, 2007). The results of these research confirmed the positive impact of nostalgia on the attitudes and behaviours of consumers. In brand management, nostalgia is a positive feeling and is described as a preference towards objects that were more common in the past (Holbrook, Schindler 1991).

*Table 1. Categories of nostalgic brands (Grebosz-Krawczyk, 2018, p. 392-401)*

Category of nostalgic brand	Characteristic
Generational brands	These brands are based on a real nostalgia that is referring to the own direct and personal memories and has the individual or collective character.
Transgenerational brands	These brands are based on a real nostalgia or simulated nostalgia (that is referring indirectly to the individual experiences or memories of other people, as well as to the collective experiences and memories in case of historical nostalgia and has the individual or collective character).

Based on the literature review, the nostalgic brand can be described as a brand associated with close or far, own or historical past. As a result, two categories of nostalgic brands can be distinguished: generational and transgenerational brands (Table 1). The strategy of a nostalgic brand is based on the assumption that the foundation of the bond between the consumer and the brand is nostalgia. The implementation of a nostalgic brand strategy allows to build a competitive advantage, not only based on the functional features of products or services, but above all based on emotional benefits. The nostalgic brand is a reflection of the symbolic benefits offered. The nostalgic brand gives added value related to symbolism of the past, historical relations with consumers, users past identity and sentimental personality.

This brand can provide consumers with additional benefits if it effectively refers to the values appreciated by one or several generations.

### 3. RESEARCH METHODOLOGY

In this paper, the research results concerning the implementation of the brand strategy in case of nostalgic brands are presented.

The scientific problem indicates the following research questions related to the strategy of nostalgic brand:

- Q1: If nostalgic brands should be used and why?
- Q2: In which sectors, the strategy of nostalgic brands can be implemented?

Due to the fact that the problem of the implementation of the strategy of nostalgic brand is complex and depends on numerous factors, the experts' study was applied. The study included sixteen experts, eight from France and eight from Poland (Table 2). The study was aimed at evaluating the possibilities of implementation of the strategy of nostalgic brand.

*Table 2. Experts' characteristic (own elaboration based on the research results)*

Experts	Characteristic
Expert 1	Sales & Marketing Director, Chemical sector, 45 years of experience, Men, Nationality: French
Expert 2	Professor of Marketing, 45 years of experience, Women, Nationality: French
Expert 3	Brand manager, Cosmetic sector, 5 years of experience, Women, Nationality: French
Expert 4	Business Development Director, Cosmetic sector, 40 years of experience, Men, Nationality: French
Expert 5	Brand manager, Cosmetic sector, 38 years of experience, Men, Nationality: French
Expert 6	Consultant, advertising agency, 20 years of experience, Men, Nationality: French
Expert 7	Marketing Director, Cosmetic sector, 30 years of experience, Women, Nationality: French
Expert 8	Independent consultant, Women, 15 years of experience, Nationality: French
Expert 9	Professor of Brand Management, 30 years of experience, Men, Nationality: Polish
Expert 10	Professor of Marketing, 20 years of experience, Women, Nationality: Polish
Expert 11	Professor of Marketing, 35 years of experience, Men, Nationality: Polish
Expert 12	Independent consultant, owner of consulting agency, high-tech sector, 23 years of experience, Men, Nationality: Polish
Expert 13	Brand manager, Cosmetic sector, 8 years of experience, Women, Nationality: Polish
Expert 14	Brand manager, Food sector, 15 years of experience, Women, Nationality: Polish
Expert 15	Marketing manager, FMCG sector, 16 years of experience, Men, Nationality: Polish
Expert 16	Consultant, advertising agency, 25 years of experience, Men, Nationality: Polish

A group of experts was gathered, composed of professors of Polish and French higher education institutions, brand and marketing managers of international companies putting brand management into practice as well as representatives of consulting companies dealing with marketing and brand management area. When selecting experts the principle of specialization was followed. This stage of the project was aimed at examining the opinions of experts and enriching the findings, therefore the Delphic method was not applied. The expert studies were conducted from March to July 2018 using the method of direct or indirect communication with the use of the interview with questions' list. The interview consisted of 5 questions related to the concept of nostalgia in marketing, nostalgic generational and transgenerational brands, retro brands, implementation of the strategy of nostalgic brand and positioning of the nostalgic brands.

#### **4. RESEARCH RESULTS AND DISCUSSION**

##### **4.1. The role of nostalgic brands according the experts opinions**

The general opinions of experts about nostalgic brands are positive. They underlined the strong relation between the perceived quality and perceived know-how of brand and its nostalgic character. According to the experts, the nostalgic brands are consider as the brands with experience and consequently the opinions about their products quality and properties are good. They are the secure benchmarks for consumers and guarantee of quality for consumers. According to the experts, nostalgic brands often play a protective bubble role - they protect against the risks associated with the purchase and are a guarantee, but on the other hand, they allow to return to the times of the past associated with a sense of security, pleasure and joy. Nostalgic brands base on myths and emotions and they are the symbols of the past time. They evoke the positive memories and help to find the lost pleasure. Both French and Polish experts positively evaluated the potential of nostalgic brands. Some differences in the opinions of the French and Polish experts are visible. The experts from the Western Europe underlined the role of the nostalgic brand that is the secure landmark and the guarantee of the good quality. They emphasised the role of nostalgic brands that are often treated as solution on the fear of the future, taking into consideration the instable situation on the market (GMO, economic crisis, emigres etc.). The experts from Eastern Europe evaluated nostalgic brands on more intangible level. They perceive these brands as a source of good personal memories and emphasise the role of personal nostalgia in brand management. The role of nostalgic brands as a guarantee of the good quality is not so significant. It can be related with the specific historical background and the fact that some nostalgic brands have the communist experience. The example of the most interesting experts' opinions about nostalgic brands are presented in table 3.

*Table following on the next page*

*Table 3. The most important statements concerning nostalgic brands (own elaboration based on the research results)*

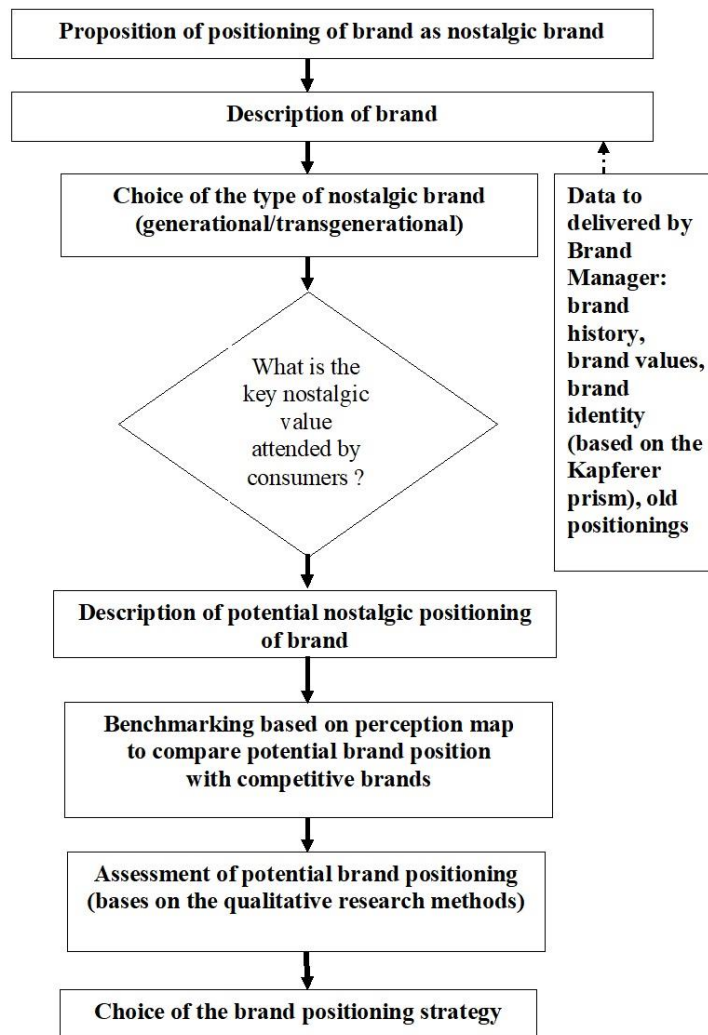
<b>Statements</b>
<i>Nostalgia creates the desire for buying in more responsible way based on the past experiences.</i>
<i>Nostalgic brands base on myths and emotions.</i>
<i>Products of nostalgic brands are cult.</i>
<i>Nostalgic brands are the spectacular reference.</i>
<i>Nostalgic brands make consumer feeling exceptional.</i>
<i>Nostalgic brands create the potential for differentiation.</i>
<i>Nostalgic brands have the heritage character.</i>
<i>Nostalgic brands often play a protective bubble role.</i>
<i>Nostalgic brands allow to compete by affirming the roots and heritage.</i>
<i>Nostalgic brands are the guarantee of quality for consumers.</i>
<i>Nostalgic brands should base on the authenticity.</i>
<i>Nostalgic brands rely on the strong brand identity and not on the old products.</i>
<i>Consumers search for nostalgic brands because they search for the lost pleasure.</i>
<i>Nostalgic brands bring back memories.</i>
<i>Nostalgic brands are the secure landmarks.</i>
<i>Nostalgic brands bring to the company new solution in the area of marketing communication.</i>

#### **4.2. The implementation of the strategy of nostalgic brand - the experts opinions**

According experts, the strategy of nostalgic brand can be implemented to:

- restore vitality to a brand,
- revive the brand,
- differentiate the brand,
- launch the limited series,
- innovate towards concepts closer to customer expectations,
- adopt a new packaging.

The model of nostalgic brand positioning is presented on the figure 1. The basic principle for launching the nostalgic brand is having a strong brand history. According the experts, during the brand implementation, it is important to revive the brand in the present based on its values or successes from the past. To be successful, the cultural heritage must be added to the modern quality and innovative solution. The experts underlined the role of both generational and transgenerational brands. The brand's positioning should be based on its history, values, identity and positioning on the past. All elements of the brand identity, like brand physicality, brand personality expressed through a value system, brand culture, brand reflection of the profile of target customers, brand relationship to the users' memories and brand self-image, should be analysed in details. Based on the historical background of the brand and the customers opinions, the brand should be classified as generational or transgenerational. This choice is crucial for the brand positioning. The brand managers need to find the key nostalgic values attended by customers. These values will be the basis for positioning and creating a promotional campaign. The benchmarking to compare potential brand position with competitive brands can be developed using the perception maps. Additional qualitative research can be also executed among potential group of customers. Finally the brand positioning that allows to reach the chosen target by establishing a clear, precise and unique place in the mind of the consumer, can be chosen.



*Figure 1: Model of the nostalgic brand positioning (own elaboration based on the own research results)*

Nostalgic brands are recommended by experts for the following sectors: fashion, food, cosmetic (especially perfumes), luxury products, automotive industry, entertainment and decoration. Experts underlined especially the opportunities for nostalgic brands in food and cosmetic sectors. Consumers long for flavours and fragrances from childhood and youth, and the purchase of a nostalgic brand allows them to return to the past. The purchase of food and cosmetic products are often spontaneous, therefore the probability of choice of nostalgic brand is higher than in case of other sectors where decision making process is longer and different, more rational factors are taken into account.

## 5. CONCLUSION

This study expands the marketing discipline's understanding of nostalgia concept. Based on the empirical results, the authors may draw the following main conclusions:

- the development of nostalgic brands depends on the ambitions of the moment,
- the use of nostalgia in brand management helps to increase brand equity, especially perceived brand quality and reinforce the associations,
- the basic rule for launching the nostalgic brand is having a strong brand history,
- the nostalgic brands are recommended for the sectors of fashion, food, cosmetic, luxury products, automotive, entertainment and decorative.



It can be stated that this paper has resulted in two contributions. From a theoretical standpoint, it has contributed to the brand positioning concept as well as providing a better understanding of the impact of nostalgia on the brand management. From a substantive standpoint, it has shed light on the possibilities of development of the strategy of nostalgic brands for companies managing the brands with long history. The conclusions in this study are presented with the caveat as to the limitations of the sample (only 16 experts representing two countries). To provide a more comprehensive picture of the implementation of the strategy of nostalgic brand, similar studies could be conducted in other countries.

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## GLOBAL BLOCKCHAIN TECHNOLOGY MARKET ANALYSIS – CURRENT SITUATIONS AND FORECAST

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### **ABSTRACT**

*Blockchain is a cryptographic technology designed for managing distributed ledger systems, which, as a rule, is used to manage online transactions. The the distributed ledger technology has been boosted by the development of various crypto-currencies, such as bitcoin. Initially, blockchain technology was used, mainly in the financial market but today there is an active introduction of technology in such verticals as healthcare, energy sector, insurance, state and municipal management. The major driving factors for the blockchain technology are transaction speed, transparency and low usage cost. This study includes the global market analysis for the use of blockchain technology in different economy sectors, its regional structure, business application and the forecast of its development until 2024. This study also identifies the main market drivers, affecting its growth and the problems faced by suppliers and the market as a whole. It also examines key market trends and their impact on the current state of the market and its development scenarios.*

**Keywords:** *Bitcoin, Blockchain, Distributed Ledger Technonolgy*

### **1. INTRODUCTION**

Blockchain is a cryptographic technology which was initially used to manage online transactions of different kinds of cryptocurrencies, such as Bitcoin, Ethereum, etc. The history of the blockchain technology starts in 2009 when it was used for the source code of Bitcoin, in order to overcome physical currency shortcomings. Blockchain could be regarded as a sequential distributed database where the entire earlier transaction history is stored and shared in a (block) chain in a public ledger (Van Alstyne, 2014, pp. 30-32). The chain grows continuously while the new blocks are added. In order to provide the user security asymmetric cryptography and distributed consensus algorithms are used. Since 2016 blockchain technology has become the mainstream - over 700 cryptocurrencies are listed in up to now. The main factors driving the blockchain technology growth are the speed of transactions, reduced total cost of ownership, immutability and transparency. As it was mentioned above, the blockchain technology was initially used for to manage different cyptocurrencies but nowadays it could be applied in the other fields such as online payments and other financial services (Foroglou, Tsilidou, 2015) smart contracts (Kosba et al., 2016, pp. 839-858), Internet of Things (IOT) (Zhang, Wen, 2015, pp. 184–191), security and digital identity, etc. However, analyzing the potential for using blockchain technology, the following main market barriers and risks should be noted:

- High level of initial investments;
- Security and confidentiality issues. Even though users make their transactions using public key and private key, privacy leakage could happen (Biryukov, Khovratovich, Pustogarov, 2014 pp. 15–29);
- Insufficiently developed regulatory framework governing the use of blockchain technology in different industry verticals;

- Organizational barrier. The network effect could be reduced because a lot of companies are developing their own platforms based on blockchain technology. This also will lead to the problem with the unification of the final system in the future;
- New business model. The implementation of applications based on blockchain technology platforms will lead to significant changes in most of the business processes. This will require a lot of time and additional material resources.

However, despite the above mentioned barriers and risks, implementation of the blockchain technology in different sectors of modern economy are not in doubt. The aim of this study is to make a global blockchain technology market analysis and to build its forecast until 2024.

## **2. RESEARCH METHODOLOGY AND SCOPE**

### **2.1. Research methodology**

For blockchain technology market estimate and forecast we used a mix of primary and secondary research. The secondary research was the initial stage of our study. During this stage we collected and analyzed big data massive from the verified data sources such as technical journals, independent studies, government and regulatory published material, trade magazines, and paid data sources. The results are the basis of our estimates. For the forecast we have assigned weights to the following factors in order to quantify their impact by use of the weighted average analysis to calculate the market growth rate:

- Consumer behavior trends
- Blockchain technology application industry trends
- Blockchain technology market drivers

Weighted average formula is the following:

$$\text{Weighted Avg}_x = w_1x_1 + w_2x_2 \dots w_nx_n$$

$w$  = relative weight

$x$  = value

We verified our forecasts through the primary research using Delphi method using 3 iterations with Key Industry Participants (KIPs) which are the representatives of system integrators and market leading companies in different industry verticals. The objective of the primary research is to validate our forecast in terms of accuracy and acceptability and to gain more data regarding current market situation and future expectations.

### **2.2. Research scope and assumptions**

The results of the study provide the market value for the blockchain technology starting from the base year 2017 and forecast up to 2024 in terms of revenue (USD million, unless otherwise indicated). During the research the dynamics of the key industries, main technological and application markets trends were evaluated in order to identify their impact on demand during the analyzed period. The market growth rates were estimated using correlation, regression and time series analysis. The global market is assessed by the integration of regional markets. It should be noted that:

- all market assessments and forecasts were confirmed during initial interviews with key industry participants;
- for the estimation and forecasting of the market, inflation is not taken into account;
- figures may not match due to rounding;
- North American regional market includes the USA, Canada and Mexico;
- The European regional market includes Great Britain, Germany and France;

- The Asia-Pacific Regional Market (APAC) includes Japan, China and Australia;
- South American regional market includes Brazil and other countries of South America;

Middle East and African regional markets include the countries of the Gulf Cooperation Council (GCC).

### 2.3. List of data sources

Some of the secondary sources used for our research include but are not limited to:

- Bitcoin Magazine
- Euromoney Magazine
- FinTech Weekly Magazine
- The Blockchain Journal

Some of the primary sources used for this report include but are not limited to:

- IBM
- Hewlett-Packard
- Sberbank
- BCGV

### 3. FINDINGS

The global blockchain technology market size estimation at the end of 2017 is 800 million US dollars. The regional market structure is shown in Figure 1. North America occupies a leading position in the global blockchain technology market (50%), second place in the Asia-Pacific region (19%), the third place is occupied by the European market of blockchain technology (18%).

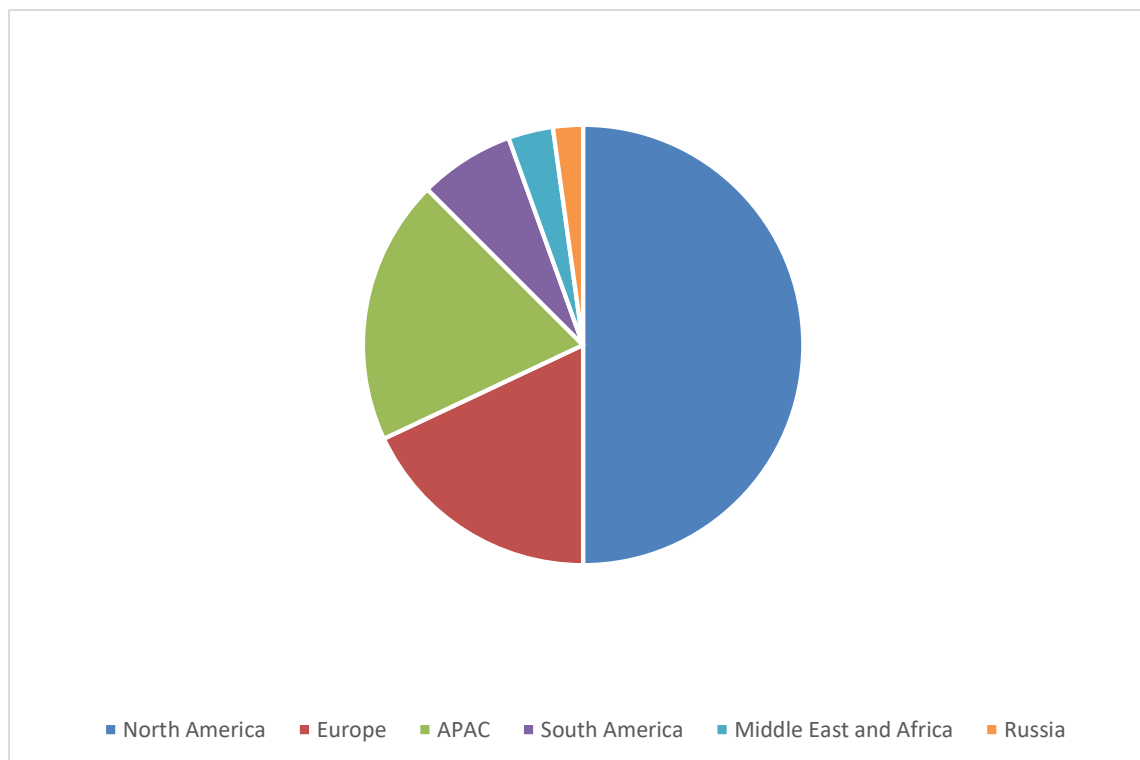


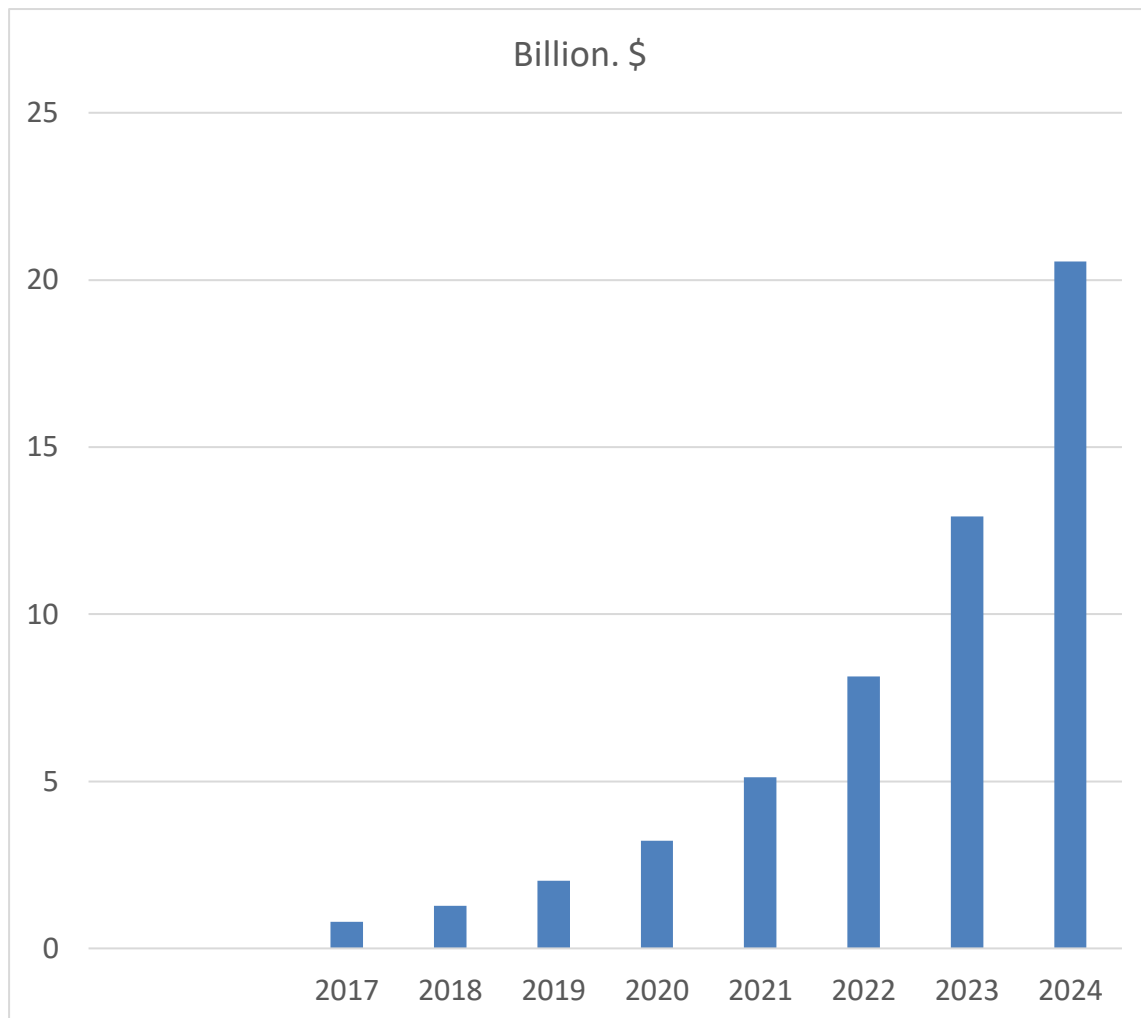
Figure 1: 2017 global blockchain technology market structure (prepared by authors)

Blockchain technology regional market capacity is given in Table 1.

*Table 1: Blockchain technology regional market capacity (prepared by authors)*

Region	Market capacity (mln. USD)
North America	320
Europe	223
APAC	160
South America	56
Middle East and Africa	24
Russia	17
<b>TOTAL</b>	<b>800</b>

From the blockchain technology life cycle point of view, three main stages can be predicted: introduction - until 2017, growth - 2017 - 2024 years, maturity - after 2024. The forecast for the global blockchain technology market capacity in 2024 is US \$ 20,550 million. The average annual growth rate of the market is estimated at the level of 59%. The estimated growth dynamics of the global blockchain technology market is shown in Figure 2.



*Figure 2: Global blockchain technology market growth forecast (prepared by authors)*

Figure 3 highlights the key blockchain technology industries market capacity for the year 2017. 33% of the global blockchain technology market belongs to the financial sector. The second is public sector with 18%, the third is healthcare – 16%. But it should be noted that the market in 2017 is in the introduction stage, its industry structure will change with time.

According to the forecast financial sector will still dominate other sectors in 2024 although its share will decrease from 33 to 26%. Meanwhile healthcare is forecasted to grow from 16% to 19%.

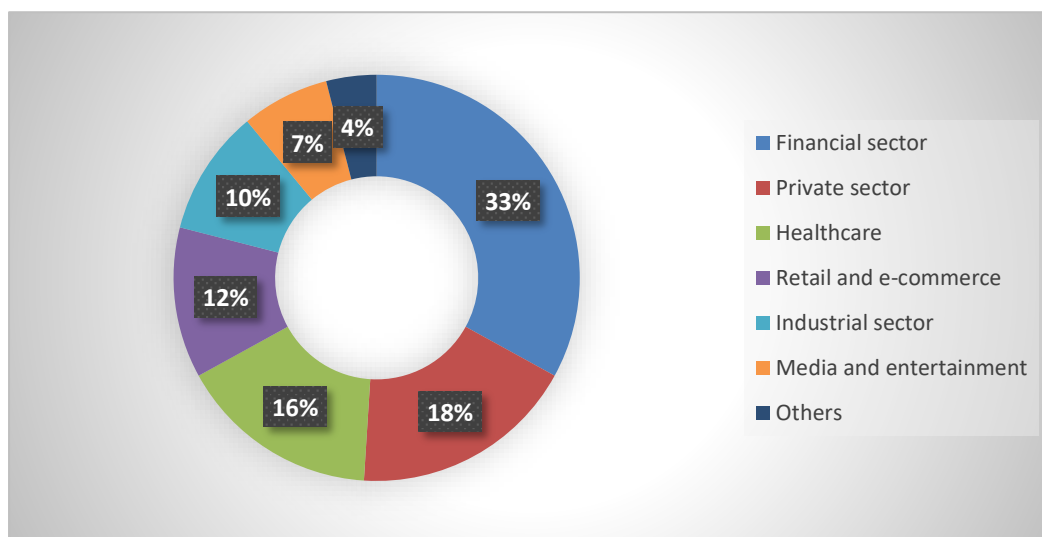


Figure 3: 2017 blockchain technology key industries market structure (prepared by authors)

The forecast of the global blockchain technology market structure in terms of key industries is shown on the Figure 4.

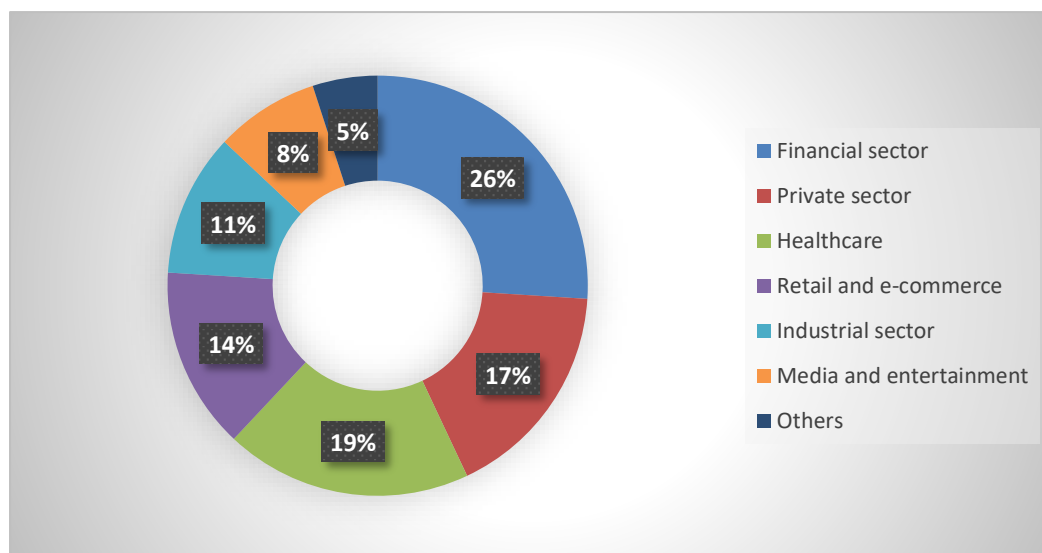


Figure 4: 2024 blockchain technology key industries market structure forecast (prepared by authors)

The forecast of global blockchain technology key industries market capacity is shown in Table 2.

Table following on the next page

Table 2: Blockchain technology key industries market capacity forecast (prepared by authors)

Industry vertical	Market capacity (mln. USD)
Financial sector	5,46
Private sector	3,57
Healthcare	3,99
Retail and e-connerce	2,94
Industrial sector	2,31
Media and entertainment	1,68
Others	1,05
<b>Total</b>	<b>21</b>

The global blockchain technology market structure in terms of application is shown on Figure 5.

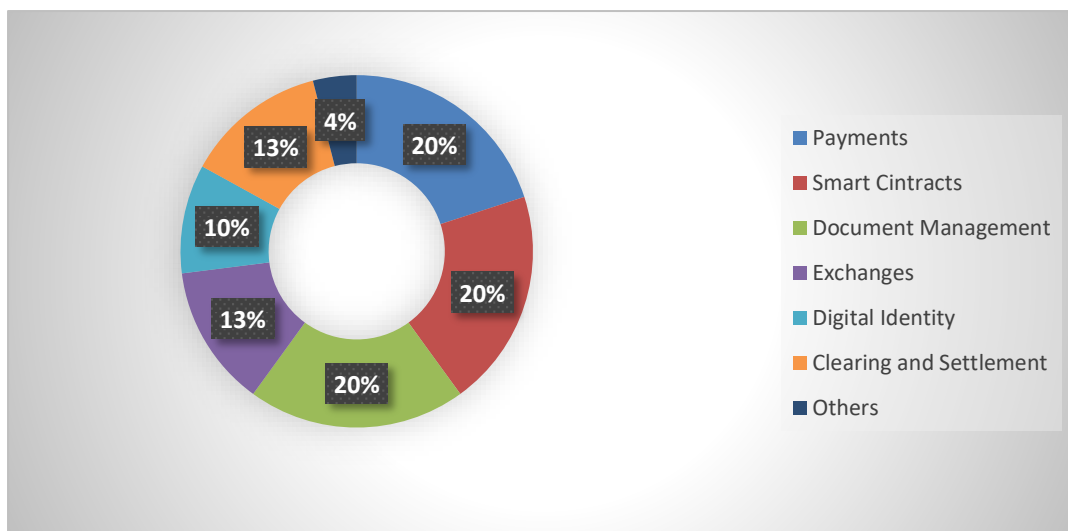


Figure 5:Blockchain technology application market structure (prepared by authors)

The forecast of the global blockchain technology market structure in terms of application is highlighted on the Figure 6. The leaders are: payments (20%), smart contracts (16%), document management (16%). The greatest growth in percentage is forecasted in digital identity. The share of this application will increase from 10% to 15%.

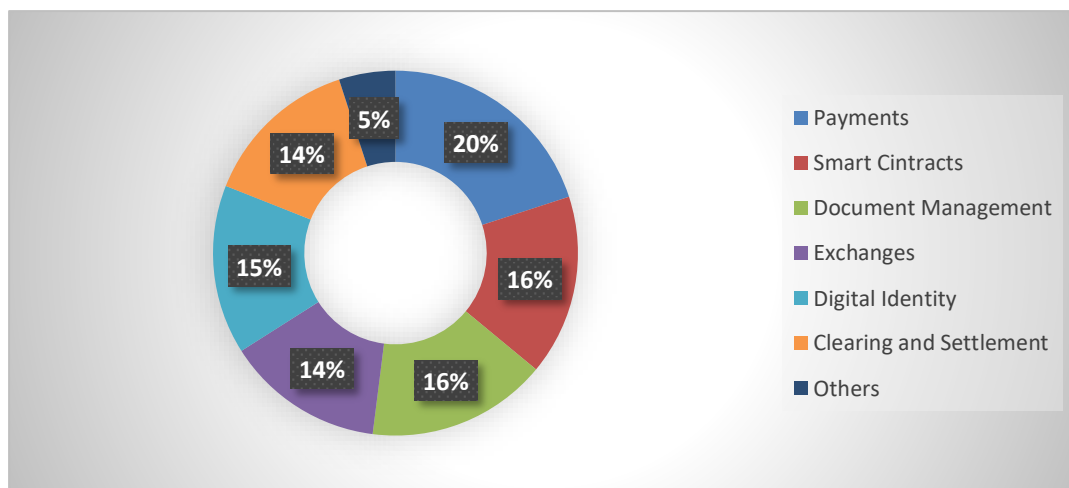


Figure 6: 2024 blockchain technology application market structure forecast (prepared by authors)

The dynamics of the global blockchain technology market forecast in terms of application is shown on the Table 3. The greatest growth in terms of value is forecasted in payments application – from 160 mln. USD to 4,2 billion USD.

*Table 3: Blockchain technology applications market capacity forecast (prepared by authors)*

Year	Payments	Smart contracts	Document management	Exchanges	Digital ID	Clearing and settlement	Others
2017	0,16	0,16	0,16	0,104	0,08	0,104	0,032
2024	4,2	3,36	3,36	2,94	3,15	2,94	1,05
CAGR (%)	59	54	54	61	69	61	65

The market capacity of payments, smart contracts, document management and digital identity blockchain applications depending on key industries were evaluated for the 2017 and forecasted for 2024. Table 4 shows the market section of the blockchain technology application in the field of payments depending on the key industries. The largest growth is forecasted in the financial sector – 1.38 billion USD.

*Table 4: Payments application market capacity depending on key industries in mln. USD (prepared by authors)*

Industry vertical	2017	2024	CAGR (%)
Financial secetor	52,8	1092	<b>54</b>
Private sector	28,8	714	<b>58</b>
Healthcare	25,6	798	<b>63</b>
Retail and e-commerce	19,2	588	<b>63</b>
Industrial sector	16	462	<b>62</b>
Media and entertainment	11,2	336	<b>63</b>
Other	6,4	198	<b>63</b>
<b>Total</b>	<b>160</b>	<b>4188</b>	<b>59</b>

Table 5 shows the market section of the blockchain technology application in the field of smart contracts depending on the key industries. The largest growth is forecasted in the financial sector – 820,8 million USD.

*Table 5: Smart contracts application market capacity depending on key industries in mln. USD (prepared by authors)*

Industry vertical	2017	2024	CAGR (%)
Financial secetor	52,8	873,6	<b>49</b>
Private sector	28,8	571,2	<b>53</b>
Healthcare	25,6	638,4	<b>58</b>
Retail and e-commerce	19,2	470,4	<b>58</b>
Industrial sector	16	369,6	<b>57</b>
Media and entertainment	11,2	268,8	<b>57</b>
Other	6,4	168	<b>59</b>
<b>Total</b>	<b>160</b>	<b>3360</b>	<b>54</b>

Table 6 shows the market section of the blockchain technology application in the field of document management depending on the key industries. The largest growth is forecasted in the financial sector – 858 million USD.

*Table 6: Document management application market capacity depending on key industries in mln. USD (prepared by authors)*

Industry vertical	2017	2024	CAGR (%)
Financial secetor	50	908	<b>51</b>
Private sector	30	612	<b>54</b>
Healthcare	28	647	<b>57</b>
Retail and e-commerce	20	412	<b>54</b>
Industrial sector	15	380	<b>59</b>
Media and entertainment	10	233	<b>57</b>
Other	7	168	<b>57</b>
<b>Total</b>	<b>160</b>	<b>3360</b>	<b>54</b>

Table 7 shows the market section of the blockchain technology application in the field of digital identity depending on the key industries. The largest growth is forecasted in the financial sector – 792,6 million USD.

*Table 6: Digital identity application market capacity depending on key industries in mln. USD (prepared by authors)*

Industry vertical	2017	2024	CAGR (%)
Financial secetor	26,4	819	<b>63</b>
Private sector	14,4	535,5	<b>68</b>
Healthcare	12,8	598,5	<b>73</b>
Retail and e-commerce	9,6	441	<b>73</b>
Industrial sector	8	346,5	<b>71</b>
Media and entertainment	5,6	252	<b>72</b>
Other	3,2	157,5	<b>74</b>
<b>Total</b>	<b>80</b>	<b>3150</b>	<b>69</b>

#### 4. CONCLUSION

Based on the results of the study, we can conclude that as of 2017, blockchain technology market is at the initial stage of its development, the vast majority of projects using this technology is of a pilot nature, largely due to the lack of a regulatory and legal framework regulating the use of this technology. The capacity of a global blockchain technology market in 2017 is 800 million USD. The leading region in terms of blockchain technology introduction is North America, mainly USA. As for the Europe, the leading country is the United Kingdom. The global blockchain technology market capacity for the year 2024 is forecasted at the level of 1,2 billion USD. In the financial sector, the main blockchain technology market driver is the growing business needs for the high level of the online payments security, which can be achieved with the help of distributed ledger technology (DLT). Today about 80% of banks are investing in the development of projects based on the blockchain technology. In addition, the use of blockchain allows you to significantly reduce the cost and time of transactions, which in conditions of financial instability can be a key success factor. It should also be noted that the growing popularity of crypto-currency, in particular bitcoin, has a positive effect on the



popularity of blockchain technology, which leads to an increase in investment by large financial institutions in the development of projects based on distributed ledger technologies.

However, analyzing the potential for using blockchain technology, the following market barriers and risks should be noted:

- Insufficient awareness of technology, especially outside the financial sector, may limit investment in technology development;
- The high level of initial investments;
- Security and confidentiality. The use of blockchain technology in the implementation of transactions imposes strong requirements on encryption and security. All data stored in a distributed network must be tied to specific identifiers to maintain confidentiality;
- The lack of a regulatory framework governing the use of blockchain technology in various sectors of the economy;
- Organizational barrier. To date, many companies are developing their own projects based on blockchain technology, which already significantly reduces the possibility of using the network effect because success of platform-mediated networks and services depends highly on the size of the user network (Economides, Katsamakasand, 2006, pp. 1057-1071). Also the integration of these projects into a unified platform in the future could be a challenge;
- Reengineering of business processes. The implementation of applications based on blocking technology will require not only technological changes, but, to a much greater extent, changes in most of the business processes. This process requires time and additional material resources.

In terms of the key industries for the blockchain technology use the most promising are financial sector, private sector and healthcare. The most promising applications of the blockchain technology are payments, smart contracts and document management systems. It should be noted that the most promising are platforms based on blockchain technology, covering several areas of application, and in some cases having an intersectoral nature. For example, within the framework of the digital government project, the areas of application of blocking technology can be payments, smart contracts, document circulation, digital identity.

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## CONDITIONS AND DIRECTIONS OF DEVELOPMENT OF BOOK FAIRS - PERSPECTIVE OF THE POLISH MARKET

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### ABSTRACT

*The book is a very specific market product which is very difficult to sell. It gives way to multimedia and other complementary products, which (according to some analysts) slowly displace the book from the contemporary market. That is why the preparation of the exhibition at the book fair requires so much experience and commitment. Not only is it about the competition between books but also about the interest in reading books. The exhibition is not supposed to only create interest in the offer of the publisher but also the interest in reading books in general. On the Polish market one can observe the development of book fairs in several exhibition centres. However, the level of readership in Poland is still at a low level. The current situation is perceived as a threat to the development of the publishing market, and thus book fairs. Both research and analysis are needed to help determine ways to reduce this risk and seek directions of development of this sector. The aim of this article is to present the situation of the contemporary book fair market in Poland, selected factors that may affect its shape and the possible directions of its development. The study also contains strategic implications for the organizers of these events and exhibitors participating in such events.*

**Keywords:** book fairs, level of readership, trade fairs

### 1. INTRODUCTION

For many industries, trade fairs are such an effective communication tool (Gottlieb, Brown, Ferrier, 2014, pp. 89–107) that the issue of their continuous development and improvement of the possibilities of their use to achieve market goals of enterprises (Kirchgeorg, Springer, Kästner, 2009; Measson, Campbell-Hunt, 2015; Sridhar, Voorhees, Gopalakrishna, 2015) representing various industries is an important subject of scientific research (Adams, Coyle, Downey, Lovett, 2017, pp.710-721). Book fairs, focused on the traditional book, constitute an important element of the trade fair reality. Book fairs themselves are very popular among exhibitors and visitors but the book as a market product is not doing very well. The level of sales as well as the readership of books is falling, which raises concerns with regard to the development prospects of book fairs. The purpose of this article is to present the situation of the contemporary book fair market in Poland, selected factors that may affect its shape and the alleged directions of its development. The study is based on the data collected from the secondary sources of information about the book market, exhibition events of this sector of the economy, level of readership and other factors that may affect the directions and nature of the development of book fairs in Poland and around the world.

### 2. BOOK FAIRS IN POLAND - PRESENTATION OF THE PHENOMENON

Since the end of the 20th century, books have been considered the product of the culture industry and creative industry (Szomburg, 2002, pp. 34-48) which are considered important from the perspective of the economy. As an element of culture, they have the potential to develop wealth and create jobs through the use and creation of intellectual property (Thorsby, 2010, p. 27). Therefore, the promotion of the habit of buying and reading books is important not only for the authors and publishers themselves (Al-Aufi, Al-Harrasi, Al-Balushi, Al-Azri 2017, pp. 280-297), but also for the entire economy. Trade fairs are one of the tools used to achieve this goal.

Book fairs in Poland have a very rich tradition and long history. The International Book Fair in Warsaw, considered to be the oldest event of this type, was held for the first time in 1956 in Poznań (Kaleta 2006, p. 23). Since 1958, this event has been held in Warsaw<sup>1</sup> and has been gaining popularity. Especially at the beginning of its existence, this event was considered the leading trade and cultural event in Central Europe. On the Polish market, events of this type (both general book fairs and more specialized ones, such as, historical book fairs) are currently much more popular and their number is growing all the time. Table 1 presents the example information about the events of this type in Poland in year<sup>2</sup> 2017 (Dobrołęcka, Dobrołęcki, 2018, pp.13-84).

*Table 1: Book Fairs in Poland in 2017 (Dobrołęcka, Dobrołęcki, 2018, p. 18; Exhibitions in Poland in 2017 (2018). Retrieved 20.07.2018 from [https://polfair.pl/wp-content/uploads/2018/07/Raport\\_targowy\\_2017\\_all\\_10.07-1.pdf](https://polfair.pl/wp-content/uploads/2018/07/Raport_targowy_2017_all_10.07-1.pdf))*

Event name	Date	Number of exhibitors	Number of visitors
XVI Poznan Book Fair	24-26.03.2017	40	32 000*
XXI Poznan Science and Popular Science Book Fair	24-26.03.2017	40	-
XXII Trade Fair For Catholic Publications	30.03-2.04.2017	160	30 000
V International Book Fair in Białymstok	21-23.04.2017	82	22 000
7. Warsaw Book Fair	18-21.05.2017	794	75 000
21. International Book Fair in Krakow	26-29.10.2017	698	70 000
3. Silesian book fair in Katowice	10-12.11.2017	144	34 000
VII Trade Fair of an Interesting Book. The Fair's New Book	17-19.11.2017	-	-
26. Historical Book Fair in Warsaw	30.11-3.12.2017	-	-
26. Wrocław Good Books Fair	30.11-3.12.2017	-	60 000

*\*with Education Fair and Poznan Science and Popular Science Book Fair*

Table 1 lists the events held in 2017, listed by the Analysis Library as part of report Book Market in Poland in 2017. However, on the list presented on Rynek-Ksiazki.pl (<http://rynek-ksiazki.pl/mapa-targow/> [access: 18.08.2018]), there are almost 30 such events. It is difficult to precisely determine how many events of such a huge marketing importance are currently organized on the Polish market. The local character of some fairs and the lack of their need to promote themselves on the wider market makes it sometimes difficult to gather information about them and, at the same time, decide which ones should be treated as important for this sector. Besides, some of the more radical market analysts believe that there are no real book fairs in Poland, but only extensive fairs, because all these events are open to individual visitors and are of a sales nature. That is because fairs in the traditional sense (Tafesse, Skallerud, 2015, 2017) should give priority to business contacts and be at least partially closed to individual visitors. A more detailed presentation of parameters and analysis of changes and trends observable within the Polish book fairs was made on the example of two events with the longest presence on the market and the most important for this sector on the Polish market, that is, the

<sup>1</sup> Of course, assuming that the Warsaw Book Fair is the continuation of the International Book Fair in Warsaw. The first of them were organized in 2010 on the initiative of the "Book Fair" LTD company and took over the second event organized earlier by the Ars Polona Foreign Trade Office in Warsaw ([https://pl.wikipedia.org/wiki/Mi%C4%99dzynarodowe\\_Targi\\_Ksi%C4%85%C5%BCKi\\_w\\_Warszawie](https://pl.wikipedia.org/wiki/Mi%C4%99dzynarodowe_Targi_Ksi%C4%85%C5%BCKi_w_Warszawie). Retrieved 20.07.2018).

<sup>2</sup> The analysis covered 2017 as the last full accounting year. Compared to 2017, apart from the fairs listed in the table, three more fair events are planned for 2018: Gdansk Book Fair, 12th Academic and Science Book Fair Academia and 8th Book Fair for Children and Youth Dobre Strony in Wrocław.

Warsaw Book Fair (WBF) and the International Book Fair in Krakow. Table 2 and 3 shows detailed fair statistics concerning these events.

*Table 2. Statistical data for the Warsaw Book Fair (Dobrołęcka, Dobrołęcki, 2018, p. 44; [www.targi-ksiazki.waw.pl](http://www.targi-ksiazki.waw.pl). Retrieved 20.07.2018)*

Specification	Year							
	2010	2011	2012	2013	2014	2015	2016	2017
Number of visitors	27856	35683	39967	60783	63114	72324	70128	75017
Number of exhibitors	312	538	503	500	720	859	815	794
The number of countries represented among exhibitors	4	15	20	18	23	29	25	32
Media representatives	274	388	578	583	620	719	934	869
Authors	225	357	442	520	695	790	1017	1004

*Table 3. Statistical data for the International Book Fair in Krakow (Dobrołęcka, Dobrołęcki, 2018, p. 62; [ksiazka.krakow.pl](http://ksiazka.krakow.pl). Retrieved 20.07.2018)*

Specification	Year										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of visitors	19 000	24 500	25 000	32 000	35 000	34 000	40 000	60 000	68 000	70 000	70 000
Number of exhibitors	436	482	479	453	539	567	570	695	700	698	698

Analysing the data contained in tables 2 and 3, one can observe the rapid growth of these events, manifesting itself both in the increase in the number of exhibitors and visitors. Organizers achieve this result thanks to a series of accompanying events (such as debates, workshops, contests, or games for children), a large number of invited book authors and other celebrities who present their achievements and sign autographs. In the case of WBF, this is, for example, 1,500 events during the edition in 2017 for representatives of the industry and individual audience as well as 1004 authors visiting the event. During the International Book Fair in Krakow the same year, there were 760 authors and special guests ([ksiazka.krakow.pl](http://ksiazka.krakow.pl). Retrieved 20.07.2018). The popularity of book fairs is the result of the fact that more and more often they are treated not only as a place of interesting leisure activities, but also as a source of general information about publishing trends and what to buy or read (<http://warszawa.naszemiasto.pl/artykul/cztery-dni-z-ksiazka-w-krakowie-dlaczego-warto-wybrac-sie,3892835,artgal,t,id,tm.html>. Retrieved 20.08.2018). Based on this knowledge, individual buyers and entities distributing books on the market place orders and make purchases. And due to the fact that today's editions of books have less and less expenditure and there are more and more of them, the decision to buy a specific item (both at the level of individual buyers and booksellers) becomes more and more complex and difficult. Therefore, skilful control over the presence and involvement of visitors during such fairs allows one to strongly influence the purchasing decisions of both groups of visitors. It can be assumed that the presence at these events shapes the future of the book market in Poland. That is why publishers and authors of books have to be highly involved in participating in fairs in order to

reach their target visitors and persuade them to trust their offer. Making the visitors aware of the significant informational function of book fairs guarantees their constant interest in actively attending these events in order to optimize the decision to buy and read certain literature items.

### 3. BOOK SALES AND READERSHIP LEVEL IN POLAND

Looking at the popularity of contemporary book fairs among trade fair guests, one could assume that it will translate into a wide interest in books which will be eagerly bought and read. However, the value of the Polish book sales market is falling and the trend is assumed to continue in the near future. According to the estimates of the Analysis Library, in years 2016-2020, it will shrink by about 8-10% (Drafińska, Liberadzka, 2017, pp. 111-120). The e-book sellers benefit from a drop in the level of sales of traditional books because readers are more and more interested in electronic books. However, despite the two-digit dynamics of e-book sales in recent years (Błaszczuk, Bednarczyk, 2014, pp. 3-8), their share in the sale of the printed book in 2017 accounted for only 2-5%. It is assumed that the e-book market will reach 13% of revenues from book sales in 2020 (Lemańska, 2016, <http://www.rp.pl/Media-i-internet/309269872-Wplywy-ze-sprzedazy-ksiazekw-Polsce-coraz-nizsze-Nie-pomoga-coraz-popularniejsze-e-booki.html#ap-1>. Retrieved 20.08.2018). However, not only the sale of traditional books is at a low level. The analysis of the readership level in Poland is also subject to negative comments from specialists. Less than 40% (38%) of Poles declared that in 2017 they read at least one book, while those reading seven or more books during the year constitute 9%. It has been noticed that books are most often read by those whose parents read often (82% of responders confirm that they read at least one book a year compared to 13% of readers from families where reading books is not popular). It was also found that people reading books are more willing to look for the information they need in printed texts and materials published on the Internet (37% of them), while those who do not read books prefer radio and television as a source of knowledge on a given topic (55% of respondents). (<https://www.bn.org.pl/w-bibliotece/3413-38%25-polakow-czyta-ksiazki.html>. Retrieved 20.08.2018)

*Table 4. Percentage of people reading at least one book a year (%) (Stan czytelnictwa w Polsce w 2017 roku.pdf, 2018)*

Year	2000	2002	2004	2006	2008	2010	2012	2014	2015	2016	2017
Level of readership	54	56	58	50	38	44	39	41	37	37	38

The level of readership in Poland fell slightly after 2006 and since then has remained at a lower, but relatively stable level. This situation, of course, worries book market analysts (<http://rynek-ksiazki.pl/rynek-ksiazki/prognozy-dla-rynku-wydawniczego/>. Retrieved 20.08.2018). However, there are also recent opinions casting doubt on whether it is really so bad that Poles now read less than some time ago. In the past, the ability and eagerness to read were associated with the education and the willingness to learn of a given person. However, today's education system from the very beginning strongly emphasizes the use of images and widely-understood multimedia in the development of the next generation of Poles. It is hardly surprising that these habits later translate into a reluctance to read traditional books. The technological progress and resulting changes in the approach to ways of seeking information, and thus readiness to read subsequent literature items also have a significant impact on the change of habits relating to reading. According to another group of market analysts, the decline in interest in books and the lower level of their sales and readership may further limit the economic and social development of the country. The belittling of this phenomenon by the government and a lack of action (as in the form of changes in the book law) may actually slow down the country's development and reduce the level of citizens' intellectual potential (Drafińska, Liberadzka, 2017, pp. 111-120).

#### **4. DEVELOPMENT PERSPECTIVES FOR BOOK FAIRS IN POLAND AND THE RESULTING STRATEGIC IMPLICATIONS FOR ORGANIZERS AND EXHIBITORS**

The book market<sup>3</sup> is an important factor influencing the development of book fairs. The situation on this market means that fewer books are sold and this fact will not be changed (at least within the next few years) by the increase in sales of e-books. The chances of reversing this phenomenon are diminishing if one notices that similar trends are observed in many other countries around the world (Drapińska, Liberadzka, 2017, pp. 111-120). That is why organizers of book fairs (Leszczyński & Zieliński, 2011, pp. 1-10) should look for additional elements that attract potential visitors<sup>4</sup>. Considering the possibility of increasing the interest in book fairs among visitors, two directions of strengthening and developing book fairs should be used simultaneously: presentation of traditional books and multimedia and other supplementary publications, such as board games, professional office and stationery materials. Thus, in order to make use of the need of visitors to be supported in the selection of books worth reading or buying, it would be purposeful to increase the possibility of meeting with the author, reviewers or literary critics who can help make a choice (including contacts through social media, especially for those who cannot reach the fair in the direct and traditional way). An important trend, which should also be considered in relation to shaping the character of future book fairs is the personification of today's marketing manifested in this case in the individualization of the exhibitors' offer and adjusting it to the preferences of individual potential customers (Proszowska, 2017, pp. 275-283). Another thing that will facilitate the conversion of the established relationship will be to make individual and institutionalized visitors aware of the details of the offer available and convince them that the proposed shopping package is not accidental but has been selected in accordance with their preferences (Jiang, Yang, & Jun, 2013, pp. 191-214; Lin, 2016, pp. 2630-2653). During the fair, the tool that would help achieve this goal are algorithms which, based on the information provided by a given customer automatically (or with the participation of personal advisers or chatbots), would help choose the offer. However, before the event (and, of course, also afterwards), it would be helpful to get acquainted with the detailed fair offer of individual exhibitors as part of the social media of a given trade fair event, not only the individual website of the offeror of a given product (Ling-ye, 2010, pp. 272-283). When thinking about maximizing the use of the presence of the exhibitors and institutional visitors at the fairs (Engblom, 2014), one should also think about at least partial (temporary) restriction of admission to the event for individual visitors, which would help facilitate strictly business contacts among entities with a greater potential. It would be a good idea to introduce two independent forms of contact via social media between exhibitors and visitors: one for larger institutionalized entities and the other for individuals. The third contact path could be of a non-commercial and strictly educational nature. It would be dedicated to teachers, library representatives and other educational institutions who at a given moment do not decide to cooperate with exhibitors but who should be aware of the opportunities they have at hand. A kind of congress gathering the entities participating in these events and coordinated on the basis of cooptation (Proszowska, 2018, pp. 217-232) by the leading organizers of book fairs in Poland should constitute an important element of the book fair market. One of the most difficult decisions would be to determine the location of this type of event. However, in order not to complicate the relationship between the organizers, the event might have a rotational character so that each organizer has the opportunity to demonstrate and directly analyse the problems of participants of the book fair.

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<sup>3</sup> Despite the fact that the development trends of both phenomena are not consistent, it should be assumed that these connections occur.

<sup>4</sup> Due to the volume restrictions of the study and clarity of the whole argument, the article, for quite obvious reasons, omitted activities already carried out as part of the book fairs which are very popular among participants.

## 5. CONCLUSION

Summing up, there are negative trends in the area of book sales and readership level in Poland and they are unlikely to be reversed. Obviously, they constitute a threat to the development of book fairs. However, the organizers of trade fairs and the entities participating are convinced of the profound benefits that they will gain from these events. They have a number of opportunities to develop these events using a variety of marketing tools and activities. In subsequent periods, it is necessary to observe the level of book sales and readership in Poland in order to assess the scale of necessary changes in the formula for organizing book fairs. At the same time, despite the obvious competition between individual organizers of the book fair, cooperation in some areas is necessary, which will strengthen the image of these events as effective and necessary tools for market communication.

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## INVESTMENT PSYCHOLOGY AND BEHAVIOR ANALYSIS IN THE KOREAN RECONSTRUCTION MARKET

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### **ABSTRACT**

*In this study, RGIRP(Realized Gain in Index of Real-estate Price) and RLIRP(Realized Loss in Index of Real-estate Price) models were used to test the disposal effect in the Korean reconstruction market. In addition, a comparative analysis of disposal effects was conducted by comparing direct impacts and indirect impacts between apartments within 500 meters and apartments within 500m~1km in the reconstruction zone. As a result, it was analyzed that there is a disposal effect within the 500 meters direct impact area of the reconstruction work site centered on Seoul area, but the disposal effect is not existed within 500m~1km of the indirect impact area. Also, it is analyzed that there is no disposal effect for apartments with large assets by asset size, and disposal effects for apartments with small assets are partially observed. This study analyzed that the behavior of investors according to the reconstruction market would be different, and it seems that the policy authorities will need to implement the reconstruction policy considering the investment sentiment.*

**Keywords:** *behavior of investors, disposal effect, reconstruction market*

### **1. INTRODUCTION**

With the development of the Gangnam(in Seoul, Korea) development that started in the mid 1970s, many houses were built in this period and the redevelopment and reconstruction of the houses began to take shape in the early 2000s as the houses were aged. According to Article 3 of the Seoul Metropolitan City Urban and Residential Environment Improvement Ordinance, apartment houses are considered to be 20 years old when they were built before 1981, and recently built houses are based on 30 years. From the beginning, redevelopment and reconstruction were promoted in earnest. However, many of the redevelopment and reconstruction projects, which had been pursued in the financial crisis of 2008, were stopped. Since the mid-2010s, market interest in redevelopment and reconstruction and has begun to increase again. The redevelopment and reconstruction have shown that housing prices have risen sharply. It has been pointed out as one of the important factors that cause the volatility of housing market and house price rise. Regulations are being considered as important. Recently, housing prices have been rising in redevelopment and reconstruction areas due to sluggish real economy, and the housing market is responding unexpectedly unlike the economic situation. Due to this situation, the government is tightening regulations such as strengthening of comprehensive real estate tax, excessive transfer of multi-lender, excess profits from reconstruction, and reinforcement of safety diagnosis. In the housing market, the rise of housing prices due to redevelopment and reconstruction is directly related to the economy of the people, so the government always intervenes. However, from the economics perspective, it is not accessible from various perspectives. This is not the case. Particularly, there is insufficient research to understand the current market phenomenon through the psychological process of participants in the housing market. Behavioral economics is an alternative to solving the above problems.

Behavioral economics is an attempt to explain the ineffective phenomena in the market or the abnormal phenomena that cannot be explained by the existing theories using human psychology. Until now, most domestic real estate researches of Korea have focused on factors affecting the price of home sales (Suh, 2001; Lim, 2006; Han, Han and Lee, 2010; Kim and Chung, 2011). In general, volatility, leverage effect, and location requirements affect the home sales price. However, since the global financial crisis in 2008, the study of the psychological factors in the home sales market has been gradually increasing in the world. In all the studies, it is analyzed that there is a disposition effect and a mental influence on the home sales market (Burnside, Eichenbaum and Rebelo, 2011; Lambertini, 2013; Kim and Yu, 2013; Jeong and Park, 2015). Although research on psychological factors is increasing, studies on the home sales market are being carried out, and there is no analysis of the marketing psychology such as analysis of the investment psychology due to reconstruction or redevelopment rather than more detailed regional analysis or home sales market. It is a situation. Therefore, there is a need to integrate behavioral economics in a multifaceted way. The purpose of this study is to analyze the effects of dispositions on the profit and loss of various psychological phenomena found in behavioral economics. The disposal effect refers to the phenomenon in which investors respond quickly to risk by avoiding risk and sell real estate where profit is generated quickly. In case of loss, investors respond in a risk-seeking manner and hold investors for a long time. Therefore, in this study, we will examine how the disposal effect varies depending on the distance to the external effect that raises house prices in the surrounding area due to reconstruction. The regional scope of the study is set as the reconstruction market of the Seoul metropolitan area in Seoul and Gyeonggi province in Korea. The effect of the disposal effect is examined by dividing 100~500m of the direct impact and 500m~1km indirect impact. Next, the temporal range was set from June 2006 to December 2017, based on the approval date of the reconstruction project. From January 2006 to March 2018, The data were extracted through a copy. This study is meaningful in that it examines how the psychology of market participants appear in the reconstruction market that has not been attempted in academia until now. Especially, It seems to be a more realistic study.

## **2. PRECEDENT RESEARCH**

Genesove and Mayer (2001) analyzed individual investors in the US real estate market and found that there is a loss avoidance tendency. Buisson (2016) showed a loss avoidance tendency in the housing market, and the loss avoidance tendency was different according to the price level. Bao and Gong (2016) confirmed that there is a holding effect on the Chinese housing market through forecasting theory. Lan (2014) investigated whether there is a cluster behavior in the housing market centered on 30 cities in China, and confirmed that cluster behavior is strong in the upward trend. Kim and Yu (2013) reported that sellers in the housing market tended to avoid losses and buyers had a tendency to anticipate. Jeong and Park (2015), Park (2016) confirmed that there is a cognitive-behavioral error and disposal effect for investors in the nationwide real estate market. Lim and Lim (2016) examined the effect of consumer sentiment index of consumer and construction firms on the housing price and transaction volume in the housing market. Lee, Lee and Jeong (2015) reported that cluster behavior occurred in the domestic apartment market, especially cluster behavior in the apartment price rise period. However, there are limitations in using the apartment price index announced by Kookmin Bank of Korea and analyzing only the Seoul area. Most of the previous studies related to the investment sentiment have been conducted on the stock market, and the study on investment sentiment about the housing market is lacking in diversity and detail. In addition, the research on investment sentiment about the housing market is focused on the nationwide home sales market, and the disposal effect is also conducted mainly in the stock market or housing market. So far, there has been no research on the subdivided market, not the whole market.

In particular, the behavior of investment sentiment is not likely to occur in the whole market, but is likely to occur in some specific regions or specific groups. Therefore, we want to make more detailed analysis in this study.

### 3. METHODOLOGY

In order to verify the disposal effect in the reconstruction market, this study extracts transaction data from January 2006 to March 2018 through a copy of the real estate registry. The regional scope of the reconstruction market is set as Seoul and Gyeonggi province. Next, we use the frequency-based model of Odean(1998) to examine the disposal effects of the reconstruction project, and utilize the model converted to the amount using the research model of Jeong(2003). In this analysis, we use the price index to distinguish between profit and loss. First, the frequency standard model is used to understand the realized and unrealized profits.

$$TR_{i,t} = RI_{i,t} - RI_{i,br} \quad (1)$$

$RI_{i,t}$ : the current house price index

$RI_{i,br}$ : the house price index of the purchase time

Utilizing the calculated  $TR_{i,t}$ , GIRP(Gain in Index of Realestate Price) and LIRP(Loss of Index of Real-estate Price) yield unrealized losses.

Realized gains(RGs) and realizable losses(RLs) are calculated using the following formula: Realized Gains in Index of Real-estate Price Ratio(RGIRP) versus Land Price Index(RLIRP: Real-estate-price-ratio).

$$RGIRP = \sum_{t=1}^T \frac{RG}{GIRP + RG} \quad (2)$$

$$RLIRP = \sum_{t=1}^T \frac{RL}{LIRP + RL} \quad (3)$$

We will examine the disposal effects of the reconstruction market through the above process. For the statistical test, we run the Komogorov-Smirnov test, which is a normality test, and the Wilcoxon Signed rank test, which is a nonparametric test when the sample is not a normal distribution. The hypotheses are as follows before analyzing through the set model.

Hypothesis 1: In the reconstruction market, RGIRP(profit realization ratio) will be larger than RLIRP(land realization ratio).

In the study of Jeong and Park(2015), we analyzed the disposal effects of the housing market, and found that the realization frequency in the profit interval is larger than the realization frequency in the loss interval. Therefore, the same result is expected in the reconstruction market, and hypothesis 1 is set.

Hypothesis 2: The smaller the asset size in the reconstruction market, the greater the RGIRP(profit realization ratio) than the RLIRP(land price index).

In the study of Jeong(2011), we analyzed the disposal effect of stock market. In the study, investors' investment behavior became more cautious as the assets of investors increased, and disposal effects did not appear. Also, in the study of Jeong and Park(2015), the results of verifying the disposal effect on the real estate market showed that the disposal effect did not appear as the asset size increased as the study of Jeong(2011).

In the existing study, it is confirmed that the disposition effect does not appear as the asset size increases both in the stock market and the real estate market, and the same result is expected in the reconstruction market. In addition, we will set up direct impact(500m or less) and indirect impact(500m ~ 1km) based on different factors that increase land prices according to the right to walk and the right to land in Lew and Kang(2012). In addition, since the effect on the house price will be different according to the distance, the disposal effect will be different, and the closer the distance is, the more the disposal effect will appear.

Hypothesis 3: There will be a difference in disposal effect depending on direct influence and indirect influence according to reconstruction execution.

## 4. EMPIRICAL RESULTS

### 4.1. Basic statistical analysis

*Table 1: Descriptive statistics*

	Profit margin (Won)		
	Total	Seoul	Gyeonggi
Mean	89,393,543	86,026,357	89,775,729
Min	-296,500,000	-255,000,000	-296,500,000
Max	798,000,000	798,000,000	376,500,000
St. Dev	93,669,729.2	107,404,974.7	77,593,302.7
Num	2,000	1,000	1,000

First, this study extracts transaction data from January 10, 2006 to March 9, 2018 through a copy of real estate registry to verify the effect of disposition on the reconstruction market. A total of 2,000 transactions were collected, and the descriptive statistics on the transfer profit of the data used in this study are shown in [Table 1]. Prior to the analysis, it is necessary to analyze whether the data are normally distributed. As a result of the regularity test, the results are shown in [Table 2].

*Table 2: Normality Test*

RLRIP - RGRIP	Kolmogorov-Smirnov test		
	Mean of Population	Z-score	p-value
	0.0245	7.520	0.000

As a result of the analysis, the probability of significance is 0.000, and the null hypothesis is "normal distribution. As a result, the statistical verification method is performed by nonparametric verification.

### 4.2. Analysis of frequency-based disposal effect

This study suggests that the RGIRP and RLIRP models are used to test the disposal effects in the reconstruction market. In addition, a comparative analysis of the apartment within 500m and apartment within 500m ~ 1km in the reconstruction area was made.

*Table following on the next page*

*Table 3: RGIRP & RLRIP in Seoul*

Seoul	RGIRP	RLRIP	RGIRP-RLRIP	Z-score	p-value
Panel A	0.012680	0.006640	0.006039	-1.503	0.133
Panel B	0.010623	0.005877	0.004746	-4.114	0.000
Panel C	0.016315	0.007061	0.009254	-0.051	0.960

*Note: Negative criterion*

*Panel A: Within 1km*

*Panel B: Direct impact within 500 meters*

*Panel C: Indirect influence within 500m ~ 1km*

As a result, the P-value of the Wilcoxon Signed rank test was 0.133 in Panel A, which is within 1km of the reconstruction project approval standard, and there was no difference between RGIRP and RLRIP. This suggests that there is no difference between the RGIRP and the RLRIP because it is expected that apartment prices will rise due to completion of the reconstruction due to the approval of the project in the reconstruction market. Next, the trading behavior of the apartments within the 500-meter range (Panel B) of the reconstruction project implementation (Panel B) showed that the P-value of the Wilcoxon Signed rank test was 0.000, rejecting the null hypothesis that "there is no difference between the two groups" Were analyzed. Next, RGIRP and RLRIP are 0.010623 and RLRIP is 0.005877, respectively, and RGIRP is relatively higher than RLRIP, and the profit realization frequency in the profit interval is higher than the loss realization frequency in the loss interval. And it is judged that the disposal effect exists. Therefore, there is no disposal effect in the whole market, but there is a disposal effect within the 500m direct impact area, and partial adoption is made for Hypothesis 1 above. Next, it is analyzed that the transaction behavior of apartment within 500m~1km of the criterion for the implementation of the reconstruction project, which is the area of Panel C, does not show the same disposal effect as Panel A. When these results are summarized, it is considered that there is a difference in the effect of disposal effect according to the authorization of rehabilitation project in Seoul. In other words, there is a disposal effect within 500m, which is the direct influence area of the reconstruction zone, and Hypothesis 3 is adopted because there is no disposal effect in the area within 500m ~ 1km, which is the indirect influence zone.

*Table 4: RGIRP & RLRIP in Gyeonggi-do*

Gyeonggi	RGIRP	RLRIP	RGIRP-RLRIP	Z-score	p-value
Panel A	0.012988	0.006983	0.006006	-3.777	0.000
Panel B	0.013446	0.007679	0.005766	-3.941	0.000
Panel C	0.012567	0.006325	0.006242	-4.508	0.000

*Note: Negative criterion*

*Panel A: Within 1km*

*Panel B: Direct impact within 500 meters*

*Panel C: Indirect influence within 500m ~ 1km*

As a result, the P-value of the Wilcoxon Signed rank test was 0.000 and there was a difference between the RGIRP and the RLRIP by rejecting the null hypothesis that "there is no difference between the two groups" Respectively. In addition, RGIRP(0.012988, 0.013446, 0.012567) was found to be higher than RLRIP(0.006983, 0.007679, 0.006325), and the profit realization frequency in the profit interval occurred more frequently than the loss realization frequency in the loss interval, . Therefore, the Gyeonggi-do area has the disposal effect, which is the same as the result of Jeong and Park(2015).

#### 4.3. Analysis of Disposal Effects by Asset Size

The frequency analysis results showed that the disposal effect was different according to the influence of Seoul area. The results of this study are as follows. Table 5 shows the results of the analysis of the disposal effects by asset size of direct impacts of less than 500m in the Seoul area.

*Table 5: RGIRP and RLIRP by Purchase Amount Group in Seoul (500m or less)*

Seoul	Group 1	Group 2	Group 3
RGIRP	0.009463	0.012527	0.00980311
RLIRP	0.002246	0.003554	0.01084378
RGIRP-RLIRP	0.007218	0.008974	-0.0010407
Z-Score	-0.170	-2.551	-3.479
P-Value	0.865	0.011	0.001

*Note: In this study, two cutting points were set based on the purchase amount to form three groups. The cut points of this study consisted of 30%(₩263,000,000), 40%(₩263,500,000), and 30%(₩1,620,000,000). 150 transactions for group 1(0% to less than 30%), 199 transactions for group 2(30% or more and less than 70%) and 151 transactions for group 3(more than 70%).*

Group 1 and 3 were analyzed as having no disposal effect. Group 3 results showed that RLIRP was higher than RGIRP. This is because, as in the case of Jeong and Park(2015), it is analyzed that investors do not show disposal effects when they are large. Group 2 (within the 5% significance level) has the same disposal effect as the previous study. Therefore, it can be concluded that the analysis of the direct influence by asset size is the same as that of the previous study. Table 6 shows the results of the analysis of indirectly influenced apartment transactions in the Seoul area from the disposal effect by asset size. As a result of the analysis, it is analyzed that the whole group (Group 2 has the 10% significance level) has the same disposal effect.

*Table 6: RGIRP and RLIRP by Purchase Amount Group in Seoul (500m~1km)*

Seoul	Group 1	Group 2	Group 3
RGIRP	0.01258	0.022462	0.016224703
RLIRP	0.003503	0.005449	0.010341952
RGIRP- RLIRP	0.009077	0.017013	0.005882752
Z-Score	-3.881	-1.849	-4.762
P-Value	0.000	0.064	0.000

*Note: In this study, two cutting points were set based on the purchase amount to form three groups. The cut points of this study consisted of 30%(₩269,500,000), 40%(₩378,000,000), and 30%(₩1,278,000,000). 150 transactions for group 1(0% to less than 30%), 195 transactions for group 2(30% or more and less than 70%) and 155 transactions for group 3(more than 70%).*

The results of the analysis of the disposal effects by asset size need to focus on Group 2 and 3 directly affected. The larger the size of the asset, the less the disposal effect, and the lower the asset size, the more the disposal effect is. The results of the analysis of the indirect influence are different from those of the previous studies. Hypothesis 2 is adopted only in direct influence.

#### 5. CONCLUSION

In this study, we analyze the existence of disposal effect according to distance in the reconstruction market by using the sales frequency reference model. In addition, we conducted an additional analysis to see whether the effects of disposal differed by asset size. The results of the study are summarized as follows.

First, it is analyzed that there is disposal effect within the 500m direct impact area of reconstruction work site centered on Seoul area. However, it is analyzed that there is no disposal effect within 500m~1km of indirect impact area. It can be judged that there is a difference according to the approval of the business execution authorization for the reconstruction site. In the case of the indirect influence, it can be judged that it invests from the long-term perspective due to the increase in the house price due to completion of rebuilding. In the existing reconstruction market, it can be judged that the effect of disposal, which is the trading behavior of the investor, immediately responded to the direct impact due to the uncertainty about the completion of construction and completion of the project. In other words, it can be understood that the analysis result of this study is different due to different characteristics from the general apartment market in the reconstruction market. In the case of Gyeonggi area, it is analyzed that disposal effect exists as same as previous research. Second, there is no disposal effect for apartments with large assets by asset size, and disposal effects for apartments with small assets are partially analyzed. This implies that the larger the asset size, the less the disposition effect is caused by the prudent and rational judgment of the investors. This study was conducted to verify the disposal effect of the real estate market using actual transaction data for the reconstruction market which is not covered in the existing domestic study and it is very meaningful that the disposal effect partially exists in the reconstruction market. In addition, it is different from other studies in that it confirms how the disposal effect appears depending on the distance based on the reconstruction site as well as the asset size. These findings suggest that real estate investors will need to be more cautious in their investment decisions and that policy makers will need to implement reconstruction policies in light of such investment sentiment. The limitations of this study are that the analysis area of the study is limited to Seoul and Gyeonggi area. The price of real estate is determined considering the individuality and geographical characteristics, and the disposal effect may be different depending on the region. Therefore, it will be necessary to analyze the whole country or other metropolitan cities and provinces in the future. In addition, although it was based on business license application days due to difficulty in securing data when extracting data, it may be necessary to extract and analyze data on the date of completion approval application date or the date of designation of maintenance area.

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## CRYPTOCURRENCY: GENERAL CHALLENGES OF LEGAL REGULATION AND THE SWISS MODEL OF REGULATION

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### ABSTRACT

*Legal regulation of cryptocurrency is preceded by the challenge of its definition. It is impossible to uniquely define the term cryptocurrency. The English language dictionary Meriam Webster defines it as any form of currency that only exists digitally, that usually has no central issuing or regulating authority but instead uses a decentralized system to record transactions and manage the issuance of new units, and that relies on cryptography to prevent counterfeiting and fraudulent transactions<sup>1</sup>. This definition also corresponds to the proclaimed intention of the creators of this new technology. Although there have been earlier, less successful attempts, it is generally accepted that the chronologically first commercially available cryptocurrency-bitcoin, was released on the market in early 2009<sup>2</sup>. Its mysterious author, Satoshi Nakamoto (for which many believe is the pseudonym behind the entire team of software engineers<sup>3</sup>) published in 2008, a paper laying out the basics of future technology of crypto currencies and their purpose<sup>4</sup>. The paper explains that bitcoin is a peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution such as bank. The problem of transaction recording and the prevention of multiple use of the same assets is solved by the introduction of "block chain" technology, a kind of digital accounting chain in which each transaction and each issue is entered cryptographically. It is decentralized and set up so that the processor work (a series of complex mathematical operations performed by different types of microprocessors) required for a digital coin to be "forged" is inevitably equal to the work required for issuance of each new coin. In this way, the crypto currency becomes essentially resistant to forgery in the form of a false issuance, and the dynamics of its issuance is determined by the complexity of the mathematical problems that are being solved. The chain is also definitely limited, since the number of issued coins is halved every four years, so the total number of issuable bitcoins is mathematically limited to 21 000 000<sup>5</sup>, which gives the cryptocurrency a self-defined deflationary<sup>6</sup>(or anti-inflationary<sup>7</sup>) framework. It is estimated that the last bit of the coin will be broadcast in 2140<sup>8</sup>. The advantages of the cryptocurrencies are numerous. From the privacy and security of transactions, to general global availability, which is of particular importance in a world where about 30% of the population has no access to financial services<sup>9</sup>, while Internet access (as the only technical requirement for the use of crypto currencies) is*

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<sup>1</sup> <https://www.merriam-webster.com/dictionary/cryptocurrency>

<sup>2</sup> <https://www.forbes.com/sites/bernardmarr/2017/12/06/a-short-history-of-bitcoin-and-crypto-currency-everyone-should-read/#62a6f6753f27>

<sup>3</sup> <https://www.cnbc.com/2017/10/27/bitcoins-origin-story-remains-shrouded-in-mystery-heres-why-it-matters.html>

<sup>4</sup> <https://bitcoin.org/bitcoin.pdf>

<sup>5</sup> Andreas M. Antonopoulos, Mastering Bitcoin: Unlocking Digital Crypto-Currencies 1st O'Reilly Media, Inc. ©2014 ISBN:1449374042 9781449374044

<sup>6</sup> <https://www.economist.com/free-exchange/2014/04/03/bitcoins-deflation-problem>

<sup>7</sup> [https://www.coindesk.com/end-of-inflation-the-radical-vision-of-futures-backed-cryptocurrency\\_central\\_banks/](https://www.coindesk.com/end-of-inflation-the-radical-vision-of-futures-backed-cryptocurrency_central_banks/)

<sup>8</sup> <https://www.investopedia.com/news/only-20-percent-total-bitcoins-remain-be-mined/>

<sup>9</sup> <https://globalfindex.worldbank.org/>

*considerably more widespread. Advantages are inevitably accompanied by disadvantages, and in the case of cryptocurrencies, they are not few in number. They relate primarily to the possibility of misuse of a wide range of criminal activities, from money laundering to the pursuit of illegal transactions, arms, narcotics<sup>10</sup>, and human trafficking<sup>11</sup>. Lately, there has also been a risk of investment fraud related to the opening of crypto funds, to which, among other things, warns the U.S. Securities and Exchange Commission<sup>12</sup>. All this leads to the need to formulate a regulatory framework for digital cash, ie, cryptocurrencies. It is a challenge that is closely followed and interwoven with the problem of their substantive definition, because all the cryptocurrencies are partly, and as we see many entirely, go out of the reduced framework of the digital global substitute of national currencies.*

**Keywords:** Cryptocurrency, Legal regulation, Swiss model, General challenges

## 1. GENERAL REGULATORY FRAMEWORKS

The issue of regulation of cryptocurrencies does not only concern their formal legal status, but also their substantial purpose. Although in the lexical sense there is no doubt that the cryptocurrency is a form of money, as its target interpretation largely confirms, in both formal and material terms, things can stand quite differently. Different states, legal orders, and legal traditions differ in relation to this problem. The creators of different cryptocurrencies provide their services for different purposes, some of which significantly differ from the traditional role of money.

## 2. VARIETY OF SPECIFIC REGULATORY FRAMEWORKS

The cryptocurrency, as a new technological framework, has recently attracted the attention of legislators and competent regulatory bodies. It is still delicate to talk about statistical data related to the regulatory framework of the cryptocurrency, because the law is in the making and every week, if not daily, it gets new sources. However, according to various estimates<sup>13</sup>, Only one third of the world's countries specifically addressed the issue of the legal framework of the cryptocurrencies, of which the majority took mainly or completely permissive attitude. Cryptocurrencies are, for the most part of their application or wholly, prohibited in only six countries<sup>14</sup>. From that, for the time being (until the end of May 2018), only Mexico<sup>15</sup>, through a wider law on financial technologies, and Thailand<sup>16</sup>, through two laws on cryptocurrencies and initial public offerings of coins (placing new cryptocurrencies on the stock market) dedicated a full legislative framework to this issue. In other countries, various forms of legal regulation are in place, from the regulations of executive powers, through the rules of the competent regulatory institutions, and amendments to the existing laws<sup>17</sup> that extend their application into the field of digital currencies. here are examples, like the one in Russia<sup>18</sup>, where different institutions in a country have different attitudes<sup>19</sup>, leading to mutual non-compliance

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<sup>10</sup> <https://www.law.ox.ac.uk/business-law-blog/blog/2018/02/sex-drugs-and-bitcoin-how-much-illegal-activity-financed-through>

<sup>11</sup> <http://humantraffickingsearch.org/bitcoin-fuels-the-human-trafficking-market/>

<sup>12</sup> <https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11>

<sup>13</sup> [https://en.wikipedia.org/wiki/Legality\\_of\\_bitcoin\\_by\\_country\\_or\\_territory](https://en.wikipedia.org/wiki/Legality_of_bitcoin_by_country_or_territory); <https://bitconnect.co/bitcoin-information/8/legality-of-bitcoin-cryptocurrency>

<sup>14</sup> <https://bitconnect.co/bitcoin-information/8/legality-of-bitcoin-cryptocurrency>

<sup>15</sup> <https://www.reuters.com/article/us-mexico-fintech/mexico-financial-technology-law-passes-final-hurdle-in-congress-idUSKCN1GD6KX>

<sup>16</sup> <https://www.bangkokpost.com/business/news/1464522/cryptocurrency-law-takes-effect>; <https://news.bitcoin.com/thailand-pass-two-cryptocurrency-laws/>

<sup>17</sup> [https://www.huffpostmaghreb.com/2017/10/26/algerie-interdiction-bitc\\_n\\_18384452.html](https://www.huffpostmaghreb.com/2017/10/26/algerie-interdiction-bitc_n_18384452.html)

<sup>18</sup> <https://cointelegraph.com/news/russias-ministry-of-finance-legalizes-cryptocurrency-trading-central-bank-disagrees>

<sup>19</sup> <https://news.bitcoin.com/cryptocurrency-is-property-in-russia-justice-minister-confirms/>; <https://www.cryptoeconomy.net/en-CA/russian-court-says-cryptocurrency-is-property/>

of legal acts and the need for a judicial<sup>20</sup> or supreme<sup>21</sup> legislative solution. The present situation is additionally complicated by the problem of different ways of using cryptocurrencies. This primarily refers to the formation of the Internet Stock Exchange for their exchange and trade, opening crypto funds through initial coin offering, use of cryptocurrencies as means of payment in everyday use, exchanging of the cryptocurrencies for official currencies, trade of banks and other financial institutions against the sale by natural persons, etc. Some legal jurisdictions limit one, while permitting another form of their use (Thailand, India, Canada)<sup>22</sup>.

### 3. FORMS OF LEGAL CLASSIFICATION OF CRYPTS

When it comes to legal classification of cryptocurrencies in countries with existing regulations, it is very diverse. The following forms have been recorded for the time being: commodity (7 countries) financial asset (3), property (3), service (3), money (2), financial instrument (2), currency (2), payment method (2), electronic cash (1), private property (1), exchange for money (1), and monetary unit (1)<sup>23</sup>. The above classifications can be conditionally classified into three main frameworks: property - which makes cryptocurrencies the subject of a positive property law; financially - which puts cryptocurrencies into different categories of financial assets and generally requires the application of the law on obligations; and money - which, in part or in whole, with a special emphasis on payment use, convertibility, and taxation, equates cryptocurrencies with the state's denominated currencies. USA is the only state where the judgment made by a judge of the Federal Court<sup>24</sup> defined cryptocurrencies as commodities, and they are subjected to application of Commodity Exchange Act and competence of the Commodity Futures Trading Commission (CFTC). This decision is also supported by the regulations of the Internal Revenue Service – IRS<sup>25</sup>, according to which the cryptocurrencies are taxed as property, and not a monetary asset, in accordance with the nominal value expressed in dollars on the day of receipt. In this way, the profit generated from the trade of cryptocurrencies, their exchange, or use for payment purposes in the domestic and foreign markets is determined and taxed. However, another judgment from the federal court in case of „U.S. v Murgio et al, U.S. District Court, Southern District of New York, No. 15-cr-00769“<sup>26</sup> defines cryptocurrencies as money, and notes their role as the medium of exchange and generally available convertibility to other, official state currencies. In order to avoid such differences, with profound consequences in the system of precedent law, the adoption of a general regulatory framework at the federal level is necessary. Israel is one of the countries where cryptocurrencies are not treated as money, but rather as financial assets<sup>27</sup>. However, the National Bank of Israel was very reserved in the general recommendation it made, citing a global lack of regulatory guides and similar adequate examples, on the basis of which a more detailed set of recommendations related to the treatment of cryptocurrencies in the banking system of the country could be formulated. Germany defines cryptocurrency as a monetary unit<sup>28</sup>, that is, a currency that is not treated as foreign, but is subject to domestic banking regulations. This was done, according to the Federal Ministry of Finance, in order to facilitate the use of cryptocurrency to the citizens of Germany and give way to further decentralization

<sup>20</sup> <https://cointelegraph.com/news/russian-supreme-court-orders-to-review-bitcoin-website-ban>

<sup>21</sup> <https://www.coindesk.com/russia-eyes-summer-deadline-new-cryptocurrency-laws/>

<sup>22</sup> <https://news.bitcoin.com/bank-of-thailand-bans-banks-from-cryptocurrency-activities/>; <http://www.bbc.com/news/world-asia-india-43669730>; <https://www.investopedia.com/news/canada-banks-ban-users-buying-cryptocurrency/>

<sup>23</sup> BITCOIN AS A PARALLEL CURRENCY – AN ECONOMIC VISION AND MULTIPLE LEGAL CONSEQUENCES, Nicole Julie Fobe, São Paulo 2016,

<sup>24</sup> <https://www.forbes.com/sites/greatspeculations/2018/03/09/cryptocurrencies-are-commodities-says-federal-judge/#773414ea5c09>

<sup>25</sup> <https://www.irs.gov/pub/irs-drop/n-14-21.pdf>

<sup>26</sup> <https://www.justice.gov/usao-sdny/file/830616/download>

<sup>27</sup> <https://www.reuters.com/article/uk-bitcoin-israel/bitcoin-is-an-asset-not-a-currency-israels-central-bank-idUSKBN1EX18E>

<sup>28</sup> <https://www.cnbc.com/id/100971898>

of the money market. This was supported by a later decision<sup>29</sup> from the first quarter of 2018 according to which all private payments made by using cryptocurrencies are tax-exempt, provided that both parties involved agree on using them only as means of payment.

#### **4. INITIAL COIN OFFERING AND CRYPTO TOKENS**

Until now, we exclusively talked about cryptocurrencies purportedly arising as digital money, or substitute for state fiat money. However, this is not their only type. In addition to them, which we can call cryptocurrencies in the narrow sense, or crypto money, there are crypts that have emerged as a digital counterpart to a financial asset, as well as those that serve to access a specific type of service. Most of these cryptocurrencies are ICO tokens, or chips released during the initial public offering of new cryptocurrencies<sup>30</sup>. It is a method of collecting funds for its launch. Interested investors invest funds, or existing cryptocurrencies, into a new project, and as a kind of investment guarantee, they receive crypto tokens. They are most often later converted into a predetermined amount of newly created digital money, but they often carry other benefits, such as permanent ownership or part of management rights<sup>31</sup>. The advantage of this way of collecting funds compared to traditional methods reflects those benefits that cryptocurrencies have in relation to fiat currencies. The same applies to disadvantages. ICO events are spatially unlimited and can be accessed by people all over the world. Anonymity of transactions is guaranteed, although it is somewhat more limited in relation to crypto money in the narrow sense. The costs of financial services of crowdfunding do not exist here. Similarly, there are no common securities and guarantees of return of funds in the event of failure of a new project.<sup>32</sup> Differences in using crypto tokens resulted in their grouping into at least two categories<sup>33</sup>. One refers to tokens representing a digital counterpart of classical securities, such as shares or stocks. The other one refers to utility tokens, which grant the owner access to a product or service that is not directly related to the crypto money. US Securities and Exchange Commission – SEC, has softened the initially negative attitude towards the new method of crowdfunding<sup>34</sup>, making a formal distinction between the cryptocurrencies in the narrow sense that are subject to one type of legal regulation, and crypto tokens that will probably be treated formally as securities in the future<sup>35</sup>. Different views of various federal agencies on the definition and legal shaping of cryptocurrencies, the US state of Wyoming tried to solve by introducing a set of state laws<sup>36</sup> that define cryptocurrencies as a completely new category of property, different from assets and securities. Wyoming has thus become the first jurisdiction in which the legislature passed an act on defining cryptocurrencies out of the previously known legal framework.

#### **5. SWISS MODEL OF CRYPTOCURRENCY REGULATION (WITH SPECIAL REFERENCE TO CANTON ZUG)**

The drastic increase in the price of cryptocurrencies, in the first place of bitcoin<sup>37</sup>, which in 2017 has doubled its value, which, at the beginning of 2018 stabilized at the level between 7 and 8 times higher than a year earlier, and ethereum<sup>38</sup>, has led to a global growing interest in financial technologies.

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<sup>29</sup> <https://cointelegraph.com/news/germany-wont-tax-cryptocurrencies-used-to-make-purchases>

<sup>30</sup> [https://en.wikipedia.org/wiki/Initial\\_coin\\_offering](https://en.wikipedia.org/wiki/Initial_coin_offering)

<sup>31</sup> <https://tokenguru.net/articles/ico-vs-crowdfunding-what-is-the-difference/>

<sup>32</sup> <https://cointelegraph.com/news/crowdfunding-vs-ico-experts-question-legitimacy-and-guarantees-of-initial-coin-offerings>

<sup>33</sup> <https://strategiccoin.com/difference-utility-tokens-equity-tokens/>

<sup>34</sup> <https://www.coindesk.com/sec-chief-not-icos-bad/>

<sup>35</sup> <https://www.ccn.com/sec-ico-tokens-not-bitcoin-should-be-regulated-as-securities/>

<sup>36</sup> <https://www.forbes.com/sites/rachelwolfson/2018/03/13/u-s-state-of-wyoming-defines-cryptocurrency-utility-tokens-as-new-asset-class/#35eb69374816>

<sup>37</sup> <https://www.coindesk.com/price/>

<sup>38</sup> <https://www.coindesk.com/ethereum-price/>

Volatile, but generally favorable market trends, attracted not only enthusiastic individuals, to whom the most cryptocurrencies were almost exclusively connected from their creation, but also large investors, banks, and investment funds. In addition to the rise in the value of existing cryptocurrencies, there has been a real wave of new and different forms of digital, financial technology that have been concentrated in and around the cryptocurrency framework. The convincing majority of the funds identified for these new projects were collected by ICO initial coin offerings. With just \$ 90 million collected in 29 ICO events in 2016, the trend in 2017 grew to over 6 billion in 871 ICO offers, or over 5 billion in 780 ICO bids for the first five months of 2018<sup>39</sup>. For now, besides the expected strong activities in the world's largest economies, three global centers of emerging financial technology have been profiled. These are Hong Kong<sup>40</sup>, Singapore<sup>41</sup>, and Switzerland<sup>42</sup>, mainly Canton Zug. Switzerland has begun to introduce legal regulation of cryptocurrencies since 2017. The state's attitude towards the new type of financial technologies is permissive, and the strategy is defined for the development of existing ones, as well as the creation and attraction of new forms of financial technology<sup>43</sup>. What makes the Canton Zug stand out from most business environments anywhere in the world is a decentralized form of political decision-making, the adoption and implementation of new laws, a culture of privacy with adequate legal protection, and a regulatory environment that fosters self-regulation as opposed to a mere imposition of norms from above<sup>44</sup>. The tax rate is one of the lowest at the national level<sup>45</sup>, but also internationally, in comparison with some of the world's leading economies<sup>46</sup>. The cantonal tax administration of Zug, defines ownership of cryptocurrencies as "ownership of property"<sup>47</sup>, in the sense determined by Article 641 of the Swiss Civil Code<sup>48</sup>. This implies that the owner uses them, including sales thereof, within the limits of the law. Therefore, the ownership of the cryptocurrency coins is determined as the right to use the digital information unit, which is unique, secure, transparent and directly portable. This is supported by the cantonal tax law (article 38 paragraph 1) based on which the ownership of a cryptocurrency unit is treated as a "monetized property right". On the basis of all the above, the City Council of the city of Zug<sup>49</sup> approved the settlement of debts to the city in the amount of up to 200 Swiss francs in bitcoin, which became the first cryptocurrency accepted in the business with some instance of the state apparatus anywhere in the world. Nevertheless, the most important regulatory framework related to cryptocurrencies and their financial instruments was set up at the federal level by FINMA - Swiss Financial Market Supervisory Authority<sup>50</sup>. This independent regulatory body is responsible for the licensing, supervision and enforcement of regulations governing the financial market in the country.. In a document published in November 2016, as the fifth of the seven strategic objectives set for the period 2017-2020, FINMA states the adoption of an innovative approach in the regulation and supervision of new financial technologies, and the abolition of unnecessary legal barriers to new forms of digital business<sup>51</sup>.

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<sup>39</sup> <https://www.icodata.io/stats/2016> ; <https://www.icodata.io/stats/2017> ; <https://www.icodata.io/stats/2018>

<sup>40</sup> <http://www.scmp.com/business/banking-finance/article/2113392/hong-kong-fast-developing-cryptocurrency-centre>

<sup>41</sup> <http://www.scmp.com/week-asia/business/article/2142682/forget-china-hong-kong-singapore-are-new-kids-blockchain>

<sup>42</sup> <https://cointelegraph.com/news/why-switzerland-is-becoming-a-crypto-nation-with-a-flourishing-ico-market-expert-take>

<sup>43</sup> <https://www.hslu.ch/en/lucerne-university-of-applied-sciences-and-arts/about-us/medien/medienmitteilungen/2018/02/28/fintech-study/>

<sup>44</sup> <https://cryptovalley.swiss/why-switzerland/>

<sup>45</sup> <https://www.zg.ch/behoerden/volkswirtschaftsdirektion/kontaktstelle-wirtschaft/zug-zahlt-sich-aus/steuervergleiche/downloads/internationaler-steuervergleich/download>

<sup>46</sup> <https://www.zg.ch/behoerden/volkswirtschaftsdirektion/kontaktstelle-wirtschaft/zug-zahlt-sich-aus/steuervergleiche/downloads/internationaler-steuervergleich-1/download>

<sup>47</sup> <https://www.zg.ch/behoerden/finanzdirektion/steuerverwaltung>

<sup>48</sup> <https://www.admin.ch/opc/en/classified-compilation/19070042/index.html>

<sup>49</sup> <http://www.stadtzug.ch/en/>

<sup>50</sup> <https://www.finma.ch/en/>

<sup>51</sup> <https://www.finma.ch/en/news/2016/11/20161116-mm-strategische-ziele/>

That this strategy primarily relates to the emerging cryptocurrency market has become unequivocally clear in September 2017 when the first guide for the regulation of the inclusive public offering of coins was published (ICO)<sup>52</sup>. This relatively brief document highlights the agency's commitment to incorporate the blockchain technology into the existing financial system of Switzerland. When it comes to initial coin offering, it is noted that there is no specific legal framework, and as a regulatory alternative, existing legal provisions regarding the usual financial institutions are proposed. The provisions of the Anti-Money Laundering Law will apply in case of issuing payment coins, which implicitly places them in the legal framework of the fiat money. The provisions of the Banking Act will apply in the event that the ICO accepts public deposits of citizens from which the obligatory relationship is born. This also applies to the condition that the company behind the initial public offering must have a banking license. Provisions on trade of securities shall be applied in case that newly created tokens are subject to the appropriate legal classification. When the value collected through ICO is managed externally, provisions related to collective investment schemes will apply. The incompleteness of this policy came to light in the last months of 2017 during the exponential growth of the number of ICO offers and the amount of money invested in them. Consequently, in February 2018 FINMA issued a new, far more detailed and complete guide to the application of legal regulations in cases of initial coin offerings.<sup>53</sup> Building on last year's document, the new guide highlights the necessity of individual assessment and classification of each new cryptocurrency and its initial public offering, referring to the lack of a specialized legislative framework, case law, or recognized legal doctrine. Their material purpose is indicated as the main guideline in determining the regulatory framework for new cryptocurrencies. For this purpose, FINMA has formulated three main categories, leaving places for their mixed forms. Those categories are payment tokens, utility tokens and asset tokens. Payment tokens are synonymous with cryptocurrencies in the narrow sense, the purpose of their use is to pay, or to take over the role of the medium of exchange for fiat currencies. The purpose of utility tokens is to access a digital application or service. Asset tokens correspond to different types of securities (stocks, bonds, or derivatives), representing equity in companies, interest in financial flows and interest, or the right to a dividend. In this way, cryptocurrencies are legally related to traditional already existing categories to whose attributes and roles they correspond with. Analysis made by FINMA has shown that the greatest part of the regulatory need is related to the fight against money laundering and security of securities. The consistent application of the Anti-Money Laundering Act resolves the first problem. The second problem is solved with the help of a new categorization of the initial public coin offering of coins formulated by the agency by complying with the criteria of transparency, functionality, and portability. Thus, the Anti-Money Laundering Act is applied to the offerings of coins or tokens intended for use as a means of payment, and new cryptocurrencies are not treated as securities. Initial public coin offerings of utility tokens will not be classified as offerings of securities only in cases when the tokens can be used for accessing applications and digital services immediately at the moment of their issuance. If their role concerns investment in a strictly economic understanding of the term, such tokens are considered as securities. Asset tokens are in any case classified as securities and their initial public offerings are subject to the legal provisions related to securities, and the Law on obligations. For the purpose of finishing and applying the regulatory framework of cryptocurrencies, the Swiss State Secretariat for International Financial Matters has established a blockchain/ICO working group, which will also involve of the Federal Office of Justice and the Swiss Financial Market Supervisory Authority<sup>54</sup>. The goals of the working group include the ongoing reevaluation of existing legal frameworks, monitoring of initial public offering of

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<sup>52</sup> <https://www.finma.ch/en/documentation/finma-guidance/#Order=4>

<sup>53</sup> <https://www.finma.ch/en/news/2018/02/20180216-mm-ico-wegleitung/>

<sup>54</sup> <https://www.admin.ch/gov/en/start/documentation/media-releases.msg-id-69539.html>

cryptocurrencies, and intervention for the purpose of a proper application of positive law. Although a medium-sized country, Switzerland has been known for centuries as a banking and financial superpower, and modern developments in the field of growth and development of new financial technologies almost guarantee that that status is maintained in the 21st century. With only slightly more than 1% of the world's population, this Alpine country has accumulated over 7% of global ICOs, placing it at the very top among all other countries.<sup>55</sup> Of the 15 largest ICOs in 2017, four were made in Switzerland, with a total value of \$ 631 million raised.<sup>56</sup> The same trend continued in the first quarter of 2018. So far, FINMA has had to intervene in only one case by closing the initial public offerings<sup>57</sup>. All this testifies in favor of justification, the validity and sustainability of the regulatory framework of various products of blockchain technology which Switzerland has set so far and the same is the best example and role model for the countries that will be addressing this legal challenge.

## 6. CONCLUSION

It is estimated that cryptocurrencies in early 2018 reached a total value of \$ 800 billion at world level<sup>58</sup>. Less than ten years after the formation of the blockchain technology, it is a remarkable phenomenon of global proportions with deep financial, legal, and with security consequences. It is difficult to predict the fate of any individual cryptocurrency, but the technology on which they are based almost certainly has the future. Anonymity, transaction security, protection from illegal surveillance and theft, but also immanent anti-inflation role guarantees the survival of the blockchain and its application in public and private affairs of the future. Advantages in one sphere of human activity may be disadvantages, or sources of possible misuse in another. This also applies to cryptocurrencies, which is confirmed by the already noticed risk of their use in various forms of ill-treatment. All of this requires the establishment of a legal regulatory framework for new technology and its commercial products, which has so far been addressed by a steady and rapidly growing number of over 60 jurisdictions in the world. Problem of finding a substantial definition of cryptocurrencies is reflected in their legal classification. Although we are far from a unique global framework that will solve the challenges, we are already seeing important trends. The first one deals with the subordinate level where cryptocurrencies are regulated in most cases, with only a few exceptions. The second concerns the classification of the cryptocurrencies through already existing economic and legal categories, for which at the moment there is only one exception at the world level. This proves the fact that the innovation of blockchain is mainly or exclusively of technological nature, without introducing new social or legal institutes. In this sense, we can compare the cryptocurrencies and their potential development with the emergence of paper money, which has become a technical substitute for the earlier metal coins. Blockchain technology thus acquires a form of an evolutionary set for determining the real value of a currency, following the gold standard and fiat money behind which is the authority of the state. These findings are clearly reflected in the Swiss model of relevant legal regulations. By-laws, regulations, and regulatory guides, different types of cryptocurrencies are classified into existing legal categories, and they are then subjected to application of the relevant law without any exception. The extraordinary success and disproportionate high presence of Switzerland in the world market of cryptocurrencies testifies to a great extent about the effectiveness of such approach, and this approach is a candidate for application in large number of countries that have yet to answer those questions.

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<sup>55</sup> <https://icowatchlist.com/statistics/geo>

<sup>56</sup> [https://cryptovalley.swiss/wp-content/uploads/20171221\\_PwC-S-CVA-ICO-Report\\_December\\_final.pdf](https://cryptovalley.swiss/wp-content/uploads/20171221_PwC-S-CVA-ICO-Report_December_final.pdf)

<sup>57</sup> <https://www.finma.ch/en/news/2017/09/20170919-mm-coin-anbieter/>

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## THE EVOLUTION OF ROMANIAN MACROECONOMY POST-CRISIS

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### ABSTRACT

*The EU, a major trading power in the world it is operating as a single market, made up of 27, respectively 28 countries. Romania, part of the EU28 since 2007, is continuing with the good work and continues to catch up with the others EU countries and the EU average, reaching 60% of the EU average at the end of 2016, compared with about 40% in 2007. The aim of the study is to analyze the evolution of the Romanian macroeconomy in accord with the 27, respectively 26 EU country, post BREXIT, by taking in consideration that the world had confront with the worst economic and financial crisis of the last century. By considering this case, we need to highlight that the Romanian GDP has doubled. Besides this, in the year 2017, the Romanian economy growth reached 7%, marking the highest level of post-crisis economic growth which makes it the 16<sup>th</sup> economy of the UE28. However, the GDP per capita remains the second lowest in the UE, after Bulgaria. At the regional level, 7 regions from 8<sup>th</sup>, have a GDP per capita below the 60%. This indicates an increase in terms of disparities between the capital region, Bucharest-Ilfov, who exceeds the EU average, around 140% with the rest of the country. The Romanian macroeconomic growth will continue to be affected by the negative demographic trends, coupled with limited domestic labor mobility and high migration. According to National Institute of Statistic, on 1 January 2017, the resident population represented 19.63 million people, with 122.000 people less compared to January 2016. The main reason for this decrease is the negative natural increase: the number of dead persons exceeding the number of births by 68.061 persons.*

**Keywords:** *Macroeconomy, GDP, growth, post-crisis*

### 1. INTRODUCTION

The European Union is a unique economic and political union in the world that brings together 28 European countries and covers almost the entire continent. For more than a half century, the European continent enjoys peace, stability and prosperity. Its population lives on high standards and benefits from a common European currency, the euro. More than 340 million EU citizens in 19 countries use the euro as their own currency and enjoy the benefits they offer (IER, 2018). The EU's main economic engine is the of the single market. This allows the free movement of goods, services, capital and people. The EU also wants to exploit this huge resource in other areas, such as energy, knowledge and capital markets, to maximize the benefits to European citizens (European Commission, 2018). At the level of 2004, both Bulgaria and Romania were candidate countries for the European Union. In the same year, most countries acceded to the EU, eight Central and Eastern European countries (Estonia, Latvia, Lithuania, Poland, the Czech Republic, Slovakia, Slovenia and Hungary) joined the EU, putting an end to the division of the Europe decided by the great powers in Yalta (Crimea), 60 years ago. Cyprus and Malta are also members of the Union. On 8<sup>th</sup> of April, 2005, a press conference organized at the headquarters of the European Integration Ministry announced the publication of the Treaty of Accession to the European Union for Romania and Bulgaria. The Parliament voted 497 votes in favor, 93 against and 71 abstentions Romania's accession. Bulgaria's accession was approved by 522 votes 70 against, and 69 abstentions (UNTRR, 2018). The signing ceremony took place on 25 April 2005 at the Neumünster Abbey in Luxembourg. The treaty came into force on 1<sup>st</sup> January 2007, the day of the enlargement of the European Union.

In 2007, Romania and Bulgaria became EU Member States, recognizing at the same time the progress made so far in the direction of social and economic reforms, but also their commitment that efforts to achieve the highest possible level of convergence with the other Member States will continue. After the accession of the two new states, Romania and Bulgaria, more precisely in September 2008, the world economy is hit by a major financial crisis. Problems start with mortgages in the United States. Several European banks face difficulties. The crisis leads to closer economic cooperation between EU countries (Honțus A., 2015).

## 2. MATERIALS AND METHODS

The comparative analysis aimed to describe as played by the characteristics differences registered in economy, in the dynamic period 2000-2016. The main indicators analyzed are population, Gross Domestic Product (GDP), unemployment rate and inflation rate at the EU level. Living standards can be compared by referring to the price of a package of goods and services to the income of each country by using a common national currency called purchasing power standard (SPC). By comparing the GDP per capita expressed in the SPC, we get an overview of living standards. The data used in this analysis have been provided by Data World Bank, Eurostat and the National Institute of Statistics of Romania.

## 3. RESULTS AND DISCUSSIONS

Romania's population is continuously decreasing due to the deepening of the aging process as well as due to the emigration phenomenon. According to the Romanian National Institute of Statistics, on 1<sup>st</sup> of January, 2017, the resident population was over 19.63 million people, down 122,000 compared to 1<sup>st</sup> of January, 2016. The main reason for this decrease is the negative natural increase, the number of deceased persons exceeding the number of newborns -hows with 68,061 people (AGERPRES, 2017). The total population of Romania in 2000 registered the largest population, being 22,442,971, and in 2016 the lowest population, being 19,699,312. From here it can be seen the visible decrease of the Romanian population, decreasing in the period 2000-2016 by 2,743,659. At EU28, the population has grown steadily, from 487.4 million inhabitants in 2000 to 508.8 million inhabitants in 2016. However, population growth at EU level is not due to positive natural growth (Table 1).

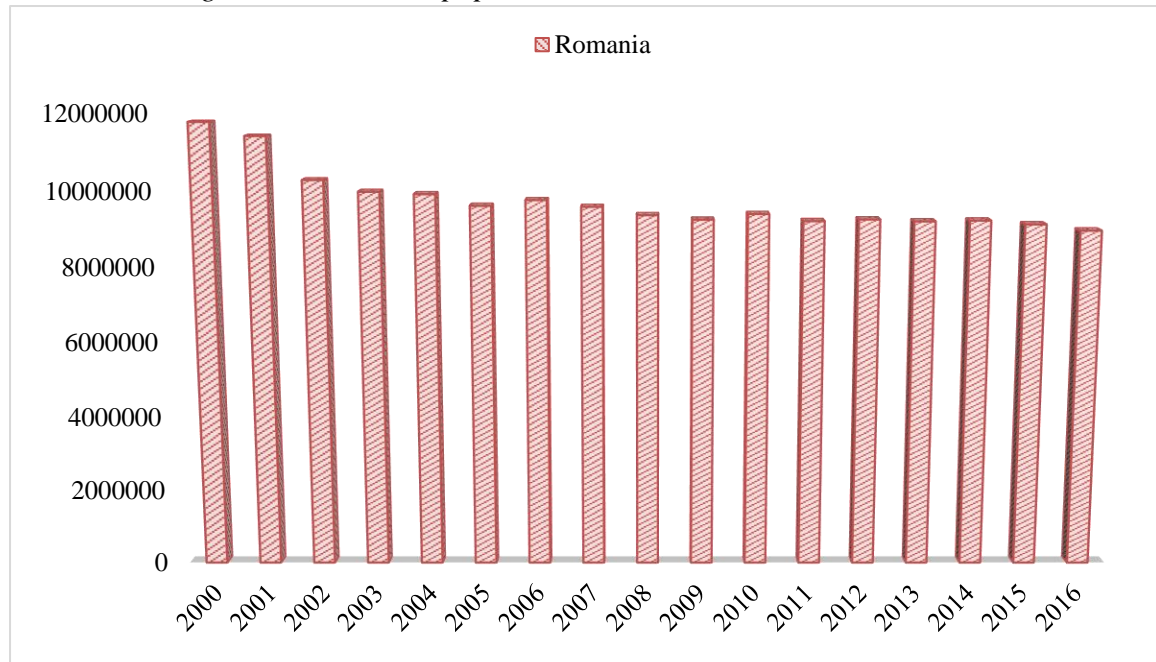
*Table 1: The evolution of the population between 2000-2016*

	2000	2007	2010	2014	2015	2016
<b>Romania</b>	22442971	20882982	20246871	19908979	19815481	19705301
<b>EU 28</b>	487441000	499299000	503832000	507123000	508000000	508853000

*Source: Processed after Data World Bank, 2018.*

In 2016, the EU-28 employment rate for people aged 20-64 was 71.1%, being the highest annual average ever for the EU, compared with 69% recorded in 2010. However, behind these averages large differences can be observed between countries. Thus, in Spain, people aged 20 to 64 accounted for 18.09% in 2016, compared to 2013 when it was 16.93% (EUROSTAT, 2018). In Romania, the percentage was 8.07% in 2016 and in 2013 it was 8.09%. Currently, Romania's population represents 3.91% of the EU28 population (Figure 1).

*Figure 1: The active population on the labour market, 2000-2016*



*Source: Processed after Data World Bank, 2018.*

As a single market with 28 countries, the EU is a major trading power in the world. The EU's economic policy aims at maintaining sustainable growth with investment in transport, energy and research. It also seeks to reduce the impact that future economic development may have on the environment. Currently, the EU's GDP, which reflects the amount of goods and services produced by the European economy, is higher than that of the United States. EU GDP in 2016 was \$ 22.3 million compared to 2010 when it was \$ 18.1 million. In Romania in 2017, gross domestic product (GDP) increased by 7% compared to 2016, according to the National Institute of Statistics (INS), and in 2016 GDP grew by 1.3% compared to 2015. Romania was in 2017 over China, which recorded an economic growth of 6.9%. The absolute value of Romania's GDP in 2016 was 454,139 million dollars, while in 2015 it was \$ 427,340 million. The eurozone (ZE-19) accounted for 70.6% of EU-28 GDP in 2016 (as measured by the SPC), falling from 72.3% in 2006 and 2007. In 2016, the sum of the five largest economies EU Member States (Germany, France, United Kingdom, Italy and Spain) accounted for 67.1% of EU-28 GDP, 2.0 percentage points lower than their share a decade ago, in 2006 (EUROSTAT, 2018). In the case of Romania and Bulgaria, the share of the agricultural sector in the gross domestic product fell quite a lot in both countries, with our country with 7.68% and Bulgaria with 7.58%. The percentage of the industry sector in the gross domestic product in the case of Romania oscillated during the analyzed period, if we compare the year 2000 with the year 2016, it decreased by 1.14%. In the case of Bulgaria, gross domestic product in industry has grown from 2000 and by 2016 by 2.46%. The percentage of the services sector in the gross domestic product increased for both countries, for our country by 8.82%, and for Bulgaria by 5.42% (STEFAN, 2018). As a result of the analysis, we can see that the labor force in the agricultural sector has dropped quite a lot, in Romania by 19.10% and in Bulgaria by 6.44%. In our country, the labor force in the industry increased by 4.088% and in Bulgaria it decreased by 3.04% (Cretu, 2015). The labor force in the service sector has increased, in Romania the growth was quite high, namely an increase of 18.01%, and in Bulgaria it increased by 5.49%. Unlike Romania, Bulgaria recorded the highest GDP in 2011. Unfortunately, for both states, it is noted that the macroeconomic shake that swept across the globe has also affected the economies of the two countries (Toader S. , 2017) (Figure 2).

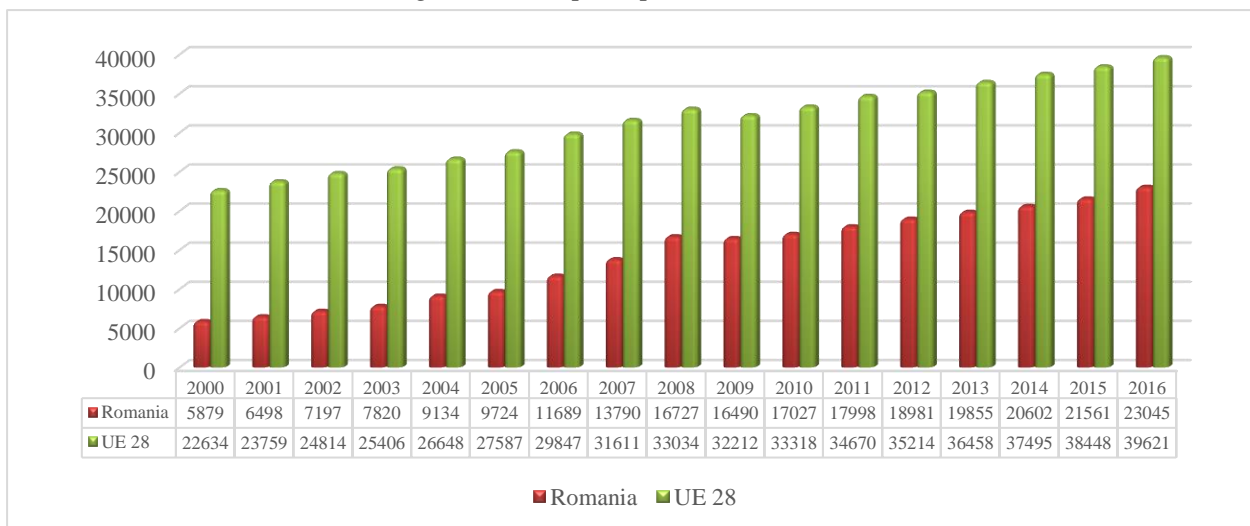
Figure 2: UE28's gross domestic product, \$



Source: Processed after Data World Bank, 2018.

Average GDP per capita at current EU-28 prices in 2016 was \$ 29,000. By comparison over time, in terms of volume (using volumes concatenated with the reference year 2010), GDP per capita at EU-28 level in 2016 was \$ 26.9 thousand, being for the second year consecutively above the maximum reached in 2008 (\$ 26.2 thousand), before the effects of the global financial and economic crisis (EUROSTAT, 2018) are felt. Romania was one of the EU countries with the lowest GDP per capita in PPS - \$ 21.5 thousand - about half of the average in the other Member States. In 2016, the absolute GDP per capita grew to 23 thousand dollars (Figure 3).

Figure 3: PIB pe cap de locuitor, \$



Source: Processed after Data World Bank, 2018.

The unemployment rate in the European Union fell to 7.3% in November 2017, from 7.4% in the previous month and 8.3% in the same period in 2016, according to Eurostat. It is the lowest level since October 2008. In the euro area, the unemployment rate fell to 8.7% in November 2017, from 8.8% in the previous month and 9.8% in the same period in 2016. It is the lowest level since January 2009. Eurostat estimates that in the eurozone, about 14.26 million people (out of the total population estimated at 330 million) were unemployed in November, 1.56

million less than in the similar period of 2016 (Buican A, 2018). Among the Member States, in November 2017, the highest unemployment rates were recorded in Spain (16.7%). Romania is below the EU average, with an unemployment rate of 4.7% in November 2017, down from 4.9% in October 2017. In November 2017, 3.69 million young people were not employed, of which 2.62 million are in the euro area. Spain is also among the countries with the highest youth unemployment rate of 37.9%. Compared with November 2016, the unemployment rate has fallen across all EU Member States (AGERPRES, 2018) (Table 2).

*Tabel 2: UE28's unemployment rate, 2007-2016*

		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Romania	Unemployment rate	6.4	5.8	6.9	7.3	7.4	7	7.3	7	6.7	5.6
UE 28		7.12	6.96	8.87	9.52	9.6	10.42	10.81	10.21	9.39	8.54

*Source: Processed after Data World Bank, 2018*

The unemployment rate in Spain in the year 2016 was 18.63%, 2.3% below the 2015 level - the lowest level since 2009. On the other hand, in Romania during the same year the unemployment rate in seasonally adjusted form was 6.5% in January 2016, down 0.2 percentage points from the one recorded in December 2015 (6.7% ). The number of unemployed (aged 15-74), estimated for January of this year, is 604,000 people, decreasing compared to the previous month (616,000 persons) and by the same month of the previous year (630,000 persons). The annual inflation rate in the European Union (EU) declined to 1.6% in January 2018 from 1.7% in December 2017. Compared to December 2017, the annual inflation rate declined in 21 countries remained stable in one EU member country and grew in six countries, mostly in Romania, where it increased from 2.6% to 3.4%. The annual inflation rate in the European Union dropped to 0.9% in October 2013 (the lowest level recorded in the last four years) from 1.3% in September. The rise in consumer prices in the 17 states using the euro is well below the target of 2% envisaged by the European Central Bank. Low inflation has led the ECB to lower its monetary policy rate to a record level of 0.25%. At the level of Romania, the inflation rate experienced impressive decreases, so between 2000 and 2016 it dropped from approximately 45% to deflation, the value being of -1.5% in 2016 (Table 3).

*Tabel 3: UE28's inflation rate, %*

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Romania	6.6	4.8	7.9	5.6	6.1	5.8	3.3	4	1.1	-0.6	-1.5
UE 28	2.3	2.4	3.7	1	2.1	3.1	2.6	1.5	0.5	0	0.3

*Source: Processed after Data World Bank, 2018*

#### 4. CONCLUSION

The economic and social situation of the unemployed is one of the worst, they are affected by the lack of employment, by the continuous increase of prices of goods and services, are experiencing difficulties everywhere, both in the field of food, clothing, housing, childcare and psychological support, through a state of stress that affects the relations of the unemployed with other family members, but also, in general, all its social relations. Romania will face the phenomenon of aging population and the demographic process. Romania's resident population was 19.8 million inhabitants in July 2015, according to the National Statistics Institute. Given that fewer Romanians are born than die (the natural increase is negative) and more Romanians leave Romania than those who return, we have lost about a quarter of a million Romanians in 2012-2015. According to NIS calculations, in the optimistic version for 2060, Romania could have 16.3 million inhabitants, and in the pessimistic version, only 12.5 million inhabitants. Long-term projects necessarily involve vision, and achieving this vision requires a direction.



Romania's economy could look very different over 20 years if its development potential was properly exploited. Of course, the future economic conditions will be different from the past. From a technical point of view, achieving this goal would require Romania to make a qualitative leap so that it can grow on average at a rate somewhere around 4% per annum over the 20 years. Growth may accelerate from 3.3% - as currently estimated - to a peak of 4.5% towards the end of the period.

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## RESEARCH ON ACCESSING EUROPEAN FUNDS FOR YOUNG FARMERS IN ROMANIA UNDER THE TWO NATIONAL RURAL DEVELOPMENT PROGRAMS

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### ABSTRACT

*The attention to be given to young farmers will need to be more and more concentrated in order to be able to solve their future problems. The paper aims to highlight the significant impact that measures for young farmers have had, as well as what needs to be taken into account in the future to meet the future needs of this extremely important and vulnerable group of farmers. By analyzing the quantitative and qualitative data it could identify a number of relevant aspects regarding the impact of the measures on the Romanian farmers and agriculture. The two measures have had positive effects, but at country level, a single program addressed to young farmers is insufficient to revitalize rural areas where young people are almost absent. Accessing European funds for agriculture has played and continues to play an extremely important role in the development of agricultural holdings and rural areas. One of the measures highly appreciated by farmers was represented by the young farmers, whose financing was a useful one in the context of their cash availability being reduced relative to the investments that can be made in agriculture so that the farm either cost-effective. In Romania and the European Union, the number of young people working in agriculture is quite low as this branch needs to operate continuously to ensure a flow of food for the population so that young farmers have to integrate into this activity for you replace the elderly. Although there are 3 years until the NRDP 2014-2020, the SubMeasure 6.1. shows an average of those who accessed it higher than in the case of Measure 112 of the NRDP 2007-2013 with about 15% influenced by a number of factors that have facilitated access to these funds, which should also be taken into account in the coming period.*

**Keywords:** *agriculture, rural space, young farmers*

### 1. INTRODUCTION

Accessing European funds for agriculture has played and continues to play an extremely important role in the development of agricultural holdings and rural areas. One of the measures highly appreciated by farmers was represented by the young farmers, whose financing was a useful one in the context of their cash availability being reduced relative to the investments that can be made in agriculture so that the farm either cost-effective (Brînzan, 2007; Burcea, 2011). Measure 112 - The installation of young farmers was part of the National Rural Development Program 2007-2013, while under the National Rural Development Program 2014-2020 its name underwent an insignificant change bearing the name of sub-measure 6.1. - Support for the installation of young farmers. However, the role of these measures (Measure 112 and sub-measure 6.1) is similar, aiming at setting up for the first time young farmers, as managers / managers of an agricultural holding, improving management, increasing the competitiveness of the agricultural sector, and compliance with the requirements environmental protection, hygiene and animal welfare and safety at work, the sub-measure will create the possibility for young resident farmers with a stable home base in Romania with a minimum of basic knowledge to set up as managers/managers of the holding, increase the number of young farmers who start farming for the first time as managers/managers, encouraging young people and rural families to settle in rural areas, which will have a positive effect on the national

economy in general (Micu, 2010, Micu, 2012). It should be noted that in the case of Measure 112 (NRDP 2007-2013), the minimum conditions a young farmer had to meet was that he must be up to 40 years of age and the agricultural holding a size 6-40 UDE (UDE representing the unit expressing the economic size of an agricultural holding determined on the basis of the standard gross margin of the holding, the value of a unit of economic size is EUR 1,200), the holding is located on the territory of Romania, and is registered in the Single Identification Unit - APIA (Agricultural Payments and Intervention Agency) and Agricultural Register. Regarding sub-measure 6.1 (NRDP 2013-2020), the farmer has to meet a number of requirements quite similar to those of measure 112, with small differences represented by the fact that the young farmer, according to Regulation (EU) no. 1305/2013 is defined as "a person up to 40 years of age at the time of filing the application who possesses the appropriate professional skills and qualifications and who is first established on an agricultural holding as head of that holding". Also, another difference is the change of the unit of measure of the UDE in S.O (the value of the standard production) and for which the holding must have a size between 12,000-50,000 S.O.

*Table 1: Comparison of the categories of eligible applicants under the two National Rural Development Programs (Information Processing Guide for the Applicant of Measure 112 (RDP 2007-2013) and sub-measure 6.1. (NRDP 2013-2020))*

Eligible applicants category	Measure 112 (NRDP 2007-2013)	Sub-measure 6.1. (2014-2020)
<b>physical person</b>	X	-
<b>registered and authorized physical person of which:</b>		
individually and independently, as an authorized person	X	X
as entrepreneur owner of an individual enterprise	X	X
as an entrepreneur holding a family business	-	X
<b>Associate and sole administrator of a Limited Liability Company - LLC</b>	X	X
<b>majority shareholder (absolute majority 50% + 1) and manager of a limited liability company - LLC</b>	-	X

Table 1 shows that for categories of eligible applicants for access the measures for young farmers, sub-measure 6.1. (NRDP 2014-2020) is more permissive for those who want to access it (Table 1). In the case of the selection criteria for selecting the financing projects, there are remarkable differences, so if in the case of Measure 112 (NRDP 2007-2013) the emphasis was on the fact that the applicant must hold a semi-subsistence holding, hold a holding in to a less-favored area, to own the agricultural holding, to be part of an associative form, and to access the agri-environment measure in sub-measure 6.1. (NRDP 2014-2020), it is complicated, trying to differentiate the applicants as clearly as possible, having the name of principles such as: priority sector principle referring to the zootechnical and vegetal sectors (where several categories are selected in each sector) , the principle of farm combining in view of the number of holdings wholly taken over (where the most favored is the applicant taking over 3 holdings), the principle of the agricultural qualification level, where the most favored is the applicant with higher education in the agricultural field, the principle of agricultural potential refers to areas with potential based on specialized studies, but also to the principle of indigenous races/varieties where emphasis is placed on races/varieties in Romania.

## 2. MATERIALS AND METHODS

This study was based on relevant centralized information by the Agency for Rural Investment Financing in 2007-2013 and 2014-2017 corresponding to Measure 112 (Installation of Young Farmers) and sub-measure 6.1 respectively. (Support for the installation of young farmers).

In order to analyze these data, the comparison method was used to identify the differences between the two measures accessed by young farmers.

### 3. RESULT AND DISCUSSIONS

At the level of the European Union, the share of young farmers (up to 35 years old) of the total number of farmers is quite low, so that the EU average is 6.5% of all farmers, given that the average number of farms is 435 of thousands, with an average area of 14.6 hectares (Table no.2).

*Table 2: Situation of beneficiaries who have accessed Measure 112 - Installation of young farmers in 2007 – 2013 (CEJA - The European Council of Young Farmers)*

Country	Farmers aged under 35 (%)	Total number of holdings (thousand)	Average area of an agricultural holding (ha)
Austria	10,7	149	19,3
Belgium	4,8	42	32,3
Bulgaria	6,9	357	12,5
Cyprus	2,6	38	3,1
Croatia	-	-	-
Denmark	4,75	-	64,6
Estonia	6,9	19	49,5
Finland	8,6	63	36,4
France	8,7	507	54,9
Germany	7,1	298	56,1
Greece	6,9	717	4,9
Ireland	6,75	140	35,7
Italy	5,1	1616	8
Latvia	5,4	83	21,6
Lithuania	5,9	200	13,7
Luxembourg	7,3	2	65,6
Malta	4,8	12	0,9
Poland	14,7	1499	9,6
Portugal	2,6	304	12,1
UK	4,1	183	85,7
Czech Republic	11,7	23	151,5
Romania	7,3	3724	3,6
Slovakia	7,1	24	79
Slovenia	4,3	74	6,5
Spain	5,3	967	24,6
Sweden	4,75	70	43,8
Netherlands	3,6	71	26,4
Hungary	7,1	534	8,8
<b>Average U.E.</b>	<b>6,5</b>	<b>435</b>	<b>14,6</b>

Among the countries with the highest percentage of young farmers (up to 35 years) of all farmers are countries such as Poland (14.7%), the Czech Republic (11.7%) or Austria (10.7%). However, when it comes to the number of holdings, the differences are significant among these three countries, so that Poland has about 1.5 million farms with an average area of 9.6 hectares, the Czech Republic has only 23 thousands of farms with an average area of 151 hectares, and Austria owns 149,000 holdings with an average area of 19.3 hectares (Table No. 2). When it comes to Romania, it accounts for 7.3% of young farmers in the total number of farmers, close to the European average (6.5%). But when it comes to the total number of holdings, Romania has no less than 3.7 million, with an average area of only 3.6 hectares (Table no.2).

Measure 112 - The installation of young farmers was a real success, being one of the most accessible measures of NRDP 2007-2013, which is an endless aid for young people who wanted to carry out an activity in agriculture. During this period the number of beneficiaries amounted to 12,769, representing on average about 2,128 persons. Over 50% of those who received this support were farmers holding a mixed holding, consisting of both crops and animals (6,429 applicants) (Table 3).

*Table 3: Situation of beneficiaries who have accessed Measure 112 - Installation of young farmers in 2007 – 2013 (Processed data provided by the Agency for Rural Investment Financing)*

Type of agricultural branch	Nr. beneficiaries	% of total beneficiaries	Beneficiaries / year
Field crops	3146	24,64	524
Horticulture	1648	12,91	275
Viticulture Sector	137	1,07	23
Permanent crops	410	3,21	68
Milk and dairy products	423	3,31	71
Herbivorous animals	326	2,55	54
Swine	191	1,50	32
Backyard birds	59	0,46	10
Mixed (crops + animals)	6429	50,35	1072
Other	1	0,01	0
<b>Total</b>	<b>12769</b>	<b>100</b>	<b>2128</b>

And young farmers who had a predominantly field crops exploited this measure, totaling 3,146 beneficiaries, representing 24.64% of the total. Thus, on average for this type of agricultural sector, the number of applicants was about 524 beneficiaries / year (Table no.3) Farmers whose activity consisted of cultivating horticultural plants also represented a significant share of total beneficiaries (about 13%), totaling no less than 1,648 (average 275 beneficiaries / year) (Table no. 3). Regarding the situation of beneficiaries that were financed through sub-measure 6.1. - Support for the installation of young farmers in the period 2013-2017 shows that their number is 9,802. In the case of the current sub-measure of financing granted to young farmers, it is noted that the largest share of the beneficiaries of the total, have an agricultural holding classified as field crops, accounting for 31,23% of the total beneficiaries, with an average of 765 beneficiaries/year in this type of agricultural branch (Table no.4)

*Table 4: Situation of beneficiaries who have accessed the measure 6.1. - Support for the setting up of young farmers in the 2014-2020 period (Processed data provided by the Agency for Rural Investment Financing)*

Type of agricultural branch	Nr. beneficiaries *	% of total beneficiaries	Beneficiaries / year
Field crops	3061	31,23	765
Horticulture	1417	14,46	354
Viticulture Sector	3	0,03	1
Permanent crops	77	0,79	19
Raising cattle for meat	34	0,35	9
Breeding cattle for milk	637	6,50	159
Sheep and goat breeding	140	1,43	35
Swine	14	0,14	4
Backyard birds	8	0,08	2
Mixed - Mixed crops	2228	22,73	557
Mixed - mixed animals	227	2,32	57
Mixed crops and animals except bees	1356	13,83	339
Bees	600	6,12	150
<b>Total</b>	<b>9802</b>	<b>100</b>	<b>2451</b>

*\* data available by the end of 2017 inclusive;*

A significant share was also played by farmers in the mixed crops category, accounting for a total of 2228 beneficiaries by the end of 2017 and accounting for 22.73% of the total beneficiaries of this measure (an average of 557 beneficiaries on year). It is worth mentioning the appearance of applicants who have a beekeeping holding, once they have been accepted only to young farmers, but by which they are conditioned by a series of purchases they can reimburse through the project, since this category benefits from a separate allocation National Beekeeping Program (Table 4).

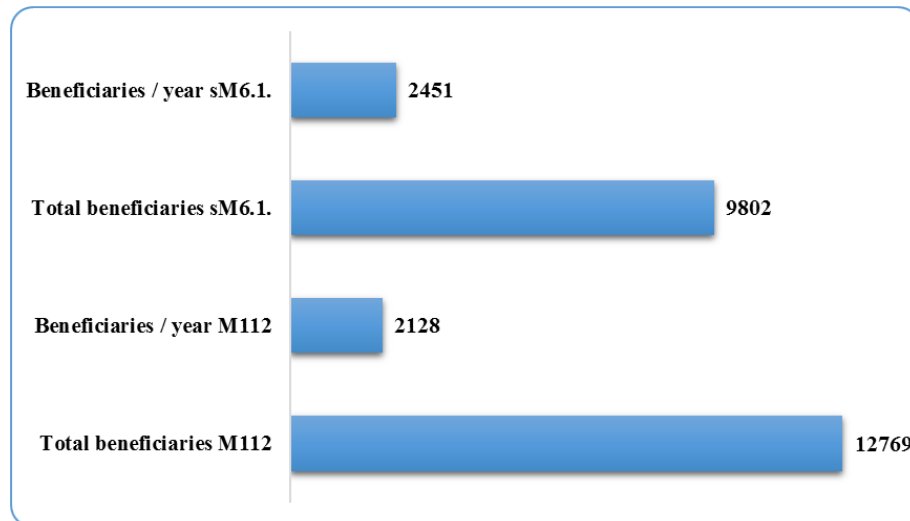


Figure 1: Comparison of the number of beneficiaries per measure (M 112 / sM 6.1.)  
(Processed data provided by the Agency for Rural Investment Financing)

It is remarked that if the total number of beneficiaries of Measure 112 of the National Rural Development Program 2007-2013 (12,769 beneficiaries) is higher by about 30% compared to the number of beneficiaries of sub-measure 6.1. related to the National Rural Development Program 2014-2020, taking into account the fact that until the end of the current NRDP there are at least 3 years (without considering its possible extension) (Figure 1). However, keeping the number of beneficiaries constantly in the last 3 years, it would be expected that the number of beneficiaries under sub-measure 6.1. would be about 15% higher than the number of recipients accessing M112 (Figure 1).

Table 5: Situation of beneficiaries who have accessed the measures devoted to young farmers according to the legal form (Processed data provided by the Agency for Rural Investment Financing)

Type of agricultural branch	M112		sM 6.1.	
	individual enterprise, family business, authorized person	Limited liability company	individual enterprise, family business, authorized person	Limited liability company
Field crops	2901	245	2763	298
Horticulture	1603	45	1351	66
Viticulture Sector	131	6	1	2
Permanent crops	403	7	66	11
Swine	190	1	13	1
Backyard birds	54	5	6	2
Mixed (crops + animals)	6376	53	1281	75
<b>Total</b>	<b>12396</b>	<b>374</b>	<b>9112</b>	<b>690</b>

As far as the young farmers are concerned, when it comes to the legal form of the holding, most of them opted for PFA IF, II variants at the expense of a LLC, so in M122 the share was 97% of the total beneficiaries, while in the case of sM 6.1. the share was 92% of the total beneficiaries (Table no.5). Noteworthy that for young farmers holding a field crop, the number of those who opted for a legal form of S.R.L. and subsequently accessed M112, are more numerous, due to a series of relaxed conditions in the current guidebook of the applicant for young farmers in NRDP 2013-2020 (Table no.5).

#### 4. CONSLUSION

In both Romania and the European Union, the number of young people working in agriculture is low in the context of this branch having to operate continuously to ensure a flow of food for the population, so that young farmers need to be integrated into this activity replacing the elderly (Bădescu, 2009; Bold, 2003). The usefulness of the measures addressed to young farmers is unceasing and they will have to be continued beyond 2020, in order to combat the current problems that young farmers have encountered in accessing these non-reimbursable funds. Although there are 3 years until the National Rural Development Program 2014-2020, sM 6.1, is completed. shows an average of those who accessed it higher than 112 with about 15%, influenced by a number of factors that facilitated access to these funds, which should also be taken into account in the coming period. Considering that the 2007-2013 period was an accommodation, where farmers were skeptical when it comes to European funds, that interest exponentially increased in the last part of the program, so the current program has removed this barrier fears about the way in which European funds are allocated, where many farmers have been discouraged by the fact that they can be very difficult and with great efforts. One of the measures is to include among the eligible applicants categories, the "majority associate", which in the case of Measure 112 (NRDP 2007-2013) was not included, which allows young farmers to hold only (at least) 51% of the company's shares , so it can be helped by bringing capital and by a partner, so the risk of failure is diminished. Although the Applicant's Guide (the material for which the business plan is drawn up for the holding to which it applies) seems more pervasive, the applicant has to go through and meet more conditions (such as, for livestock farms, building a manure management platform), however, there are several situations in which certain aspects could be interpreted differently and could have led to the rejection of the project. One extremely useful thing was the introduction of the obligation (in the definition of the young farmer) to have professional skills and abilities, which is extremely important in the efficient management of agricultural activity (Doltu, 2011; Dona 2005). Also, a big problem of accessing European funds is excessive bureaucracy, which discourages and confuses applicants by creating problems for farmers who work for the farmer himself. The long list of necessary documents that are submitted along with the business plan of the project, makes it very difficult to access these European funds. A viable solution would be the digitization of a whole series of documents that the institution that checks (the Agency for Rural Investment Financing) can request from other institutions issuing such documents as ANAF (the National Agency for Administration Taxation) or APIA (Agency for Payments and Interventions in Agriculture). In the future, support for young farmers should also be given in the case of start-ups and not just those who take over or own one, as the repopulation of rural areas from which young people are completely lacking, influenced by a series of where one of the most important are the lack of jobs and life perspectives, so encouraging start-ups could also attract other family members into farming-specific activities, thus revitalizing rural space. In the paper "Analysis Regarding the Romanian Village - Case Study, Grindu, Ialomita County", published in the 29th IBIMA Conference 3-4 May 2017 Vienna, Austria, at Grindu Commune in Ialomita County, recognized as an important agricultural area, the number of young people is very low, and if we look at an essential aspect when it comes to the future of the commune, it is stated that in the average of

the last 5 years "in the number of 70 people dying, one child is born", which can be extrapolated easily in almost the whole area of Bărăgan (the Romanian Plain) (a part of which belongs to the commune of Grindu), and which emphasizes the decline registered by the rural population of Romania, so that the future measure can also take into account the improvement of these aspects.

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## THE PECKING ORDER THEORY (POT) AND START-UP FINANCING OF SMALL AND MEDIUM ENTERPRISES (SMES): INSIGHT INTO AVAILABLE LITERATURE IN THE LIBYAN CONTEXT

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### ABSTRACT

*Purpose: The Pecking Order Theory (POT) states that businesses adhere to a hierarchy of financing sources prefer internal financing when available; and, if external financing is required, debt is referred over equity. Thus, this paper aims to test the application of POT as an exploitation of start-up financing of SMEs in Libya.*

*Design/Methodology/Approach: The conclusions were drawn from desk research. A comprehensive literature search of published academic, peer reviewed professional literature using a variety of databases including journal articles, conference papers and thesis, both published and unpublished, was conducted. The main sources was the Internet.*

*Findings: By reviewing the available literature on access to finance by SMEs in Libya, the Pecking Order Theory (POT) was supported.*

*Research limitations: There are a number of stages in the SME life cycle. SMEs financing needs will vary depending on a number of variables, including the stage of development of a business. This study is limited to start-up stage. Moreover, The main limitation of the literature review, as a study methodology, is that it relies on information which has already been researched (secondary information). Thus, an empirical study is needed to provide more support to findings of this study.*

*Originality/Value: This is the first review of this area and thus should help intending and existing scholars. It could help policy makers to undertake some serious public policy serving the SMEs access to finance.*

**Keywords:** *Small and Medium Enterprises (SMEs), Pecking Order Theory (POT), Start-Up Financing, Literature Review, Libya*

### 1. BACKGROUND AND INTRODUCTION

The firm life cycle is divided into four different stages. Each stage has its own prescribed characteristics. The different stages of the firm lifecycle are Birth or Startup stage, Growth stage, Maturity Stage and finally the Decline or Revival stage. The startup stage is considered to be the starting point where the entrepreneur tries to convert an idea into a business opportunity. In the startup stage founder and the key personnel are the main employees of the firm followed by small funding requirements. Access to finance for startup firms has always been an issue of debate within the circle of Economists and Researchers. Issues related to the capital structure decision have attracted lot of attention, because of the reason that these issues are primarily dominant in small size and young firms.

Capital structure has been defined as the mixture of debt and equity used to finance the business activities of a firm (Myers, 1984). The ability to gain adequate access to financial capital enables SMEs to establish and subsequently operate effectively. The capital structure decisions of SMEs therefore have important implications for their performance, their ability to succeed, their risk of failure and their potential for future development. Several major financial theories have been developed to explain the capital structures that firms adopt (Johnsen and McMahon, 2005). Pecking Order Theory (POT) is more suitable to identify the SME capital structure compared to other theories even though it is developed for large corporations (Mlohaolas et al., 1998, Osei-Assibey et al. 2011). However, there is a lack of such studies in Libyan context, particularly in SMEs. Therefore, this study attempts to fill this gap in the finance literature addressing the research question, "To what extent does the POT appear to explain financial structure of SMEs in Libya?". Thus, the objectives of this study are two-fold: first, to investigate the financing preference of SMEs in Libya at start-up stage; second, to examine whether the POT can explain such financing preferences of SMEs in Libya at start-up stage. The study is organised as follows; Section two discusses the research methodology. Section three is devoted to a review of the relevance of POT for start-up SMEs. Section four deals with literature on SMEs start-up finance in Libya and application of POT. The last section concludes the paper.

## **2. RESEARCH METHODOLOGY**

The research is based on the structured review of the literature. The first part of literature review includes the selection of most relevant articles on SMEs access to finance at start-up stage in Libya. A comprehensive literature search of published academic, peer reviewed professional literature using a variety of databases including journal articles, conference papers and thesis, both published and unpublished, was conducted. The main sources was the Internet. Once the articles are selected it is followed by the next step, which is the analysis of the selected articles. Based on the definitions of POT, the results of such studies will be analysed to find out various components that are available to answer the research questions of the paper. Furthermore the results gathered from the analysis will be merged to give a meaningful interpretation and help in more structured literature review. However, The main limitation of the literature review, as a study methodology, is that it relies on information which has already been researched (secondary information), and if there is none, then specific questions on the new study might not be adequately answered. Secondly, owing to different objectives and methodologies (and study designs) of previous studies, the data might not be in the right format or specific enough to answer the current study. Because of these limitations, a literature review is always conducted in preparation for primary and more detailed research (NCR, 2011). Thus, this research aims to provide a theoretical framework for the research followed by other researchers in future.

## **3. THE RELEVANCE OF POT FOR START-UP SMEs**

Financing decision at start-up stage of SMEs, selecting one or more sources of finance mainly depends on available financial sources in the financial system, preferences of owners and accessibility to finance. This decision is one of a vital decision for any firm regardless of the size, industry, etc. This is because business continuity has a direct relationship with firm finance and its effect on ability of taking competitive advantage (Heng and Azrabijani, 2012). As a result, financing decisions are imperative for SMEs similar to large enterprises as SMEs are functioning as backbone of any country specially a developing country like Libya. SMEs can use different types and sources of financing methods especially informal sources, which differ from traditional or formal sources of finance, namely equity and debt (Osei-Assibey, Bokpin & Twerefou, 2012). Johnsen and McMahon (2005) briefed five capable theories which is more relevant in SME financing, which named as Static Trade-off Theory, Agency Theory, Growth Cycle Theory, Alternative Resources (Bootstrapping) Explanations and Pecking Order Theory

(POT). POT to date remains essential part of corporate finance. It is considered as one of the most influential theories (Mlohaolas et al., 1998, Osei-Assibey et al. 2011). The Pecking Order Model developed by Myers (1984). According to this model firms prefer internal funding over external funding. In case firms require external funding they would prefer debt over equity. Traditional methods represent a logical sequence for start-up companies to start raising money, and most start-up companies enter the entrepreneurial world in this way. If the start-up project founders do not have their own financial resources (prefer internal funding) and cannot independently raise the start-up without external investments they usually turn to the traditional financing sources such as: 3F (i.e. Friends, Family and Fools), business angels, bank loans and venture capital investments. Equity is generated as last resort (Chittenden et al., 1996; Abouzeedan, 2003; Beck and Demurguc-Kunt, 2006; He and Baker, 2007; Wu et al, 2008; Abdulsaleh and Worthington, 2013). The POT sought mainly to explain the observed financing practices of large publicly traded corporations. However, it was soon recognised that the theory may also relevance of SMES and apply to the financing practices of non-publicly traded SMEs that might not have the additional financing alternative of issuing external equity finance. Scherr et al. (1990, p. 10) consider the POT to be an appropriate description of SMEs' financing practices, because the 'Pecking order hypothesis is in keeping with the prior findings that debt is by far the 4 largest source of external finance for small business'. In addition, Holmes and Kent (1991, p. 145) suggest that in SMEs 'managers tend to be the business owners and they do not normally want to dilute their ownership claim'. Thus, the issue of external equity finance, and the consequential dilution of ownership interest, may be further down the pecking order. The theory's application to SMEs implies that external equity finance issues may be inappropriate. In relation to the owner-manager's control over operations and assets, if the POT holds, then internal equity finance will be preferred, because this form of finance does not surrender control. When external financing is required, obtaining debt rather than equity finance is favoured, because this places fewer restrictions on the owner-manager. A growing number of researchers have sought to establish whether the pecking-order theory can assist in explaining the capital structures adopted by SMEs (Jordan et al., 1998; Berggren et al, 2000; Zoppa and McMahon, 2002; Cassar and Holmes, 2004; Bundala, 2012; Meryen, 2014; Menike, 2015; Kuruppu and Azeez, 2016; Sarlija and Harc, 2016). However, Little is known about the financial structure of startup SMEs in Libya (see for example Masoud, 2014). This study attempts to contribute to the existing literature focusing the debate on capital structure and financing behavior of SMEs from a developing country perspective and examines the capital structure and financing patterns that represents by Libyan SMEs based on POT.

#### **4. SMES START-UP FINANCE IN LIBYA AND APPLICATION OF POT**

##### **4.1. Definition of SMEs in Libya**

Understanding the SMEs and its contribution to the economy is not complete without identifying the still unresolved question of what really constitutes SMEs. There is no universally agreed definition of SMEs. Generally, there are two common approach to defining the SMEs (Raslimahmood, 2000). The first is a functional definition in which the small businesses are distinguished from the larger ones on the basis of suspected or proven characteristics. For example, Ang (1991), suggest that a business is classified as small if it possesses most of the following characteristics: (a) it has no publicly traded securities, (b) the owners have undiversified personal portfolios, (c) limited liability is absent or ineffective, (d) first generation owners are entrepreneurial and prone to risk taking, (e) the management team is not complete, (f) the business experiences the high cost of market and institutional imperfections, (g) relationships with stakeholders are less formal, and (h) it has a high degree of flexibility in designing compensation schemes. The second approach to the definition of a small business employs some quantitative measures, such as number of employees, sales

turnover, level of output or capital assets (Abdulsaleh and Worthington, 2013). However, in Libya, the Ministry of Manpower, Training and Employment (MMTE) adopted the second approach in defining the SMEs in Libya. It establishes a national standard for SMEs, which stated that: "private productive or service businesses and instruments for economic and social development, accommodate the strengths of youth, and which includes professional administrative, and technical specifications which are suitable to operate efficiency" (Hajjaji, 2012, p.14). The MMTE classified SMEs in Libya as shown in the table (1).

*Table 1. Libyan classification for productive, service, and commercial businesses*

Business	Size of employment	Size of fixed assets
Small	No more than 25	Less than 2.5 Million Libyan Dinars
Medium	26-50	Less than 5 Million Libyan Dinars
Large	More than 51	More than 5 Million Libyan Dinars

*Source: MMTE Report of 2004 (reported in Hajjaji, 2012).*

Finally, it is worth to mention that there is a large number of SMEs in the Libyan economy, though the exact size of the sector is unknown. This is due to the fact that most SMEs in Libya have conducted their business outside the formal economy to avoid taxation and other fiscal and regulatory considerations (Porter and Yergin, 2006). Currently the SME sector is dominated by the production of food products, wood products, and metal for construction. Some SMEs also engage in the production of clothing, ceramics and bricks, grain milling and press and publication goods (Gunto and Alias, 2013).

#### **4.2. Importance of SMEs in Socio-Economic Development in Libya**

In general, there is a growing recognition that SMEs can be a vital resource to combating some of the challenges facing the region by contributing to job growth and the economy, and bridging some of the regional economic development imbalances that have emerged within developed and developing countries (Gallagher and Stewart, 1984; Ganguly, 1985; Bums and Dewhurst, 1986; Dyson, 1990; Keasey and Watson, 1993; Berry and Levy, 1994; Binks et al., 1997; Cook and Nixson, 2000; Sanusi, 2003; OSCE, 2006; Ariyo, 2008; Kpelai, 2009; Ayozie and Latinwo, 2010; Emine, 2012; Muritala, et al., 2012; Kiraka, et al., 2013). However, it is generally acknowledged that there is substantial evidence that SMEs face large growth constraints and have less access to formal sources of external finance, potentially explaining the lack of SMEs contribution to the country's economic growth (Coco, 2000; Hall et al., 2000; Cassar, 2004; Beck et al, 2006; Gilbert, 2008; Sarapaivanich and Kotey, 2006; Beck and Kunt, 2007; Lin, 2007; Deakins et al., 2008; Zhao, 2008; Nichter, 2009; Shen et al., 2009; Klapper, 2010; Berger et al., 2011; Riding et al., 2010; Pandula, 2011; Anis and Mohamed, 2012; Terungwa, 2012; Kira, 2013). Accordingly, SMEs are very important to Libyan economy because of the fact that the economy of Libya suffers from lack of economic diversification in its activities (Eltaweel, 2011; Abdwahab and Abdesamed, 2012; Zarook et al., 2013 a, b). The government has proactively created the national programs for SMEs in 2008 to promote a vibrant SME sector. However, although 96% of the enterprises in Libya are SMEs, their contribution to the GDP of the country is only 4% (Atniesha, 2009; Abdesamed and Abdwahab, 2012; Essmui et al., 2013). This is supported by UN's report of 2008. It stated that: "the contribution of SMEs to the Gross Domestic Product (GDP) is estimated to be less than 10 percent in most African counties" (UN, 2008, p. 6). The main aspects of this disadvantaged position is due to: (1) the Libyan economy is heavily dependent on the exports of oil for state revenue; more than 96% of exports are from the oil sector (Eltaweel, 2012, UN, 2008), and (2) the financial difficulties for these enterprises to have accessed for bank loan successfully (Zarook et al., 2013 a, b).

#### 4.3. Literature on SMEs Start-up Finance in Libya

By reviewing the available literature on SMEs start-up finance in Libya, one can say that in Libya, bank lending to SMEs Firms is relatively low<sup>1</sup>. Falah (2006) reported that only 4% of Libyan SMEs borrow money from banks. Moreover, Eltaweel (2011) and Elmansori and Arthur (2013) found out that loans from banks represent only 11% and 8%. Wahab and Furthermore, Abdesamed (2012) examined the issue of financing SMEs in the startup phase and when they were established as businesses. They found that 81.6% of startup firms used informal sources of finance and among these, 60.5% preferred personal savings, whereas only 17.1% preferred formal sources of finance. Moreover, 71.1% of the mature businesses were still using informal financing such as personal savings (25%), family subsidies (25%), trade credit (15.8%) and their own profit (5.3%), whereas 27.6% were relying on bank loans. Table (2) gives a description of this trend.

*Table (2) Source of Finance of SMEs in Libya*

Source at the Startup stage	Percentage	Source after the Startup stage	Percentage
Personal Saving	60.5	Personal Saving	25.0
Family Loan	3.9	Family Loan	25.0
Friend Loan	9.2	Trade Credit	15.8
Active Partner	2.7	Firm Profit	5.3
Inactive Partner	5.3		
<b>Bank Loan</b>	<b>17.1</b>	<b>Bank Loan</b>	<b>27.6</b>
Total	98.7	Total	98.7
Missing System	1.3	Missing System	1.3
Overall Total	100	Overall Total	100

*Source: Abd Wahab and Abdesamed (2012, p. 1538-1539).*

Abdulaziz (2016, p. 142) stated that: "overall, the three most common sources of funds used by SMEs in the sample to finance business start-up were as follows: owner-managers' own savings, venture capital and bank finance. Just a above half of enterprises in the whole sample has used the own savings of their owner-managers as the primary source for start-up capital". Moreover, regarding to the source for post start-up, he stated that: "a cross the sample financing source generated internally (retained earnings and personal saving) were the most preferred source for ongoing finance...when it comes to external sources banks and trade credit from suppliers were found to be the most preferred... other sources of finance (equity finance and government assistance) were found to be least" (pp. 144-145). Samawi et al. (2016, p. 1143) also confirmed such fact by saying that: " When asked about sources of finance, 75% of respondents said that they had started their businesses by using informal finance, which is consistent with the 73% of Libya SMEs that were found to rely on informal sources of funding in a study by Falah (2006). Most had used their personal and family savings at startup". The above results of literature clearly consistent with the pecking order theory of capital structure and suggest that SMEs Start-up (even post start- up) finance in Libya tends to finance their expansion with debt over equity after exhausting their internal resources. This conclusion was supported by Masoud (2014) who stated that: "the empirical finding of this study contribute towards a better understanding of financing decisions of these firms can be explained by the determinants suggested by much of extant the empirical literature. Specifically, it is found that liquidity and profitability are negatively and significantly related to the leverage ratios, which is consistent with pecking order theory. This implies that firms prefer to finance investment with internally returned funds before issuing debt" (p. 79).

<sup>1</sup> In order to attain more in-depth understanding of the financing decisions of SMEs, see Ahmad and Atniesha (2014), who explored the effects of the internal, institutional and external factors on the accessing to bank loan by Libyan SMEs.

## 5. CONCLUSION AND FUTURE RECOMMENDATIONS

This study attempts to contribute to the existing literature focusing the debate on capital structure and financing behavior of SMEs from a developing country perspective and examines the capital structure and financing patterns that represents by Libyan SMEs based on Pecking Order Theory. Based on the literature review, it can be more or less concluded that financing businesses from personal savings, family and friends have been considered as very significant source for providing seed capital for most start-ups and expansion, as it remains the popular choice for SMEs in Libya. Moreover, when it comes to external sources banks and trade credit from suppliers were found to be the most preferred and equity finance was found to be least. Although this study does not provide empirical evidences of SMEs but at least this study will contribute in addition of literature review and knowledge regarding SMEs in Libya. However, as the main limitation of the literature review, as a study methodology, is that it relies on information which has already been researched (secondary information), an empirical study is recommended to provide more support to findings of this study.

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## MULTI-CRITERIA HIERARCHY OF DEVELOPMENT REGIONS FROM THE TOURISM PERSPECTIVE – ROMANIA

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### **ABSTRACT**

*Romania has a rich and varied, yet insufficiently valued tourist potential because of poor tourist infrastructure, lack of qualified staff, poor international promotion and bad service quality. Tourism is an important economic branch which can help achieve the main objective of regional development policy, namely reduce regional economic and social disparities. This is possible thanks to tourism which can use a number of specific elements that cannot be capitalized by other activity sectors. The present paper aims at achieving a multi-criteria hierarchy of Romanian development regions from the tourist perspective. For this purpose, we have used the real rank method which is based on a number of specific tourism activity indicators and their relative importance. The analysis of regions' ranking for the two reference years 2001 and 2016 has emphasized the following situation: two regions have retained their rankings (the North-West and the South Muntenia regions), whereas the other six regions have either got on top of the rankings or lower. The status of the South-Eastern region (having been in the top ranking for a long time) is surprising as it has been surpassed by the Center region, which originally ranked fourth. The explanation for this improvement is given by better indicators such as: the total number of tourists, the number of overnight stays, the number of tourist structures, modernized roads.*

**Keywords:** *regions, tourism, Romania, hierarchy, real rank method*

### **1. INTRODUCTION**

The development of the tourist sector is integrated and conceived in close connection with the regional development policy and it is subordinated to the latter. Tourism is a sector having a special contribution to diminishing regional disparities by capitalizing on the tourist potential of less developed areas. It plays an extremely important role in the development of regions without other alternatives for achieving this goal (Cabugueira, 2005). Moreover, a region can benefit from the growth of its neighbours' tourist sector in the presence of spatial autocorrelation (Vieira % Santos, 2017). Unlike other fields of activity, tourism has the advantage of exploiting a number of elements that each and every region has: landscape, climate, therapeutic mineral waters, cultural objectives (Iordache et al., 2011, p. 75). By means of tourism, poor areas can be developed in the resources needed to carry out other economic activities. In this case, tourism can be the main engine or the only solution for the economic and social development of such areas due to the multiplier effects it generates (job creation, emergence and development of local businesses, diversification of local economies, attracting investors, encouraging demand for goods and services from other sectors of activity, increasing female employment and reducing gender gaps in unemployment rates, improving local people's living standards, improving the quality of life, etc.). Yet, all these must be the result of tourism development policies and strategies laid down and implemented in compliance with the principles and criteria of sustainable development. According to the "Creation of Romania's Tourism Brand", the main elements of differentiation of Romanian tourism are: wild nature and

landscapes (protected natural and national parks, beautiful landscapes, rare flora and fauna areas), authenticity (old traditions, simple rural life, local environment-friendly products, typical local architecture) and the unique cultural heritage of Romania (UNESCO heritage sites, numerous castles, monasteries, wooden churches, well-preserved historic castles). All these elements make Romania an attractive tourist destination, but the numerous shortcomings of the tourist sector lead to an insufficient capitalization of the tourist potential. However, tourism can be an economic activity generating direct and indirect income for many more or less developed areas in the country. At international level, the issue of regional tourism has been approached by many specialists. In the national specialized literature there are also approaches of the issue of regional tourism. The work of Biji et al. includes a statistical analysis of the development of regional tourism in EU Member States. In this respect, the authors have used the method of relative distances between units, identifying the regions with the best tourist performance for 2009. Regional tourism and its role in regional development are also dealt with in a series of national papers (Babucea & Rabontu, 2013; Butnaru & Niță, 2016; Iordache et al., 2010; Mazilu, 2011; Mitruț & Constantin, 2009; Pascariu & Țigănașu, 2014; Pohoăță et al., 2013; Scutariu, 2009; Scutariu, 2012; Zaman et al., 2012; etc.). The multi-criteria tourist hierarchy approach of development regions in Romania is relatively recent. A.L. Scutariu had a work published in 2012 aimed at the distribution of tourist activity at regional level before (2004) and after Romania's accession to the European Union (2008). At that time, the author achieved a multi-criteria hierarchy of the regions using the relative distance method based on seven indicators: accommodation capacity, number of arrivals, number of overnight stays, accommodation occupancy rate, share of hotels' and restaurants' turnover (HR) in total, share of gross HR investments in total and share of HR employees in total. The results reveal the placement and retention of the South East region as ranking first. The present paper aims at achieving a ranking of the eight development regions in Romania in terms of tourist attractiveness while pursuing the possible changes having occurred during the studied period. In this respect, we have used the real rank method and official statistical data published by the National Institute of Statistics. The lack of statistical indicators at regional level has somewhat limited the research, which is why only eight indicators have been thought relevant to tourism activity. In order to perform the analysis, two moments have been chosen: 2001 (the first year of the third millennium, three years after territorial regionalization) and 2016. The latter year of analysis has been selected for two reasons: 1) its data include the changes made in the tourism activity in Romania throughout the analyzed period first of all as a result of becoming a candidate country and then a EU member state as well as because of the economic and financial crisis; 2) it is the last year to issue regional statistical data for tourist activity at the time of drawing up this paper.

## **2. TOURISM IN ROMANIA – BRIEF TOURIST PRESENTATION OF DEVELOPMENT REGIONS**

Undoubtedly, Romania has huge natural, geographical, environmental, heritage and ethnographic richness that can be as many tourist attractions for both domestic and foreign tourists. However, the Romanian tourism in 2017 was only 1.3% of GDP (2,138.9 million USD). Of the total revenues of the tourist sector, the money received from foreign tourists was 1,712 million USD, the number of foreign tourists being slightly over 2,200 thousand people, and the average expenses of approximately 766 USD each. According to the Global Tourism Competitiveness Report, Romania was at the middle of the ranking, with an index of tourism competitiveness of 3.78. More precisely, our country ranked 68<sup>th</sup> in the top of the 136 countries analyzed by the World Economic Forum, 2 rankings lower than in 2016. The index groups several sub-indices and Romania's best rankings are for health and hygiene, respectively for safety and security, whereas the weakest ones are for terrestrial and port infrastructure,

respectively for tourism prioritization. The detailed Tourism and Travel Competitiveness Index for Romania is shown in Figure 1. In the context of regional development, the tourist sector can help reduce economic and social development gaps by capitalizing on the natural and anthropic tourist potential of less developed areas, being a strategic sector from this perspective. Moreover, through tourism it is possible to increase the level of their living standards and especially in the rural ones (Scutariu, 2012, pp. 80-81). In order to implement the regional development policy based on Law 151/1998, eight development regions have been created in Romania, namely: the North-West region consisting of 6 counties, the Center region (6 counties), the North-East region (6 counties), the South-East region (6 counties), the South-Muntenia region (7 counties), the Bucharest-Ilfov region (the capital city and one county), the South-West Oltenia region (5 counties) and the West region (4 counties).

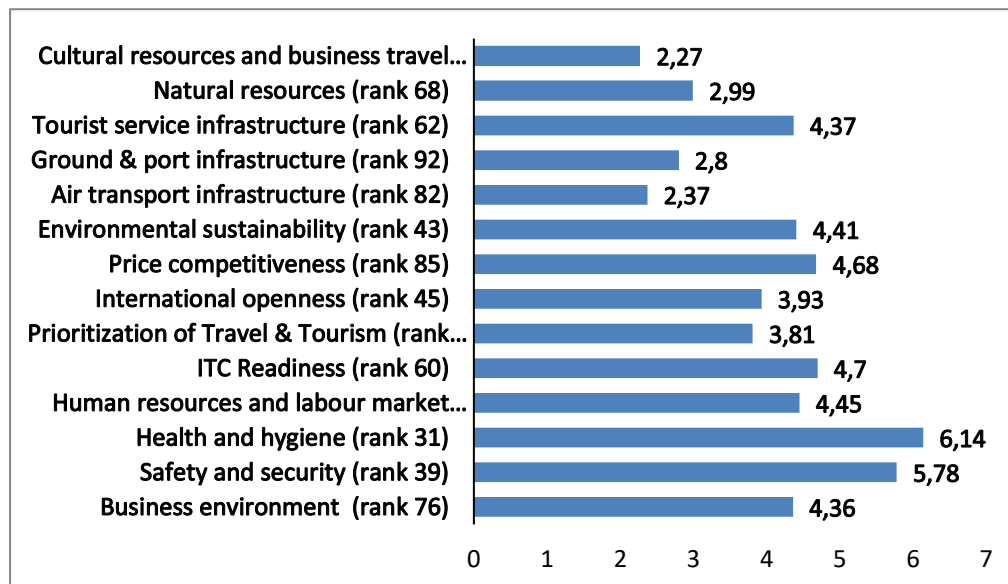


Figure 1: Tourism and Travel Competitiveness Index – Romania, 2017 (prepared by the author according to data issued by the World Economic Forum)

Each of these regions has a number of tourist attractions and below are only a few of them.

- The North-West Region is a tourist destination due to its multitude of natural and cultural attractions. Its main natural attractions are: mountain landscapes, lakes, rivers, thermal waters, salt mines, protected natural areas, national parks and natural parks included in the tourist circuit. The region is also visited by tourists for its numerous cultural attractions such as: historic fortresses and monuments, fortified churches of Transylvania, wooden monasteries of Maramureș (UNESCO heritage), numerous castles and museums. Most resorts are concentrated in the counties of Bihor and Cluj, and the best-known are the spa resorts at Băile Felix, Sângerz Băi and Băile 1 Mai. The mountain resorts here are not as developed as other mountain resorts in the country. The important tourist sites known in the country and abroad are: Săpânța Merry Cemetery, Vaser Valley Mocănița Train, Turda Salt Mine, Sighetu Marmăției Memorial Museum, Bărsana Monastery, Turzii Gorges, etc. (<http://www.intreprinzatorturism.ro>)
- The Center Region has a rich natural and anthropic tourist potential. It is here that one finds a number of historical and architectural monuments of different historical times, with mutual influences of the national, Hungarian and German cultures. These are the main tourist attractions, with the most significant being: Bran Castle - Brașov; Vauban Fortress - Alba Iulia, medieval fortresses in Brașov, Sibiu, Sighișoara, Sebeș, Făgăraș, Târgu-Mureș, Balványos. The anthropic tourist heritage of the region is complemented by history, art, and

ethnography museums as well as the documentary libraries in Sibiu, Târgu Mureș, Brașov, Alba Iulia. In the Center Region, there are several national parks visited by tourists very often. Furthermore, the region has a balneal-climatic potential (Covasna, Băile Tușnad, Sovata, etc.) and also here is one of the most popular and visited mountain resorts in the country that attracts a large number of tourists from the country and abroad every year: Poiana Brașov. (<http://www.adrcentru.ro>)

- c) The North-East Region is characterized by the existence of numerous reservations and monuments of nature, national interest protected natural areas. Additionally, the region has a good balneal-therapeutic potential with the best-known localities being: Vatra Dornei, Slănic Moldova and Târgu Ocna. Mountain tourism is also present through a number of resorts: Vatra Dornei, Gura Humorului, Durău, Câmpulung Moldovenesc, etc. Yet, in the North-East Region, cultural and religious tourism is intensified, thanks to the numerous museums and monuments of national and international interest (historical buildings, memorial houses, funerary monuments or public fora), cultural events, and especially thanks to the presence of UNESCO heritage monasteries (Putna, Voroneț, Humor, Moldovița, Sucevița). The latter are actually the tourist emblem of the region, being also known as cultural objectives of world importance (Analiza socio-economică a Regiunii Nord-Est, 2014-2020), which make it a region focused on cultural-religious tourism.
- d) The South-East Region is preferred by domestic tourists because of the Black Sea coast, being one of the regions with the highest level of tourism development in Romania, characterized by high and diverse tourist potential. Several types of tourism are practised here such as: seaside, mountain, cruise, rural, environmental, cultural and religious tourism. However, the major tourist attractions of the region are the Black Sea coastal resorts (renowned for balneal-climatic tourism, too) and the Danube Delta. The latter is the second largest delta in Europe (after that of the Volga River) and the best preserved European delta, being an important attraction of great scientific value and high tourist potential (it is included in the UNESCO List of Universal Cultural and Natural Heritage). The Danube Delta is also the only biosphere reservation in the world. The cultural heritage of the region includes numerous historical vestiges, religious and cultural buildings, monuments and museums (<http://www.adrse.ro>). From a religious perspective, the roots of the Romanian Christianity are here - the monastery and the cave of Saint Andrew, an apostle who arrived there in around 60 A.D. (<https://romanalibera.ro>).
- e) The South-Muntenia Region specializes mainly in mountain and balneal tourism. It includes the main tourist attractions for practising winter sports and weekend tourism which are the mountain resorts on Prahova-Bucegi Valley: Azuga, Breaza, Bușteni, Predeal, Sinaia (also known as the "Pearl of the Carpathians" including the summer residence of the royal family - Peleş Castle - built in Germanic style in the 19<sup>th</sup> century), Cheia. The region also includes spa resorts (Slănic Prahova, Amara and Pucioasa), many cultural and historical values and monuments, as well as natural parks (in the Bucegi and Piatra Craiului Mountains). Unlike the southern part of the region, the northern one is much better valued in terms of tourism. (<https://www.adrmuntenia.ro>)
- f) The Bucharest-Ilfov Region is the smallest and at the same time the most developed region in Romania from the economic perspective, comprising the capital city (Bucharest) and Ilfov county. The tourist offer of the region is given by the attractions typical of a metropolis and those typical of a rural plain area with numerous valleys, running waters, natural and artificial lakes. There are many historical monuments and the most important are the Romanian Athenaeum and the Cantacuzino Palace (both included in the European Patrimony List). Other cultural attractions: Snagov Monastery dating from the 16<sup>th</sup> century (called Vlad Țepeș Monastery) and Brâncoveanu Palace at Mogoșoaia, built in the 17<sup>th</sup> century. The most common form of tourism is business tourism and job-related tourism. In

addition, there are cultural tourism, relative and friend visit tourism, and recreation and leisure tourism (<http://www.adrbi.ro>). The region is preferred by non-residents as a result of business tourism.

- g) The South-West Oltenia Region has a tourist potential specific to balneal-climatic, rural and mountain adventure tourism. The balneal resorts visited very often are: Căciulata, Călimănești, Govora, Olănești. Also here is the sculpture ensemble (The Infinity Column, The Table of Silence and the Kiss Gate) of Constantin Brâncuși, one of the greatest sculptors of the 20<sup>th</sup> century. Transalpina is the highest road in Romania, at over 2,100 m altitude and it is in this region. There are also several monasteries, historical buildings, monuments and museums. (<https://ad-turism.ro/oltenia-1684/>).
- h) The West Region has a very rich and varied natural environment, being a tourist destination with a high degree of attractiveness. There are several national and natural parks here. Balneal-climatic tourism is present by means of several national and local resorts: Băile Herculane, Geoagiu-Băi, Moneasa, Buziaș. The rich network of historical and archaeological sites, the historical and architectural monuments, as well as the museums make this region very attractive (the Dacian complex in the Orăștie Mountains and the Ulpia Traiana Sarmizegetusa Colony, the medieval fortresses of towns: Arad, Timișoara, Deva, numerous medieval castles, stone and wooden monasteries - some certifying the beginnings of Christianity in Romania). Other forms of tourism practised in the region are: wine tourism; rural tourism; mountain tourism (the mountain resorts at Semenice, Straja, Muntele Mic, Parâng) and sports tourism; hunting and "catch and release" fishing tourism; recreational tourism; scientific tourism and business tourism. (<http://www.adrvest.ro>)

### 3. STATUS OF TOURIST RESORTS BY DEVELOPMENT REGIONS

In the year 2016, the total number of tourist resorts in the country was 100, by 38 declared resorts more than in 2001, which shows the increase of local authorities' interest in the development of tourist performance. Of those, 42 were national interest resorts and 58 were local interest resorts. The 11 national interest resorts on the Black Sea coast made the South-East region rank first, with 26.19% of the total. Although geographically it is the smallest one, being the only region where there is no national interest tourist resort, however the Bucharest-Ilfov region succeeded in attracting a significant number of tourists in 2016 (over 2 million), by over 0.5 million more than in the South East region. The regional poles for local interest resorts are: the Center region and the Bucharest-Ilfov region. It is also worth noting that two regions rank the same both in terms of the number of national and local interest resorts (the South-West Oltenia Region ranks sixth and the Bucharest-Ilfov region ranks last). The distribution of resorts by regions has been made according to table no.1:

*Table 1: Number of Tourist Resorts, 2016 (processed by the author according to <http://www.romaniaturistica.ro>)*

Regions	National interest resorts			Local interest resorts			Total resorts		
	Number	%	Place	Number	%	Place	Number	%	Place
North-West	2	4.76	7	16	27.59	2	18	18.00	2
Center	7	16.67	2	18	31.03	1	25	25.00	1
North-East	7	16.67	2	5	8.62	4	12	12.00	5
South-East	11	26.19	1	3	5.17	6	14	14.00	3
South-Muntenia	6	14.29	4	4	6.91	5	10	10.00	6
Bucharest-Ilfov	0	0.00	8	1	1.72	8	1	1.00	8
South-West Oltenia	4	9.52	6	3	5.17	6	7	7.00	7
West	5	11.90	5	8	13.79	3	13	13.00	4
<b>Romania</b>	<b>42</b>	<b>100.00</b>	<b>x</b>	<b>58</b>	<b>100.00</b>	<b>x</b>	<b>100</b>	<b>100.00</b>	<b>x</b>

## 4. MULTI-CRITERIA HIERARCHY OF DEVELOPMENT REGIONS FROM THE TOURISM PERSPECTIVE

### 4.1. Methodology

The method used for the multi-criteria hierarchy of the regions has been the real rank method. In fact, other methods too can be used for the multi-criteria hierarchy of territorial units, such as: rank method, rank sum method or relative distance method. The easiest methods are the first two. However, they have certain disadvantages which the real rank method does not (they do not take into account the relative distances between the values of the indicators and subjective criteria are used for the division of territorial units with the same rank). The relative distance method is more appropriate than the rank method or rank sum method. Yet, there may be cases when some indicators may be zero. In this circumstance, the zero value does not allow the calculation of the synthetic index by means of the geometric mean, and therefore the application of the method. We have faced a situation of this kind in our analysis. That is why the method we finally chose was the real rank method that allows the final ranks to be determined regardless of the values of the indicators. It has the following advantages: 1) it takes into account the relative distances between the individual values of the indicators; 2) each indicator is assigned a different relative importance depending on the richer information content (Nelea, 2006, p. 690). The real rank method has involved the following steps:

1. selecting the main indicators of tourist performance. In this respect, eight statistical indicators were taken into account, grouped according to the context below, to which some importance shares were assigned for the aggregation of the partial ranks.
  - a) *tourism potential indicators:*
    - number of national and local interest resorts (J\_1) with a relative importance of 35%;
  - b) *tourist movement indicators:*
    - total number of tourists arrivals (J\_2) with a relative importance of 20%;
    - total number of overnight stays (J\_3) with a relative importance of 10%;
  - c) *accommodation infrastructure indicators:*
    - total number of accommodation establishments (J\_4) with a relative importance of 10%;
    - number of accommodation places (J\_5) with a relative importance of 10%;
  - d) *transport infrastructure indicators:*
    - modernized roads (km) (J\_6) with a relative importance of 5%;
    - railways in service (km) (J\_7) with a relative importance of 5%;
    - number of international airports (J\_8) with a relative importance of 5%.
2. collection of statistical data. For our case we have used statistical data published by the National Institute of Statistics.
3. determining the partial real ranks for each indicator (j) and each region (i). All the indicators selected in our analysis were indicators that are optimized by maximization (they get better and better if they reach higher values). Therefore, the ratio of determining partial real ranks was as follows:

$$R_j^i = n - \frac{a_j^i - a_j^{\min}}{a_j^{\max} - a_j^{\min}}(n - 1) \quad (1), \text{ where: } i=1,2,\dots,n \text{ and } j=1,2,\dots,m$$

and:  $a_j^i$  = level of indicator "j" for development region "i"

$a_j^{\min}$  = level of indicator "j" for worst performance development region

$a_j^{\max}$  = level of indicator "j" for best performance development region

n = number of development regions (8)

m = number of indicators selected in the analysis (8)



4. calculation of average (real final) ranks of the regions as weighted averages of the partial ranks according to the ratio:

$$R^i = \frac{\sum_{j=1}^m R_j^i \cdot w_j}{100} \quad (2), \text{ where: } j = 1, 2, \dots, m$$

and  $w_j$  = relative importance of indicator "j" in conditions  $\sum_{j=1}^m w_j = 100\%$

5. setting the final hierarchy of regions. Ranking first is the region with the lowest rank, the ordering being increasing (the lowest rank will indicate the best performance and the highest rank will indicate the worst performance).

#### 4.2. Statistical Data and Results

The statistical context and the evolution of the indicators analyzed are shown in tables 2 and 3.

Table 2: Status of Indicators by Regions, years 2001 and 2016 (INSSE TEMPO-ONLINE; \* <https://lege5.ro/>; \*\* <https://ro.wikipedia.org>)

Regions	Year	Indicators							
		J_1*	J_2	J_3	J_4	J_5	J_6	J_7	J_8**
North-West	2001	9	596,305	2,117, 486	322	25,197	3,115	1,645	4
	2016	18	1,316,363	3,060,446	831	33,848	4,136	1,668	4
Center	2001	15	836,432	2,591,248	744	34,648	2,239	1,470	2
	2016	25	2,585,938	5,324,477	2,094	67,496	5,133	1,333	2
North-East	2001	5	534,780	1,406,321	262	16,971	3,084	1,506	3
	2016	12	1,084,045	2,166,634	858	28,763	5,361	1,621	3
South-East	2001	12	994,292	5,601,924	1,047	132,053	1,949	1,329	2
	2016	14	1,506,616	5,310,863	1,129	98,769	4,350	1,748	2
South Muntenia	2001	5	545,962	1,758,784	336	21,321	3,242	1,699	0
	2016	10	914,141	1,980,419	734	30,347	5,168	1,247	0
Bucharest-Ilfov	2001	1	487,914	967,534	86	9,233	405	354	2
	2016	1	2,065,012	3,355,893	185	22,242	475	279	2
South-West Oltenia	2001	3	337,815	1,745,186	164	15,326	3,300	1,001	1
	2016	7	630,446	1,802,775	453	19,190	4,352	990	1
West	2001	12	541,277	1,933,205	305	22,298	2,534	2,011	2
	2016	13	899,961	2,273,142	662	28,233	4,953	1,888	2
Romania	2001	62	4,874,777	18,121,688	3,266	277,047	19,868	11,015	16
	2016	100	11,002,522	25,274,649	6,946	328,888	33,928	10,774	16

Table following on the next page

*Table 3: Status of Indices (I) and Changes by Regions ( $\pm\Delta I$ ) – 2016/2001 (%) (own calculations based on INSSE TEMPO-ONLINE data)*

Regions	I, $\pm\Delta I$	Indicators							
		J_1	J_2	J_3	J_4	J_5	J_6	J_7	J_8
North-West	I	200.00	220.75	144.53	258.07	134.33	132.78	101.40	100.00
	$\pm\Delta I$	100.00	120.75	44.53	158.07	34.33	32.78	1.40	0.00
Center	I	166.67	309.16	205.48	281.45	194.80	229.25	90.68	100.00
	$\pm\Delta I$	66.67	209.16	105.48	181.45	94.80	129.25	-9.32	0.00
North-East	I	240.00	202.71	154.06	327.48	169.48	173.83	107.64	100.00
	$\pm\Delta I$	140.00	102.71	54.06	227.48	69.48	73.83	7.64	0.00
South-East	I	116.67	151.53	94.80	107.83	74.79	223.19	131.53	100.00
	$\pm\Delta I$	16.67	51.53	-5.20	7.83	-25.21	123.19	31.53	0.00
South Muntenia	I	200.00	167.44	112.60	218.45	142.33	159.41	73.40	100.00
	$\pm\Delta I$	100.00	67.44	12.60	118.45	42.33	59.41	-26.60	0.00
Bucharest-Ilfov	I	100.00	423.23	346.85	215.12	240.90	117.28	78.8	100.00
	$\pm\Delta I$	0.00	323.23	246.85	115.12	140.90	17.28	-21.19	0.00
South-West Oltenia	I	233.33	186.62	103.30	276.22	125.21	131.88	98.90	100.00
	$\pm\Delta I$	133.33	86.62	3.30	176.22	25.21	31.88	-1.10	0.00
West	I	108.33	166.27	117.58	217.05	126.62	195.46	93.88	100.00
	$\pm\Delta I$	8.33	66.27	17.58	117.05	26.62	95.46	-6.12	0.00
<b>Romania</b>	<b>I</b>	<b>161.29</b>	<b>225.70</b>	<b>139.47</b>	<b>212.68</b>	<b>118.71</b>	<b>170.77</b>	<b>97.81</b>	<b>100.00</b>
	<b><math>\pm\Delta I</math></b>	<b>61.29</b>	<b>125.70</b>	<b>39.47</b>	<b>112.68</b>	<b>18.71</b>	<b>70.77</b>	<b>-2.19</b>	<b>0.00</b>

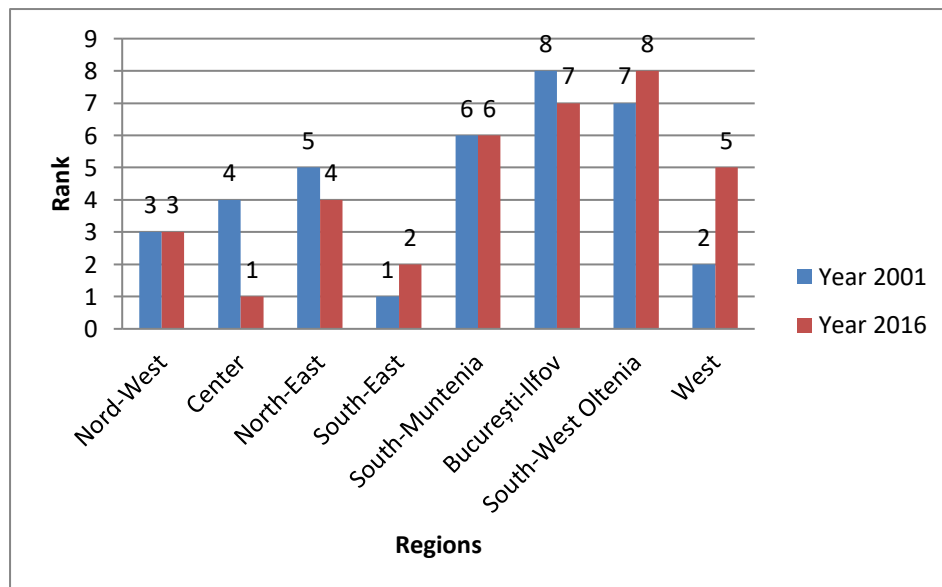
As shown in table 3, except for the last indicator (railways in service) all indicators at national level have improved. Within them, there are some indicators that have had negative performance at regional level. For example, the South-East region (the most visited tourist region in the summer season) has reported a decrease in overnight stays by 5.20% and in the number of accommodation places by 25.21%. Concerning the transport infrastructure, there is a decrease in the number of kilometers of railways in service by 2.19% in the country, while at regional level the highest decrease is reported in the South-Muntenia region by over 26%. Other regions that have also reported decreases in the number of kilometers of railways in service are: Bucharest-Ilfov region (-21.19%); Center region (-9.32%); West region (-6.12%); South-West Oltenia region (-1.1%). However, there are also regions that have reported increases in the length of railways in service, namely: South East (+ 31.53%); North East (+ 7.64%) and North-West (+ 1.4%). For all the regions and indicators analyzed, the highest increase is reported in the Bucharest-Ilfov region (+ 323.23%) in the number of tourist arrivals. The lowest increase is in the North-West region, 1.4% for railways. At national level, the highest increase is 125.7% in the total number of tourists. A significant improvement is also seen in the total number of accommodation establishments, namely an increase of 112.68%. Observing the steps of the method has revealed the following status of the development regions:

*Table following on the next page*

*Table 4: Partial Real Ranks, Average Rank and Final Rank - years 2001 and 2016 (own calculations)*

Regions		Partial real ranks for:								Average rank	Final rank
		J_1	J_2	J_3	J_4	J_5	J_6	J_7	J_8		
North-West	2001	4	5.24	6.26	6.28	7.09	1.45	2.55	1.00	4.66	3
	2016	3.04	5.54	7.04	5.63	6.71	2.76	1.96	1.00	4.09	3
Center	2001	6	2.68	5.55	3.21	6.55	3.57	3.29	4.50	4.73	4
	2016	4.57	1.00	1.00	1.00	3.75	1.33	3.41	4.50	2.61	1
North-East	2001	6	5.90	7.34	6.72	7.56	1.52	3.13	2.75	5.81	5
	2016	4.79	6.38	7.28	5.53	7.16	1.00	2.16	2.75	5.01	4
South-East	2001	2.5	1.00	1.00	1.00	1.00	4.27	3.88	4.50	2.01	1
	2016	4.21	4.86	1.03	4.54	1.00	2.45	1.61	4.50	3.32	2
South Muntenia	2001	6	5.78	6.80	6.18	7.31	1.14	2.32	8.00	5.86	6
	2016	5.38	6.98	7.65	5.99	7.02	1.28	3.79	8.00	5.73	6
Bucharest-Ilfov	2001	8	6.40	8.00	8.00	8.00	8.00	8.00	4.50	7.50	8
	2016	8.00	2.86	4.91	8.00	7.73	8.00	8.00	4.50	6.06	7
South-West Oltenia	2001	7	8.00	6.83	7.43	7.65	1.00	5.27	6.25	6.87	7
	2016	6.25	8.00	8.00	7.02	8.00	2.45	4.91	6.25	6.46	8
West	2001	2.5	5.83	6.54	6.40	7.26	2.85	1.00	4.50	4.48	2
	2016	4.50	7.04	7.07	6.25	7.20	1.58	1.00	4.50	5.16	5

The final hierarchy of development regions is shown below:



*Figure 2: Final Hierarchy of Regions (prepared by the author based on their own calculations)*

According to the data in figure 2, a change of leadership is noticed. The South-East region misses one rank (it moves from the top to the second place). Six of the eight development regions have changed their rankings and two have maintained theirs. Of the six regions that have changed their rankings, three have climbed and three have dropped in the top. The most spectacular climb in the top is the Center region, ranking from fourth to first. The biggest drop in the top is the West region, ranking from second to fifth. The Bucharest-Ilfov and North-East regions have managed to climb one position each. Instead, the South-West region moves from seventh to last.

It can be seen that the Bucharest-Ilfov and South-West Oltenia regions are switching places. The North-West and South-Muntenia regions have remained in the same positions, third and sixth respectively.

## 5. CONCLUSION

The regions have different tourist potential and a different degree of capitalization, which determines a certain hierarchy. The indicators chosen to prepare the classification have revealed certain changes and also some position retentions of the regions (North-West and South Muntenia). According to the number of national interest resorts, the most prosperous region in 2016 was the South-East region, being a region focused on seaside tourism. However, the region was not at the top of the ranking as it used to be in 2001, being outranked by the Center region. The latter reported significant increases in some indicators in 2016 compared to 2001. The investments made in the field have led to: tripling the number of tourists (most of them being attracted by the Poiana Braşov mountain resort); doubling the number of overnight stays; growth by almost 2.81 times in the number of accommodation establishments and 1.94 times in the number of accommodation places; increasing the length of upgraded roads - 2.3 times). Compared to the Center region, the South-East region reported either comparatively lower increases or even lower indicator levels. In our analysis, attention is also drawn to the West region which has dropped three positions in the ranking. Although in 2016 as compared to 2001, as a whole, one can talk about increases in the values of the indicators analyzed, however, under the circumstances of different importance shares, the reported increases were insufficient to keep the same ranking. Another very important conclusion is that the Bucharest-Ilfov region, the most developed region in Romania and at the same time the smallest development region, ranks last in terms of tourism. It is the only region in the country that has only one resort (of local interest). Nevertheless, the region manages to climb a ranking position (from eighth to seventh) as a result of significant increases in the following indicators: number of tourists (more than 4.2 times), number of overnight stays (over 3.4 times), number of accommodation places (more than 2.4 times), number of accommodation establishments (more than 2.1 times). As in the case of the West region, the increases in such indicators have proven insufficient to significantly reduce distances from the other regions.

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## FUNCTION AND IMPORTANCE OF INTERNAL AUDIT IN HOTEL GROUP „BUDVANSKA RIVIJERA“

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### **ABSTRACT**

*Purpose: Evaluate the efficiency of internal audit in risk management strategies and come up with recommendation on how internal audit can efficiently manage risk in star rated hotels group "Budvanska rivijera".*

*Methodology: In this paper the survey is applied as a method of scientific research. By this survey a clear insight is given into the real contribution of the internal audit in business of the company itself and how the work of internal audit reflects on the performance of the other functions and business sectors over which internal audit has a control function. Therefore, a conducted survey examined the settings and segments of the internal auditor's operations, rules, procedures, and responsibilities.*

*Findings: It is expected that the results of scientific research paper show that there is a high correlation between the function and importance of successful implementation of internal audit with the success of hotel business. The best example for this is the company "Budvanska rivijera", whose primary factor is the tourist business in Montenegro. Permanent, continuous, wholly-effective internal audit activities are constantly monitored across all sectors of the business of this hotel company.*

*Contribution: The scientific contribution of the paper is to conduct a thorough research of all the participants in the company's management, all business processes, business activities, relations, rules and procedures, and empirical research in a comprehensive, systematic, and holistic manner by covering scientific and theoretical definitions. It will help the professional and scientific community in hospitality industry in the future work, both from a theoretical and empirical standpoint.*

**Keywords:** *internal audit, internal audit effectivitiess, hotel sector*

### **1. INTRODUCTION**

The research paper deals with internal audit in the hotel industry. An analysis of the function and importance of the internal audit service is showcased on the example of the hotel group "Budvanska Riviera", which holds a key segment of Montenegro's tourist offer. "Budvanska rivijera" is hotel chain that has 3950 beds, 1400 rooms and employs 550 workers in the season with an annual turnover of over twenty million euros. The Hotel group "Budvanska rivijera" is working on a new assessment of the value of capital for the needs of privatization and finding an adequate model of restructuring. During last year, there were 560 thousand overnight stays, which is an increase of nine percent compared to the previous year ([www.hgbudvanskarivijera.com/index.php/en](http://www.hgbudvanskarivijera.com/index.php/en)).

Notable growth was achieved on Western Europe markets, with an increase of 18%. The largest share of the French market and in the total number of overnight stays, the EU participates with nearly 40 percent. A significant increase in the number of guests was also recorded from the Scandinavian market. The offer, the quality of service and compliance with the world tourism standards have impacted the recovery of the Northern Europe emission zone markets, which can be crucial for Montenegrin tourism and the quality in the upcoming years. These are the markets which significantly contribute to the extended tourist season, and on the other hand the continuity in the quality of the competitor's guest service, which has already been recognized by professional tourist public, has been maintained and has positioned us on the map of the travel destinations with growing interest. The return of West and North European markets to the Montenegrin tourist destination gets back a tourist reputation and places it at the top of the lists of tourist offers in the Mediterranean and Europe. The recorded results of this year's tourist season, as outlined by Budvanska Riviera, have increased by 25% in revenues from the arrangements for a period of ten months, while the revenues from the non-accommodation grew by 19%. (<https://budva.travel/>). All results prove that 2017 is the year of records regarding financial results. Novelty in the concept of work, at the request of tourist demand and tour operators, is an extended work of the hotel Palas, which in November and December with specially designed wellness, romantic and family package arrangements, achieved successful results in the late post-season period. For the further development of the tourism industry of Montenegro one of the basic problems is the lack of hotel capacity of high category. For that reason the group is committed to the efforts to fully implement the construction and put into operation the hotel Cristal Palas in Petrovac. The Hotel group "Budvanska rivijera" consists of the following hotels: "Slovenska plaza", "Mogren", "Castellastva", "Aleksandar", "Palas". The importance of these hotels for the development of the overall economy is immense. Choice of this particular topic is the result of the great importance that internal audit has in today's hotel business of the company. It will demonstrate how important internal audit is to the performance of the hotel group "Budvanska rivijera" by applying research techniques and elaborating the implementation of all systems of internal audits and internal controls.

## **2. THEORETICAL FRAMEWORK OF WORK - OVERVIEW OF THE RESEARCH**

According to authors Andrić, Krsmanović & Jakšić and their Audit, theory and practice, internal audit is an independent assessment of a function established within the company to examine and evaluate its activities as a service provided to that company. Internal audit can be viewed as an organizational control that works by measuring and evaluating the effectiveness of other controls. When an organization develops its own plan and then continues to implement it in terms of business, it has to do something to monitor the operation to ensure the achievement of the goals set. These further efforts can be perceived as controls. Although the function of internal audit itself is one type of control used, there is a wide range of other controls. The Institute of Internal Auditors in Florida, USA (<https://na.theiia.org/Pages/IIAHome.aspx>) defines an internal audit as an independent appraisal function that is set up within the organization to provide services to the organization based on the testing and evaluation activities and the communication of the audit results. (Audit Committee Effectiveness - What Works Best, The IIA Research Foundation, 2005., page 48). Since internal audit can deal with any activity of the organization, the practice of professional internal audit has traditionally expanded beyond the examination of accounting controls and financial accounts and reports. ([www.hgbudvanskarivijera.com/index.php/en](http://www.hgbudvanskarivijera.com/index.php/en)). This was rarely the case because financial audits and IT audits were the main focus for internal auditors. The role of the internal auditor has evolved to present today a risk-based audit, resulting in a new definition. By this definition, internal audit is an independent, objective assurance and consultancy activity designed to add value and improve the organization's operations (Auditing standard no. 2 - An Audit of Internal

Control Over Financial Reporting Performed in Conjunction with An Audit of Financial Statements, Public Company Accounting Oversight Board, 2006., page 112.). It helps the organization to meet its objectives by introducing a systematic approach in order to evaluate and improve the effectiveness of risk management, control and management processes. According to the American state manual, internal audit is the service of an independent and objective assessment in an organization. It primarily provides an independent and objective opinion of the Accounting Officer on risk management, control and management through measurement and evaluation of their effectiveness in achieving the agreed goals of the organization. In addition, the findings and recommendations of the internal audit are useful for line management in the areas under audit. Risk management, control and management include policies, procedures and tasks that are set up to ensure the achievement of objectives, appropriate risk assessment, reliability of internal and external reporting and accountability processes, compliance with applicable laws and regulations and compliance with standards of conduct and ethical standards established for organization. All business systems, processes, operations, functions, and activities in the organization are subject to the internal auditor's assessment. The goal of the overall internal audit work is to provide a reasonable assurance that: (International Standards on Auditing, Translation, Association of Accountants and Auditors of Serbia, Belgrade, 2007, page 15.). a) the risk management system is efficient, b) the internal control system is adequate, effective and efficient, c) the process of managing is effective by defining and maintaining values, setting goals, monitoring activities and the effect and define the liability measures. Andrić, Krsmanović & Jakšić in their fourth edition of Audit, theory and practice (p.91) describe management as responsible for maintaining an adequate internal control system for risk management in the organization. Internal Audit provides confidence to the management, the board and the audit committee in terms of reviewing the adequacy of these internal control systems. Internal Audit provides consulting services to help promote and facilitate the development of effective risk management and internal control systems. Additionally, and according to available resources, the audit should respond to managerial requests regarding investigations into matters concerning issues of abuse, fairness and compliance. According to above authors, the objective of the internal audit is to help members of the organization, including those in the management and the board, in the effective performance of their duties. (Audit, theory and practice, fourth edition, p. 109.). In the International Standards on Auditing, Translation, Association of Accountants and Auditors of Serbia we find that internal audit provides analysis, estimates, recommendations, advice and information related to the activities under audit. (Belgrade, issue 2007, page 65). The field of work of internal audit involves examining and assessing the adequacy and efficiency of the internal control system of the company as well as the quality of the performance of assigned responsibilities. According to the above paper (p. 114), internal auditors should:

- Examine the accuracy and completeness of financial and operational data, as well as the means used to identify, measure, classify, and report such data.
- Examine the systems introduced to ensure respect for those policies, plans, procedures, laws and regulations that could have a significant impact on operations and reports, and to establish whether the organization adheres to them.
- Examine how to save funds and, if necessary, verify the existence of those funds.
- Estimate economy and efficiency of use of funds.
- Examine jobs and programs to determine if the results are in line with the set goals and whether the jobs and programs are performed as planned.

The scope of the internal audit work included a systematic, disciplined approach to assessing and improving the adequacy and efficiency of the risk management process, the control and management process, and the quality of the performance of assigned duties. (above, p. 137.).



Internal auditors, under adequate risk management, control and management processes, imply those processes that the management has planned and designed in a way that provides reasonable assurance that the organization's objectives will be achieved in an efficient and cost-effective way. In order to achieve the goals of the organization, management must effectively manage all processes, starting from planning activities and resources, approving activities and transactions, monitoring effect, and checking whether the organization's processes run as foreseen. According to the specialists from Ljubljana University, Odar, Korosec and Horvat, internal auditing, considered one of the centrepieces of nowadays corporate governance, has a relatively short practice in their country. Apart from the law-obliging, required internal audit units that were established by the industry laws in financial services, a tendency of growth of non-mandatory, volitional internal auditing units is however evident, with the rising ranking of expertise level of internal auditors amongst the Slovenian enterprises, as well as industry practices related to establishing procedures, reporting lines, size and score of work of the units as well as expertise of the internal auditors. As a bottom-line result, an analysis shows that a developed countries guidelines and practices are followed throughout the process (Odar, Korošec & Horvat). Development and the current profile of internal auditing- the results of internal auditing - results of the two empirical studies in Slovenia organisations 2006). Head of Internal Audit, Mwiri of Serena Hotels outlines the interconnectedness of change in process related to the service offered to client and the change in processes of auditing such as the likeliness of timely communication not being addressed to all or the absence of Board Risk and Auditing committee parties. The study centers on the number of possibilities where an untrustworthy party (from clients to vendors) can take advantage of situations not covered by the secure and confident anti-fraud controls (Serens, & De Beelde 2006, Internal auditors perception about their role in risk management, A comparison between US and Belgian companies. *Managerial Auditing Journal*, page 38.). Partnership with management has shifted the role of internal auditing from conventional to an ardent, value-added approach. The expansion of internal auditors portfolio has been a center of talks for many years now, and the change in practices of internal auditors is nowadays more obvious. The market requirements have dictated such a shift in focus as well as a need to add value to a service offered to their employing institution. To name a few, Southcorp, KPMG and Qantas are opening opportunities to the internal auditors to launch assurance based services this providing their managers with possibilities to achieve organisational objectives (according to Bou-Raad, 2000, Internal auditors and a value-added approach: the new business regime", *Managerial Auditing Journal*, Vol. 15, page.185.). Choice for dealing with research paper in this field is that the internal audit today in the modern conditions of business of the Montenegrin economy is only at the beginning, in other words, it exists only formally. The rules, principles, procedures adopted by the internal audit services are usually only of a formal nature and do not reflect in the essence of business. This is not the case in Budvanska rivijera, which is what makes it an excellent example of a successful company where the engagement of a quality internal auditor who has his scientific research paper within the doctoral thesis on the topic of internal audit risk management and, on the other hand, practical experience has been upgraded through work as an internal auditors in the company. Montenegro as a country is a special region in the tourist offer, and "Budvanska rivijera" is the key driver of the development of the tourism industry of this country. It represents the only company in this country that has a developed internal audit service that is constantly evolving in a way that its internal auditor permanently follows a large number of professional conferences, sessions and practices both at home and abroad, and continuously upgrades knowledge and skills in the area of an internal audit.

### 3. METHODOLOGY OF SCIENTIFIC RESEARCH PAPER

Amongst numerous techniques and methodologies available to explore the importance and efficiency of internal audit, we chose survey because it gives the opinion of all participants of the survey research in a clear, identical and holistic manner. The survey conducted in January 2018 in the hotel group "Budvanska rivijera" was carried out with the aim to analyze the significance and level of implementation of internal audit in this hotel company which represents the pillar of Montenegro's tourist offer. When forming a sample; out of all employees we have been guided by the selection of top management employees whose work is directly related to the internal audit service and whose opinion is relevant to our research. In this regard, we interviewed the following employees: internal auditor, executive director, financial director, director of legal services, and head of accounting. We believe that only these employees can provide an independent, objective, professional, realistic and adequate response because their work is directly or indirectly in conjunction with the functioning of the internal audit service. Below, we have given a short elaboration of all the employees we have covered in the survey, in order to prove the validity of just such a sample: The internal auditor is the head of the internal audit department, who has established in the hotel group "Budvanska rivijera" 4 years ago. Being an individual with a high level of education and holding that position for a year, he has largely opened the way for the implementation of internal audit. He gave a systematic, comprehensive and critical overview of the functioning of the internal audit sector in the hotel group "Budvanskarivijera". Internal audit performed its function only through this person. The Board of Directors and the Executive director's intention is to form an internal audit sector in the middle of the current year, where the current internal auditor will get two associates. The other respondent is the Executive Director of the company, who has several decades of experience as Executive Director of the hotel group "Budvanska rivijera" and who is extremely familiar with the business of the company itself. His opinion expressed through responses to the questionnaire gives us fullness of business through the prism of management and simulation to business processes, employees, personnel policy, risk assessment in the business system. The next interviewee is a person who holds half of a century of work experience in the hotel industry and in large part helps the work of the internal audit service. He is employed as an external associate and member of the Board of Directors. When it comes to the expertise, credibility and the importance of permanent decision-making, his attitude is extremely appreciated by the management of the company. In addition to these respondents, the financial director and head of accounting service were interviewed in order to indicate from the aspect of their sector the main advantages and disadvantages of the functioning of the internal audit service and how much it is in the function of the entire business. The Legal Service Director contributes to the formation and preservation of the ethical code of professional practice of internal audit or normative acts, the application of which contributes to the internal audit of the system in a systematic, comprehensive, legal and full manner. The head of accounting service and the financial director are in close relationship with the internal audit business because internal audit is in the interests of the improvement of each sector individually. Its role is not to be a "policeman" in the Hotel group "Budvanska rivijera", but to contribute in a systematic, full-fledged, convincing manner to the values of the company. In the end, the internal controller who performs a lower level of operational internal controls has also been interviewed. The first part of the questionnaire concerns the general characteristic of interviewed employees such as age, gender, work experience, vocational training, and years of service in the hotel group "Budvanska rivijera". The goal of the first part of the questionnaire is to get a sharp picture of the surveyed top management employees. The aim of the second part of the questionnaire is to investigate the importance of the internal audit service and to see to what extent the internal audit service contributes to the business of the entire company. We also want to examine the level of risk that we are experiencing in the business processes that we investigate using basic

audit principles. The first ranking of the survey refers to the gender as shown in the following table:

*Table 1: Gender of the respondents*

Gender	Number	Percentage
Male	6	85,71%
Female	1	14,29%
Total	7	100%

*Source: Author*

All respondents are male except for one (Executive director) who is a female. This first step is more formal and has no impact on the importance of conducting an internal audit in the hotel company. The second level of the survey refers to the level of education:

*Table 2: Level of education of the respondents*

Level of education	Number	Percentage
Secondary education	0	0,00%
Higher education	1	14,29%
University degree	5	71,43%
Master Studies	0	0,00%
PhD Studies	1	14,29%
Total	7	100%

*Source: Author*

The largest number of respondents have a university degree i.e. faculty, while only one is at the highest level - Phd studies and also only one with a higher education. However, we can conclude with further analysis that the level of education is not a presentable indicator here, because the person with the lowest level of education - the higher economic school has an extraordinary business experience of half a century, which is of crucial importance for the integrity of the hotel company's business and therefore great support for internal audit. When it comes to the type of education, out of 7 respondents, there is only one of legal profession, while all other are economic professions (predominantly the Faculty of Economics). In the following section, we present a questionnaire that was given to abovementioned employees in order to evaluate the relevance of the work of the internal audit in a more comprehensive way. Answers are presented with grades from 1 to 5 where the grade 1 is the lowest grade and the 5 is the highest

1. How satisfied are you with the work of the Internal Audit Service in the area of activity relevant to your business (grade 1 – I am not satisfied at all; grade 5 - completely satisfied)

*Table 3: Satisfaction management of work of Internal Auditor*

How satisfied are you with the work of the Internal Audit Service in the domain of activities that is relevant to your business	
Response to the question	Number of responses
I am completely satisfied - grade 5	5
I am satisfied	1
I am moderately satisfied	1
I am not satisfied	0
I am not satisfied at all	0

*Source: Author*

The answer to this question is as follows: out of 7 respondents, 4 gave grade 5 - I am completely satisfied, while one employee gave grade 4 and one gave grade 3. The basic analysis shows that most of the employees have an internal audit function of importance in improving the efficiency and effectiveness of the business because the primary and basic goal of internal audit as independent and objective activity to contribute to the company's operations and to enable other sectors to perform business tasks better, more efficiently and quickly. In this regard, internal audit helps service and sector managers, while there is no direct impact on lower employees, therefore the choice of respondents is reduced to the top management of the company.

2. How do you evaluate the professionalism of an internal auditor?

All employees responded to this question with a rating of 5 (maximum). Here we take into account several important notes. The internal auditor who worked before the current internal auditor had only 4 formal documents taken from other publications, so that the internal audit function did not function properly. An internal auditor who is now working on two international licenses of an authorized internal auditor, a doctoral dissertation in the field of internal audit and every month goes on two to three workshops or scientific conferences dedicated to his profession, whether in the field of internal audit, external audit, accounting, estimates of capital values or risk management. Then the external audit gave an excellent rating for the work of the internal auditor. Here, there is a limitation that the questionnaires do not have essential knowledge in the field of internal audit, nor practical experience, so this answer is based on the opinion of the internal auditor as a person, and not on the basis of his audit reports.

3. How do you evaluate the PR skills, that is, the managerial and organizational skills of the internal auditor?

In the answer to this question, out of 7 respondents, 2 respondents answered the grade 5, 3 of them rated 4, 1 respondent with grade 3 and one respondent with grade 2, with no negative ratings. Here we quote the restriction that still there is no internal audit sector, but the internal auditor's job relates to one person who is an internal auditor of the hotel group.

*Table 4. Evaluate management and organizational skills of internal auditor*

How do you evaluate management and organizational skills of internal auditor?	
Response to question	Number of responses
Grade 5	2
Grade 4	3
Grade 3	1
Grade 2	1
Grade 1	0

*Source: Author*

4. How much do internal audit procedures, rules and strategies help you to perform semi-annual and annual reports in your sector?

In response to this question, most employees responded very positively. Here it is emphasized that the help of the internal auditor consists mostly in the formulation of the appropriate measures, the rules, procedures and techniques of their activities, as well as the formulation of reports by the directors of certain sectors, taking into account the techniques and skills of creating internal audit reports.

There is only one negative response from the director of the legal sector who is a person with decades of experience and top-most knowledge of the acts and legal order where the internal auditor does not interfere with his work.

*Table 5: Procedures, rules of internal audit strategy help himin performing semi-annual and annual inventories in the sector.*

How much do the procedures, rules of internal audit strategy help you in performing semi-annual and annual inventories in your sector	
Response to question	Number of responses
Grade 5	5
Grade 4	1
Grade 3	0
Grade 2	0
Grade 1	1

*Source: Author*

- How do you assess professional ethics and moral code of the internal auditor.  
In response to this, all employees gave a rating of 5. It is a person who is moral and ethical, not convicted or punished, an example in every respect.

*Table 6. Professional ethics and moral code of the internal auditor*

Professional ethics and moral code of the internal auditor	
Response to question	Number of responses
Grade 5	7
Grade 4	0
Grade 3	0
Grade 2	0
Grade 1	0

*Source: Author*

- How is organization of the work of the internal audit service with grade?  
All employees have answered 5. We need to consider this with a restriction because the employees do not have a realistic insight into the internal auditor's work, who is being alone in the service without superiors and subordinates who could realistically answer this question.

*Table 7: Level of organization of the work of the internal audit service*

How is organization of the work of the internal audit service with grade	
Response to question	Number of responses
Grade 5	7
Grade 4	0
Grade 3	0
Grade 2	0
Grade 1	0

*Source: Author*

7. I evaluate the business communication of internal audit with other sectors of the company with grade.

To this question, three employees gave a grade 5, three employees gave a grade 4 and one employee grade 3, as presented in the table.

*Table 8: Business communication of internal audit with other sectors*

Business communication of internal audit with other sectors	
Response to question	Number of responses
Grade 5	3
Grade 4	3
Grade 3	1
Grade 2	0
Grade 1	0

*Source: Author*

8. How do you evaluate the work of the internal audit service in the coming period? All employees answered this question by grade 5 - excellent because the management plan of the company's management is that with an internal auditor, an employee of the internal auditing risk management expert and another employee form an internal audit department that will provide continuous support to the improvement of hotel management.
9. What are the main disadvantages of internal audit according to your opinion?  
Employees (everyone except one remained unresponsive to this question). Internal auditor said that the only disadvantage is that there are no specialist courses in our country and in the region that are specifically aimed at internal audit process in hotel industry, which is a very specific activity.
10. The main barriers in the communication and implementation of internal audit are (please specify):  
Given that employees do not have direct insight into this profession, only the internal auditor has given an explanation that the only barrier is that there is a lack of highly specialized internal audit staff and internal audit in hotel management. The significance and contribution of the internal audit service is that in the hotel group "Budvanska rivijera", through the readiness and dedication of the internal auditor, who is systematic, comprehensive, purposeful, in a holistic manner through the adoption of ten internal acts, rules, procedures, guidelines for conducting business activities, procedures, rules and internal controls among the employees and at the level of the Company's business sector, organized better coordination and connection between them, which in many ways enhances the level of work performed and contributes to easier audit at the level of the sector and at the level of the entire hotel group.

The survey which was carried out showed this very clearly. In its internal acts and annual report, the company's management stated the importance of internal audit and in its strategic plan for the period 2018-2020 described the development at the level of the internal audit sector, which once again confirms the significance, functionality and importance of the internal audit service. Internal audit has consistently controlled the legal regulations that determine the company's

operations, including policies, principles, rules and guidelines issued by the competent authorities that relate to the company and corporate governance. However, this does not mean that the Audit Board should have exclusive control function. International Standards on Auditing, Translation, Association of Accountants and Auditors of Serbia outline that the scope of the internal audit includes several of the following activities:

- Monitoring of internal control. The management of the Company is responsible for establishing adequate internal control and proper continuous attention.
- Examination of financial and business information includes an overview of the methods used to identify, evaluate, classify, and report on such information, and in particular examine items including transactions and processes testing.
- Overview of the economy, effectiveness and efficiency of operations, including non-financial control of the company
- Review of compliance with laws, regulations and other external requirements and with policies and directives of management and other internal requirements.

The scope of the internal audit work included a systematic, disciplined approach to assessing and improving the adequacy and efficiency of the risk management process, the control and management process, and the quality of the performance of assigned duties. The Audit Board under the adequate processes of risk management, control and management processes implies those processes that the management has planned and designed in a way that provides reasonable assurance that the company's objectives will be achieved in an efficient and cost-effective way.

#### **4. CONCLUSION**

The Internal audit in the hotel group "Budvanska rivijera" is organized as an independent and special function performed by an internal auditor with a license. It has significantly contributed to the improvement of the performance of the entire company's operations by creating procedures, rules and principles of financial reporting, internal acts, guidelines for accounting entry of business changes and creating business reports on daily and monthly, as well as at quarterly and annual basis. The objective of the internal audit in the hotel industry is of particular importance for the business of each segment of the company's management: finance, accounting, procurement, plan and analysis, commercials, because it performs an audit of each sector individually and the entire business process is being re-occurred among these sectors. The survey carried out in the best way demonstrates the efficiency and effectiveness of internal audit in the operations of the Hotel group "Budvanska rivijera". In order to effectively perform the function of internal audit, a professional staff is required who in all segments know the nature and character of the hotel business, but also auditing, managerial and other professional knowledge and has a high level of professional practice. The results of scientific research work can be of great use in the implementation of internal audit and internal control to the scientific and professional public in the field of tourism and hotel management. It is of particular importance to internal auditors in hotel companies, since the level of development of internal audit in the hotel industry is at a relatively low level of development, and the application of these knowledge and scientific results will significantly facilitate the work of internal auditors, top management of hotels and financial sector managers. In addition, this work is of a great importance for academic staff, professors and professional staff who are engaged in internal audit. By application of set methods the aim of this paper is to investigate the existing state of involvement, as well as development perspectives of the effectiveness of internal audit in the hotel business process. A survey conducted among the top management showed how high is the importance of the internal audit function in the company's business.

There is a clear correlation between the level of implementation of the internal audit in business of „Budvanska rivijera“, and the achievement of business plans which corresponds with the organisation of the entire process of managing the company. The purpose and significance of existence of internal audit is thus indicated in this work to underline its contribution to business and business process, and avoid its consideration only as a cost to a hotel group. Through the conducted survey research, he has seen how high the importance of internal audit is and how much it contributes to ensure the business operations are implemented according to the regulations, Rulebook of internal audit and standards. On the basis of the conducted research, it proposes that further research in the context of internal audit focuses on the application of auditing activities in certain process, procedures authorisations and responsibilities that correspond with the Act of Internal Audit. The further research should also be directed towards the nature of hotel business which shows seasonality the particular attention should be paid over risks and prevention of frauds through establishing certain measures of internal audit.

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## EFFICIENT MARKETING METHODS AIMING TO COMPLY WITH THE REQUIREMENTS OF MODERN CLIENTS

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### **ABSTRACT**

*This paper aims to present marketing methods aimed to improve the relationship between companies and its clients. Marketing plays an increasingly important role in society, which is closely linked to increasing competition and can influence positively or negatively the local, national and global economy. Due to increased competition on the products and services market, customer income and access to information, it is imperative to present methods that will facilitate knowledge, understanding of their importance and their application by companies. The most influential marketing people explore the frontiers of the most effective communication between companies and customers, paying special attention to telecommunication methods, to online ones, trying to create experiences and new consumer habits to satisfy, in a higher level, the consumption needs of customers. Correctly understood by some countries, the marketing manager allowed tremendous development of the respective companies, a development that was not anticipated by a majority of the world's population a hundred years ago. Company managers need to know client queries, recognize changes in demand, to know what competition is doing, and provide the best value of money for their products or services. By applying these methods, we will know exactly how many products or services we can sell to the targeted target audience, which is the best selling price in relation to customer income and cost of production, what is the degree of customer acceptance and satisfaction, and also the most effective ways to attract and persuade customers to test, taste and buy our products or services once, at least.*

**Keywords:** *Client queries, Companies, Competition, Economy, Effective communication, Marketing methods*

### **1. INTRODUCTION**

Marketing is changing to meet the changing world. Marketing represent the activity that seeks and identifies an organization's customer needs and queries, determines which target markets it can serve best and designs the right products, services and programmes for the markets. However, marketing is more than an isolated business function - it is a philosophy that is needed in every organization, it is a way of thinking. The objectives of marketing is to design and offer the customer satisfaction in a profitable way by building valued relationships with customers. Marketing, is one of the most important and sensitive activity, deals with customers. Creating customer value, satisfaction and needs are needed in our days. Marketing it is all about delivery the delivery and customer satisfaction in a profitable way for the company. The aim of marketing is to attract new customers by promising superior value, to keep current customers by delivering what's promised.

### **2. CUSTOMERS NEEDS, WANTS AND DEMANDS**

One of the most basic concept underlying marketing it is about human queries. Humans have more and more complex and new needs. These include basic needs for food, clothing, warmth and safety; social affection needs; and individual needs for knowledge and communication. These needs are not created by marketers. When a need is not satisfied or accomplished, a person will act in two two ways:

1. search for an object that will suit for him/her; or
2. try to reduce or change the need.

People engaged in any industry will try to find or develop objects that will satisfy customer needs. People in less developed countries or areas will try to reduce their desires and satisfy them with something available. Human wants are influenced by culture, access at information and personality. A hungry person may want a vegetable, fruits and water. A rich person may want a ham and matured chese, salad and wine. As a society evolves, the wants of its members grow more and more. As people are seeing more objects that catch their interest, producers try to create and offer more want-satisfying products and services. People have narrow, basic needs (e.g. for food or shelter), but almost unlimited wants. They also have limited resources. But, want to have products that provide the best quality-cost for their money. When backed by an ability to pay - that is, buying power - wants become querries. Thus a Honda Civic means basic transportation, low price and fuel economy. A Mercedes means comfort, luxury and status. Given their wants and resources, people demand products which seems to be designed for them. Outstanding marketing companies try to discover and create for their customers, wants and demands. They conduct consumer and market research. They analyze customer complaint, income levels, inquiry, frequency of buying, product changing periods, warranty and service data. They train their employees to be on the look-out for unfulfilled customer needs. Observing customers likes and dislikes is so important. Understanding customer needs, wants and demands in detail provides important input for designing marketing strategies.

### **3. COMPANIES NEEDS TO OFFER VALUE, SATISFACTION AND QUALITY**

Consumers usually can choose from a multitude of products that satisfy a given need. What product will they choose to accomplish their need? Consumers will buy the products or services based on their perception of the value that the products deliver. The guiding concept is customer value. Customer value means his value for customer and the cost for the product. For example, Federal Express customers gain a number of benefits. The most obvious is fast and reliable package delivery. However, when using Federal Express, customers may also receive some status and image values. Using Federal Express usually makes both the package sender and the receiver feel more important. When deciding whether to send a package via Federal Express, customers will weigh these and other values against the money, effort and psychic costs of using the service. Moreover, customers will compare the value of using Federal Express against the value of using other shippers-UPS, DHL, the postal service - and select the one which he thinks suits best. Customers often do not judge product values and costs accurately or objectively. They act on perceived value. Customers perceive the firm to provide faster, more reliable delivery and are hence prepared to pay the higher prices. The planning school aims at developing planning instruments which help businesses in finding the right strategy. A main assumption is that, by providing input which helps decision-makers in structuring their thoughts, the quality of decision-making can be improved. It is assumed that decision-makers have their own theories, subjective theories linking success to its causes (see, e.g., Ferguson & Dickinson, 1982; Hofer & Schendel, 1978; Ohmae, 1982). Peter Drucker, a famous business management consultant, said, “Because its purpose is to create a customer, any business enterprise has two and only two basic functions, marketing and innovation. Marketing is the distinguishing, unique function of a business.” That’s really what it’s all about. If you don’t have customers, you don’t have a business. If they’re not funding your business, you don’t have one. Many times, the biggest mistake a company or individual makes is to focus mainly on their product. Marketing is generally misunderstood or at least people have a wrong perception of what it is. For the purposes of this P.U.M.P. System introduction, we can say that marketing is “the continual education and gradual process of guiding of people in order to take a specific

action.” Now what that means is I want to start a relationship. I want to start communicating before you ever purchase something from me. I want people who never buy from me to refer me to others. Often people wait for somebody to become a customer before they have the system in place to get referrals. Just because somebody doesn’t want a red blouse, doesn’t mean they can’t tell it to their spouse, friend, or whoever wants a red blouse. If you are perceived as an honest, worthy person, providing a great product or service, there are people who aren’t necessarily in the market for your specific product or service who will refer you, so make sure you take care of that. The first part of marketing is identifying and attracting prospects or potential clients. Potential clients mean they’re existing, they might want to read your article. Prospects are more defined. So if I have a business article on sales and marketing then I may be able to get a hold of a list or create a list of people who have purchased sales on marketing articles before. The strategy for seizing a market niche requires segmentation. In the sales strategies of the past, “the market” was regarded as a uniform whole. For more short-term, flexible sales strategies, however, it is necessary to regard the market as multiple individual segments. In the marketplace, companies must have the mobility to ward off the competitors’ strategic advances, like individual ships interacting in battle both to elude the enemy and deliver devastating blows. Considering the market as a segmented marketplace broken down into a host of individual elements implies a clear identification of the customers of each company. If a company can “sell a product to anyone,” the product can be used for anything or for nothing. It is thus necessary to determine with absolute clarity who the customers are, e.g., which lifestyles they embrace, where they live, which age-group they represent, the annual income, and other facts. After defining the target group, it is then necessary to offer products and services that match their needs perfectly.

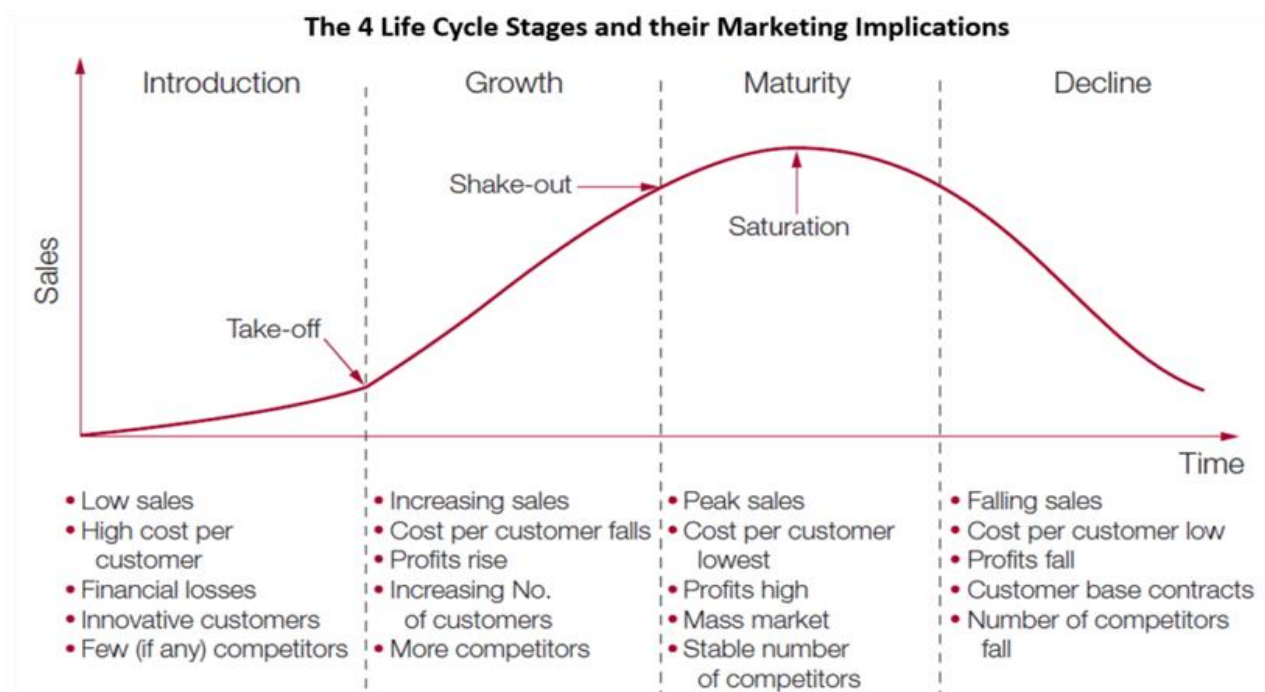
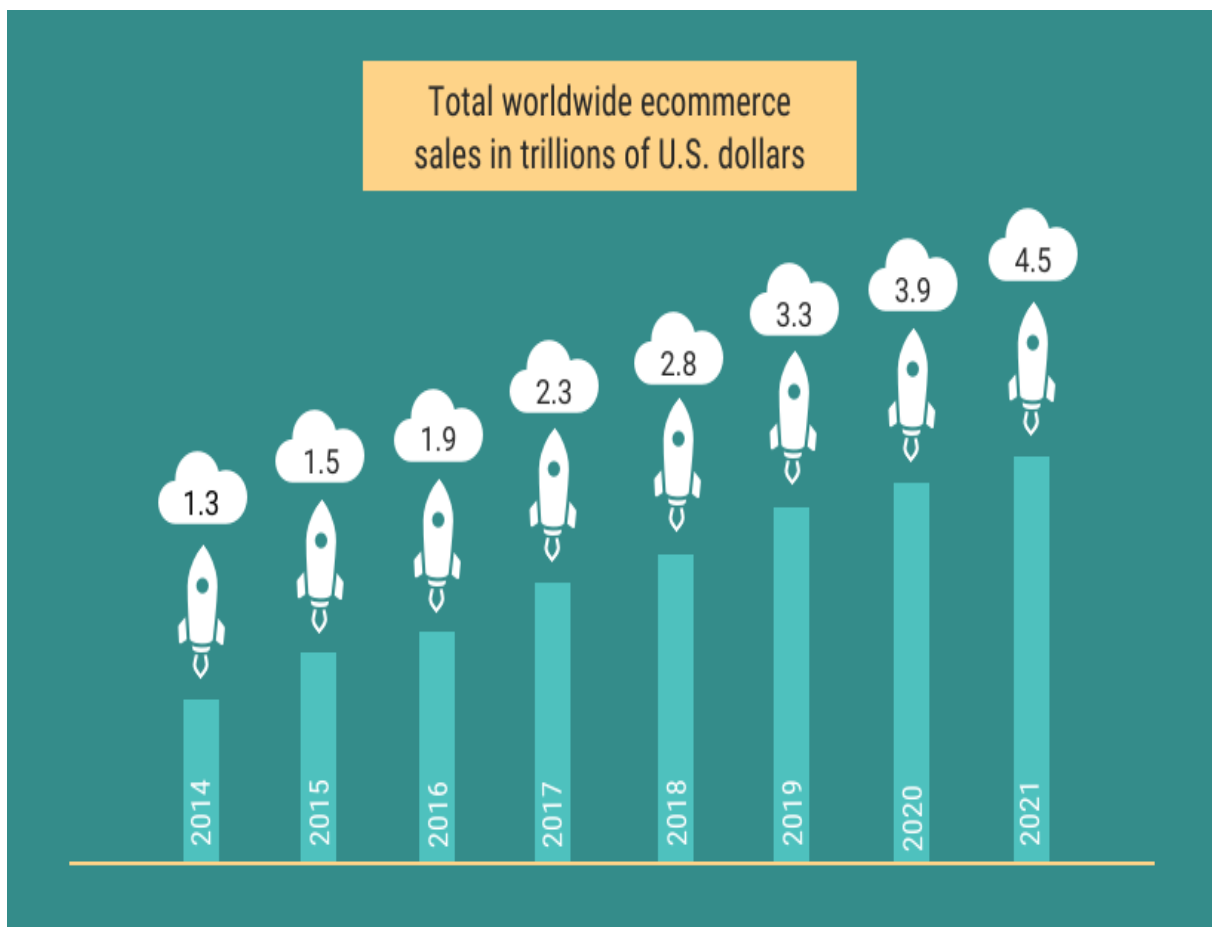


Fig. 1: The 4 life cycle stages and their marketing implications ([www.obfuscata.com](http://www.obfuscata.com))

One of the most important fact is that every product or service will face the decline. The decisions in this period of the product are veryimportant and the managers need to make some crucial improvments. They need to rename, to improve the quality, to modify the price, to change the aspect, or to stop the production.

#### 4. IMPORTANCE OF SOCIAL MEDIA

Social media marketing is an incredibly powerful tool and these days it is one of the single biggest factors that a marketer can use to build their digital empire. In fact, social media is often what really makes the difference between having a website and having such an „empire“. A website on its own can make you money and it can promote your business – but it takes more than that to build a brand and to have that ubiquitous presence that can help you to drive the maximum amount of traffic to your monetization systems. Social media allows you to interact with your audience, to get feedback, to hear suggestions and to communicate in a variety of different ways. It lets you build brand visibility and it lets you drive visitors directly to your site. This is why social media is so important and it's why so many people and businesses are hopping on board. In fact, 66% of marketers believe that social media is a core part of their business (Salesforce), with 92% of respondents describing it as „important“ (Social Media Examiner). 38% of companies are looking to increase their spend in this area. 66% of businesses have a dedicated social media team according to Salesforce. But unfortunately, despite this ubiquity of social media marketing, many of these companies are not actually getting the very most out of their marketing efforts. Many social media marketers simply don't know how to allocate their resources with regards to social media and the result is that they often aren't getting anywhere near the increase in profits and brand awareness that they could be from it.



*Chart 1: Total worldwide ecommerce sales in trillions of U.S. dollars  
(<https://www.shopify.com/enterprise/global-ecommerce-statistics>)*

We can see that the total worldwide ecommerce sales (in trillions of USD) will be growing from 1.3 trillions in 2014, to 4.5 trillions in 2021, which represents a growth of more than 300%.



Fig.2: The 10 largest ecommerce markets expressed in billion USD  
(<https://www.shopify.com/enterprise/global-ecommerce-statistics>)

The 10 largest ecommerce markets in the world are: China: \$672 billion, United States: \$340 billion, United Kingdom: \$99 billion, Japan: \$79 billion, Germany: \$73 billion, France: \$43 billion, South Korea: \$37 billion, Canada: \$30 billion, Russia: \$20 billion and Brazil: \$19 billion.

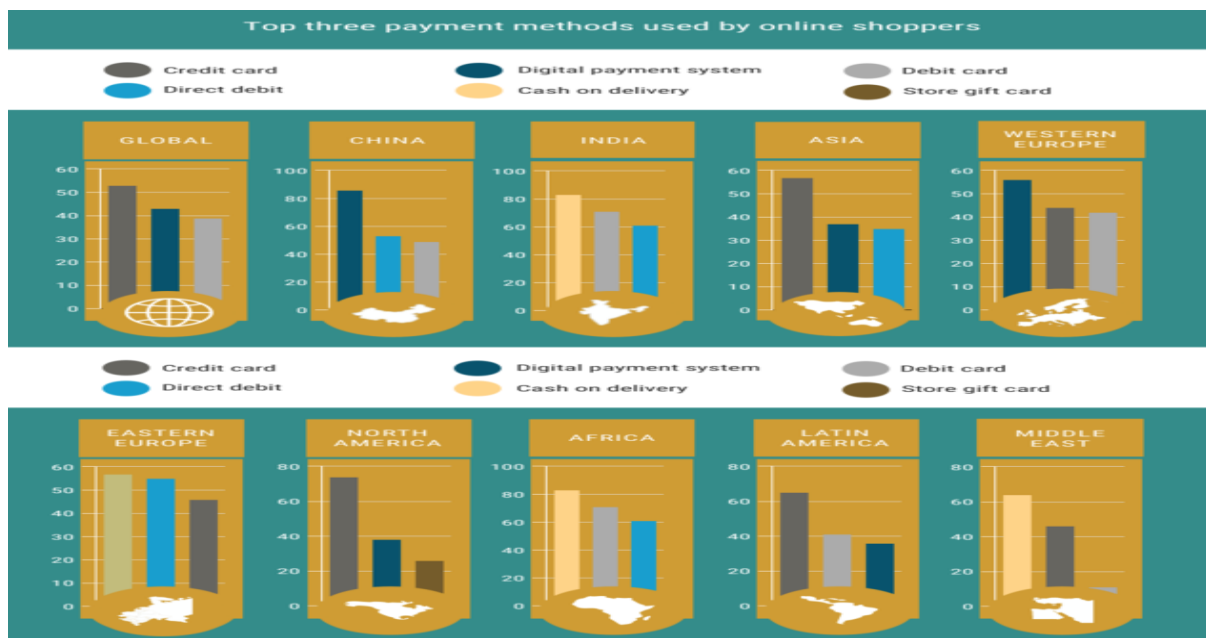


Chart 2: Top three payment methods used by online shoppers  
(<https://www.shopify.com/enterprise/global-ecommerce-statistics>)

Online payment methods weigh heavily on buying decisions and local preferences vary depending on the country. It's no surprise that in North America, credit cards are number one by a mile. Digital payment systems like PayPal and Apple Pay are a close second.

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## GRI REPORTING FRAMEWORK AS A TOOL OF SOCIAL ACCOUNTING

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### ABSTRACT

*Social accounting is aimed at identify, measure and reporting on social and environmental aspects related to the functioning of company. Thus, it is important to ensure the quality and reliability of information generated by reports. For that reason, organisations around the world are involved in development of norms, standards and guidelines concerning the reporting of social and environmental information. At present, the most comprehensive tool in this field is GRI Reporting Framework. The aim of the article is to identify the level of the use of GRI Reporting Framework in the process of preparing social reports. The realization of the article's purpose was based on descriptive method consists of analysis of the subject-related literature concerning social accounting and review of the GRI Reporting Framework documents. In addition, the method of desk research, based on selected studies showing global practices in the use these type of tools and on reports submitted to the GRI Sustainability Disclosure Database and CSRinfo's registry, were applied. Results of the research lead to the conclusion that GRI Reporting Framework occupies a significant place in the process of social reporting both on the global scale and in activities undertaken by companies operating in Poland. This is due to the fact that it allows companies to select and disclose the most significant matters related to economic, social and environmental impacts. However, the analysis of the content of selected reports showed diversified range of indicators published by individual organisations, with the result that comparison of their engagement and performance in the field of sustainable development may pose a problem.*

**Keywords:** *GRI, reporting on social and environmental issues, social accounting*

### 1. INTRODUCTION

In the context of growing importance of sustainable development and corporate social responsibility, the success of modern companies depends not only on consideration the needs and expectations of stakeholders and taking actions congruent with a broadly defined social interest. It is also important to provide the data enabling an evaluation of the impact of these activities on company's environment, both internal and external. Social accounting is the source of this information. It is aimed at identify, measure and reporting on social and environmental aspects related to the functioning of company. Organisations around the world, striving to ensure high quality data included in social reports being the final product of social accounting, are involved in development of norms, standards and guidelines concerning the reporting of social and environmental information. At present, the most comprehensive tool in this field is GRI Reporting Framework developed by Global Reporting Initiative. It is aimed at help companies and governments worldwide in understanding and communicating their impact on



key aspects of sustainable development. The aim of the article is to identify the level of use of the GRI Reporting Framework in the process of preparing social reports. The realisation of the article's purpose was based on the analysis of the subject-related literature and review of GRI Reporting Framework documents. The reports submitted to the GRI Sustainability Disclosure Database and CSRinfo's registry, were also analysed.

## **2. SOCIAL ACCOUNTING AS A SOURCE OF SOCIAL AND ENVIRONMENTAL INFORMATION**

The accounting is a primary source of economic information. By being a universal and flexible system, on the one hand, it reflects the economic reality but, on the other actively participates in its creation (Śniezek, Wiatr, 2012, p. 246). However, this reality is constantly changing. Recently, the direction of these changes is dictated by the development of the concepts of sustainable development and corporate social responsibility. Therefore, broader dimension of accounting that is social accounting is discussed more and more nowadays (Michalczuk, Mikulska, 2014, p. 199). Social accounting includes a set of organisational activities relating to the measurement, analysis and reporting on social and environmental performance to all concerned groups, both within and outside the organisation (Islam, 2015, p. 11). Understood in this way, it is aimed at identification and presentation of social costs and benefits resulting from the activities of a specific economic entity in a manner allowing to evaluation its progress in the implementation of the concept of sustainable development (Gabrusewicz, 2010, p. 60; Islam, Ahmed, Chowdhury, 2012, p. 1). A special role is assigned to appropriately constructed subsystem of accounting, namely reporting. The data on social and environmental issues may be disclosed within the non-financial statement, being an integral part of management report. However, more and more often companies go beyond the scope of obligatory reporting by preparing a separate non-financial reports. In recent years, social reports are becoming a key final product of social accounting (Michalczuk, Konarzewska, 2018, p. 136). They present comprehensively the economic, social and environmental actions undertaken by companies in the interest of selected groups of stakeholders within a strictly defined time frame (Wróbel, 2016, p. 85). Increasingly, companies also choose to prepare an integrated reports which provide an opportunity to include in one document information being generated by financial statement and the data concerning economic, social and environmental aspects of the functioning of organisation. Integrated reports inform about overall business activity by presenting the way in which "organisation's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium and long term (IIRC, 2013, p. 7)". Social reporting brings tangible benefits to both companies and the environment in which they operate (Fifka, Adai, 2015, p. 291). It is one of the most important elements of company's transparency which is necessary to conducting business according to principles of sustainable development and to building trust in relationships with stakeholders. The data generated within a social reports also allow to verification of the set objectives as well as measuring the company's impact in many aspects of its operations. From the company's point of view, they create a possibility to identifying the opportunities and threats coming from the environment as well as to specifying the implemented strategies.

## **3. GRI REPORTING FRAMEWORK**

Social reports being the final product of social accounting should be a reliable source of information on social and environmental issues. Therefore, more and more often, discussions are not related to relevance of reporting these issues but to proper selection and presentation of information. It is important that they are based on specific norms and standards. Undoubtedly, a reliable solution is the preparation of social reports on the basis of GRI Reporting Framework developed by Global Reporting Initiative - an independent international organisation, founded

in 1997. GRI Reporting Framework is aimed at understand the relevance of companies' communication about their impact on key aspects of sustainable development such as: climate changes, human rights, governance as well as social well-being. In consequence, this should be reflected in taking real actions bringing widespread economic, social and environmental benefits (About GRI...). Cooperation between representatives of scientific communities, specialists and business practitioners from around the world is the foundation of Global Reporting Initiative's activity (Pakowska, 2012, p. 548). The continuous consultations based on exchanges of experiences contribute to improving the GRI Reporting Framework in a way that makes it a reliable source of information for a wide range of stakeholders (Global Reporting Initiative, 2011, p. 2). Consequently, GRI Reporting Framework is better adapted to the current needs of both reporting companies and the information's recipients - particular groups of stakeholders (figure 1).

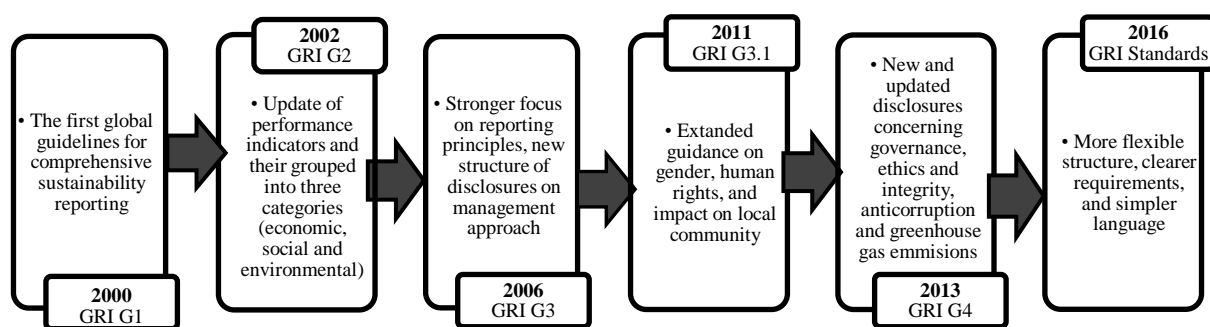


Figure 1: Steps in the evolution of GRI Reporting Framework (Source: Authors' own work based on: Villiers, Mähönen, 2015, p. 218; Tencati, 2015, p. 216; Tencati 2010, p. 423; Paszkiewicz, Szadzińska, 2011, p. 633; GRI's History...)

Since the founding of Global Reporting Initiative, five versions of guidelines for sustainability reporting have been published. It was not until 2016, after numerous consultations, that GRI Standards - the set of first global standards sustainability reporting, have been prepared. An important issue is that from July of 2018 they constitute the only acceptable version of GRI Reporting Framework. Until then, organisations in the reporting process had an opportunity to choose between the latest GRI Standards and the GRI G4 guidelines. The GRI Standards are to be more understandable, better structured and easier to use than previous G4 version (*G4 Guidelines Transition to Standards...*). It should be emphasized that the reporting principles are the ones of the most important elements included in the GRI Standards. The main task of their application is to help organisations in selection of issues and the methods of their disclosure. They are aimed at ensuring data transparency, treated as a value and a goal of sustainability reporting (Samelak, 2013, p. 59-60). As in previous versions of GRI guidelines, the principles were divided into two groups: principles for defining report content and principles for defining report quality (table 1).

Table following on the next page

*Table 1: The principles of non-financial reporting according to the GRI Standards (Source: Authors' own work based on: GRI Sustainability Reporting Standards..., 2016)*

<b>Reporting Principles for defining report content</b>	
<b>Stakeholder inclusiveness</b>	The reporting organisation should identify its stakeholders, and explain how it has responded to their reasonable expectations and interests
<b>Sustainability context</b>	The report should present the reporting organisation's performance not only in the context of business strategy but also in the wider context of sustainability
<b>Materiality</b>	The report should cover issues and indicators that reflect the reporting organisation's significant economic, environmental, and social impacts
<b>Completeness</b>	The report should include coverage of material topics, sufficient to reflect significant economic, environmental, and social impacts, and to enable stakeholders to assess the reporting organisation's performance in the reporting period
<b>Reporting Principles for defining report quality</b>	
<b>Balance</b>	The reported information should reflect positive and negative aspects of the reporting organisation's performance to enable a reasoned assessment of overall performance
<b>Comparability</b>	The reporting organisation should select, compile, and report information consistently in order to enable stakeholders to analyse changes in the organisation's performance over time, and their comparison relative to other organisations
<b>Accuracy</b>	The reported information should be sufficiently accurate and detailed for stakeholders to assess the reporting organisation's performance
<b>Timeliness</b>	The reports should be prepared on a regular schedule so that information is available in time for stakeholders to make informed decisions
<b>Clarity</b>	The information should be disclosure in a manner that is understandable and accessible to stakeholders using that information
<b>Reliability</b>	The information and processes used in the preparation of the report should be compiled and presented in a way that can be a subject to examination, and that allows to establish the quality and materiality of the information

A key tools of GRI Standards are the indicators, which contain basis information about an organisation and its approach to management. They also enable communication on company's engagement and performance in three fields of sustainable development (table 2).

*Table 2: The structure and scope of disclosures covered by the GRI Standards (Source: Authors' own work based on: GRI Sustainability Reporting Standards..., 2016)*

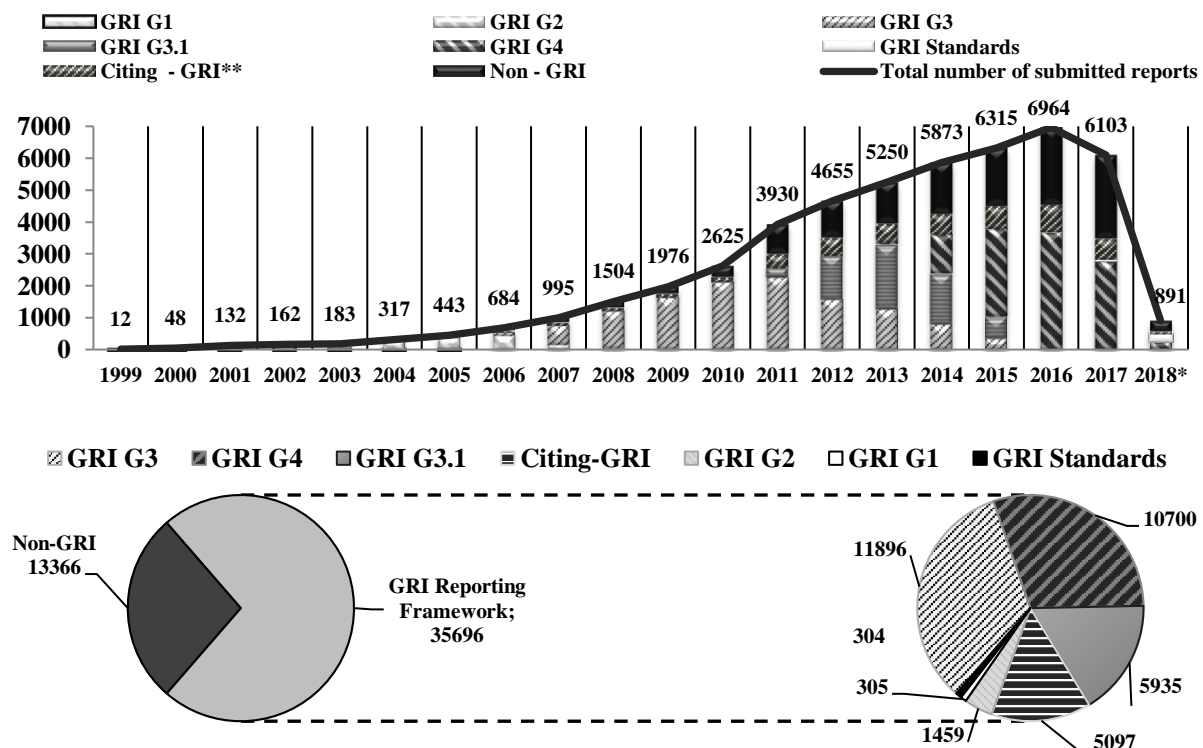
<b>General disclosures</b>	<b>Management approach</b>
<ul style="list-style-type: none"> <li>• Organisational profile</li> <li>• Strategy</li> <li>• Ethics and integrity</li> <li>• Governance</li> <li>• Stakeholder engagement</li> <li>• Reporting practice</li> </ul>	<ul style="list-style-type: none"> <li>• Explanation of the material topic and its Boundary</li> <li>• The management approach and its components</li> <li>• Evaluation of the management approach</li> </ul>
<b>Economic topics</b>	<b>Environmental topics</b>
<ul style="list-style-type: none"> <li>• Economic performance</li> <li>• Market presence</li> <li>• Indirect economic impacts</li> <li>• Procurement practices</li> <li>• Anti-corruption</li> <li>• Anti-competitive behaviour</li> </ul>	<ul style="list-style-type: none"> <li>• Materials</li> <li>• Energy</li> <li>• Water and effluents</li> <li>• Biodiversity</li> <li>• Emissions</li> <li>• Effluents and waste</li> <li>• Environmental compliance</li> <li>• Supplier environmental assessment</li> </ul>
<b>Social topics</b>	
<ul style="list-style-type: none"> <li>• Employment</li> <li>• Labour/management relations</li> <li>• Occupational health and safety</li> <li>• Training and education</li> <li>• Diversity and equal opportunity</li> <li>• Non-discrimination</li> <li>• Freedom of association and collective bargaining</li> <li>• Child labour</li> <li>• Forced or compulsory labour</li> <li>• Security practices</li> </ul>	<ul style="list-style-type: none"> <li>• Rights of indigenous peoples</li> <li>• Human rights assessment</li> <li>• Local communities</li> <li>• Supplier social assessment</li> <li>• Public policy</li> <li>• Customer health and safety</li> <li>• Marketing and labelling</li> <li>• Customer privacy</li> <li>• Socioeconomic compliance</li> </ul>

It should also be emphasized that every organisation must declare its report to be in accordance with the GRI Reporting Framework.

As was the case with the GRI G4 guidelines, there are two options for preparing a report in accordance with the newest GRI Standards: core and comprehensive. The report prepared in accordance with the core option must contain minimum information needed to understand the nature of the organisation, key areas of activity and its effects. In contrast, the comprehensive option requires to report all the topic-specific disclosures for each material topic covered by the GRI Reporting Framework (GRI Sustainability Reporting Standards..., 2016).

#### 4. THE USE OF GRI REPORTING FRAMEWORK IN SOCIAL REPORTING

The use of GRI Reporting Framework is becoming a common business practice. This is reflected in results of research concerned with trends in social reporting among 4900 companies in 49 countries, which have been described in the report „The road ahead. The KPMG Survey of Corporate Social Responsibility Reporting 2017”. Approximately 63% of all analysed companies referred to GRI Reporting Framework. This percentage is even higher among 250 largest companies in the world by revenue. More than 75% of them have prepared their reports on the basis of Global Reporting Framework (KPMG, 2017, p. 28). The GRI G4 guidelines received the most attention among the companies reporting in accordance with the GRI Reporting Framework. They have been used in approximately 88% of reports. It should be also noted that although the newest GRI Standards have become effective since July of 2018, every tenth non-financial reports were prepared by using them (KPMG, 2017, p. 28). The increasing importance of GRI Reporting Framework in a companies’ practice is also confirmed by the analysis of reports registered in the GRI Sustainability Disclosure Database (figure 2).

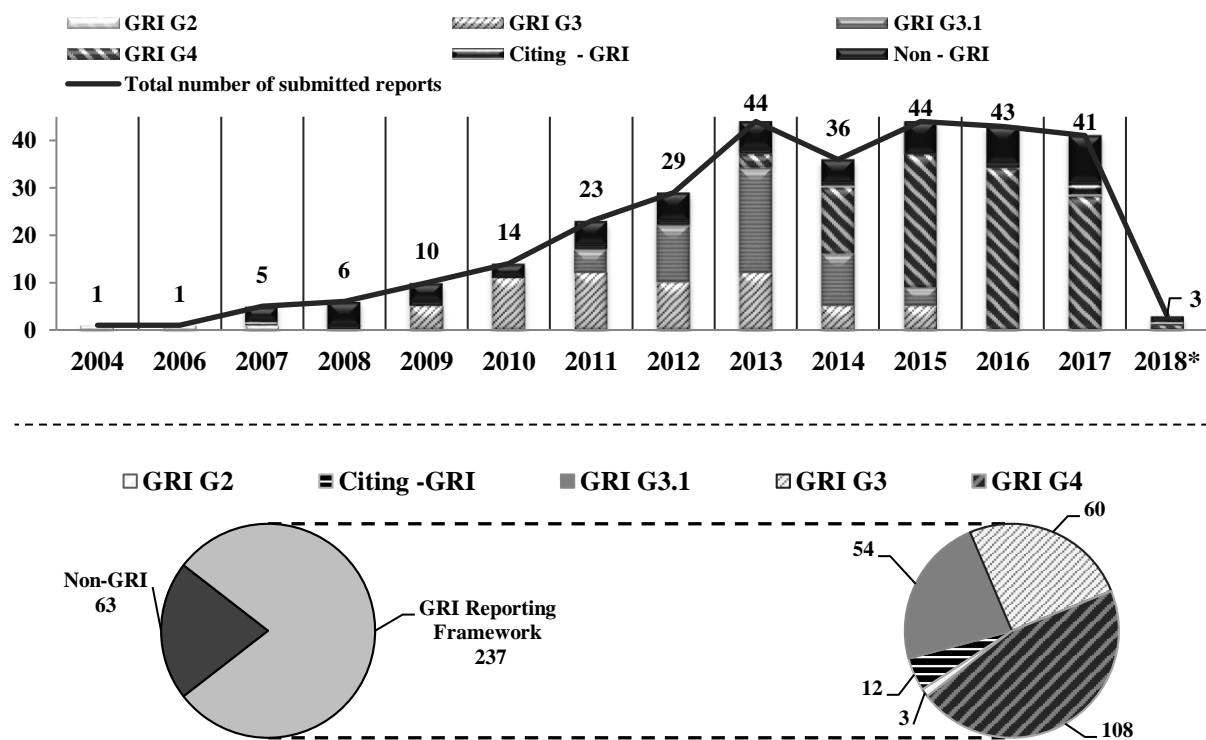


\* As of 18.08.2018

\*\* Reports that make specific reference to or use elements of GRI's guidelines but do not include a GRI Content Index

Figure 2: Total number of reports registered in the GRI Sustainability Disclosure Database  
(Source: Authors' own work based on: GRI Sustainability Disclosure Database...)

Approximately 50.000 of social reports were registered since the founding of GRI Sustainability Disclosure Database. An important issue is both the gradual increase in number of submitted reports and the fact that vast majority of them (73%) were prepared in accordance with regulations developed by the Global Reporting Initiative. For that purpose, the guidelines in versions: GRI G3 and GRI G4 were the most frequently used. It should be underlined that companies also prepared their reports on the basis of the GRI Standards. Between 2016 and 2017, the total of 73 such reports were submitted. In 2018, the one-quarter of all reports registered in the GRI Sustainability Disclosure Database were prepared in accordance with GRI Standards<sup>1</sup>. When analysing the level of use of the GRI Reporting Framework by geographical segments it turns out that it is most frequently used in reports registered by companies from Latin America and the Caribbean (85%). Subsequently the Europe (74%), Asia (72%), Northern America (71%) and Oceania (71%) are classified. The lowest rate of use of regulations proposed by GRI (49%) can be noted in reports submitting by companies from Africa (GRI Sustainability Disclosure Database...). When comparing this information with the practice of Polish companies, it can be stated that despite the fact that number of Polish reports registered in the GRI Sustainability Disclosure Database significantly deviates from the world's best performances, however, the level of use of the GRI Reporting Framework puts Poland above global average (figure 3).



\* As of 18.08.2018

Figure 3: Number of reports in the GRI Sustainability Disclosure Database submitted by Polish companies (Source: Authors' own work based on: GRI Sustainability Disclosure Database...)

Out of all 300 reports submitted in the GRI Sustainability Disclosure by Polish companies as many as 237 (79%) have been prepared on the basis of the GRI Reporting Framework.

<sup>1</sup> As of August 2018.

The GRI G4 guidelines (108 reports) were the most frequently used version of regulations developed by GRI. Subsequently, the GRI G3 guidelines (60 reports) and the GRI G3.1 guidelines (54 reports) were applying. The reason for this is fact that it is only since 2013 that the increase interest in publishing this type of reports by polish companies has been observed. It should be emphasized that companies operating on the Polish market can register their social reports not only in the GRI Sustainability Disclosure Database. They also have an opportunity to publish them to the registry maintained by CSRinfo - an educational and consulting company, which is an official partner of the Global Reporting Initiative in Poland. Until now, 375 reports have been registered there, of which 66% were prepared in accordance with the GRI Reporting Framework (CSRinfo,...). It is important to note that reports prepared by particular companies differs on scope of the information presented. In order to show the key areas and aspects of reporting in accordance with regulations prepared by Global Reporting Initiative, the reports of four Polish organisations were analysed<sup>2</sup> (table 3).

*Table following on the next page*

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<sup>2</sup> The selection of these reports had been dictated by fact they were prepared in accordance with the GRI Reporting Framework. Also because they were published in 2018.

*Table 3: Reporting on GRI indicators in non-financial reports registered in the CSRinfo database in 2018 (Source: Authors' own work based on: Raport odpowiedzialności Grupy Agora..., 2018; Raport zrównoważonego rozwoju MPWiK S.A...., 2018; Raport zintegrowany LPP..., 2018; Pierwszy Raport Społeczny FHO..., 2018)*

	GRI indicators	Agora (GRI G4)	St. Christopher's Oncology Hospice Foundation (GRI G4)	MPWiK Wroclaw (GRI G4)	LPP (GRI Standards )
<b>General disclosures</b>	Organisational profile	X	X	X	X
	Strategy	X	X	X	X
	Ethics and integrity	X	X	X	X
	Governance	X	X	X	X
	Stakeholder engagement	X	X	X	X
	Reporting practice	X	X	X	X
<b>Management approach</b>	Explanation of the material topic and its Boundary	X	X	X	X
	The management approach and its components	X	X	X	X
	Evaluation of the management approach	X	X	X	X
<b>Economic topics</b>	Economic performance	X	X	X	-
	Market presence	-	-	-	-
	Indirect economic impacts	X	X	X	-
	Procurement practices	-	-	-	-
	Anti-corruption	X	X	-	X
	Anti-competitive behaviour	X	X	-	-
<b>Environmental topics</b>	Materials	X	-	-	X
	Energy	X	-	X	X
	Water and effluents	X	-	X	-
	Biodiversity	-	-	-	-
	Emissions	X	-	-	X
	Effluents and waste	X	-	X	X
	Environmental compliance	-	X	X	-
	Supplier environmental assessment	-	-	-	X
<b>Social topics</b>	Employment	X	-	X	X
	Labour/management relations	X	-	-	-
	Occupational health and safety	X	-	X	X
	Training and education	X	-	X	X
	Diversity and equal opportunity	X	-	X	-
	Non-discrimination	X	-	-	X
	Freedom of association and collective bargaining	-	-	-	-
	Child labour	-	-	-	-
	Forced or compulsory labour	-	-	-	-
	Security practices	-	X	-	-
	Rights of indigenous peoples	-	-	-	-
	Human rights assessment	-	-	-	-
	Local communities	X	X	X	X
	Supplier social assessment	-	-	-	X
	Public policy	-	X	-	X
	Customer health and safety	X	X	X	X
	Marketing and labelling	X	-	X	-
	Customer privacy	X	X	-	-
	Socioeconomic compliance	X	X	-	-

*X - this means that at least one indicator in a given category was disclosed*

The reports analysed contain indicators relating to all categories characterising the organisation concerned and its management approach. The situation is clearly different in the case of top-specific disclosures within each of three areas of sustainable development. When analysing the scope of economic disclosures, it can be noted that reports prepared by Agora and St. Christopher's Oncology Hospice Foundation include indicators relating to four topics. In the case of reports of MPWiK and LPP, the indicators relating to two and one economic topics respectively, can be found. The situation is different within the environmental area. Two organisations covered in the survey (Agora and LPP) publish indicators relating to five topics.

The report prepared by MPWiK includes references to four topics. In contrast, St. Christopher's Oncology Hospice Foundation disclose indicators focus on only one aspect, namely environmental compliance. Agora's report, also within the social area, has the most comprehensive approach to reporting on GRI indicators. They relate to eleven aspects of company's social activity. Subsequently, the reports prepared by LPP (eight topics), MPWiK (seven topics) and St. Christopher's Oncology Hospice Foundation (six topics) are classified. The conducted analysis also allows to indicate the key economic, social and environmental categories that have been included in reports. They mainly concentrate on issues relating to local communities and customer health and safety. By contrast, the least attention is paid to the aspects such as: market presence, procurement practices, biodiversity, freedom of association and collective bargaining, child labour, forced or compulsory labour, rights of indigenous peoples as well as human rights assessment.

## 5. CONCLUSION

The development of social accounting is reflected in evolution of reporting system. This is caused by the fact that results of the measurements carried out within the social accounting must be reflected in reports prepared by the companies. Social reports are the basic source of information concerning social and environmental issues. It is important that they are not only good quality but also reliable and transparent. This is ensured by preparing reports on the basis of the GRI Reporting Framework, which is aimed at create a generally accepted framework for reporting on economic, social and environmental aspects of the organisation's functioning. GRI Reporting Framework is updated constantly in order to be better adapted to the needs of both reporting companies and particular groups of stakeholders. The GRI Standards published in 2016 are currently in force. The main aim of introducing them is to increase availability of GRI Reporting Framework to reporting organisations through the use of more flexible structures and clearer requirements. It should be emphasized that GRI Reporting Framework is becoming a widely used tool in the practice of social reporting as indicated by analysis conducted in the article. This is due to the fact that it defines comprehensively what a properly prepared report should contain. GRI Reporting Framework includes not only general principles and guidance facilitating the reporting process but also indicators, by means of which companies have the opportunity to measure and communicate their impact on the environment.

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## THE CONCEPT OF ORGANIZATIONAL AMBIDEXTERITY AS AN EXAMPLE OF PARADOXICAL STRATEGY

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### **ABSTRACT**

*The success of enterprises in the conditions of globalization and hyper-competition depends on the ability to cope with paradoxical strategies. Organizational ambidexterity is an example of a strategy based on capability of exploiting the existing competencies while simultaneously exploring new opportunities. The main goal of the article is to review contemporary definitions of the ambidexterity and its usage in current organization theory. The author's goal was to review the definitions and systematics of the concept and identify gaps in this area. The contribution of the research is to highlight implementation dilemmas present in provided literature overview. The element combining the definitions of organizational ambidexterity is the presence of two opposite activities that must be simultaneously or sequentially combined. Exploitation focuses on what the company already has and knows and is associated with such concepts as efficiency, repeatability, stability, reliability, low level of uncertainty and high level of success. Exploration focuses on what is to be discovered and is associated with low efficiency, experimentation, flexibility, tolerance for errors, high uncertainty and low level of success. The analysis shows that there is inevitable friction within the organization resulting from the combination of conflicting processes. In particular, three areas of the most persistent tensions are distinguished: around the strategic goal, around the customer orientation and around personal motivation. Even if there is a consensus that organizational ambidexterity is necessary several implementation issues remain unsettled.*

**Keywords:** *exploitation and exploration, organizational ambidexterity, paradoxical strategies*

### **1. INTRODUCTION**

Organization researchers use ambidexterity metaphor, the ability of people to use both hands with the same precision as a proposed principle for organizations that are equally skillful in exploitation and exploration (Simsek, 2009). It is a paradoxical method: to meet the challenge of a ground-breaking change companies need to explore and exploit at the same time. These activities require different management logic and practice. Exploitation refers to the use of market position, competencies and resources already existing in an organization to ensure its success in the short term, while exploration refers to the use of new knowledge and opportunities to achieve success in the long term. The pace and dynamics of changes in the market environment, manifested in disruptive changes, disturbing the existing markets and completely changing the whole categories of products, drew the attention of management theorists to the need for seeking new ways of dealing with such changes. Even experienced and well-managed companies were surprised by the speed of technology development, which jeopardized not only their market position but also their overall business survival. It suffices to mention Eastman Kodak, founded in 1888, in the face of digital photography, or Disney Animation Studios, when computer animation appeared. Despite the importance attributed to the very survival of enterprises “curiously, however, organizational ambidexterity (OA) remains an undertheorized, underconceptualized, and, therefore, poorly understood phenomenon”. (Simsek, 2009, p. 598). According to Raisch, Birkinshaw, Probst and Tushman (2009), despite the great interest in the concept of ambidexterity, the literature review indicates that many of its serious aspects remain unexplored or are ambiguous and conceptually unstable.

Organizational ambidexterity is most often understood as simultaneous exploitation and exploration, although the term also appears in other connotations. The aim of the article is to present the concept of organizational ambidexterity as one of the paradoxical strategies. Based on the literature on the subject, definitions and analysis of the dimensions of the studied phenomenon were reviewed. An attempt was also made to identify research gaps in this regard. The analysis was based on selected scientific articles from the management area published in magazines indexed in the Web of Science in 1991-2017. Publications were selected based on the keywords: exploitation and exploration; organizational ambidexterity; paradoxical strategies with the selection narrowed to 25 articles with the highest number of citations.

## **2. DEFINITION OVERVIEW**

Zeki Simsek provides the following overview of definitions of organizational ambidexterity:

*Table following on the next page*

Author (year)	Definition
<b>R.B. Duncan (1976)</b>	Capacity of organizations to facilitate the differentiation of organization structure that facilitates the innovation process in its two different stages. More specifically, the ability of the organizational unit to deal with conflict, conduct effective interpersonal relations, develop switching rules, and institutionalize dual organizational structures for innovation.
<b>E.F.McDonough, R. Leifer (1983)</b>	Capacity of a work unit to employ several different structures simultaneously.
<b>M.L. Tushman, C.A. O'Reilly (1996)</b>	The ability to simultaneously pursue both incremental and discontinuous innovation and change that result from hosting multiple contradictory structures, processes, and cultures within the same firm.
<b>M.L. Tushman (1997)</b>	Ambidextrous organizations have multiple organizational architectures to concurrently nurture diverse innovation requirements that are capable of simultaneously creating both incremental and discontinuous innovation. Ambidextrous organizations are capable of operating simultaneously for the short and the long term, for both incremental and discontinuous innovation. Such dual organizations build in the experimentation, improvisation, and luck associated with small organizations, along with the efficiency, consistency, and reliability associated with larger organizations.
<b>M.J. Benner, M.L. Tushman (2003)</b>	Ambidextrous or dual organization forms are organizational architectures that build in both tight and loose coupling simultaneously. These organizational forms are not loosely coupled, nor do they switch between contrasting structures. Ambidextrous organizations are composed of multiple tightly coupled subunits that are themselves loosely coupled with each other.
<b>C. Gibson, J. Birkinshaw (2004)</b>	Ambidexterity is the behavioural capacity to simultaneously demonstrate alignment and adaptability across an entire business unit. Alignment refers to coherence among all the patterns of activities in the business unit; they are working together towards the same goals. Adaptability refers to the capacity to reconfigure activities in the business unit quickly to meet changing demands in the task environment.
<b>Z. He, P. Wong (2004)</b>	The need for an appropriate balance between exploration and exploitation . . . the capability to operate in both mature markets (where cost efficiency and incremental innovation are critical) and develop new products and services for emerging markets (where experimentation, speed, and flexibility are critical).
<b>K. Atuahene-Gima (2005)</b>	Simultaneous investments in both the exploitation of existing product innovation capabilities and the exploration of new ones.
<b>J.J. Jansen (2005)</b>	The ability to pursue exploratory and exploitative innovations simultaneously.
<b>S. Kaplan, R. Henderson (2005)</b>	Organizations in which one part of the organization continues to operate much as before while another attempts to combine the best aspects of small, entrepreneurial firms with the advantages derived from being part of a more established company.
<b>K.G. Smith, M.L. Tushman (2005)</b>	Ambidextrous designs are organizational forms that build internally consistent architectures and cultures into business units so that the firm can both explore and exploit. These organizational architectures involve highly differentiated units as well as top management team integration.
<b>A.K. Gupta (2006)</b>	Ambidexterity refers to the synchronous pursuit of both exploration and exploitation via loosely coupled and differentiated subunits or individuals, each of which specializes in either exploration or exploitation.
<b>M.H. Lubatkin (2006)</b>	Ambidextrous firms are capable of exploiting existing competences as well as exploring new opportunities with equal dexterity.
<b>G.C. O'Connor, R. DeMartino (2006)</b>	The ability of business unit managers to simultaneously advance radical innovation initiatives while conducting daily operational functions.
<b>N. Venkatraman (2006)</b>	The capability of an organization to simultaneously pursue exploration of new product markets while exploiting current product markets.
<b>P.E. Bierly, P.S. Daly (2007)</b>	Paradoxical companies that are successful at simultaneous exploration and exploitation.
<b>J.G Cegarra-Navarro, F. Dewhurst (2007)</b>	Ambidexterity is an organization's context to achieve alignment and adaptability simultaneously within the organization learning processes.
<b>J. Sidhu (2007)</b>	Firms that are able to manage supply and spatial exploration with demand-side exploitation in fast changing dynamic contexts and to juggle the balance so that they combine demand and spatial exploration with supply-side exploitation when the environment settles down.

*Table 1: Definitions the organizational ambidexterity (Simsek, 2009 p.600)*

The element connecting the definitions of ambidexterity is the presence of two opposing activities, which must be combined simultaneously or sequentially. In a broader sense, therefore, ambidexterity can be considered as an example of a paradoxical strategy.

Smith, Binns and Tushman (2010) argue that companies' success in a globalizing and hyper-competitive environment depends on their ability to manage paradoxical strategies. According to researchers "either/or" approach to strategic tensions is inadequate". (Smith, Binns and Tushman, 2010, p. 449), Andriopoulos and Lewis (2009) draw attention to the inevitable friction within the organization resulting from the combination of conflicting processes. They are particularly distinguished by three areas of the most permanent tensions: around the strategic goal (profit – market breakthrough), around customer orientation (close – loose feedback), and around the personal motivation of employees (discipline – passion). It should be added that ambidexterity, as a simultaneous exploration and exploitation paradox strategy, is only one of many paradoxical strategies, while others concern, for instance, the paradox of simultaneous global and local approaches, low cost and high quality, or stability and variability (Smith, Lewis, 2011). One of the interesting ways to understand ambidexterity is the issue of combining social responsibility (moral goals) and achieving instrumental commercial goals (Hahn, Pinkse, Preuss, Figge, 2016). Traditional contingency strategies formulate dilemma 'should we implement A or B' and paradoxical strategies change optics to 'how can we implement A and B' – this change makes possible the development of new business models. It should also be mentioned that the concepts of ambidexterity are not only relevant to enterprises, but also, for instance, to universities (Chang, Yang, Chen, 2009). Another element of most definitions of ambidexterity are the concepts of exploitation and exploration. 'Exploitation refers to the improvement of current competencies, while exploration involves the search for new knowledge and opportunities' (Cao, Gedajlovic, Zhang, 2009). Exploitation focuses on what the company already has and knows and is associated with concepts such as efficiency, repeatability, stability, reliability, consistency, control, low uncertainty and a high level of success. Exploration focuses on what needs to be discovered and is linked to low performance, experimentation, flexibility, adaptability, error tolerance, high uncertainty and low success rates. The concept of exploitation and exploration was presented in 1991 by James March (March, 1991) for whom exploration and exploitation are two different activities that lead to organizational tension. This is due to the fact that, on the one hand, both activities compete for limited resources and on the other hand require different capabilities within the same organization. Exploration through the necessity of "searching, diversifying, experimenting and innovating" (March, 1991, p. 71) is a time-consuming activity, the result of which can be expected in a long period of time, with no certainty as to the final effect. The exploitation activities based on self-improvement or efficiency improvement are more certain because they are based on the existing knowledge and competences of the organization. According to March, organizations that want to get better results should find a balance between these two activities. Further work was underway to clarify the definition of both types of activities, e.g., from the point of view of ways of acquiring knowledge, and to further investigate the nature of the relations between them (Gupta, Smith, Shalley, 2006).

### **3. ORGANIZATIONAL AMBIDEXTERITY IN THE STRUCTURAL AND CONTEXTUAL ASPECT**

Proposed by Tushman and O'Reilly (Tushman, O'Reilly 1996) the ambidexterity concept initially referred to a dual corporate structure where evolutionary and revolutionary change processes could be implemented (Birkinshaw, Gupta, 2012). It was proposed to create two separate structures (business units) within the company, one of which would focus on evolutionary exploitation and the other on revolutionary exploration. They have different, task-specific strategies, processes and architectures. One approach is to completely separate exploration activities from the company, in the form of a corporate venture subsidiary (Hill, Birkinshaw, 2014). As Benner and Tushman (2015) stated, ambidextrous models require high differentiation, point-based integration at the junction points of exploitation and exploration,

and a well-integrated management team. Exploration units are usually smaller, more decentralized and more flexible. Structural ambidexterity facilitates the division and proper allocation of competencies specific to different types of activities. In this way, adequate resources are channeled towards traditional and emerging business opportunities. The coordination of the exploitation part and the exploration part is the responsibility of the company's top management. Due to the significant separation of the two activities, some researchers started to work on determining whether this is an optimal model and to what extent the diversification and integration of exploitation and exploration is effective (Raisch, Birkinshaw, Probst and Tushman, 2009). In 2004, the model based on the integration of exploitation and exploration within the same business unit gave rise to the contextual ambidexterity approach advocated by Birkinshaw and Gibson (2004). This means creating a specific context within the company in which employees are encouraged to both explore and exploit. It shifts the focus from structural solutions to the individual creativity and motivation of employees. Ambidexterity is the behavioral ability of employees, the ability to simultaneously demonstrate consistency and adaptability within a business unit. The organization supports and develops the ambidexterity of individuals, allowing for experimentation, the flow of knowledge and the dynamic exchange of experience in exploration and exploitation. In this approach, not only a narrow top management group, but all employees are involved in the coordination of both activities. Some researchers have also introduced another way to manage duality in addition to the structural and contextual approach. It consists in a temporal separation, whose “main idea is that the same team or company can undertake two seemingly incompatible activities (such as exploitation and exploration) but at different times (Markides, 2013, p. 315). It seems, however, reasonable to consider this last method as one of the variants of the contextual approach. The combinations of structural and contextual approaches are applied in different proportions, as Raisch, Birkinshaw, Probst and Tushman (2009) argue. There are proposed further research on how the ratio between differentiation and integration should change over time, whether an organization should follow a sequential or simultaneous approach (Simsek, Heavey, Veiga, Souder, 2009), and what the role of teams in the development of organizational ambidexterity is (Zimmermann, Raisch, Birkinshaw, 2015).

#### **4. THE ROLE OF TOP MANAGEMENT AND THE CEO**

Recent research focuses on the role of management and the CEO themselves in the successful implementation of the organizational ambidexterity model (Jansen, Kostopoulos, Mihalache, Papalexandris, 2016). Birkinshaw and Gupta (2012) believe that research into decision makers is the most promising research field in terms of ambidexterity. According to Benner and Tushman (2013), internally inconsistent architectures require managers who are not afraid of paradoxes and contradictions. In order to coordinate two conflicting activities at the same time, the specific competencies of the company's top management team are necessary, especially in the area of dual cognitive challenges and the differentiation and integration challenge issue. Heavey and Simsek (2017) highlight the role of management in creating, integrating and distributing knowledge within the organization. It is worth mentioning that magnetic resonance research observes what parts of the brain of decision-makers are active in dealing with exploitation and exploration paradoxes (Laureiro-Martinez, Brusoni, Canessa, Zollo, 2014). The key role of top management in the success of the organization's ambidexterity is recognized, but it remains unclear which management features and cognitive abilities are critical. Ci-Rong Li (2016) proposes and studies the following characteristics of the management that best suits the ambidexterity challenges: diversity (broadens top management's thinking and reduces its inertia), ability to take a different perspective and empathy (helps better understand the needs and motivations of the environment), transformational leadership (ability to inspire to make radical changes and adopt other points of view).

“A top team with heterogeneous backgrounds reflects various knowledge, skills, and abilities among top executives, which stimulates diversity in interpreting situations” (Li C-R, 2016, p. 772). A study by Ci-Rong Li (2016), carried out on a group of 210 randomly selected high-tech enterprises in Taiwan, using information from 1321 members of their top management, found a link between the proposed elements of top management characteristics and the effective use of organizational ambidexterity. Interesting is the cultural background associated with the symbol of balance, Yin and Yang, present in Eastern tradition, which can be considered as a non-European equivalent of simultaneous ambidexterity in the sense of depicting the coexistence of opposite elements in the same place and time (Li P.P., 2014). Smith, Binns and Tushman point out the role of dynamic decision making by top management referring to exploration and exploitation “(...) where management teams made quick, frequent and flexible decisions, continually shifting resources, roles and responsibilities between the two” (Smith, Binns and Tushman, 2010, p. 452). Research on dynamic decision making by top management teams continues (Smith, 2014). Equally important is the ability to manage the conflict and even encourage the disclosure of the conflict, which results from tensions occurring in ambidextrous organizations, e.g., around competition for limited internal resources. Papachroni, Heracleous and Paroutis (2016) also address the issue of internal tension management skills. Further research in this direction should be carried out, as there may be many other characteristics of top management that may determine the success of the organizational ambidexterity.

## **5. BARRIERS TO AMBIDEXTERITY**

As Andriopoulos and Lewis put it, “Firms tend toward homogeneity, finding comfort as they develop mindsets and routines supporting one form of innovation, escalating their efforts in their preferred mode to the neglect of the other” (Andriopoulos and Lewis, 2009, p. 697). Researchers see that even well-managed companies, although often coping with exploitation, fail to explore. The reason may be what Benner and Tushman (2013) describe as a tyranny of efficiency, short-term thinking and inertia. Well-managed companies focus on what creates most value and pay less attention to what does not create value. Since exploration seldom instantly delivers value, there is a good reason not to devote attention to it. Moreover, well-run enterprises do not tolerate mistakes or failures. Tolerance of early errors is essential for exploration. The reasons why exploitation activities take precedence over exploration have been found in the company structure, motivation system, culture, competencies, identity and level of experience of top management (Piao, Zajac, 2016). One of the most important issues seems to be the allocation of resources: since they are limited, the competition for resources between exploration and exploitation usually ends in a shift of resources to the area that is valuable ‘here and now’. Furthermore, as He and Wong write “...there is little direct evidence of the positive effect of ambidexterity on firm performance” (He, Wong, 2004, p. 481). Their research of 206 companies has shown that there is a positive correlation between the balance of exploitation and exploration innovations and sales growth (He, Wong, 2004), and they postulate that further research in this direction is undertaken. Ambidexterity is critical to the way companies innovate and acquire knowledge, yet in the short term it can reduce productivity by dispersing resources. Despite a growing number of studies confirming the positive impact of ambidexterity on various aspects of companies, “We know far less about the appropriate timing for when ambidexterity is more or less useful” and “...when do the benefits of ambidexterity outweigh the costs” (O’Reilly, Tushman, 2013, p. 333). The difficulty in maintaining a balance between change-oriented strategic flexibility and operational efficiency is one of the reasons for the disappointment with ambidexterity (Kortmann, Gelhard, Zimmermann, Piller, 2014). One way of overcoming the problem is a sequential method, where the transitions between exploitation and exploration occurs, but here again the question of right timing arises (Swift, 2016).



Further research in this respect should be carried out because despite the agreement that enterprises must focus on both activities, there is no answer to the questions on how to most effectively do it.

## 6. CONCLUSION

The concept of organizational ambidexterity drew the attention of many researchers and practitioners of management as a method of overcoming the problem of maintaining high operational efficiency and dynamic innovation at the same time. The appearance of disruptive changes has invalidated the possibility of choosing "one or the other". It was necessary to simultaneously carry out both activities: the exploitation focused on the present and future-oriented exploration. The first period of organizational ambidexterity development focused on the structural division, i.e. creating separate business units for exploitation and exploration. The next stage of the concept development is the proposal of contextual ambidexterity. In this approach, the organization creates a context in which employees can simultaneously concentrate on exploitation and exploration, remaining in one structure. Factors such as vision, strategic goal, values, motivational systems and leadership allow to achieve contextual ambidexterity in which employees creatively release all their potential by dealing with conflicting requirements. Both in structural and contextual approach, the qualities and competences of top management were found to be key, and much attention is devoted to this issue. The discussion on the characteristics of effective ambidextrous leadership goes hand in hand with research on the characteristics of organizational culture conducive to the reconciliation of contradictions, the search for the optimal balance between exploitation and exploration or the degree of diversity and integration of the organization. Many of these issues require further research because the very idea, though interesting in general terms is devoid of established methods of achieving the postulated state of organizational ambidexterity. Even assuming that for each enterprise this path may be different, there is a lack of consensus, what are the widest frames and factors determining effective application.

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## **'QUESTIONS BANK' IN TERMS OF WŁADYSŁAW JACHNIAK AS A MANAGERIAL TOOL OF FINANCIAL EDUCATION**

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### **ABSTRACT**

*The article is a contribution to organizational history. It analyses and validates 'Question Banks', the concepts proposed by Władysław Jachniak's (1915-1994), a Polish independent entrepreneur and economist from so called communist period. 'Question Banks' was created in the 1970s (the times in Poland of the centralized industry with a relative opening to the West) as a training material for economists operating in those economic realities: period of loans, growth of consumption, huge investments and WOG (Large Economic Organizations). The aim of the analysis was to determine the suitability of this training material for adaptation in the conditions of the current economy. Moreover, Władysław Jachniak's 'Question Banks' was analysed as a potential tool for a coach and mentor in modern business. The article also presents the elements of the theoretical perspective on the concept of professional development, which are necessary for 'Question Banks' utility in financial education today. In order to show the financial reality during the life and work of Władysław Jachniak in comparison to the present times, a comparative analysis of budget expenditures in 1974 and in 2017 was made. The research uses data from the 'Question Banks' itself, from the budget laws of 1974 and 2017 as well as reports and articles on the issues discussed. The validity of the main concepts used by the author of Question Banks was also examined by comparing the frequency of their occurrence in the current database of scientific articles. The proposals contain recommendations on how 'Question Banks' can be adapted to current managerial practice. The article shows how managers can use the experience and tools of their predecessors to today's challenges in the field of economic education, mainly for the purpose of effective mentoring and coaching duties.*

**Keywords:** *budget, coaching, managerial training, mentoring*

### **1. INTRODUCTION**

The aim of the article is to present the analysis and to verify the timeliness of 'Question Banks' by Władysław Jachniak. To achieve this, the authors show the structure of the aforementioned managerial tool, along with the critical elaboration of the subject matter of its individual parts. This study is preceded by a presentation of the biography of Władysław Jachniak and the preliminary, necessary to introduce in the subject, the characteristics of the times in which the author of 'Question Banks' lived and acted. 'Question Banks' were created in the 1970s (in the so-called Gierek period) as a training material for economists. The authors of the article put forward the thesis that 'Question Banks', despite the fact that they were created several decades ago and in a radically different economic reality, still have substantive value, and at the same time can be updated and then adapted for use for the current needs of financial education. In order to show the financial reality in the life and work of Władysław Jachniak compared to the present times, the article outlines the historical background through the general characteristics of the Gierek period and a comparative analysis of budget expenditures in 1974 and in 2017.

The analysis was preceded by the presentation of the author of 'Question Banks' with particular emphasis on showing the conditions under which Władysław Jachniak lived and created.

## **2. LIFE AND WORKS OF WŁADYSŁAW JACHNIAK**

Władysław Jachniak was born during the First World War, on February 10, 1915. He graduated from high school in Cracow while giving tutoring in mathematics. He studied economics at the High School of Commerce in Cracow. After the war, he had qualifications of a financier with a specialization in foreign trade. He became a co-worker with Eugeniusz Kwiatkowski (1888 - 1974), a well-known deputy prime minister of the Second Polish Republic. Władysław Jachniak performed various social and administrative functions. At the same time, he ran his own business 'Harpun' and 'Unia'. The repressions against Władysław Jachniak were caused mainly by the fact of his opposition to the order to execute a transaction harming seafarers from Polish passenger ships (MS 'Batory', MS 'Sobieski' and MS 'Puławski'). After that, it was announced that he owed PLN 60 million to the Tax Office (for example, the tenement house in Gdynia cost PLN 2.5 million that time). Władysław Jachniak lost everything. In 1949, the courts acquitted him, but the company was liquidated and he could not get a job. On May 16, 1950, he was arrested by the Main Board of Military Information and included in the process of Generals General Tatar and General Kirchmayer. This one of the most famous demonstration processes of Stalinist Poland. Accused of attempting to change the system and espionage, he survived the gehenna: 28 months of ongoing hearings. However, he did not sign accusations against Polish economists for treason and espionage. In September 1952, Władysław Jachniak was sentenced to 15 years in prison. On April 25, 1956, he was released after 6 years. In December 1956, the Supreme Military Prosecutor's Office discontinued criminal proceedings for lack of evidence of guilt. After 1956, Władysław Jachniak still struggled with the adversities of the communist period. In 1961 he graduated from the University of Economics in Krakow. He worked as an economic analyst. He also devoted a lot of employee training to economic personnel – it was his passion. During the economic changes of the Gierek period, he prepared a cycle of scripts for training purposes: 'Question Banks'. He worked until the end of his life - January 23, 1994 (Ochinowski, 2013 and Jachniak family archival and oral data).

## **3. GIEREK'S POLAND AND CURRENT POLAND - DISCUSSION**

The authors of the presented text leave the professional researchers of the past a solution to the question of how much the historical experience of 'Gierek's Poland' can be compared to the implementation of capitalism in the communist political environment, as is currently the case in mainland China or Vietnam. This is a secondary matter for this article. It seems interesting, however, to draw attention to the thesis of Stanisław Gomułka (2017) formulated a year ago, clearly belonging to the area of scientific journalism, about the similarity of the Polish economy to that of the five-year plan implementation. GUS data, however, are different - the economy is good, it is growing at a rate of around 5%, low unemployment, and a lower than expected deficit. The reasons for this may be the lack of implementation of two reforms, i.e. the shift back to the retirement age and the resignation of the tax-free increase for all (and the lack of currency conversion of loans in Swiss francs) (Leiden, 2017). The view that nowadays we are dealing with a 'repetition' of the Gierek era is, to a large extent, debatable. Researchers of that period indicate that the reason for this was the neglect of the importance of managing the organization, with the simultaneous desire to improve economic management (Borkowska, Gliński, 1966). The economy is currently characterized by a different specificity. It is a conglomerate of many organizations, both state and private, creating a common image that can not be easily controlled and regulated. From this point of view, the opinion that the actions of the current government can lead to the effects that were caused in the conditions of a centrally planned economy is dubious.

It is, however, that Władysław Jachniak created 'Question Banks' in a different economic reality than the current one. In this part of the article, the authors emphasize this difference through 'narrative' using statistical data, bearing in mind the previously mentioned vagueness of PRL times also in the aspect of statistics.

### **3.1. Historical context of 'Question Banks' in the perspective of Władysław Jachniak**

It is obvious that the protagonist of this article constructed his tool in the economic realities of Poland different than the present one. A characteristic feature of the formation popularly referred to as the 'PRL' (Polish People's Republic), as all similar to it was the multi-level 'ambiguity', which still hinders a reliable description of the experiences of that period, also in the sphere of economic activities. It is a category proposed by the Romanian historian Istvav Rev, more widely defined as a type of social engineering used by the authorities, social engineering of the 'all-encompassing' citizens (Rev, 2005, by Ochowski, 2018). At the same time, the 1970s brought an attempt to 'open up to the West' governing the PRL in the economic and political spheres. No other leader of the PRL maintained such political contacts as Gierek (Głuszko, 2017). One of the well-known aspects of the economic reality of the Gierek period was the 5-year Commercial Plan of the Polish People's Republic (1971-1975). It was a strategy of accelerated economic and social development of Poland. Inextricably linked to the issues discussed, the issue of organizational culture in force in the times of the PRL is connected. Three levels may be pointed:

- a layer of culture imposed by the authorities or a reflection of the author's actual views identical with the state ideology,
- elements admitted by the authorities despite partial incompatibility with the so-called official course. They were a manifestation of the uncertainty of the authorities and this was to testify to its liberalism. It served to gain support or divert public attention from other problems,
- so called 'mask' for the author enabling him to publish relatively independent views, or even creating such hope (Ochowski, 2018).

In order to compare the situation in 1974 and 2017, Table 1 presents budgetary categories of expenditure for these years.

*Table following on the next page*

Budget Act 1974	
TOTAL EXPENDITURE (in thousands of PLN)	537 349 263
financing of enterprises and other economic units	205 600 622
expenditure on investments and major repairs	95 267 011
health protection, social care and physical culture	46 546 458
other current expenses	44 917 102
education and upbringing	44 270 748
national defence	42 582 800
administration, public safety, pron. justice and the prosecutor's office	29 585 307
Science	13 147 135
central and departmental reserves	9 615 978
culture and art	5 816 102
Budget Act 2017	
TOTAL EXPENDITURE (in thousands of PLN)	384 498 688
Different settlements	97 396 641
Compulsory social insurance	85 142 714
Family	36 658 175
Public debt service	30 400 000
National defence	29 777 699
Higher education	15 617 830
Public safety and fire protection	14 542 936
public administration	13 593 130
Justice	12 138 092
Transport and communication	11 832 250
Other	37 399 221

*Table 1: Polish budget expenditure items in 1974 and 2017 (Budget Act for 2017, Budget Act for 1974)*

The individual budget items are difficult to compare with each other due to the radically different approaches to categorizing the economy in 1974 and 2017. The list in Table 1 illustrates, however, that some of the the concepts in the state budget description have not changed (eg. 'National defense', 'Education'), some have partially changed in terms of new types of expenditure. Therefore, it should be remembered that Władysław Jachniak, while describing the economic reality of his time, could use other concepts, but he spoke about the same phenomena as current economists.

### 3.2. Structure and subject matter of 'Question Banks'

In order to determine the timeliness of issues in Władysław Jachniak's 'Question Banks', it is necessary to determine its structure and themes. The very construction of 'Question Banks' can be described as a compendium of knowledge about finance and the economy in the form of questions and answers. This is similar to the currently known and functioning in the area of customer service of many companies 'Frequently Asked Questions', which is a tool aimed at shortening the process of handling customer inquiries. The authors of the study express the supposition that Władysław Jachniak, observing the specificity of the work of managers he trained, decided to apply this form of knowledge transfer. This could be due to the accumulation of many repeated questions from the recipients of his training. 'Question Banks' can therefore be a response to the needs of managers of those times - in need of quick, concrete answers on topics related to finance and the economy. The authors of the study analysed the texts contained in the 'Question Banks' and determined the subject of each of the individual volume as well as the main concepts that have been raised in a given chapter. 'Question Banks' consist of five parts, thematically diverse. The first part is about selected issues related to the functioning of the company on the market under the conditions of the economy during the Gierek period. In this part, aspects such as investment financing, pay system and price system are discussed.

The second part focuses on the relationship and the legal and institutional environment of the company. The links between the organization and the internal and foreign market are described. Sub-chapters are devoted to export-import activities and central planning. The subject of the third part is the impact of economic changes on the functioning of the enterprise. It includes, among others, description of the role of banks in the economic system as well as the impact of technical and economic progress. The fourth part, entitled by the authors of this study as 'Research and development, economic analysis', contains relatively more detailed questions and answers in the field of financing of R&D and its implementation and evaluation of the economic effectiveness of investments. The fifth part, as detailed as the previous one, is a specific complement to the entire 'Question Banks'. It is possible to find here references to previously discussed topics - such as technical progress or foreign trade - but the questions and answers concern the issues omitted earlier.

### 3.3. Comparison of the subject of 'Question Banks' and content extracted using the GOOGLE web search engine in the field of economic issues

In order to try to determine the relevance of the issues raised by Władysław Jachniak in the 'Question Banks', the authors of the study focused on comparing the subject of this text with the current issues of economics on the basis of determining the frequency of occurrence of concepts raised in 'Question Banks' in the database of scientific articles and determining the frequency of occurrence of concepts raised in 'Question Banks' in the Internet search engine. The research was executed on November 11, 2017. The authors of the study identified the most frequently discussed issues on the basis of a critical text analysis. Subsequently, these issues were examined. Table 3 presents selected concepts from 'Question Banks' related to topics of Polish scientific articles published in the last 5 years and issues searched in the search engine over the last year.

Concept from 'Question Banks' (here: translated into English)	Number of speeches in the UW academic database	The number of instances in the GOOGLE web search database
Investments	6958	122000
Foreign trade	626	93800
Depreciation	425	115000
Research and Development facilities	56	10 ('Research and Development Department' - 837)
Demand analysis	45	313
Social Fund	31	8000
The wage fund	10	621
Analysis of supply	7	61
Inventory management	7	235
Economic progress	6	128
The role of prices	5	460
Price regulation	2	53
Rotating loans	2	2350 (this may be due to popularity in the world of small entrepreneurship)
Financing of current assets	0	5
Currency exchange	0	0

Table 2: A comparative analysis of the concepts from Władysław Jachniak's 'Question Banks' with reference to search results of analogical concepts in the UW scientific database and the GOOGLE internet search database (<http://www.buw.uw.edu.pl/zasoby-online/bazy-online/>, retrieved 13/11/2017 and <http://www.google.pl>, retrieved 13/11/2017)



Comparison of the frequency of specific concepts shown in Table 2 showed that many of the concepts discussed by Władysław Jachniak could be successfully used to describe current economic problems. Economists use the terms 'Investments', 'Foreign trade' or 'Depreciation' on a daily basis. This was reflected in the popularity of the above-mentioned concepts in current scientific articles as well as in the results of internet searches. As it was indicated in Table 2, the relatively high level of the occurrence frequency of individual concepts in the database of scientific articles of the University of Warsaw coincided with a high level in the GOOGLE internet search database. An analytical look at the timeliness of 'Question Banks' does not bring definite results. Inference based on a particular sample admittedly confirms that concepts used by Władysław Jachniak are still recognized and sometimes used relatively often, however, can not prove the validity of the whole material.

#### **4. THE PROBLEM OF THE TIMELINESS OF TOOLS SUCH AS 'QUESTION BANKS' IN THE MODERN TRAINING OF MANAGERS**

The intention of the authors of this study was to carry out an analysis aiming to estimate the timeliness of Władysław Jachniak's 'Question Banks' in the context of their suitability for financial education today. Władysław Jachniak, as it was mentioned, conducted numerous trainings of managerial staff in WOGs (Great Economic Organizations), mainly on economic and financial management in contemporary economic conditions. 'Question Banks' were his training tool. When attempting to determine the relevance of this material, it is also necessary to analyze the validity of the form of employee training using such a tool. Individual topics are described in detail by Władysław Jachniak, with references to normative acts. This may be surprising. Currently, managers are dealing with issues in a generalized way, without going into details. However, managers need tools to optimize cooperation with their team. Such tools in present times are coaching and mentoring.

##### **4.1. Outline of the issues of modern coaching and mentoring**

For the purposes of this article, we assume that coaching is a comprehensive relationship between a coach and a person undergoing coaching, both on a conscious and non-conscious level (Cushion, C. J et al., 2003). Gould (1997) adds that it allows managers to be prepared especially for unpredictable events that ordinary skills training could not provide. Anderson, Krajewski, Goffin and Jackson (2008) on the basis of literature review, but also as a result of interviews with managers, define coaching as one of the 25 attributes attributed to leaders. Mentoring is a completely different approach to personality formation. Although the term 'mentor' is still strongly associated with the world of education (Martin, D., 1997), Holmes, J. (2005) describes this phenomenon as a dialogue aimed at providing support and teaching to a subordinate whose goal is to better shape his career at the same time, while maintaining the organization's goals. The following is an analysis of whether and to what extent these tools can be visualized in the perspective of various approaches to human behaviour in the organization.

##### *4.1.1. Psychological perspective*

It can not be denied that tools aimed at personal development have their base in psychology. As a field, it penetrates almost all other disciplines, but focuses on studying the behavior and mental processes of people (Klincewicz et al., 2016). Psychology examines a person in the organization in terms of his motivations, beliefs and values. It is important to distinguish whether a given action has the task of shaping a leader or leadership: each of these processes is assigned different practices (Day, 2000). Properly used mentoring is an effective, mobilizing support for people who are forced to perform new or until now unrelated duties (Jackson, D., 2009) which enriches the individual's skills. The relationship between two entities: a mentor and his mentoree is diverse. Research shows that mentors focus more on the development of

skills related to shaping a career, while their mentorees appreciate the most social skills they acquire in the cooperation process (Young, A. M., and Perrewé, P. L., 2000). Gender and differences in the functioning of men and women are also the subject of innumerable psychological studies. The same applies to employees. Coaching and mentoring is important especially for women who want to reach high levels in organizations as an element supporting and helping to overcome negative gender stereotypes in business (O'Neil, D.A. and Bilimoria, D. 2005).

#### *4.1.2. Theories of organizational culture*

Solutions such as coaching and mentoring are a model of conduct. Regarding the organizational culture, it should be remembered that their introduction in the organization may require individually calculated time for adaptation. The same applies to innovations in quality management, eg when introducing the six sigma method (Kwak, Y. H., & Anbari, F. T. 2006). One of the unique organizational cultures is a family company. Family relationships between the founders of the company and their successors include an element of natural mentoring. So, are external consultants needed in such a company? This is a subject for discussion, however, as some studies indicate, yes - only in this way can you supplement your 'family' knowledge to effectively create new leaders of the organization (Salvato, C., & Corbetta, G., 2013). Considerations about culture can also be adapted on the market, if many organizations use similar patterns, for example when recruiting new people. Currently, employees of a specific work culture in a specific market reality can already study at university. Driessen E. W. et al. during trainings in portfolio creation in medical schools, in which mentors participated, they proved that mentoring and coaching had a positive effect on formal students' skills (2005). The process of shaping leaders has been formalized in recent years, more and more often it is expected that certificates for assessing the qualifications of potential leaders, especially for work in education (Bush, 2009).

#### *4.1.3. Human Relations*

By characterizing such managerial tools as coaching and mentoring, it is impossible not to refer to the trend in the world of the early 20th century described by Elton Mayo and Mary Parker Follet. Human Relations focuses the attention of the organization's scientists and analysts on the influence of environmental factors in the workplace on employee productivity and team behavior in the organization (Klincewicz et al., 2016). The experiments on the correlation between work factors and productivity, made since 1927 in Hawthorne by Elton Mayo, is one of the first manifestations of interest in employee motivation. Currently, a similar, though more advanced role, is played by coaching and mentoring. However, it can not be said that these are sufficient tools. In the 1990s, mentoring was a factor positively affecting the chances of promotion and the probability of an increase in employee remuneration (Scandura, T. A., 1992). Currently, it can be differently. Eby, L. T. and Lockwood, A. (2005) characterized formal and informal mentoring and their impact on employees' decisions regarding building a professional career. The conclusions suggest that this is more a source of guidance and help in planning activities in the near future, but it is not a key role for the fate of employees (Eby, L. T. and Lockwood, A., 2005). The coaching and mentoring processes themselves should be supervised and adequately supplemented by the organization, as managers tend to limit the critical analysis of their actions (Gray, D. E., 2007). For this purpose, it is worth using the 360° assessment because it effectively eliminates self-assessment errors during leadership courses (Solansky, S. T., 2010). Organizations should have an impact on the training of leaders due to the possibility of mistakes in the individual selection of a development scenario by individuals (Orvis A. K., & Ratwani K. L., 2010). This can be done on the basis of research - in comparison with other activities aimed at increasing job satisfaction, mentoring and support in performing specific

tasks is much more effective than coaching or regular help from colleagues (Harris, J.I., Winskowski, A.M. and Engdahl, B.E., 2007).

#### **4.2. Władysław Jachniak's Question Banks as a potential tool for a coach and mentor**

The authors of this article see analogies in the specifics of coaching and mentoring currently used and the practices that Władysław Jachniak used in his work as an expert training managers. Władysław Jachniak saw managers as mentors, and he himself tried to fulfill this function for people participating in his training. Using undoubted experience in developing his own businesses, he passed on clear business tips to managers with whom he trained. His approach and commitment to the quality of the trainings was also influenced by the personal inclination to a positive assessment of planned changes that were to take place during the Gierek period. The combination of these two aspects resulted in an effective and reliable mentoring approach to the recipients. In conditions of more difficult access to knowledge (imperfection of technology, the conflict of the Polish state with some countries, lack of Internet), detailed knowledge about the functioning of the enterprise could guaranteed effective performance of managerial functions. That is why information presented to managers by Władysław Jachniak was so detailed. Currently, this form of manager education seems to be unjustifiable. For years, the division of employees has been made, among others for those who shape their career in the direction of managers as well as those who shape it in the direction of experts - mainly due to the fact that for a long time, a higher position in the organizational hierarchy does not mean higher earnings, and also because employees increasingly appreciate flexibility of work. According to the latest report of the HAYS consultancy firm, the most job offers can be counted on by specialists in the areas of IT, sales and production and engineering. More and more companies are also deciding to use flexible forms of employment. The importance of contractors is increasing - mainly in the IT and modern technologies industries. Employers emphasize that temporary and contact work guarantees flexibility and implementation of current tasks - especially at the time of increased interest in the company's products or services or during the period of dynamic business growth - while monitoring the level of employment. Temporary employees are increasingly replacing people on long-term redundancies and - what is important for employers - they bring to the companies the competencies needed to complete projects, implement new solutions or relieve existing structures. Increasingly, they also become a response to the difficulties associated with finding suitable candidates for permanent work.

#### **5. CONSLUSION**

Issues raised in Władysław Jachniak's 'Question Banks' are still valid, although some concepts have become obsolete due to changes in the business environment or have been replaced by other concepts. The form of manager training proposed by Władysław Jachniak seems to be unadapted to the current market conditions. As in the 1970s, due to the difficult access to information, legal regulations, market practices, instructions such as 'Question Banks' could have a positive effect on the organization of work, so now managers should not focus on memorizing detailed information which can be found immediately in easily accessible sources. Ochowski (2014) writes straightforwardly that in the culture of the 1960s and 1970s there were both positive and less optimistic portraits of managers - eg an image of the director - a socialist manager, unconventionally managing, which must exceed regulations to pay more people and conflicts with the deputy-servant. In return, they are responsible for coordinating the work of their subordinates in the conditions of ever faster business processes and the turbulent environment of the organization that occurred both in the Gierek period and now - of course in a different form. Other researchers may be offered the development of adaptation of 'Questions Banks' as a tool of financial education in accordance with the current standards of finance and accounting and with the current needs of managers. Analysis of which topics

discussed in 'Question Banks' are still valid and which should be omitted is a necessary modification of these materials. It is also worth considering the idea of confronting case studies of companies from the Gierek period and the years after the political transformation within a specific issue raised by Władysław Jachniak, which was economically valid both in the 1970s and now. This would allow to determine whether the problems with which companies are facing 'then' and 'now' are perhaps not very similar to each other, and organizational forgetfulness caused that they are not permanently resolved in a sustainable manner. According to the authors, many problems that managers are currently struggling to avoid would be taken into account if the experience of their predecessors, even from decades ago, was taken into account.

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## A POLITICAL ECONOMY ANALYSIS OF THE CHINESE SYSTEM OF SOCIALIST MARKET ECONOMY

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### ABSTRACT

*In order to do political economy analysis, one should not only consider purely economic and political factors. Certain other relevant non-economic institutional factors such as history, religion, culture, national ideology, political identity and even climate are of at least equal importance. They contribute to a society's definition of its interests, influence its behavior, and in turn, shape the unique economic pattern of the individual country with the help of those purely economic factors within the country. Those economic factors, such as labor force, natural resources, monetary capital, technological knowledge, etc., alone cannot decide what kind of goal they would pursue in developing their national economy, nor which economic path the country would take. Due to different experiences each country had in its past, they tend to have their own ideals, values, beliefs which would influence the political path they chose for themselves. Chinese economy is a socialist economy in essence, at least according to the Chinese Government and the Communist Party of China. Chinese economy is also, at least partially, a market economy which transformed from planned economy. The feature and characteristics of Chinese economy, i.e., socialist market economy, are deeply influenced by the political factors such as national political science (philosophy ideology), official religion (or the lack of) and historical experience. In order to understand the Chinese economy and its future paths, it is important to study those factors.*

**Keywords:** *Chinese economy, institutions, political economy, socialist market economy*

### 1. INTRODUCTION

According to the contemporary political economic theory of development, when making an inquiry into the nature and causes of success or failure of different nations one could not do it properly without taking into consideration “the sociopolitical nature, the national ideology, and political identity” (Gilpin, 2001, p. 21). All those non-economic institutions would “contribute to a society's definition of its interests and influence its behavior” (Gilpin, 2001, p. 21), and in turn, shape the unique economic pattern. In other words, economic factors, such as labor force, natural resources, monetary capital, technological knowledge, etc., alone cannot decide what kind of object they would pursue in developing their economy, nor which economic path the country would take. Due to different experiences each country had in the history, they tend to have their own ideals, values, beliefs, those non-material thoughts which would influence the political path they chose for themselves. Furthermore, even different political reality has a lot to do with the economic pattern of the country. Thus, to understand the political economy in each country, it is essential for us to do the economic and non-economic analyses on the same time (Gilpin, 2001, p. 4), which means, in addition to consider those economic factors in a great

detail, we must also take a good look at those “other” factors as well, which could “be of equal, and perhaps greater importance” than those economic factors “in determining the character of the global economy”, i.e., “history, political science, and the other social sciences” (Gilpin, 2001, p. 12).

## **2. PHILOSOPHY, ETHOS AND TRADITIONAL VALUES IN CHINA**

### **2.1. Confucianism**

One of the mainstream philosophies which have dominated China for more than two thousand years<sup>1</sup> is Confucianism. Confucianism has influenced the whole Eastern Asia deeply, including China, Japan, Korea, Vietnam, etc., since it was introduced in the “Spring and Autumn Periods of Zhou Dynasty” around 5 Century B.C. by Confucius, a philosopher and educationist<sup>2,3</sup>. Confucius teachings are numerous, not to mention all the later doctrines which developed by other Confucian Scholars (Mencius<sup>4</sup>, Dong Zhongshu<sup>5</sup>, Zhuxi<sup>6</sup>, etc.) in more than 2500 years. Nevertheless, from those six doctrines cited below, we can find out what is the main teaching of Confucianism: Hierarchy should be honored. The ruler should rule the country kindly; and the people should obey those policies. The best way to rule a country is to educate people with moral principle rather than with the stick of law. The ruler can employ a policy directly, without explanation to the people. People should not challenge the government’s deeds if they are not officially in charge of that affair, because they may fail to understand the ruler’s long-term plan; Equality is much more important than wealth and efficiency for maintain a steady country. After the establishment of People’s Republic of China, traditional Confucianism have been criticized severally, especially during the Cultural Revolution<sup>7</sup>. However, respect for the old Confucianism never vanished, and the “Reform and Opening” process which begins at 1978 changed the official attitudes toward it. In order to awake people’s patriotism and nationalism, Chinese government make the Confucianism acceptable.

### **2.2. Other Traditional Thoughts**

Although the Wu Emperor of Han Dynasty admitted Confucianism as the only official ideology in 134 B.C., there still are many other philosophical thoughts which influenced Chinese character. We would list only a few most influential of them and explain it shortly;

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<sup>1</sup> Confucianism been admitted as the only official ideology in 134 B.C., under the ruling of Wu Emperor of Han Dynasty.

<sup>2</sup> Confucianism was established by Confucius (Circa 551-479 B.C.), a philosopher and educationist, in a time which called “Spring and Autumn Periods of Zhou Dynasty” (Circa 770-476 B.C.).

<sup>3</sup> For more details see *Analects of Confucius*;

(1) “..... ‘King should rule the country as a king, his courtier should serve him as a loyal courtier; A father should manage his family as a father, his son should obey him as a good son’.”

(2) He who rule his country with benevolent policy is just like the North Polar Star! Always be there and surrounded by the other stars”.

(3) “...Ruling the country by orders<sup>3</sup> and the law, the people would learn to circumvent them and reduce themselves to cunning villains; ruling the country through (the education of) moral and ritual, people would be righteous subjects...”;

(4) “The people should be led to follow a path of action, rather than made to understand it. ”

(5) “If you are not in charge of a public office, you should not consider what policy should be adopted (in order to carry out its duty).”

(6) “Look at a country or a family, it is not a problem if the commodities are few, but it is dangerous if they are distributed unequally; it is not a problem if all the people are poor, but it dangerous if they are not content with what they had. Because as long as the distribution is equal, they would not complain; as long as all the people live in harmony, they would not feel insufficient; if people are content with what they had, they would not try to overthrow the country or household (for establishing a new one)”

<sup>4</sup> Lived in Warring States Period of Zhou Dynasty, Circa 371- 289 B.C. The one philosopher who was deemed the Second Saint in Confucianism, after the Confucius himself.

<sup>5</sup> Lived in Han Dynasty, circa 179-104 B.C, he suggested the Wu Emperor of Han Dynasty to admit the Confucianism to be the only official political thought.

<sup>6</sup> Lived in Song Dynasty, Circa 1130 -1200 A.D. Famous for his comment on the traditional Confucianism Works.

<sup>7</sup> Happened between 1966 - 1976. A riot initiated by Mao Zedong, Chinaman and other leaders of Chinese Communist Party, which meant to wipe out all the thoughts different from the Communism.

### 2.2.1. Taoism

Taoism is another important philosophy established even before Confucianism. Lao-Tzu (Laozi)<sup>8</sup> wrote a famous but somehow confusing work “Tao Te Ching” and is deemed the Founder of Taoism. Later, he was even deified as a supernatural being, or at least a semi-legendary figure.<sup>9</sup> Taoism was not the “main stream” though of Chinese’ ideology, but it was always present, from Chuang Tzu<sup>10</sup> to Huanglao School of thoughts<sup>11</sup>, then to the Taoism as a religion. Chuang Tzu focused on the spiritual freedom of individual and promoted some kind of moral and philosophical relativism. The Huanglao School of thoughts focused on the political philosophy, suggesting that the ruler should remain neutral in his ruling and allow people to mind their own business, i.e., small government and big society. Taoism as a Religion is a Chinese original religion. Thus, Taoism is the second important philosophy which shaped Chinese character. Chinese still have a longing for nature and dream of a prehistoric Golden Age, kind of utopia. They sometimes wonder if people remained ignorant of science and technology, whether we will be happier today?

### 2.2.2. Legalism (Fajia)

Legalism we mention here is not the concept which most westerners understand as “formalism carried to an extreme; an inclination to exalt the importance of law or formulated rules in any area of action.” (Garner, 2014). It is a political ideal which was popular in the later part of Warring States Period of Zhou Dynasty (Circa 400 -337 B.C.), called Fajia. Some famous legalists include Guan Zhong, Shen Buhai, Shangyang, Shen Dao, and Han Fei. They were focused on the pragmatic questions rather than theoretical considerations. They wanted to know how to rule the country effectively rather than what a perfect government ought to be. Those funders and advocates of Legalism are somehow like Chinese variety of Niccolò Machiavelli, who taught that political issues should be handled efficiently, without the influence of moral consideration.<sup>12</sup>

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<sup>8</sup> Lived in so called “Spring and Autumn Periods of Zhou Dynasty”, Circa 571-471 A.D.

<sup>9</sup> The main thoughts of Taoism can be summed up like this:

- a. People should respect the Nature and the Laws’ of Nature (Tao). Tao told us everything, just like Yin and Yang would be transformed in a long run. Today’s happy is tomorrow’s sorrow, and vice versa.
- b. People should remain ignorant and not try to acquire knowledge and education. Because if you know nothing, you would not want anything that you do not have. Otherwise, you would be greedy and unhappy.
- c. The ruler should keep people from starving, but nothing else, especially never educate them.
- d. Only after the Law of Nature is ignored, the moral and righteous can be created; When wisdom is praised, the fraud happens; and while the country is in riot, the loyal officer would exist.
- e. Thus, if we abandon the wisdom and knowledge, people would benefit from that; If we abandon morality and righteousness, the people would live in harmony; and if we prohibit the technique, there would not be thieves and burglars.
- f. We should refrain from being selfish, never want too much, and abandon knowledge, then everyone would be satisfied and live harmonious in nature. (Lao Tse, 2013)

<sup>10</sup> Lived in the Warring States Period of Zhou Dynasty, Circa 369 – 286 B.C., about the same time as Mencius.

<sup>11</sup> One school of Taoism that was popular in Han Dynasty until Wu Emperor of Han Dynasty admitted the Confucianism as the official political thought.

<sup>12</sup> According to the theories of Legalism:

- a. The ruler, i.e., King, should be the dictator of the country. All the aristocrats, ministers, officers and subjects should obey him unconditionally.
- b. People are born evil, they would do things in response to incentive. Law should be established to regulate them. Reward can guide them to do what the ruler want; and the punishment would scare them away from unwanted behaviour.
- c. Thus, to rule a country effectively, the ruler should focus on making adequate laws, and publicize them. Rule by law is more practicable than rely on moral education and the law should be strict or even cruel to prohibit the people from doing anything wrong.
- d. The power of law should be derived from the ruler, not vice versa. But ruler should rule the country according to the text of law rather than distort it for personal preference.
- e. Law should remain stable, if you change it too often it will do more harm than good. But in ruling the country the ruler should not stick to the tradition, he should be prepared to face the change of situation and willing to evolve.
- f. Wealth and commodity are a good thing. Only when people have enough to eat the moral would be developed. During poverty people may behave as monsters. The country should focus on production and become wealthy.



Confucianism always criticized Legalism because they overlooked the importance of moral education. They also argue it is the equality rather than efficiency that should be pursued, and the country should be ruled by a good ruler according to benevolent consideration rather than stick of law. However, as the name of “Warring States Period of Zhou Dynasty” suggested, there were several principalities fighting against each other for strength and power and their rulers preferred Machiavelli’s style than moral approach. It is the theory which made the Qin Kingdom of Zhou Dynasty more and more powerful and they finally conquered other kingdoms of the Warring States Period of Zhou Dynasty to create the Qin Dynasty. The triumph of Legalism ended after the Qin Dynasty was overthrown by insurrection and finally succeeded by Han Dynasty due to people deemed the law of Qin Dynasty as too cruel to obey. The new ruler of Han Dynasty firstly used the Taoism to pacify the people who suffered long from the cruel law of Qin Dynasty. And then, the Confucianism was admitted as the official political thought. Later on, during the whole feudal monarchy period which ended on 1911 along with the overthrow of Qing Dynasty, Legalism never dominate the political thought again<sup>13</sup>. Nevertheless, the spirit of Legalism was never entirely dead. One proof is that all the feudal dynasties had their own statutes and codes and used law as a useful instrument to regulate the country. After the overthrow of the monarchy of Qing Dynasty in 1911, lots of western political philosophy have been introduced into China, and the western law also was incorporated into Chinese law. The Legalism once more was honored as a good theory after adapted a bit, like the use of a Government concept to replace the king as the ruler. During the Cultural Revolution, Chairman Mao Zedong and other higher leaders in Chinese Communist Party prefer some aspects of Legalism to Confucianism, therefore it unofficially become popular again.<sup>14</sup> Nevertheless, “One particular problem in this respect relates to the legal framework. While civil and political liberties can be curtailed, once you grant property rights certain liberalizing consequences inevitably follow, as any 18th century political economist will tell you. Thus, the Communist Party contractor or buyer and seller of property cannot be above the law. ... An independent legal profession needs further freedoms of speech and association and so on. It is this compulsion to establish a rule of law which will be crucial for China.” (Desai, 2003).

### 2.2.3. Mohism

Mohism established by Mo-Tzu<sup>15</sup> in the Warring States Period of Zhou Dynasty. It is quite different from other philosophies in China, for it advocates some kind of universal love, value people according to their ability rather than social class and has a faith in free will of people. It is also famous for its emphasis on logical reasoning and the use of empirical evidence to verify their theory. In fact, Mohism is even famous for its scientific methods and findings<sup>16</sup>.<sup>17</sup> Mohism

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g. Aristocracy is not merely decided by blood. Common people would become a noble if they carried the military service extraordinarily. (Chinese Text Project-Legalism)

<sup>13</sup> Generally, except for the first feudal monarchy dynasty, i.e., Qin Dynasty, all the other feudal monarchy dynasties admitted Confucianism as their official political thought.

<sup>14</sup> Yu Keping “was one of the first Chinese scholars to elucidate the difference between rule *of* law (法治) and rule *by* law (法制), which have the same Chinese pronunciation but are different characters and distinct concepts. “Rule by law” means that the party is above the law, while “rule of law” means that the party should be held accountable under the constitution. Yu Keping favours the establishment of rule of law. Of course, that battle has not been resolved in China yet. Some days leaders say there should be rule of law but other days they say the party should be above the constitution. This ambiguity at the official level summarizes the current status of legal development in China.” (Cheng, 2016)

<sup>15</sup> Lived in Warring States Period of Zhou Dynasty, Circa 470 – 391 B.C.

<sup>16</sup> Mo-Tzu himself was a famous scientist, with important finding in geometry, algebra, mechanics and optics.

<sup>17</sup> Some important teachings of Mohism include:

- a. People should not limit their love to their relatives and neighbours, all the mankind should be loved as well.
- b. Peace is valuable, war should be avoided as long as possible.
- c. People should be valued according to their ability rather than their aristocratic status. The ruler should be supported only if he has the ability, and he should appoint other able people as his officers.
- d. “Heaven” has will and it loves people. Ruler should respect “Heaven” and rule the people kindly. If ruler violates the

was once popular in China, before Confucianism was admitted as the official political thought. Later as Confucianism dominated the Chinese philosophy, Mohism gradually lost its influence. Its decline is quite a tragedy for China, for this theory is the most “modern” and scientific theory which China has ever had. Still, it has some influence on ethos of Chinese people; generally modern China is not a big fan of aggression and conquest, as well as it is aware of the power of science and scientific reasoning, research and development.

#### 2.2.4. *Communism*

China had fundamental belief in collectivism for thousands of years, which has been strengthened by the Marxism dogma that had been introduced into China in 1889. China has only one ruling party, Communist Party of China. Only by sticking to Communist ideology could the Party control the whole country without worrying about any legitimate challenge. The Party, and the Chinese Government would not risk allowing other political philosophy to compete with Communism, especially after the collapse of Soviet Union and the dissolution of former Yugoslavia. Thus, the communist dogma can be found everywhere in China; through all levels of Government, to all the text books from elementary school to the university level. In fact, according to the Constitution, every citizen has a duty to support Communism as well as the Communist Party of China as the only legitimate authority.<sup>18</sup>

### 2.3. Historic and religious influences

China is not a religious country. China had no official religion during the most of its history. On the contrary, it was a secular state. Occasionally some emperors preferred a specific religion and claimed it as an official religion, but after their death, that official status was soon lost. Currently, atheism is part of Chinese education. Freedom of religion is established by the Constitution, but nonetheless, few Chinese are interested in religion at all. Although Chinese are not religious, some of them are superstitious, especially those with poor education. It means that they do not have clear religious beliefs, but they would go to various temples and “bribe” the god(s) to be given some benefit in this world, and they are willing to believe in any god of any religion if they can do this. They are highly practical. In the ancient time, China was one of the cradles of civilization. “The outward radiance of Chinese culture throughout East Asia led the American political scientist Lucian Pye to comment famously that, in the modern age, China remains a “civilization pretending to be a nation-state.” (Kissinger, 2012, p.11) Paper making, gunpowder, typography and compass are four famous invention among others which has been invented in China. In the Tang Dynasty Chinese culture spread over the whole East Asia area; and later in Song Dynasty, China was one of the richest countries in the world. “While other countries were named after ethnic groups or geographical landmarks, China called itself *zhongguo*—the “Middle Kingdom” or the “Central Country.”. (Kissinger, 2012, p.3) Unfortunately, China lost its advantage gradually. In order to remain powerful, emperors of China always preferred agriculture to commerce. During the Ming Dynasty and Qing Dynasty, while all the western countries benefited from the “age of discovery”, Chinese emperors chose to issue bans on maritime trade for fear of instability caused by the intercourse with foreigners. These policies caused China to become a powerless and undeveloped country. Nevertheless,

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will of Heaven he will be punished by it, and if he obeys the will of Heaven he will be prosperous.

- e. Destiny or fate does not exist, people’s behaviour decides their own future.
- f. Thrifty is a virtue; the ruler should not spend money on luxury. Consumption should be balanced with productivity. (Chinese Text Project-Mozi)

<sup>18</sup> The lessons Chinese learned from Communism generally can be summed up as:

- a. Equality is much more important than efficiency.
- b. Capitalism and almost all the capitalists are evil, at best a “necessary evil” which has to be constrained tightly.
- c. Government should control most parts of public affairs include economy. Citizens should obey government and support every decision it made.
- d. Welfare is part of Government’s mission. See Constitution of the People’s Republic of China (2018 Amendment)

China was the world's largest economy in 1820 – and is the second largest economy today. During the Qing dynasty China, held the largest share of global GDP. (Eckart, 2016). From 1840 to 1945 China has been invaded by almost all more developed countries, from England to Japan, i.e., the opium war. Later on, the Eight Nation Alliance<sup>19</sup> even conquered Beijing in 1900 and in 1931 Japan invaded the Northeast of China. The establishment of People's Republic of China ended those humiliations. However, as a communist country, China was closed to western world during the cold war. Only after the U.S. president Nixon's visit to China in 1972 China started to open gradually.<sup>20</sup> All that past glory and humiliation produced complicated feelings toward itself and foreigners. Generally, Chinese do not believe there is justice and goodness in the international politics and diplomacy, rather they deem all the international affairs are decided by the state power. On the same time, China do not want to interfere into other nation's domestic affairs and would not want to be interfered as well. China is fond of autonomy<sup>21</sup> and increase of its state power.

### **3. CHINESE SYSTEM OF POLITICAL ECONOMY**

#### **3.1. Chinese socialist market economy system**

The People's Republic of China (PRC) is a communist (or socialist) country since its establishment in 1949. On the earlier stage of PRC history, Chinese government got most property rights formerly owned by private individuals and companies in a few years, partly through “peaceful redemption”, partly through confiscation. In 1956 China had not any “means of production” remained in private hands. Learning from the experience of the Soviet Union, Chinese government industrialized the whole country through the sacrifice of agricultural sector. The heavy industry has been created from ground, and the light industry improved profoundly as well. In fact, shortly before 1957 China successfully produced its own first automobile and first aircraft. During the Cold War, China was one of the few communist countries which refused to be dominated by Soviet Union. Long before the collapse of Soviet Union in 1991 China invited U.S. President Nixon to make a visit in 1972 and established formal diplomatic relationship with U.S. in 1979. Furthermore, China decided to adopt its “Reform and Opening” policy and open its market to western world in 1978. China gradually transformed from a Socialist Planned Economy to a Socialist Market Economy. All these transformations were made in order to develop Chinese economy and catch up with the western countries.<sup>22</sup> According to Chinese government, China would remain a socialist country, despite its adoption of some market economy principles to replace the old planned economy. As mentioned briefly above, China claims that market can be used as a mechanism to organize social production by both socialism and capitalism. Thus, the official name for the current economic system of China is “socialist market economy”, combining the visible hand of government with invisible hand of the market (Jinping, 2014). From the Constitution of the People's Republic of China (articles 1,6,7,8,11 and 15.) we can conclude that the private sector is only a “complement” to the socialist public economy, while the state-owned economy remains its leading force. Consequently, the distribution system is mainly featured according to work rather than according to the capital investment.<sup>23</sup>

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<sup>19</sup> Consisting of Austria-Hungary, Britain, France, Germany, Italy, Japan, Russia and United States.

<sup>20</sup> For more details about that historical visit and its consequences see: Kissinger, 2012.

<sup>21</sup> Which is sometimes erroneously detected as a rejection of so called „global values“. More about such approach see, for example, at Wo-Lap Lam, 2015.

<sup>22</sup> For more details about Chinese development during that time see Kissinger, 2012.

<sup>23</sup> Nevertheless, “The private sector is the main driver of growth and employment. Between 2010 and 2012, private sector firms produced between two-thirds and three-quarters of China's GDP; it also accounts for 90% of China's exports. ...The tertiary sector now makes up the majority of GDP; financial services account for more than 80% of economic profit. The tertiary sector is also the largest source of employment (36.1%), compared to 33% in agriculture and 30.3% in industry, according to the National Bureau of Statistics of China.” (Eckart, 2016)

### 3.2. Chineses Values and Objectives of Economic Development

#### 3.2.1. Political stability, Social Harmony and Stable Economic Growth Rate

The leadership of the Communist Party of China is “the defining father” of socialism with Chinese Characteristics<sup>24</sup>. The Chinese Government is controlled by the Party. Thus, the Party and the Chinese Government have interest in maintaining the political stability in China, i.e., to maintain their own political power. “*The China model* is a phrase widely employed to describe Chinas approach to economic development and governance since the era of reform in the late 1970s.” (Bell, 2015, p. 179)<sup>25</sup> In such a background, nothing would be allowed to detriment the political and economic stability of China. Owing to the legacies from Confucianism, Taoism and Mohism, China also emphasis a lot on social harmony. It is true that sometimes social harmony is an excuse for maintaining political stability, but it also has certain independent value in the eyes of the Government and the people.<sup>26</sup> Considering the fact that a lot of former communist and/or socialist countries collapsed due to backward economy and poor development and growth, China strives to maintain a stable economic growth rate around 6.5% p.a. in the term of GDP growth target.

#### 3.2.2. State Power, Political and Economic Independence

The lesson which China learned from its humiliating modern history, made it believe that it is the state power and military strength which have final say in the international community and diplomatic affairs.<sup>27</sup> Thus, China pays lots of attention in strengthening its state power and national defense. The Chinese diplomatic policy is called “the independent foreign policy of peace”, and Chinese Government promotes one specific principle, i.e., non-interference in other countries’ internal affairs or imposition of one’s own will on others. Thus, political independence is always one of the objectives of Chinese Government. The memory of the Cold War, and the fact that China is among the last few socialist countries in the world that is dominated by the capitalist countries, worked together to make China value its economic autonomy highly. Chinese Government feel uncomfortable over the idea of allowing Chinese economy been heavily dependent on international trade. On the contrary, it should acquire the basic ability to remain self-sufficient in case of any international political turbulence.<sup>28</sup>

#### 3.2.3. Collectivism and Income Distribution Equality

Like other Eastern countries, China value collectivism over individualism. This tendency is strengthened by the dogma of Communism. Thus, individual should sacrifice himself for the common interest of society, when the conflict of interests exists. Confucian teachings such as it is better to have less social wealth and distribute them equally among people, rather than have lot of wealth with unequal distribution are still dominant. It is also being supported by the Communist ideology in favor of distribution according to work rather than distribution

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<sup>24</sup> For more details see: Jinping, 2014.

<sup>25</sup> According to Bell, *the China model* of political governance consists of **democracy at the bottom** (local democracy that is rooted in Zhu Xi Neo Confucian thought as a present day free elected village committees and resident committees, **experimentation between local and central levels of government at the middle** in which central government experiments with various policies at subnational level and then choses the most successful ones as official policies for the whole country and **meritocracy at the top**, which requires that higher Party officials should be elected according their formal education, practical expertise and past performance (Bell, 2015).

<sup>26</sup> “Almost all empires were created by force, but none can be sustained by it. Universal rule, to last, needs to translate force into obligation. Otherwise, the energies of the rulers will be exhausted in maintaining their dominance at the expense of their ability to shape the future, which is the ultimate task of statesmanship. Empires persist if repression gives way to consensus.” (Kissinger, 2012, p. 13)

<sup>27</sup> „China's greatest strategic fear is that an outside power or powers will establish military deployments around China's periphery capable of encroaching on China's territory or meddling in its domestic institutions. When China deemed that it faced such a threat in the past, it went to war rather than risk the outcome of what it saw as gathering trends -- in Korea in 1950, against India in 1962, along the northern border with the Soviet Union in 1969, and against Vietnam in 1979.“ (Kissinger, 2012, p. 540)

<sup>28</sup> Nevertheless, China is World’s second largest provider and the top receiver of foreign direct investments. (Eckert, 2016)

according to the contribution according to capital investment. When an average Chinese is asked to pick from the two situations; “to have a big cake and distribute it unequally” and “have a small cake and distribute it equally”, majority would be in favor of the latter choice. Income distribution equality also helps to maintain the political stability.

### 3.3. Economic Role of the State

China has been monarchy for at least over 2200 years if calculated from the Shi Emperor of Qin Dynasty (also called “the First Emperor of Qin Dynasty”) that took the throne of the newly unified country in 221 B.C. until the abdication of the Xuantong Emperor of Qing Dynasty in 1911. Later on, both the Chungkuo Kuomintang (i.e., the Chinese Nationalist Party), and its successor, the Communist Party of China, ruled the country in some kind of authoritarianism. Thus, Chinese are used to be obey the Government rather than dispute its authority. In addition to that, Confucian belief in a benevolent ruler, along with the communist ideology of the absolute right of people and its representative, i.e., the Communist Party, combined to make people into thinking that the government is generally willing and capable to direct and protect the people in all aspects of their lives. China relays on its industrial policy to encourage the development of IT sector, clean energy, artificial intelligence and etc. as a way of transition to innovation driven growth (Jinping, 2014). Those industrial policies are meant more to guide domestic and foreign private investment into those sectors of strategic significance, rather than as a rigid plan to distort the market information. State-owned enterprises still constitute important part of Chinese economy, especially in some sectors such as public defense, energy industry, financial industry, and steel industry. But those enterprises have gone through the so-called “State-owned enterprise reform”, and their ownership and management has been separated; Government has the ownership and the profit, while management runs the business with high degree of autonomy.<sup>29</sup>

## 4. CONCLUSION

It is notable that in order to develop its economy, China introduced market economy into existing planned economy. In order to solve the theoretical challenge toward the Communist ideology, China called it “socialist market economy” and claimed that market is merely a mechanism to organize production and it can be used by different political systems. Furthermore, China also argues that every country has its own conditions, thus external ideologies should be mixed and adjusted according to its own background and present needs. The features and characteristics of Chinese economy, i.e., socialist market economy, are deeply influenced by its economic as well as non-economic institutions such as national political tradition (philosophy and ideology) and historical experience. In order to understand the Chinese political economy and its future paths, it is important to understand those non-economic institutions if we want to find the answer on the question: Will China be able to sustain present political and economic order? We think that if policy creators deliver on steady economic growth coupled with wide national consensus about key socio-political and economic issues, major political (democratization), economic (demography<sup>30</sup> and growth) and

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<sup>29</sup> According to the Constitution of PRC (articles 14 and 15, 2018 Amendment) in order to fulfil its duty in the economic development through industrial policy, legislation and other legitimate incentives, rather than be left alone to the potential market failure, government should:

- a. Continuously raise labour productivity, improve economic results and develop the productive force;
- b. Properly apportion accumulation and consumption, concern itself with the interests of the collective and individual as well as of the state, and gradually improve the material and cultural life of the people;
- c. Establish and improve the social security system step by step.
- d. Practice socialist market economy, strengthen economic legislation and improve macro-regulation and control and prohibit any unlawful activities which may disturb the social-economic order.

<sup>30</sup> „Propelled by increasing standards of living and longevity combined with the distortions of the one-child policy, China has one of the world’s most rapidly aging populations. The country’s total working-age population is expected to peak in 2015.

institutional (efficiency and the rule of law)<sup>31</sup> challenges can be successfully mitigated. China's philosophical heritage that is still a living part of national ethos can give inspiration how to make that leap forward.

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From this point on, a shrinking number of Chinese citizens aged fifteen to sixty-four need to support an increasingly large elderly population. The demographic shifts will be stark: by 2030, the number of rural workers between the ages of twenty and twenty-nine is estimated to be half its current level. By 2050, one-half of China's population is projected to be forty-five or older, with a full quarter of China's population—roughly equivalent to the entire current population of the United States—sixty-five and older.“ Kissinger, 2012, p. 524-525)

<sup>31</sup> „Institutions are of fundamental, overall and long-lasting importance, and affect the stability of the country. “ (Jinping, 2014, p. 434).

## CONTEMPORARY INNOVATION PROCESSES AND MANAGERIAL ISSUES

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### **ABSTRACT**

*In this paper we analyze the influence of open innovation on the structure and organization of the contemporary innovation process. The paper starts with a literature survey followed by a few empirical cases. On the basis of this, the multi-process model of innovation is presented. Afterwards we identify the main managerial issues or rather challenges to be faced by managers of innovation processes in enterprises.*

**Keywords:** *innovation, innovation process, innovation management*

### **1. INTRODUCTION**

From a historic perspective, ideas for innovations usually appeared and still appear in firms, even in situations when idea generation has relied on results from university research, contract R&D or joint research projects. Contract research run on order fits within the innovation process initiated in the enterprise. Chesbrough (2003) calls such innovation 'internal', and considers it as part of a 'closed' innovation paradigm, whereby "you must 'make' your ideas and monetize them through your own products" (pp. 63 and 155). In contrast, the 'open innovation' paradigm, which has become widely popular nowadays, assumes that "there is a bountiful supply of potentially useful ideas outside the firm, and that the firm should be an active buyer and seller of intellectual property" (ibidem, p. 155). Other features of an 'open innovation' process can be identified from the work of other scholars. For example, Koziol-Nadolna (2013, p. 64) associates open innovation with the fourth generation of R&D management methods that assume, among other things, the division of research tasks among partners located sometimes in various countries. In Kisielnicki's (2013) opinion, according to the systems theory, an R&D project may be called open, i.e., "it is the system getting in interactions with the environment" (p. 30). According to Jasinski (2014), the driving force of technological progress in the contemporary economy is no longer concentrated around a researcher/research team/research organization, but it largely depends on the existence of an innovation ecosystem, which facilitates the communication and networks among innovation stakeholders. Nowadays, no company, however large, can continue to survive as a technological island. So, within innovation activities, contemporary entrepreneurs must cooperate with external entities or persons, sometimes by creation a strategic partnership, sometimes even with competitors. It is also important to notice that the firm's orientation towards cooperation – resulting in the openness of innovation activities – has certain consequences for the management of innovation processes which is a subject considered in this paper. In light of the above, the main aim of the paper is to identify new managerial issues or rather challenges faced by the managers of technological innovation. An answer to this question seems important both for theory and for practice.

### **2. TYPES OF THE INNOVATION PROCESS**

The innovation process usually is understood as a put-in-order sequence/set of the actions/operations that lead – shortly speaking – to innovation. This process very often occurs in an organizational form of innovation project. However, there is no single type of the project, so there is no single kind of the process. In practice, different innovation projects result in different innovation processes (Salerno et al, 2015). According to Shenhar (2001), innovation

projects may assume specific process configurations to address specific situations and contingencies. Following Shenhar's (2001) considerations, Salerno et al (2015) tried to find such configurations in order to answer the question: Which innovation processes best fit in various types of projects? During their empirical studies of 132 innovative projects in 72 Brazilian companies, the authors identified eight types of the innovation process different in terms of structure and content. These are (Salerno et al, 2015, p. 63): (1) traditional process: from idea to launch, (2) anticipating sales: the tailor-made approach (open order), (3) anticipating sales form a given client specification (closed order), (4) process started by a call/bid, (5) a process with parallel activities, and three varieties of process with a stoppage: (6) waiting for the market, (7) waiting for the advance of technology and (8) waiting for the market and for the advance of technology. As seen, contemporary innovation processes occurring in firms can be designed in various ways. Keeley et al (2013) also tried to classify innovation processes and types of innovation. For them, innovation is the creation of a viable new offering. This definition seems to be a bit too narrow because a new, innovative manufacturing technology, being a process innovation implemented in a given enterprise, may not be a subject of offer/sales. These authors identify a set of eight – as they call – types of innovation processes that include (Keeley et al, 2013):

- two types of innovation focused on more customer-facing elements of an enterprise and its business system: (1) innovation of the customer experience and (2) innovation of the product idea and concept,
- three types of innovation focused on an enterprise's core product or service, or its collection: (3) innovation of the product functionality, (4) innovation of the design and production process and (5) innovation of the corporate culture, and
- three types of innovation focused on innermost workings of an enterprise and its business system: (6) innovation of the attitude towards venturing, (7) innovation of the network and (8) innovation of the organizational model and structures.

These de facto are types of innovation. However, one may find a set of 'ten types of innovation', such as: the way in which you make money; networks with other to create value; alignment of your talent and assets; signature of superior methods for doing your work; distinguishing features and functionality; complementary products and services; support and enhancements that surround your offerings; how your offerings are delivered to customers and users; representations of your offerings and business; and distinctive interactions you foster (Keeley et al, 2013). In our opinion, these can rather be understood as features of contemporary innovation processes or can be seen as a mixture of types of innovation and innovation processes.

### **3. RECENT INNOVATION PATHWAYS**

In the recent literature, many authors use the concept of pathway in the context of technological innovation. For instance, Geels and Schot (2007) present their typology of socio-technical transition pathways based on the multi-level perspective (Rip and Kemp, 1998). Geels and Schot mean transition as a system change from one socio-technical regime – an extended version of Nelson and Winter's (1982) technological regime – to another. Such transitions take place thanks to technological niches where radical novelties emerge; therefore are called niche-innovations. Socio-technical regimes and technological niches have a character of organizational fields (ibidem, p. 400). The authors distinguish four transition pathways that differ in combination of timing and nature of multi-level interactions: (1) transformation, (2) reconfiguration, (3) technological substitution, and (4) de-alignment and re-alignment (Geels and Schot, 2007, pp. 406-415). Within each pathway, a niche-innovation is a kind of germ. Three years later, an interesting concept was published by Rip et al (2010) who introduce the



notion of distributed innovation. They start with the observation concerning innovation pathways by writing that: ‘one striking feature is the recent shift from the idea of centralized organization of innovation to explicit recognition of the importance of distributed and more diverse innovation, even if that means some loss of control for central actors. An example would be the present interest, within a number of big companies, in open innovation’ (p. 20). Therefore, they call for more attention to distributed innovation in contrast to centralized innovation, where ‘innovation was produced and/or orchestrated by a central (focal) agent, (...) distributed innovation is observed in situations where heterogeneous actors who hold complementary pieces of knowledge interact and form networks of creative communities; they cooperate in quite informal ways and co-construct the technology for a joint use’ (ibidem, pp. 22-23). So, in our opinion, open innovation and distributed innovation may be treated as equivalents. The authors speak about a regime of innovation<sup>1</sup> but in a different sense than Geels and Schot (2007). Rip et al (2010) have identified two specific ways to organize and promote (and to govern) innovation in contemporary society, which they have labeled as (1) the regime of economics of techno-scientific promises and (2) the regime of collective experimentation. They conclude that innovation models are not unique and are constantly reinvented by actors. There is no one single best way/pathway to innovate. But the authors add that a vibrant European knowledge society can be built if there is sufficient attention to collective experimentation (Rip et al, 2010). It is also worth adding here Sterling’s (2014) view on innovation pathways: ‘innovation of all kinds in any given area is not a one-track race to the future. Instead, it is about social choices across a variety of continually branching alternative pathways for change. In this sense, innovation is more like an evolutionary process, than a race. It is as much about exploring a space of different possibilities, as optimizing any one [and] there unfold many radically contrasting alternative pathways for innovation’ (ibidem, p. 52). Sterling adds that a robust knowledge base and rigorous analysis are both necessary to expand on alternative innovation pathways within or across different domains. Critical appraisal of the driving forces behind alternative innovation pathways (not just the claimed aims) can be undertaken with confidence at an early stage of the innovation process, despite the uncertainties (ibidem, p. 54). In concluding, he underlines once more that innovation is not so much about a race to optimize a single pathway, as a collaborative process for exploring diverse alternatives (Sterling, 2014). Of course, the chosen innovation process must be completed afterwards.

#### **4. CASES FROM PRACTICE**

We have been looking for practical examples to check whether the open innovation mechanism rips the innovation process open. Four cases have been identified and analyzed.

##### **4.1. Merck<sup>2</sup>**

Merck is perhaps the leading pharmaceutical firm in the world in terms of doing its own research. Merck has charged its internal scientists with a new task: to create a virtual laboratory in their research area. This means that Merck scientists don’t just create excellent science in their own lab; they rather identify and build connections to excellent science in other labs, wherever these labs may be. In the words of Merck’s head of R&D - ‘Every senior scientist here running a project should think of herself or himself as being in charge of all the research in that field. Not just the 30 people working in our lab but the 3,000 people, say, in the world working in that field’-. This is a good example of the way to join an external, international base of scientific and technological knowledge. Nevertheless, Merck was already well networked into the international research community.

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<sup>1</sup> A regime, here a regime of innovation, contains a model, or paradigm, that is a notion of how things must be done (Rip et al, 2010, p. 21).

<sup>2</sup> Based on Chesbrough (2003).

#### 4.2. Procter and Gamble<sup>3</sup>

At the beginning of the 21st century, Procter and Gamble (P&G) Corporation adopted a new strategy called Connect and Develop. The strategy is directed towards seeking and developing innovation emerging in various places of the world. Within this strategy, P&G cooperates with individuals, industrial enterprises, laboratories, research institutes, universities, financial institutions, clients and suppliers. They belong to the P&G Innovation Network. In this way, the Corporation does not rely only on the innovativeness of own 7,500 R&D workers, but can use ideas of 1.5 million people from outside P&G who joined the Internet Platform Connect and Develop. This has allowed the firm to significantly speed up innovation processes and gain numerous quite new ideas for innovation.

#### 4.3. Nokia<sup>4</sup>

As known, Nokia has recently sold its Cell-phone Division to Microsoft for USD 5.4 bn. Microsoft has bought it together with the whole knowledge hidden in Nokia's patents and know-how. The new President of Nokia now says: - 'We try first of all to develop our own ideas in our labs although we don't hesitate to buy the firms which dispose of the solutions more advanced than those we have. Recently we have bought Mesaplexx – a small Australian enterprise highly advanced in filter technologies needed in basal stations. Mesaplexx's devices – being the result of many-year work – are a few times smaller than ours. This new technology, bought together with the firm, will allow us to design smaller and more effective energetic basal stations. (...) We have also bought two enterprises dealing with data analyses. Their technologies will be useful in HERE – our pillar considering maps and navigation. Sometimes we opt for a strategic partnership: in this way, we cooperate with a firm Juniper working together on the solutions regarding services in the cloud' -.

#### 4.4. IBM<sup>5</sup>

In the middle of the first decade of the 21st century, IBM Corporation adopted a strategy of development of the innovation ecosystem based on the open innovation model. According to S. Palmisano, IBM President: 'Innovations are not created through increasing an own R&D budget but via creation of the environment in which they emerge and develop'. As an example we can mention JAVA – a language of programming that has been born in the result of a broad R&D cooperation between IBM and a few international enterprises dealing with the programming. It is worth adding here that IBM has nine main R&D centers of which only four are in the U.S.; the other are located in Sao Paulo (Brazil), Hursley (England), Bangalore (India), Beijing (China) and Yamato (Japan). The confirmation of the fact that IBM is oriented towards scientific and technological cooperation with the foreign environment can be, for example, a number of enterprises dependent on IBM which operate outside the U.S. There were 75 such firms in 2009 (perhaps not all of them conducted research and development). Moreover, the Corporation took over 134 enterprises in the years 1998-2009 following such criteria as: (1) patents and trademarks, (2) R&D projects in progress, and (3) complete technologies. In other words, it was the orientation towards capturing an external scientific and technological knowledge. As regards the second criterion, we may assume that those processes/projects were/are continued in IBM.

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<sup>3</sup> Based on Huston and Sakkab (2006).

<sup>4</sup> Fragments of the interview with R. Suri, President of Nokia ('Polityka' weekly, No 30/2014).

<sup>5</sup> Based on T. Sierotowicz's PhD elaborate, Jagiellonian University, Krakow, 2011. Also Chesbrough (2003) treats IBM as a paragon to be followed by other corporations.

#### 4.5. Summary

The analyzed cases deliver proofs that, in certain situations, open innovation causes that a contemporary innovation process does not constitute a pithy whole any more. The described enterprises have applied various methods or forms of their participation in the open inbound-innovation mechanism. Each of the analyzed firms decided to join the innovation processes in progress somewhere in the world and to use the knowledge that circulates in global networks. These enterprises follow the principle: ‘We must gain external, someone else’s knowledge as much as possible’ especially because there is ‘a bountiful knowledge landscape’ (Chesbrough, 2003, p. 53). Afterwards, the firms incorporate the obtained knowledge into their innovation processes/projects ‘at home.’ This means that the transfer of scientific-technological knowledge has taken place, sometimes through the purchase of another enterprise. The considerations in this section seem to prove that nowadays, the innovation process *de facto* is a combination of dispersed processes, partly independent, very diverse and complicated. This undoubtedly is a new organizational field being a result of reconfiguration of the innovation process but it can’t be treated as a new socio-technical regime. According to Buijs (2003), the process of innovation now is a set of different, parallel, competitive and contradictory processes often taking place at the same time, which creates a bit chaotic composition. In our view, the concept of distributed innovation refers to dispersed processes. So, a contemporary technological innovation is the result not of one but of several processes. However, here we don’t mean the depiction which assumes that innovation is the result of a complex set of processes inside the organization (Doyle and Bridgewater, eds., 1998; Galanakis, 2006; Salerno et al, 2015).

#### 5. THE MULTI-PROCESS MODEL OF INNOVATION

On the basis of the observation that a contemporary technological innovation is – more and more often – a combination of processes (not phases), the multi-process model of innovation has been elaborated (Jasinski, 2014). Its assumptions are as follows:

1. Innovation ‘stands on two pillars’: while one pillar still lies in the R&D sphere, another one already lies in the production sphere, and between the two there is a transfer or flow of scientific and technological knowledge (Jasinski, 2003).
2. Sometimes there is no continuity from R&D to production implementation, for example, when the results of a research project – undertaken by a research organization on its own initiative – go ‘on the shelf’ after being finished. Moreover, not only new (the newest) knowledge is being used in innovation activities but accumulated knowledge is often used too, as in the chain-linked model (Kline and Rosenberg, 1986).
3. Particular partial processes can be and are held at different times and at various places of a national or even of the world economy as a result of ‘the distributed nature of knowledge production’ (Rip et al, 2010) or of ‘the dispersed process of knowledge production’ (Weresa, 2014).
4. We witness the internationalization or rather globalization of innovation processes (by some people called techno-globalism<sup>6</sup>) which causes breaks in the chain of normally existing relations among partial processes.
5. The entities participating in innovation activities are much diversified. These can be production firms, service firms, agricultural farms, scientific organizations, various institutions and also house-holds – the latter as in the model of user-driven innovation (NIC, 2008).
6. Many production enterprises now are parts of more or less formalized networks. A networked character of firms and institutions, and of the cooperation among them, is favorable to atomization of the innovation process. This is consistent with a general

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<sup>6</sup>See, e.g., Edgerton (2007), Montresor (2001), Weresa (2012). However, a globalization of innovation is a broader notion.

observation that today, business is more and more vulnerable to decomposition into independent modules or components that are able to merge in various configurations (Veryard, 2000).

7. Certain activities which can be parts/fragments of the innovation process take place in network, that is, somewhere in the world. A new knowledge as the result of collective thinking arises in network, especially on Internet platforms. Here we mean not only crowd-sourcing as a tool of knowledge exchange. In the case of new ICT products, practically the whole innovation process – except for R&D – can be conducted via network (e.g., Linux).
8. The innovation process more and more often is not a continuous, closed and coherent process with an easy-to-identify beginning and end. For example, in the case of open innovation it is hard to determine where and when this process has started. Sometimes it may not finish with commercialization.

As seen, it is even difficult to speak here about a ‘process’ by definition. The multi-process model of innovation, where the following conventionally named processes can be included, looks as below (Jasinski, 2014):

### **Ideas + R&D + Transfer + Implementation + Commercialization + Diffusion**

Each of the six components creates a new knowledge that has a certain (partial) value. In this way, an innovation value chain arises. We must, however, explain here that:

- These are not phases/stages of the innovation process, but rather processes creating contemporary innovation activities.
- This is a non-linear mechanism: sometimes another sequence of processes may happen. For instance, during research - by coincidence - an idea can appear for the new product, earlier not taken into account.
- Certain processes, e.g., ‘Ideas’ and ‘R&D’ can occur in parallel.
- The actions making up knowledge transfer and innovation diffusion are not typical, indigenous workings being parts of the innovation process but they accompany it.
- In the case of a concrete innovation, not all processes must take place; some of them may not exist.
- Finally, the only process that must take place is a production implementation because it determines whether technological innovation appears or not.

As seen, this model represents a process approach to innovation. In the model, each body participating in a given process may be treated as an intermediate client. This can be, e.g., a research organization, an industrial enterprise implementing a new solution and a firm launching a new product into the marketplace. In turn, a final client here will be a consumer or another customer (enterprise, institution or another organization).

To summarize, this is a simplistic outline of the multi-process model of technological innovation. It needs to be polished up and developed. Especially, inter-relations between particular processes creating the value require further research. Nevertheless, the presented model may be useful in improving the management of contemporary innovation processes.

## **6. MANAGERIAL ISSUES/CHALLENGES**

As mentioned earlier, innovation nowadays is more and more often not the result of one single innovation process/project, but of a set of partly independent processes/projects. This fact entails certain implications for practice, especially new challenges to be faced by the managers of innovative activities in industrial enterprises. In this section, we focus only on some managerial issues or rather challenges in the context of the multi-process model.

There are at least two major dimensions/perspectives that can be taken into account here: (1) an innovation type from the point of view of its novelty level: radical or incremental and (2) a firm size: small & medium-sized enterprises (SMEs) or big & giant enterprises (BGEs). The main difference between the two types of the change is that – in opposite to an incremental innovation – a radical one<sup>7</sup> requires a new business model (Christensen, 1997; Hobcraft, 2016; Satel, 2016; Tidd and Bessant, 2009). This is a big challenge for company managers. While the main difference between the two types of firms is that – in contrast to BGEs – small and medium-sized enterprises usually do not possess in-house R&D competences or infrastructure. The considerations below mainly refer to big and giant enterprises. A starting point of all decisions and actions in innovation management should be a permanent, attentive observation of what happens in a given field (market, sector) in the world and in forecasting what may happen in the future. In open innovation, the issue of choice appears when a firm is starting to look for appropriate external knowledge. This is a very responsible task because, according to Sterling (2014), the chosen pathways can quickly become effectively irreversible. First of all, a decentralization of the innovation management is needed (Rip et al, 2010). Here we mean a delegation of duties and entitlements to the subjects/entities running particular activities, together with a relevant allocation of resources among various processes. Let's notice that for Christensen (1997), the allocation of resources and the management of innovation are both sides of the same coin. The range of those subjects' independence in this area should be relatively broad because their responsibility is relatively big. For example, it may sometimes happen that someone else will be responsible for gathering and consulting ideas from Internet; someone else – for the R&D work being conducted in the country or abroad; someone else – for production implementation of a new product at the place of the firm's residence; and someone else – for the product launching into the marketplace. In connection with this, the highest rank should receive the supervision over those persons or activities, which is impossible without an effective, many-sided communication among them, especially via social media. Network relations make the coordination of innovative activities easier. According to Brzezinski (2015), the main coordinator or integrator of 'the innovation network' should be an innovating firm. For instance, a cluster of enterprises may create such network with one of them being the integrator. The concept of creative factory by Galanakis (2006) may be helpful here. Innovation is by nature a risky activity. Therefore, Salerno et al (2015) find that innovation management is closely linked to uncertainty management. Due to the fact that additional uncertainty arises as the result of a dispersion of this activity,<sup>8</sup> an ability to undertake and manage a risk becomes necessary. Contemporary innovation needs brave leaders. A relevant innovation leader is permanently needed to ensure an effective management of the mentioned team game. Bialon and Werner (2014), Brzezinski (2015) and Deschamps (2008) also think that innovation needs a strategic leader. According to Dodgson, Gann and Philips, eds. (2014), innovation more and more often will be an effect of the firm's collaboration with the environment, and its managers will have to accept that they more seldom will assume full control over these processes in their enterprises. According to Deschamps (2008), innovation requires a special type of leadership. Not all leaders are fit to be innovation leaders. There exists no single pattern of leadership in innovation. The author divides the innovation process into two big conventional stages. The chairmanship in the first phase – from idea to conception, where creativity and the ability to take risks count – demands fundamentally different personality predispositions and another style of leadership than carrying out such functions in the second phase – from conception to product launching into the marketplace, where discipline and acting speed count (ibidem, p. 9). Finally, he concludes that various innovation strategies require different types and styles of leadership. Due to the mentioned atomization of innovative activities, nowadays, innovation

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<sup>7</sup>Or disruptive innovation (Christensen, 1997) or niche innovation (Geels and Schot, 2007).

<sup>8</sup>As remember, Rip *et al* (2010) warn that distributed innovation means some loss of control for central actors.

can't emerge without a skillful, many-sided science-technological cooperation among various entities. Trust in partners is the basis of such collaboration. For instance, trust is needed because there appears the issue of 'collective property rights' (Rip et al, 2010) as a key challenge for managers. Trust increases through experience with interactions among firms and other actors (Granovetter, 1985). Therefore, an effective management of this cooperation is so important but very difficult due to a big dynamics of the present inter-organization relationships (Luoma, Paasi, Valkokari, 2010). Here the managers can make use of achievements in the theory of management of inter-organizational relations (see, e.g., Ahuja, Soda, Zaheer, 2012; Inkpen, 2000; Lorenzoni and Lipparini, 1999). A key point here is the issue of intellectual property rights (IPRs). Such a big importance of IPRs for managers within open innovation, results from two reasons: Firstly, there is a need for an effective protection of IPRs being the firm's important asset, especially because sometimes they are made available free of charge, for instance, in the ICT sector (Szpringer, 2017). Secondly, according to the recent studies, IPRs are used as a coordination mechanism in the firm's cooperation with other entities during innovation activities (Hurmelinna-Laukkanen, 2011; Ritala et al, 2015). One of characteristic features of innovation activities is the fact that research project management contains a set of actions which – according to Kisielnicki (2013) – are not fully defined and sometimes only sketched out. Consequently, such methods as the management of competences, talents and knowledge come to the fore in the coordination of research projects. If needed, there is a rich world's literature on project management to be used here. The open innovation model is based on knowledge flows between the firm and other actors on the innovation scene.<sup>9</sup> A modern innovating enterprise should make use of so-called network reserves or network capital (Gulati, 2007; Huggins, 2010). These resources can be defined as interactions and relations – being used by organizations to obtain knowledge – that can exist in formal or informal knowledge alliances favorable to innovation (Knoben and Oerlemans, 2006). These alliances are one of many forms of scientific-technological cooperation, and the knowledge emerges in the course of various processes creating the innovating activity. On the basis of empirical research among 83 British firms, Huggins and Johnston (2012) showed that access to network reserves in the form of knowledge alliances is positively correlated with their innovation performance. So, network creates a kind of innovative environment containing certain knowledge resources that arise during partial innovation processes. Afterwards, this knowledge is 'thrown' into network. Such behavior is favorable to the innovation openness but, at the same time, it causes the mentioned atomization of the innovative activity into partial processes. Open innovation, in turn, is accompanied by such modern ways of supporting action as outsourcing, open source, crowd-sourcing and crowd-funding. They may be used by managers to support relevant innovative activities both in BGEs and SMEs but rather in smaller firms.

## 7. CONCLUSIONS

Traditionally, innovation is usually seen as a process consisting of several phases/stages from the view-point of the firm. However, there exist substantial differences between the phases, various process configurations, various types of the innovation process and various innovation pathways. Moreover, innovation nowadays becomes open, distributed and more diverse. The innovation process de facto is a combination of dispersed processes, partly independent, very diverse and complicated. In our view, the concept of distributed innovation refers to the notion of such set of processes. However, we don't mean that innovation is the result of a complex set of activities inside the organization because innovative processes today go far beyond the firm. Innovation, as a fragmented and dispersed combination of processes, brings many troubles for managers in industrial enterprises.

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<sup>9</sup> The concept of the innovation scene, based on the Triple Helix model by Etzkowitz and Leydesdorff (1995), was presented in Jasinski (2003).

The concept of the multi-process model of innovation may be helpful for them to face new challenges caused by those troubles. This is a kind of school of thought that should, as soon as possible, dominate over the actions being undertaken by the managers engaged in the innovative activity. Therefore, the multi-process model presented in this article needs to be further polished up and developed. Notably, inter-relations between particular processes creating the value require further research.

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## ROMANIAN WINES - PAST, PRESENT, FUTURE

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### ABSTRACT

*The vine and the wine are dated to the territory of the present country called Romania for 6,000 years ago. Famous historians of antiquity have written about these lands and about the treasures which they could meet here, including wine. A king on these lands, Burebista, tried to destroy the vine at some point but he failed. An insight into history was made in order to discover the beginnings of wines in the space between the Carpathian Mountains, the Black Sea and the Danube. Studies have been carried out to show the current state of harvesting, grape processing and the level of wine production in Romania comparing with other countries successful in this wonderful field, both in Europe and other continents such as Australia or South America. I also presented the wine-growing areas of Romania, the country's great vineyards and some very tasty local wine varieties. Among the conclusions related to wine production are the following: Romania has a glorious past, a present disappointing by the drop of exports (especially due to the lack of coherent legislation in this respect), but the future seems promising if we will follow the examples of the countries who have succeeded in this field such as: France, Italy or Spain from Europe, Chile from South America or South Africa (Continent Africa). This paper will highlight some of the problems faced by the wine producers both at legislative and production level and, at the end of it, there will be some recommendations to help winemakers in Romania.*

**Keywords:** future, past, present, Romania, wine producers

### 1. INTRODUCTION

The wines and vineyards of Romania have been coveted for almost 6,000 years. During ancient times, Romania, known as Dacia, was constantly being invaded. King Burebista (1st Century BC) even ordered all the country's vineyards be destroyed because he thought this would stop the invasions which he believed were happening because others wanted the vineyards and wine in the country. But not all of them were destroyed, or they grew back, because in 105-106 AD the Romans invaded again. Roman and Greek historians often mention the great agriculturalists from Dacia, the beautiful vineyards and their delicious wines in their historical records. A Roman coin was found that says Dacia, with a woman and two children on it. One of the children is holding a large amount of grapes. Historians believe the coin was released as a testimony to the rest of the empire of how rich Dacia was in grape cultivation, making the conquest of Dacia a huge victory. Legend also has it that Dionysus, the Greek god of wine, was born in the area of Dobrogea. Many countries have wine regions, but there are few wine producing countries which can say that the entire country is a wine producing region. All 7 of Romania's historical regions produce wine. Many people who dream of owning vineyards and producing wine have been buying up land in Romania because the terroirs are comparable with Italy, Germany and France, but for a fraction of price. In 2009, Romania was the 11th largest wine producer in the world and by 2015 the 6th largest wine producer in Europe, with 4,069 million hectolitres. However only 10% of the wine produced were exported, and in the past 2-3 years even less than 2 percent. Romania also attracts many wine buyers because the prices are very low comparing with the quality of the wines. The main vineyards in Romania:

- Jidvei Winery in Transylvania known for its dry whites

- Segarcea – Crown Estate, southwest of Bucharest. The only producer of Tamaioasa Roza (rose wine)
- Murfatlar Vineyard on the coast of the Black Sea known for their Chardonnay and their fortified wine selection Lacrima Lui Ovidiu.
- Cotnari Vineyard dates back seven centuries to the time of Stephen the Great (1457-1504). World famous for sweet white wines.
- Senator Wines grows in 4 regions and is the only company that produces Babeasca Gri, a rare and ancient varietal.



Figure 1. Romanian Wine Regions  
Source: [www.google.ro/images](http://www.google.ro/images)

The main local wines in Romania:

- Fetească Albă – Semi-dry white wine, well balanced, with a distinct aroma reminiscent of the first flowering of the vineyard.
- Tămâioasă Romanească – A naturally sweet or semi-sweet white wine with subtle honey and basil aromas, an exquisite amber colour and a persistent rich taste. Its sweet taste may also suggest a blend of rose petals and wild berries.
- Grasă de Cotnari – A naturally sweet white wine with a delicate fragrance and a smooth interplay of fruitiness and acidity.
- Galbenă de Odobesti – A light white wine with a delicate bouquet that preserves the fragrance of the mellow grape.
- Fetească Neagră – Semi-sweet, medium bodied, light red wine, with original aromas.
- Băbească Neagră – Traditional full bodied red wine with a delicate bouquet and a slight taste of clove.

- Cadarca – this red, native variety, displaying a ruby-red colour with a stinging taste of fresh clove, was the wine of the imperial court of Vienna during the reign of Emperor Franz Josef, in the 18th century.

## 2. MATERIALS AND METHODS

This work represents the result of a study carried for the duration of 3 years (between 2015 and 2018) where materials such as historical references (since ancient times) linked to the vine and the wines from these lands, data taken from information sources (such as National Institute of Statistics) and data provided by current wine producers and taken over, mostly, directly from vineyards being helped by employees, managers or even patrons, were used. Among the methods used, in addition to general questions, I have also written some questionnaires applied in the field. The results obtained give us hope for a better future of Romanian wines.

## 3. RESULTS AND DISCUSSIONS

In Romania, most wine producers do not have legal personality. This is mainly due to the fact that farmers produce wine only for personal needs without marketing it. In these areas are the majority of vineyards in our country. They are also among the most important as the surface, the age, the quality of the wines.

### 3.1. Agricultural holdings without legal personality

These are highlighted in Table 1 where permanent crops have a significant share in the South Muntenia region with 46,193 holdings. The next places are the South-East (Dobrogea – 38,078 units) and the South-West (Oltenia – 26,225). The same regions are found in the first 3 places in the vineyard specialization only that the first two ranked ones are reversed:

1. South-East – 34,715 holdings
2. South Muntenia – 16,750 holdings
3. South-West – 15,528 holdings
4. North-East – 10,888 holdings.

*Table 1. Agricultural holdings without legal personality by macroregions and development regions, by type of agricultural activity*

Type of agricultural activity (typology of agricultural holdings)	MACROREGION 1		MACROREGION 2		MACROREGION 3		MACROREGION 4	
	NORTH - WEST	CENTER	NORTH - EAST	SOUTH - EAST	BUCHAREST - ILFOV	SOUTH MUNTENIA	SOUTH - WEST OLTENIA	WEST
Specialist permanent crops	17,715	3,974	14,773	38,078	2,053	46,193	26,225	3,639
Specialist vineyards	3,977	1,703	10,888	34,715	1,693	16,750	15,528	429
Specialist quality wine	409	104	640	6,164	29	850	788	240
Specialist other than quality wine	3,447	1,595	9,975	26,096	1,569	15,556	14,685	169
Specialist table grapes	97	6	117	958	97	179	49	19
Other vineyards	27	-	159	1,500	-	168	9	4

Source: [www.oniv.ro](http://www.oniv.ro)

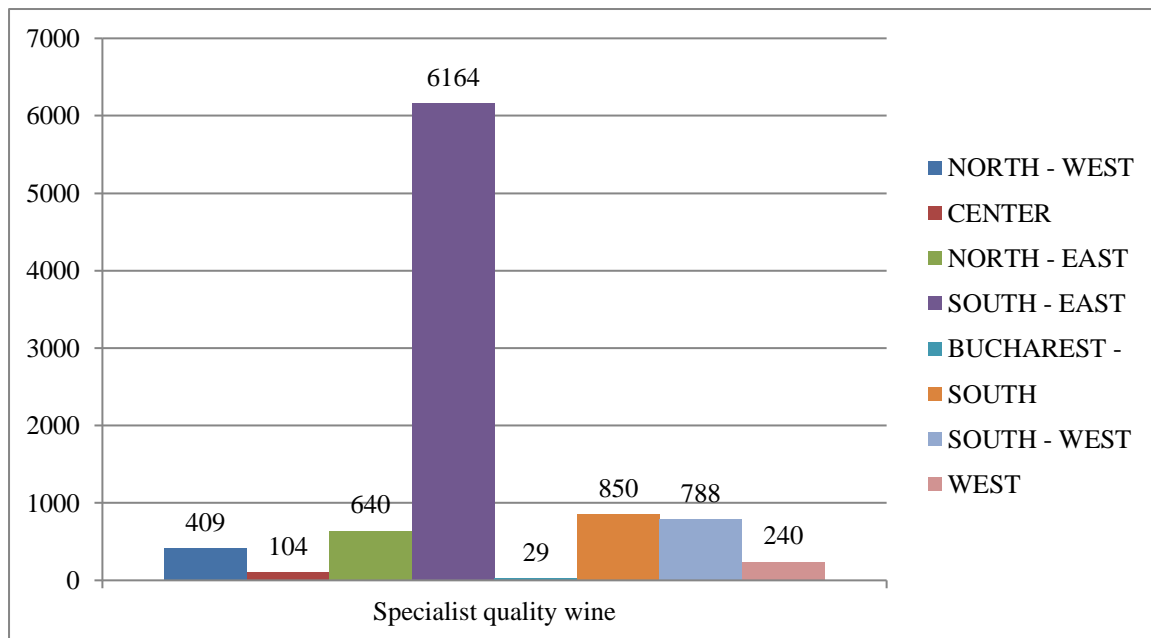


Figure 2. Specialist quality wine – units without legal personality

In Figure 2 it can be seen that the South-East Region dominates authoritatively at specialized units on wine quality (6,164). This is followed at a great distance by South Muntenia (850) and South-West region (788 holdings). The South-East Region is ranked first also the next: specialist other than quality wine – 26,096 units, specialist table grapes – 958 units and other vineyards – 1,500 units.

### 3.2. Agricultural holdings with legal personality

If we refer to units with legal personality, they are much less, but they are much larger than the other type of units.

Table 2. Agricultural holdings with legal personality, by macroregions and development regions, by type of agricultural activity

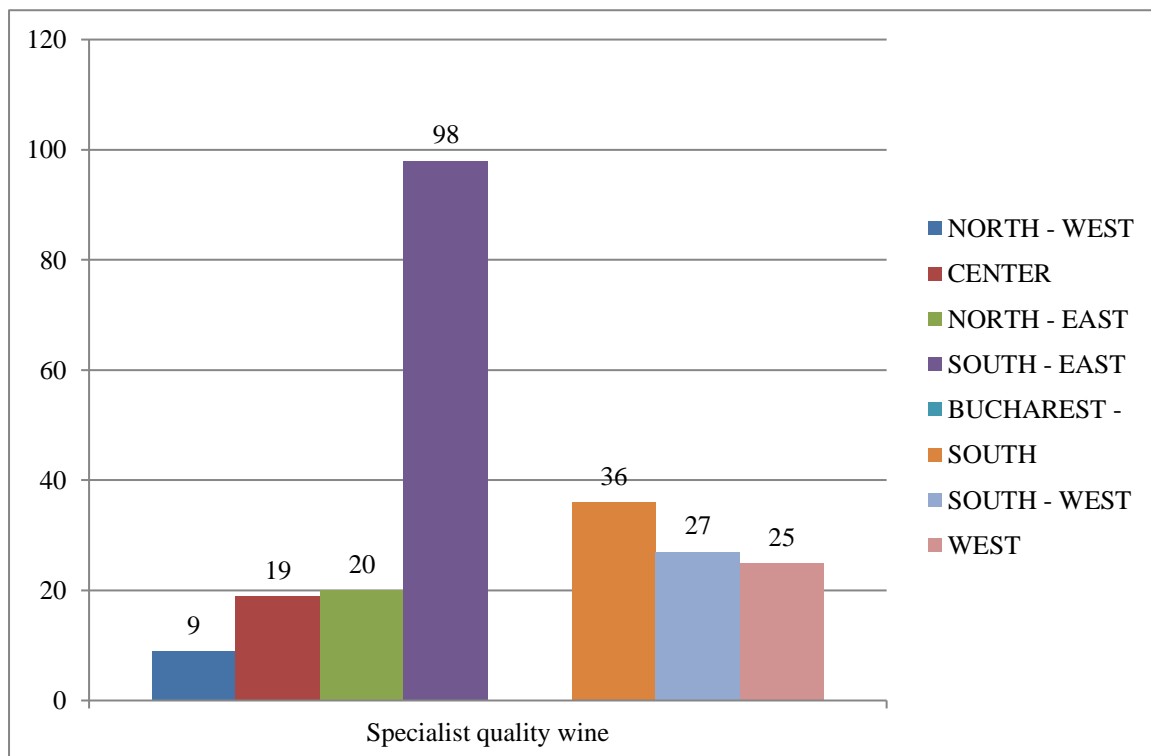
Type of agricultural activity	MACROREGION 1		MACROREGION 2		MACROREGION 3		MACROREGION 4	
	NORTH - WEST	CENTER	NORTH - EAST	SOUTH - EAST	BUCHAREST - ILFOV	SOUTH MUNTENIA	SOUTH - WEST OLTENIA	WEST
<b>AGRICULTURAL HOLDINGS WITH LEGAL PERSONALITY</b>								
Specialist Permanent Crops	184	131	233	272	6	225	133	133
Specialist vineyards	14	23	59	186	-	49	44	47
Specialist quality wine	9	19	20	98	-	36	27	25
Specialist other than quality wine	6	5	35	66	-	13	16	12
Specialist table grapes	-	-	5	13	-	-	2	8
Other vineyards	-	-	2	12	-	2	2	5

Source: [www.oniv.ro](http://www.oniv.ro)

Table 2 shows that permanent crops have also a significant share in the South - East region with 272 units. The next two places are the North-East (233 units) and the South Muntenia (225 holdings). The same regions are found in the first 3 places in the vineyard specialization:

1. South-East – 186 holdings
2. North-West – 59 holdings
3. South Muntenia – 49 holdings
4. West – 47 holdings
5. South-West – 44 holdings.

In the South East region, there is the largest vineyard in Romania - Murfatlar, which has over 3,300 hectares.



*Figure 3. Specialist quality wine – units with legal personality*

In Figure number 3 it can be seen that the South-East Region dominates authoritatively at specialized units on wine quality (98). This is followed at a great distance by South Muntenia (36) and South-West region (27 holdings). The South-East Region is ranked first and the next: specialist other than quality wine – 66 units, specialist table grapes – 13 units and other vineyards – 12 units, while some categories are missing in many regions. From the analysis of the two tables above, there is a definite difference between the units without legal personality and those with legal personality, at least in terms of their number.

### **3.3. Agricultural holdings, economic size, utilised agricultural area and average economic size by an agricultural holding and by 1 ha of utilised agricultural area, by type of agricultural activity**

The lands in Romania are very fragmented and unevenly distributed. The same can be said if we relate to vines. The table below shows the number and type of agricultural units in Romania, their economic size (in thousand EUROS), the agricultural area used (in hectares), the average economic size (in EURO) and the economic size per hectare.

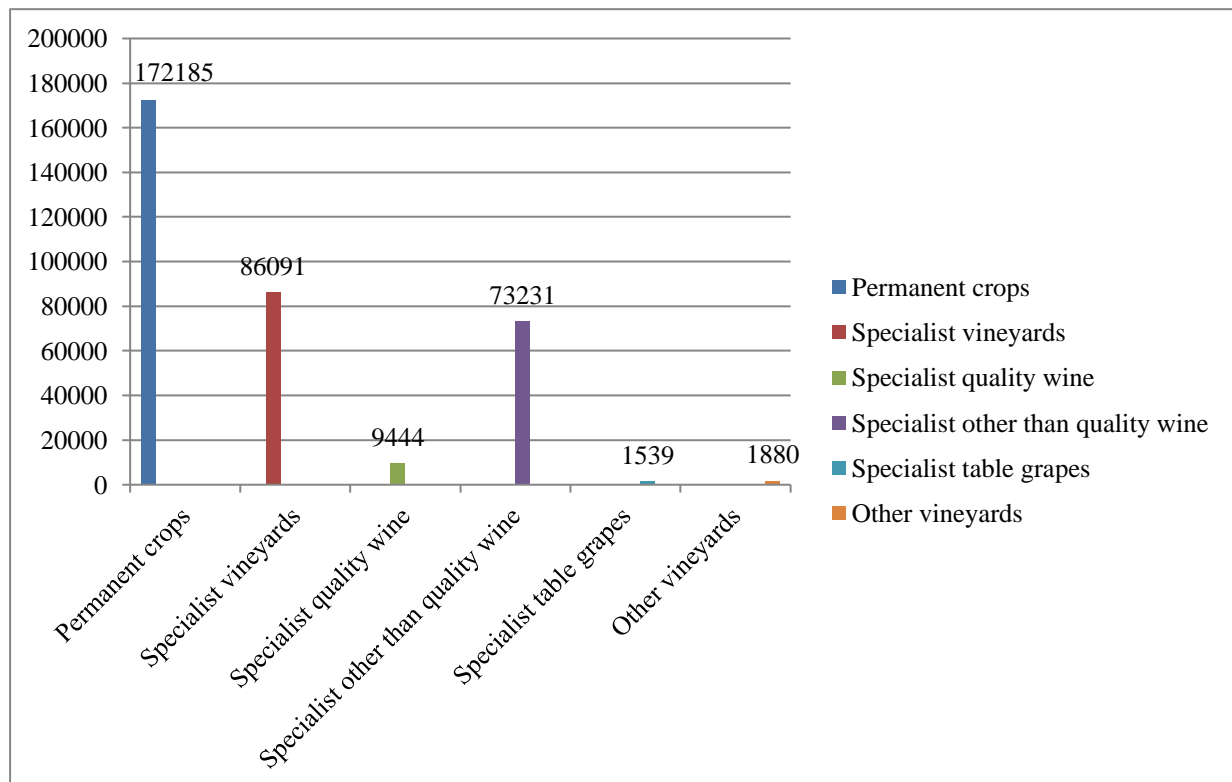
*Table 3. Type of agricultural activity*

<i>Typology of agricultural holdings</i>	<i>TOTAL agricultural holdings (number)</i>	<i>Economic size of agricultural holdings (thousands Euros)</i>	<i>Utilised agricultural area (hectares)</i>	<i>Average economic size by an agricultural holding (thou. Euros)</i>	<i>Economic size by 1 ha of utilised agricultural area (thou. Euros)</i>
<i>Specialist Permanent Crops</i>	<b>172,185</b>	309,996.25	224,971.24	2.02	1.39
<i>Specialist vineyards</i>	<b>86,091</b>	96,592.74	84,240.66	1.13	1.16
<i>Specialist quality wine</i>	<b>9,444</b>	49,552.81	33,268.75	5.26	1.5
<i>Specialist other than quality wine</i>	<b>73,231</b>	33,613.95	39,799.38	0.47	0.85
<i>Specialist table grapes</i>	<b>1,539</b>	2,549.77	2,283.83	1.67	1.13
<i>Other vineyards</i>	<b>1,880</b>	10,876.24	8,888.73	5.80	1.23

Source: [www.oniv.ro](http://www.oniv.ro)

In the table above and the figure below we can see the total number of units and vine producers in Romania in the years 2015-2016. It is also noticed that the most important area is the specialized vineyards (84,240.66 hectares) and the smallest ones, the table grapes growing units (2,283.83 hectares). From the point of view of the average of the economic size by an agricultural holding the first place is *Other vineyards* with 5.8 thousands Euros followed by *Specialist quality wine* (5.26 thou. Euros) and *Specialist Permanent Crops* (2.02 thou. Euros). Economic size by 1 ha of utilised agricultural area:

1. Specialist quality wine – 1,500 Euros
2. Specialist Permanent Crops – 1,390 Euros
3. Other vineyards – 1,230 Euros



*Figure 4. Typology of agricultural holdings*

#### 4. CONCLUSIONS

The average of wine production in Romania is annually about 5 million hectolitres, of which only a third is marketed, the rest being self-consumption. Only 2% represent the export of wine. Among the conclusions of this paper we can highlight:

- the past of the vine in these lands is one that tends to mythology;
- although Romania produces high-quality wines comparable to the ones from the countries with tradition and success in this area around the world (France, Italy, Chile, Australia, South Africa, etc.), poor management, unstable situation at the country's legislative level and others, have hindered the development of wine exports to date and postponed Romania's presence in the top wine countries in the world;
- In the near future, if the signals of the present will come true, Romania will regain its place in the top 10 countries in terms of sales and, especially, wine exports.

In order to increase the profitability of the production units I propose the vineyard tourism. This activity, besides the financial plus that it could obviously bring with the direct sale of the wine from the farm, could produce, this time in an indirect way, beneficial and very pleasant financial effects to the owners of the vineyards.

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## R&D EFFECTIVENESS IN THE PHARMACEUTICAL INDUSTRY

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### ABSTRACT

*One of the challenges for the Big Pharma is finding the golden line in the tradeoff between innovation and pricing. This paper investigates the relationship between R&D expenditures, patents and gross profits, based on US pharmaceutical industry panel data. The initial hypothesis states that there is a positive relationship between the R&D expenditures, patents applied in a current year and the company's profitability measured in terms of gross profits. The study concludes that there is a significant positive relationship between the R&D spending and the number of the applied patents in a current year. However, the relationship between the patents applied and the profitability has proved to be negative. The incline in the total assets and sales volume leads to the increasing profitability, whereas the size of the firm measured by the number of employees has an opposite negative effect. Results are relevant to the ongoing discussions regarding the fairness of pharmaceutical industry pricing, since it provides an evidence on the relationship between R&D expenditures, patents and gross profits.*

**Keywords:** *Big Pharma, patents, profitability, R&D*

### 1. INTRODUCTION

The beginning of the twenty first century could be characterized by double digit growth rates of U.S. pharmaceutical companies, known as “Big Pharma”. Despite substantial investments of Big Pharma into R&D activities, its actual productivity has also seemed to undergo a sizable decline (Madson and Wu, 2016). The main research question of this paper is inspecting the nature of the relationship between R&D expenditures, patents applied in a current year and gross profits of American pharmaceutical firms. It is assumed that R&D expenditures as well as the annual number of applied patents do have a significant positive effect on profitability. To answer the research questions, there has been used the regression analysis along with the empirical evidence from the previous studies. The pharmaceutical industry has been subject to numerous studies that have analyzed various aspects of its performance. This paper uses the number of the patents applied in a current year as a measure of R&D effectiveness. However, Alexander, Flynn and Linkins (1995) suggest to use number of compounds in the firm's R&D pipeline as a measure of R&D effectiveness rather than the patents applied. R&D pipeline refers to all the chemical compounds that have been tested during the full research cycle. Their findings show that incline in R&D expenditures lead to higher productivity in pharmaceutical industry, but only to the certain point where diminishing returns are reached. Therefore, it is stated that larger companies are less productive in terms of R&D efficiency than the smaller ones. The research performed by Lee in 2009 conveniently uses 10 year lagged R&D expenditures as a variable due to the time span needed for the expenses to materialize (Lee, 2009). Lee also states that due to the crucial differences in patents' quality, the number of implied patents is not as relevant as the number of citations per patent, or the number of times a given patent has been referred to in the academic context. Another research conducted by Nord (2011) analyzes 16 U.S. companies over the period between 2004 and 2007 to link R&D investment to market value and the overall firm performance. The findings prove the existence of a significant positive relationship between R&D expenditures, free cash flow and the market

value of the firm. Market share and firm growth rate turned out to be insignificant, whereas risk expressed as a standard deviation of the stock price over three years has a strong negative effect on the value of the company. The valuable contribution to the research on the matter has also been done by Fortune and Shelton (2012). The novelty of the approach was the focus on R&D and intangible assets intensity, rather than simply their nominal value. The number of patents applied as well as R&D expenditures were divided by the total number of employees in the firm. Based on the above-described assessment of the relationship between R&D expenditures, intangible assets and profits, the patents (intangible assets) turned out to be a mediator, as anticipated. Study by Madsen and Wu (2016) puts focus on the ever-decreasing R&D efficiency in the last years. Moreover, it also considers the firms' size expressed as a number of employees, a primary proxy for the comparison. The paper confirms the belief that the structure of the industry is based on the economy of scale and there are numerous barriers to enter. Nevertheless, study shows there can be observed higher R&D productivity in small firms, than the large corporations. Before proceeding further into the analysis of the data, it is crucial to consider one more important factor, namely patent protection. Gawel (2016) advocates the system of patent protection as the key driver of pharmaceutical innovation. According to the research, patents play the role of the “promise” of returns on investment and facilitate knowledge-based fusion, therefore affecting overall economic growth. Gawel describes the reverse effect and causality pointing that R&D incline might be directly caused by increasing profits in the previous years. Factual evidence based on OECD data presented in the article shows that increased number of patents will result in even more R&D spending and, therefore, the prospect for developing new life-saving drugs. The summary of all the above-mentioned studies along with the visual comparison of the samples, methodologies and findings of the researchers can be found in the Table 1 below.

*Table following on the next page*

*Table 1: The summary of the literature used. (based on the examined studies)*

Authors, year	Sample	Methodology	Dependent variable	Independent Variable	Conclusions
<b>Alexander, Flynn and Linkins (1995)</b>	26 international firms; (1987 to 1989)	OLS with fixed effect with application of Kmenta's pooling technique	Global Market Share	a) Number of compounds in the R&D pipeline b) Number of employees	a) evidence of diminishing returns of R&D expenditures b) Firm size has a positive effect on the R&D productivity c) Number of sales employees has a positive effect on the global market share of a firm.
<b>Lee (2009)</b>	794 international firms; (1989 - 2000)	OLS, Tobin's Q estimation	Firm Market Value	Citations per Patent	Citations per patent are a better proxy of R&D effectiveness. (includes pharmaceutical and semiconductor industries).
<b>Nord (2011)</b>	16 American firms (2004-2007)	OLS	Market Value	a)R&D b)Revenue growth c) Free Cash Flow d) Market share e) Risk	All of the dependent variables, except for risk, proved to have a positive effect on market value. b) Risk has a negative impact on the market value.
<b>Fortune and Shelton (2012)</b>	89 international firms (1994-2006)	a) OLS approach for measuring TTP of firms; b) Levinsohn-Petrin technique for omitted variable bias elimination.	Pretax Income	a)R&D Expense b)R&D Intensity c)Intangible Assets d)Intangible Assets Intensity	a) increases in R&D effort burst research effectiveness at an increasing rate. c)effectiveness mediates the relationship between research efforts and firm performance.
<b>Madsen and Wu (2016)</b>	94 international firms (2002-2013)	OLS and Scale Elasticity Estimation	Revenues	a)EBIT; b)Total Assets; c)R&D Expense d)Number of Patents	a)Diseconomy of scale in the innovation b) Small companies have higher R&D productivity
<b>Gawel, 2016</b>	There is no empirical model used in this study. Author evaluates the role of intellectual property rights in the knowledge based economies.				There is a proven decline of pharmaceutical patents individual value. However, author underlines the vital importance of the patents for attracting investments into the industry.

## 2. DATA

As previously stated, the research is aimed at establishing the nature of the relationship between research & development expenditures, patents applied in the current year and gross profits of the companies to be examined. To estimate the relationship between the control variables, a

ten-year time frame has been used. The analysis was based on the data from 50 American pharmaceutical companies over the period of ten years. Nord (2012) suggests using the time period that accounts for the full business cycle including the expansion and the recession. A perfect example of the above-mentioned time span in the recent history would be 2001-2009; nevertheless, it was not possible to obtain all the necessary data without the gaps given the resources of the research. Therefore, the research focuses, instead, on the time period between 1995 and 2005, where the obtained sample is consistent and all the cross unit sections, namely companies, have the necessary variables for the analysis. The data has been extracted from annual reports and financial statements of the examined companies. Cross-section units, the second constituent of the panel data, were taken for the 50 U.S. pharmaceutical companies of various sizes in terms of employee count as well as the annual turnover. The table below aims to present the descriptive statistics of the variables considered in the study.

*Table 2: Descriptive statistics of the main and control variables (own elaboration)*

<i>(all the money values are expressed in the millions of the U.S. Dollars)</i>				
<b>Variable</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Median</b>	<b>Standard Deviation</b>
Gross profits (GP)	-200,7	46 704	20, 2	6585,9
R&D Expenditures (XRD)	0,007	12183	32,7	1211,1
Patents applied in current year (PatentsPP)	0	431	4	66,3
Sales (SL)	0	52516	48,1	8199,5
Number of Employees (EMP)	5 000	122 000	32400	24,6
Total Assets (AT)	1,405	123684	156,9	12503,8

As suggested by the study conducted by Nord (2011), to fill the data gaps linked to the inconsistent availability of the financial reports, several other online data sources have been used to gather the missing information. Along with annual financial reports, MSN.com/money, Google finance, Financial Data Finder at OSU, Statista.com, NAISC association data and Data.gov have been used for data gathering.

### 3. METHODOLOGY

The paper is aimed to examine the previously stated hypothesis of whether there is a positive relationship between R&D expenditures, a number of approved patents and the gross profits in the pharmaceutical industry based on the data for 50 American companies.

**H0:** There is a positive relationship between the R&D expenditures, patents applied in a current year and the company's profitability measured in terms of gross profits.

**H1:** There is a negative relationship between the R&D expenditures and profitability with patents applied being a mediator of the above-mentioned relationship.

Taken into the consideration the researches presented previously, the dependent variable of the model is gross profits, whereas the independent variables are R&D expenditures and the number of patents applied in a current year.

*Table 3. Description of the variables (own elaboration)*

Variable	Definition	Source	Expected sign
<b>Dependent variable:</b> Gross profits (GP)	Expressed as a difference between the total revenue and the costs of the goods sold.	Annual Financial Statements & AnnualReports.com	N/A (the variable to be explained)
<b>Independent Variables</b>			
R&D expenditures (XRD)	Annual spendings on the research and development by the firm	Income Statements (annual basis) & Statista.com	+
Patents applied in current year (nbPatentsPP)	Number of patents that have been registered in a particular year.	Data.gov & Statista.com	+
<b>Control Variables</b>			
Sales (SL)	The total volume of sales per year	Income Statements; MSN Money; AnnualReport.com	+
Total Assets (AT)	The value taken from the balance sheet of the company: describes the value of all the equity and liabilities that the firm holds.	Annual Balance Sheets	+
Number of Employees (EMP)	The proxy of the measure of the firm's size.	D&B Hoovers, NAICS Association	-

The analysis has been split into the two main parts where the first regression only deals with the three main variables, namely R&D expenditures, patents applied in the current year and gross profits. The nature of the panel data requires appropriate choice of analysis method. The application of the Ordinary Least Square regression method alone within R-Studio framework would require performing a separate estimation for each examined year, which would require simultaneous consideration of eleven pairs of graphs. The basic linear model that is widely used in econometrics can be expressed through suitable restrictions of the following general model:

$Y_{it} = \alpha_{it} + \beta_{it}X_{it} + u_{it}$ , where  $i=1,...,n$  is the company index,  $t=1,...,T$  is the time index and  $u_{it}$  is a random disturbance term with mean 0.

To avoid a decrease in the quality of obtained results, a locally weighted scatterplot smoothing (LOWESS) method has been used. LOWESS implies fitting the simple models to localized subsets of the data to construct a function that described the deterministic part of the variation in the data by point. This part of the research will also test the possible presence of the indirect effect between the R&D expenditures, patents applied and the firms' profits. The control variables might be crucial to analyze changes in profits; however, testing these effects requires

an appropriate analysis method. To choose the best method for running the regression, there have been two tests performed. The first one is the pooling test for time and company fixed effect that is aimed to test the poolability or whether the same coefficients apply across all of the entries. It is needed to determine whether the pooled model is appropriate for performing the estimation. The pooling test is a standard F-test that compares the estimation for the full sample of the model with the estimation of an equation for each individual. The second test is needed to choose between the usage of the random or fixed effects model and is known as Hausman Test. Before performing the Hausman Test, both fixed and random effects models have to be estimated to check whether the unique errors ( $u_i$ ) are correlated with the regressors. The null hypothesis for the Hausman test is that there is no correlation.

#### 4. FINDINGS

The first regression performed considered only the dependent variable and two main independent variables, namely R&D expenditures and the number of the applied patents. There is an assumption of the indirect effect existing between the variables with the patents variable presumably being a mediator. As it has been previously stated, there are two additional tests being introduced into the analysis to check for poolability and fixed versus random effects model. The graph below shows the results of the poolability test for the time and company effect:

*Table 4: Pooling test for time and company effect. F-statistics (own elaboration)*

<b>Data:</b>	GP ~ PatentsPP + XRD + SALE + EMP + AT		
F = 39.5627	df1 = 40	df2 = 118	p-value < 2.2e-16
Alternative hypothesis: instability			

Results show that the pooled model should not be used, primarily because it does not differentiate between cross sections and units of time. The following table display the results of the Hausman test that has been performed to choose between estimating the fixed effect or the random effect model.

*Table 5. Hausman Test (own elaboration)*

<b>Data:</b>	GP ~ PatentsPP + XRD + SALE + EMP + AT	
chisq = 116.6573	df = 5	p-value < 2.2e-16
Alternative hypothesis: one model is inconsistent		

Based on the results of the Hausman test, a fixed effects model should be used. Results signify the presence of a deterministic relationship between the variables. Even though the first test discouraged using the pooled model, it has still been estimated for the results comparison, but for the Hausman test results, it is only reasonable to use the fixed effect model.

*Table 6: Pooled model estimation. Individual effect pooling model (own elaboration)*

plm (formula = GP $GP \sim PatentsPP + XRD + SALE + EMP + AT$ , data = Data, model = "pooling")				
Balanced Panel		n = 50	T = 10	N = 500
Residuals:				
Min.	1st Q	Median	3rd Q.	Max.
-1230.0	-46.1	36.5	52.3	606
Coefficients:	Estimate	Std. Error	t-value	Pr (> t )
(Intercept)	-46.544713	22.693975	-2.0510	0.041921 *
PatentsPP	-2.492486	0.430881	-5.7846	3.785e-08 ***
XRD	1.184254	0.176652	6.7039	3.402e-10 ***
Sale	0.893805	0.031226	28.6237	< 2.2e-16 ***
EMP	-74.283826	7.043920	-10.5458	< 2.2e-16 ***
AT	0.046820	0.017461	2.6815	0.008109 **
Signif. codes:	0 '***', 0.001 '**', 0.01 '*', 0.05 '.0.1 ' ', 1			
R-Squared:	0.99599			
Adj. R-Squared:	0.95955			
F-statistics:	7847.78 on 5 and 158 DF, p-value: < 2.22e-16			

The high R-square signifies that the relationship between the variables is explained very well by the estimated model. It should also be noted that there are no statistically insignificant variables in the model therefore, all of the control variables do have a specific impact on the profitability of the company. Based on the results of the estimation, the following conclusions can be drawn:

1. There is a negative coefficient observed for the number of patents applied and gross profits. This means that the incline in the issued patents would lead to the decline in profits for that particular year. The initial assumption was a positive relationship between the number of patents in a current year and profitability. Such a result may be partially explained by the costs incurred for the approval of a patent in an initial year.
2. According to the results, the increased investment in R&D leads to profits growth, as initially assumed. Such a conclusion can be made based on the positive coefficient.
3. Higher sales increase profits, as can also be seen from the positive coefficient.
4. As anticipated, an increase in the number of employees leads to a decrease of profitability since there is a negative coefficient.
5. There is a significant positive relationship between the total assets of the company and its profitability. Since the financing of companies' operations comes from either the debt or the equity, both being part of total assets, it would be useful to account for causality. It is possible that firms with more total assets have more debt or equity available for financing their R&D, and, since R&D proved to increase the profits, it might have a reversed effect.

Consequently, it is not R&D that causes the incline of the profits, but rather higher total assets and initial profitability affect the intensity of R&D investments of pharmaceutical firms.

To compare the results and check the soundness of the obtained estimation, there has been performed another analysis accounted for company and time fixed effects. The detailed results of the estimation can be seen on the Table 7 below.

*Table 7: Estimation for the company and time fixed effects (own elaboration)*

<i>plm(formula = GP ~ PatentsPP + XRD + SALE + EMP + AT, data = Data, model = "within", effect = "twoways")</i>				
Balanced Panel	n = 50	T = 10	N = 500	
Residuals:				
Min	1st Q	Median	3rd Q	Max
-438.0000	-9.4100	-0.0668	9.6200	207.0000
Coefficients	Estimate	Std. Error	t-value	Pr(> t )
PatentsPP	-0.526597	0.217915	-2.4165	0.0172 *
XRD	0.856058	0.153266	5.5854	1.518e-07 ***
Sale	0.789355	0.033534	23.5387	< 2.2e-16 ***
EMP	-62.278524	8.448558	-7.3715	2.527e-11 ***
AT	0.014718	0.012538	1.1739	0.2428
Signif. codes:	0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1			
R-Squared:	0.97925			
Adj. R-Squared:	0.70459			
F-statistics:	1114.01 on 5 and 118 DF, p-value: < 2.22e-16			

In case of the fixed effect model, the R-square equals 97%, which also means that the model is appropriate for describing the analyzed relationship. Nevertheless, when estimated for time and company fixed effects, total assets turned out to be statistically insignificant. Therefore, the previous assumption of a reversed relationship between R&D expenditures and gross profits via the mean of the total assets has not been proved, unless until further analysis. Otherwise, coefficient signs align perfectly with the results of the previous estimation of the pooled model. Therefore, it is fair to conclude the robustness of the results, since conclusions do not change regardless of the used method, with a minor exception of total assets' insignificance.

## 5. CONCLUSION

The analysis concludes that there is a significant positive relationship between R&D spending and the number of patents, which confirms the initial assumption and disclaims reduced R&D



productivity. Another finding is the establishing of a significant negative relationship between the patents applied in a current year and profitability, which rejects the initial hypothesis. The possible explanations for such a phenomenon can include multiple factors from the data or measurement errors to the unaccountability for the mediator effect, etc. The presented research, however, has only aimed at proving the significance of such a relationship and establishing whether independent and control variables have a positive or negative effect on gross profits. The assumption of a negative effect of employees' count on gross profits has also been confirmed by the negative coefficient of the estimation. The only control variable that has differed in pooled and fixed effect models has been total assets of the firm. The fixed effect model considered total assets to be statistically insignificant, whereas the pooled model showed a positive effect of total assets on the profitability of the pharmaceutical company. However, since based on the first poolability test, the usage of the pooled model has been discouraged and the estimation has only been performed to check the robustness of the results, the research concludes the effect of the total assets based on the estimation of the fixed effect model. Therefore, the total assets are considered statistically insignificant for profitability. This study is relevant to the ongoing discussions regarding the fairness of pharmaceutical industry pricing (Williams, Ooms and Hill, 2015 or recently Fitzgerald and Yeancha, 2018), since it provides a precise numerical evidence on the relationship between R&D expenditures, patents and gross profits. The main challenge for the Big Pharma is finding the golden line in the tradeoff between innovation and pricing. The true breakthrough innovation always includes significant spending and sunk investments that will be reflected in the price of the developed drugs. The Schumpeterian concept of “creative disruption” claims that companies must innovate to stay competitive since it allows to create new markets, which both benefit consumers and gives the advantage to the business. However, the true meaning of this concept may be misinterpreted, since innovation is a complex process that cannot be measured by uniform single proxy. The conducted research demonstrates that even though intensive R&D expenditures lead to higher number of the issued patents, it does not necessarily imply higher profitability. It can potentially be linked to the fact that patents might not be the most efficient measure of innovation, as suggested by Lee (2009). In the meanwhile, it is important to understand a crucial role of policy makers in the pharmaceutical industry, since this sector does require the existence of strictly defined regulations. Given the existence of a patent system, the governors have to design additional regulations to prevent anti-monopolistic behavior of the Big Pharma through the efficient work of antitrust authorities.

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## BETWEEN CONSUMERISM AND DECONSUMPTION - ATTITUDES OF YOUNG POLES AS A CHALLENGE FOR MARKETERS

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### ABSTRACT

*Deconsumption is a voluntary giving up of behaviors aimed at satisfying desires created by marketers in favor of a conscious, rational and ethical choice intended to satisfy one's real needs. Deconsumption means taking responsibility for the long-term and multi-faceted effects of consumer decisions that are being taken nowadays. It assumes the elimination of consumer's hedonistic behaviors oriented at immediate gratification in favor of more demanding ones, which are characterized by postponed gratification, but – in the long run – are of more value. Deconsumption is a reaction against the feeling of exhaustion caused by excessive consumption (consumerism) and a distinctive feature of a consumer living in a post-ownership era, for whom the value lies in the benefits from using a products and not in its ownership and possession. Deconsumption is demonstrated mostly by limiting (rationalizing) consumption [caused by disappointment and fatigue resulting from excessive consumption, lowered importance of consumption and a human element within the system], greening consumption, servitisation, being involved in collaborative consumption (sharing economy and access economy). In a broad sense, deconsumption also includes anti-consumer behaviours, including those related to consumer resistance (e.g. consumer boycott, retaliation against companies that, for instance, abused their position, etc.). So far, deconsumption has not been adequately described in the literature on the subject (both in Poland and abroad) and there is a great cognitive gap regarding this phenomenon. Most of the research carried out in this area is of qualitative character. Quantitative research has been focusing on selected aspects and, additionally, it has been conducted on low-key, convenient trials (mainly involving students). The basic aim of this study is to diagnose the deconsumptive attitudes and behaviour of Generation Y in Poland. People born between 1980 and 2000 acquired consumer awareness in a competitive, free-market economy. Thanks to technological development they have access to global information and they can follow trends from different parts of the world. Are they therefore ready to give up a consumer lifestyle and the will to increase their ownership? The conclusions are based on the results of quantitative research conducted on a representative sample of 600 young Poles. The sample was selected by random-quota method. The respondents were selected based on gender, age and place of residence.*

**Keywords:** consumerism, deconsumption, Generation Y

### 1. INTRODUCTION

At the turn of the 20th century a hedonistic consumption became an important social phenomenon in economically developed countries. It was stimulated by marketers, focused on seeking pleasant experiences and was not oriented on satisfying basic human needs. Consumerism can be defined as an active ideology assuming that life is built around buying goods (Mróz, 2013, p.52). It is an attitude to life that is not limited a specific social group or a geographic zone (Mróz, 2009, p.10) but is characterized by attaching excessive importance to acquiring material goods (Plażyk, 2011, p. 990). In a consumer society, the acquisition and possession of goods was perceived as a key determinant of social status or prestige, and consumers succumbed to the illusion that the more goods they would collect the better life they would have and the happier they would be (Lee, Ahn, 2016, p. 18) In the second decade of the 21st century, much is being said about the negative consequences of consumerism, both for the individual (dysfunctional approach to the purchasing process, which manifests itself in, among

others, a constant lack of self-fulfillment, a large amount of stress caused by excess market supply, indebted households and the undermining of social and family fabric resulting from workaholism and shopaholism), the natural environment (degradation of the natural environment through depletion of natural resources, emission of pollutants from, among others, processing and production of goods, excessive production of waste) or the society (unethical exploitation of less developed societies) (Wilczak, 2012, p. 199-210). An alternative to consumerism is deconsumption. Deconsumption is a voluntary, economically unconditioned giving up of behaviors aimed at satisfying the desires created by marketers in favor of a conscious, rational and ethical choice intended to satisfy one's real needs (Bywalec, 2010, p. 216). Deconsumption means taking responsibility for the long-term and multi-faceted effects of consumer decisions that are being taken nowadays (Kieźel, Smyczek, 2015, p. 81). It assumes the elimination of consumer's hedonistic behaviors oriented at immediate gratification in favor of more demanding ones, which are characterized by postponed gratification, but – in the long run – are of more value. Deconsumption is a distinctive feature of a consumer living in the post-ownership era, for whom the value lies in the benefits from using a product and not its ownership or possession. In the literature on the subject, deconsumption has been defined in various ways. In a very narrow approach, deconsumption can be understood as limiting the level of the ongoing consumption, where the added value is the reduction of both direct and indirect costs). This is largely in line with the macroeconomic perspective, which perceives deconsumption as the decline in the consumption of households in a given area, sector, nation or internationally (De Lanazue, Siadou-Martin, 2013, p. 56). In a broader sense, the term deconsumption refers to activities related to reduction of the quantity of consumed goods and their increased quality, as well as limiting material consumption and increasing non-material consumption sphere, i.e. servitization of consumption (Woś, 2003), putting local/regional consumption ahead of the international one, a more ecological market behavior, which does not mean a fundamental change in purchasing habits, but rather their correction on the basis of pro-environmental factors (Senda, 2000) and rationalization of market behaviors. In the broadest sense, deconsumption, in addition to the above-mentioned activities, should also involve engaging in systems and networks of collaborative consumption, which allows access to products and services without incurring costs of ownership (Botsman and Rogers, 2010; Gansky, 2010; Guillard, 2017, p. 11-12), considering ethical aspects at every stage of the purchasing process (i.e. when making decisions, consuming products and disposing negative goods), and even completely changing the lifestyle and adopting the "voluntary simplicity" (Etzioni, 2004, p. 407-420; Huneke, 2005, p. 527-550; McDonald, Oates, Young, Hwang, 2006, 515-534). Deconsumption does not mean a total withdrawal from the market and complete giving up on buying things. It forces the consumer to be more active in fulfilling market roles and to take over new functions. It entails shifting the customer's interest away from offers prepared by marketers, raising the quality of life of an individual, their family and social groups and taking responsibility for future generations. The term "Generation Y" appeared in the literature of the subject in the 1990s. In the broadest view, Generation Y began in 1980 and ended in 2000. In Poland, Generation Y boasts 11.5 million citizens, who are additionally divided into three categories: those between the ages 32 and 38, between 25 and 31 and the 18-24 year-olds. Researchers describing the features distinguishing the members of Generation Y from previous generations usually point to education (Generation Y obtained a higher level of education than the previous generations; furthermore, Millennials are focused on constant self-development), high level of self-confidence, conviction of one's uniqueness, self-perception as being highly qualified, strong globalization being a result of access to global media, being part of a globally interconnected world, frequent travels, limited attention span combined with expectations of dynamic changes and being well-informed (e.g. following new trends) as a result of using modern technologies in almost every single aspect of life.

In the case of developed countries, research indicates that Generation Y may be the first generation in modern history whose members will not achieve a better standard of living than their parents. An in-depth understanding of Generation Y, especially by the managers, seems to be of importance because its members are now at their peak age and have more and more assets at their disposal. According to the study conducted by Boston Consulting Group, in 2015 Generation Y in 2015 had a total global capital of 16.9 trillion dollars, which represented approx. 10% of the world's wealth (Millenials – the global guardians of capital, 2017, p. 6). In 2020, Generation Y's assets can amount to as much as 35.3 trillion dollars. Representatives of Generation Y from Central and Eastern Europe are much less wealthy than their peers from the western part of the continent or from the US. Despite this fact, they collectively have 0.5 trillion dollars at their disposal, which is 14% of all assets for this part of the world (BCG Global Client Discovery Survey, 2015). In the literature on the subject, there is a cognitive gap on the issue of deconsumption, in particular among representatives of Generation Y. Most studies covering this issue are of qualitative character. Quantitative research focuses on selected aspects (e.g. green consumption) and is additionally conducted on low-key, convenient trials (mainly involving students), which is why the results cannot be generalized to the general population. The aim of this study is to partially fill this gap by answering as to whether young members of Generation Y in Poland are ready to adopt the deconsumption as their lifestyle, and if so, to what extent.

## 2. RESEARCH AIM AND METHOD

In order to solve the problem defined above, it was necessary to accomplish two research goals: to examine the attitudes towards deconsumption of young Poles and to verify whether and to what extent their deconsumptive attitudes are diversified and whether it is possible to identify different market segments based on these attitudes. The material was collected in July 2018 by Biostat. CAWI (Computer Assisted Web Interviews) method was employed for the purposes of this study. A representative sample of 600 people was selected among the participants of Biostat e-panel. Random-quota sampling was used so that the sample would reflect the general population in the sex, age and place of residence (Polish people born between 1980 and 2000). The characteristics of the test sample are presented in Table 1.

*Table 1: Characteristics of the sample (own research)*

Variable	Value	N=600	In %
Gender	Female	305	50,8
	Male	295	49,2
Age	18-24	159	26,5
	25-31	206	34,3
	32-38	235	39,2
Place of residence	Countryside	69	11
	City $\leq 20\,000$ inhabitants	51	8
	City $20\,000 \leq 100\,000$ inhabitants	49	8
	City $100\,000 \leq 200\,000$ inhabitants	114	19
	City $200\,000 \leq 500\,000$ inhabitants	78	13
	City of over 500 000 inhabitants	239	40
Education	Primary	21	3,5
	Vocational	43	7,2
	Secondary	232	38,7
	Higher	304	50,7
Household net income	$\leq 5\,000$ PLN	275	45,8
	$5\,001 \leq 7\,000$ PLN	190	31,7
	$7\,001 \leq 10\,000$ PLN	104	17,3
	$> 10\,000$ PLN	31	5,2

The research was conducted using a questionnaire containing 61 statements measured in a 7-point Likert scale (where 1 = strongly disagree and 7 = strongly agree). Statements used to measure deconsumptive attitudes were formulated on the basis of a qualitative study carried out in 2015 and the conclusions from the literature on the subject. A pilot study was conducted on a sample of 60 respondents in June 2018 in order to verify the research tool. The proper study was carried out in two stages using two types of analysis: a factor analysis and a cluster analysis. A statistical analysis was carried out using the IBM SPSS Statistics v. 24 software and the *fpc* package in the R statistical environment.

### 3. RESEARCH FINDINGS

In order to learn about the structure of deconsumption attitudes among young Polish people, the factor analysis was carried out using the principal axis method with Promax rotation with Kaiser normalization, which allows for correlations between different factors. The results of the preliminary analysis suggested that there is collinearity between the items in the questionnaire, because the correlation matrix between the items was not positively determined. The relevance of the sample was verified using the Kaiser-Meyer-Olkin (KMO) test. KMO of 0.88 showed that the data from the tested sample can be subject of exploratory factor analysis, since the value exceeded the generally accepted threshold of 0.7. The calculated value of Bartlett's test was ( $\chi^2=15655.66$ ,  $df = 1953$ ,  $p = 0.000$ ). Kaiser's criterion suggested a 14-factor solution. However, the analysis of the scree plot clearly shows that a five-factor solution is more appropriate for this data set. In order to verify the reliability of the separate factors, the Cronbach's Alpha statistics were calculated for each of them (negative values were converted into positive beforehand). The results of the analysis (Table 2) showed that all of the separate factors are either highly or very highly reliable.

*Table 2: Reliability and descriptive statistics (own research)*

Factor	Number of items	Cronbach's Alpha	Mean	Std.Deviation
Rationalisation and ecologisation of consumption	21	0,884	4,7799	0,81445
Willingness to share	14	0,859	3,7862	1,00342
Exhaustion of consumerism;	10	0,813	4,4055	1,03233
Positive approach to redistribution of goods	8	0,810	4,3471	1,07179
Marginalisation of consumption's and possession's roles	8	0,702	3,7369	0,92397

Due to the adopted 7-point scale, where 4 = I have no opinion, it can be assumed that the mean average ranging from 3.75 to 4.25 is a neutral consumer attitude, the averages above 4.25 indicate readiness for adopting deconsumptive lifestyle, with those with average below 3.75 being not ready to undertake such activities. In view of the above it can be assumed that members of Generation Y in Poland are ready to rationalize their consumption and to make it greener, have favourable outlook on redistribution of goods, and show signs of consumer fatigue. However, their attitude towards participation in the sharing economy and they are indifferent in their perception of the role of consumption and possession. After completing the first research objective, cluster analysis was carried out in the next step. To identify groups of consumers with similar deconsumption attitudes of five previously identified types, a cluster analysis was performed with the k-means clustering method using the *fpc* package in the R statistical environment, in which the optimal number of clusters is determined automatically.

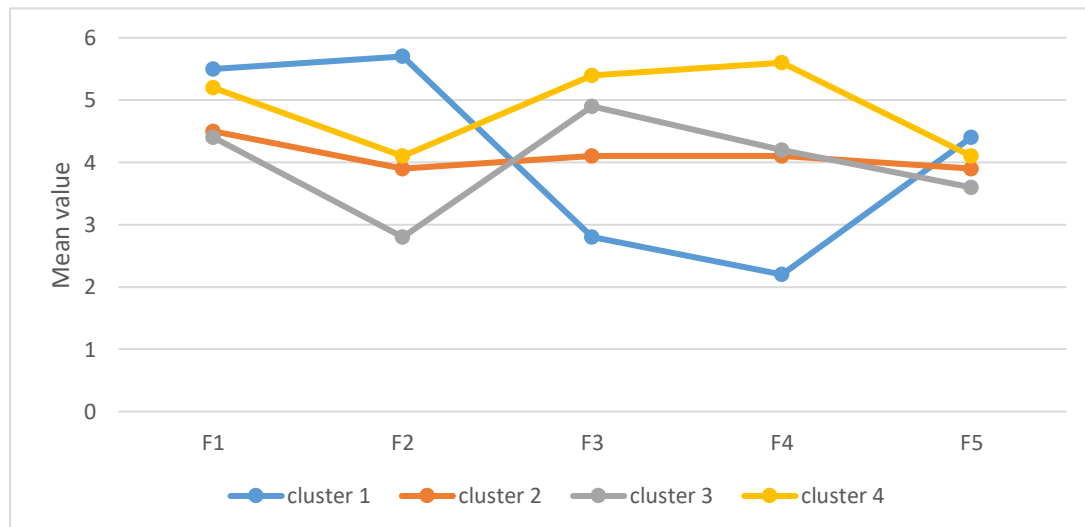
For the data analyzed, it was determined that the optimal number of clusters is 4. The results of cluster analysis are presented in Table 3 and illustrated in Figure 1.

*Table 3: Results of cluster analysis (own research)*

Clusters	Factors (mean value)					N
	F1	F2	F3	F4	F5	
Cluster 1	5,5	5,7	2,8	2,2	4,4	44
Cluster 2	4,5	3,9	4,1	4,1	3,9	257
Cluster 3	4,4	2,8	4,9	4,2	3,6	169
Cluster 4	5,2	4,1	5,4	5,6	4,1	130

*F1 – Rationalisation and ecologisation of consumption; F2 – Willingness to share; F3 - Exhaustion of consumerism; F4 - Positive approach to redistribution of goods; F5 - Marginalisation of consumption's and possession's roles, N=600*

*Figure 1: Profiles of individual consumer clusters differing in their attitude towards deconsumption – average values of variable (factors) for each cluster*



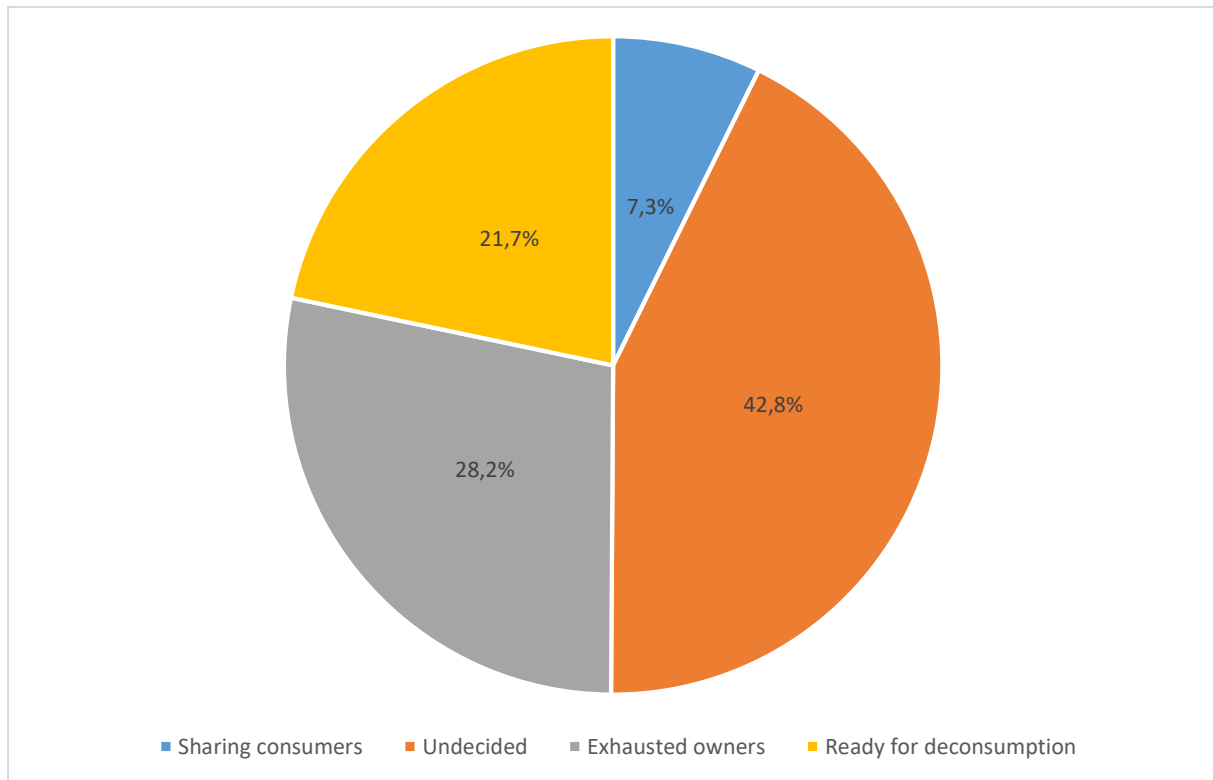
*F1 – Rationalisation and ecologisation of consumption; F2 – Willingness to share; F3 - Exhaustion of consumerism; F4 - Positive approach to redistribution of goods; F5 - Marginalisation of consumption's and possession's roles*

Configurations of factors occurring in separate clusters allowed identifying the following profiles for four consumer groups:

- cluster No. 1 comprises of 44 people who exhibit the highest readiness among all groups to rationalize their consumption and to make it more eco as well as to participate in sharing. They are people who are not tired of consumption and are not ready to participate in redistribution. Purchasing and possessing goods is relatively important for consumers belonging to this group,
- cluster No. 2 comprises of 257 people who are ready to rationalize their consumption and to make it greener but are indifferent in their attitude towards the other four factors
- cluster No. 3 comprises of 169 people exhausted of consumerism, ready to rationalize their consumption and to make it greener and who attach great significance to possession and consumption. At the same time, they are indifferent to redistribution and completely unprepared for participation in the sharing economy,

- cluster No. 4 comprises of 130 people ready to rationalize their consumption and to make it greener, tired of consumerism and positively oriented to redistribution, but indifferent to sharing and the role of consumption and possession.

Based on the analyzes conducted, we can initially identify four groups of young Polish people who differ in their attitudes towards deconsumption (Figure 2).



*Figure 2: Identified segments and their sizes (in %) (own research)*

The largest segment includes 42.8% of respondents who can be identified as "Undecided". Their level of readiness to adopt deconsumption lifestyle is lower than for the entire sample; similarly, the average values referring to the level of consumer fatigue and readiness to participate in redistribution are lower in their case as well. It is a group of consumers whose attitudes place them between consumerism and deconsumption. The second segment in terms of the number of people it covers includes 28.2% of respondents. They can be called "Exhausted owners". Possession and consumption play an important role in their lives however, they are also tired of consumerism and try to rationalize their consumer behaviour. They do not accept shared consumption and are indifferent towards redistribution. The next segment, which comprises of 21.7% of respondents, are people who are "Ready for deconsumption". The consumers from this group are characterized by a high rate of rationalization of consumption and readiness to go green, the highest consumption fatigue (when compared to the other three segments) and a positive attitude towards redistribution. In this group, the mean averages for all five factors are higher than for the entire population. The smallest segment comprises 7.3% of the respondents. These are "Sharing consumers" who strive to satisfy their needs in a rational way and are willing to use systems of collaborative consumption. Owning products remains important to them. On the other hand, they are definitely not ready to participate in the redistribution of goods, nor are they tired of consumerism. The demographic structures of the individual segments have been presented in Table 4.



*Table 4: Segment characteristics (own research)*

Variable	Value	Sharing consumers (in %)	Undecided (in %)	Exhausted owners (in %)	Ready for deconsumption (in %)
Gender	Female	40,9	50,2	37,9	64,6
	Male	59,1	49,8	62,1	35,4
Age	18-24	15,9	29,2	26	25,4
	25-31	25	35,4	36,1	33,1
	32-38	59,1	35,4	37,9	41,5
Place of residence	Countryside	9,1	10,5	10,7	15,5
	City $\leq 20\ 000$ inhabitants	6,8	10,1	7,7	6,9
	City $20\ 000 \leq 100\ 000$ inhabitants	6,8	6,2	9,5	10,7
	City $100\ 000 \leq 200\ 000$ inhabitants	15,9	20,6	19,5	16,2
	City $200\ 000 \leq 500\ 000$ inhabitants	11,4	11,7	13,6	15,4
	City of over 500 000 inhabitants	50	40,9	39	35,4
Education	Primary	4,5	3,9	3	3
	Vocational	20,5	8,6	3,6	4,6
	Secondary	31,8	41,6	39,6	33,9
	Higher	43,2	45,9	53,8	58,5
Household net income	$\leq 5\ 000$ PLN	36,4	50,2	43,8	43,1
	$5\ 001 \leq 7\ 000$ PLN	31,8	29,6	33,7	33,1
	$7\ 001 \leq 10\ 000$ PLN	27,3	16,3	16	17,7
	$> 10\ 000$ PLN	4,5	3,9	6,5	6,1

#### 4. PRACTICAL IMPLICATIONS

Consumers belonging to Generation Y are and for many years will be a key target group for many enterprises. In many respects, it is a heterogeneous group, also in their attitude towards deconsumption. Deconsumption presents itself as challenge for both entrepreneurs and entire economies, whose development is driven by growing consumption among households. It is a positive and desirable phenomenon from psychological, sociological and pro-environmental perspective, but can be seen as a threat by both the economists and marketers. In particular, marketers should closely monitor the development of the phenomenon of deconsumption and observe how it will evolve in the future. It is important for the marketers to identify four market segments and to have knowledge of their members' readiness to rationalize their consumption, go green and participate in sharing, their attitude to redistribution, the level of consumer fatigue and the limited role of consumption and possession. In order to create effective marketing plans, it is crucial to first understand what is of value for the consumer and how this value can be effectively created and delivered. Marketers used to stimulating consumer attitudes have to face new challenges. The first of those is the changed approach to buying, which manifests itself by rationalizing purchasing decisions, consciously limiting consumption, placing quality of products above their quantity, selecting local products and making consumption greener. This attitude, represented with varying intensity in all identified market segments, results in a change of approach to planning the entire marketing mix, from the market assortment and the qualities of an individual product, to distribution and pricing to marketing communication. The second challenge is due to a change in the approach to ownership. For some young Poles (the "Sharing consumers"), the value lies in the access to product and not in its ownership. This means a potential new market opportunity for enterprises that can develop offers focused on making products available to consumers on a commercial basis, as well as creating tools to help consumers share their products with other interested parties (within both sharing economy and access economy). The third challenge is associated with consumer fatigue, or, more specifically, the fatigue from consumer lifestyle. Two of the identified consumer groups (those "Ready for deconsumption" and the "Exhausted owners") already report a high level of fatigue from excess of choice, wasting purchased goods or unreasonable purchases. For them, consumption is no longer satisfying, and it became the source of growing frustration and despondence. What's more, they begin to associate ownership with costs incurred and treat it as a burden on

household budget. Marketers must therefore focus with increased intensity on providing satisfactory customer experience rather than material goods. Finally, the fourth challenge relates directly to the management of negative goods. Young Poles belonging to one of the identified segments ("Ready for deconsumption") express their readiness to engage in deconsumption based on the principle of redistribution. Marketers can use this by organizing appropriate spaces and providing tools that will facilitate participation in this process. In the case of redistribution, entities from the third sector have an important role to play as well, especially within the context of collecting and transferring goods and marketing communication helping to overcome negative stereotypes and the reluctance associated with marketing of products that are already perceived as useless for some, but may still be of value to other people.

## 5. CONSLUSION

The aim of the study was to diagnose the attitudes of young Poles towards deconsumption and to determine whether and to what extent they are ready to adopt this lifestyle. Four groups of consumers have been identified, each having a different attitude towards deconsumption. The findings presented here are part of a larger project being implemented by the author and certainly are not exhaustive. An interesting research goal would be to compare the results using alternative statistical methods and to deepen the analysis using both quantitative and qualitative methods. It is also worthwhile to apply the results to other age groups (e.g. to see how they would compare to Generation X) or to the members of Generation Y from other countries (e.g. those that were subject to similar political and economic changes as in Poland, as well as those with an established and long-standing free market economy).

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## SELECTED PROBLEMS OF THE CREATION AND DEVELOPMENT OF THE INFORMATION SOCIETY AGAINST A BACKGROUND OF GLOBALIZATION

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### **ABSTRACT**

*The paper presents an analysis of a particular set of diagnostic features. It spans the years 2010-2017 and is based on data for 35 selected countries published by the Central Statistical Office as well as national and OECD statistical yearbooks. The variables, whose relevance and statistical accuracy were first verified, formed a basis for the classification of the countries according to Internet usage by physical persons aged 16-74. The aim of the analysis is to apply a selected taxonomic method – the maximum gradient method – to identify groups of countries with a similar level of Internet usage.*

**Keywords:** *Econometric Methods, Globalisation, Information Society, Taxonomic analysis*

### **1. INTRODUCTION**

Globalization is one of the drivers behind scientific and technological advances, including the development of information technologies. It impacts on a great number of economic, scientific and social spheres of human activity, gradually leading to the disappearance of both geographic and social borders. Our functioning in the contemporary world is dependent on the use of multiple information (Bliźniuk, Nowak, 2005, pp. 15-40). We are developing as an information society, which generates, stores, transmits and uses information. By applying the information that we acquire and process we are undergoing continuous development. Thus, the connection between the information society and technological advancement is becoming essential. The possibility of using various types of information resources paves the way to prosperity and development in numerous economic areas. Moreover, the increasing inter-state cooperation in the sourcing, processing and exchange of information promotes, and will continue to do so, the so called “global community” (Globan-Klas, Sienkiewicz, 1999, pp. 40-117). These processes have a significant impact on the creation of the global network. Access to the Internet enables people and organizations to liaise and exchange information despite economic boundaries. It is vital, however, to realize that among the wealth of reliable and accurate information there can be some faulty or incomplete information as well (www1). Moreover, such rapid development has various side effects, e.g. the latecomer syndrome, which can be observed on the way to the more advanced stages of the process, whose speed and course depends to a large extent on the country where it takes place. Other examples of undesirable effects include the possibility of the emergence of a controlled society, or the expansion of the most powerful corporations striving to increase their investments, which other countries may find unacceptable. The threats posed to computer systems, computer viruses, information destruction, computer crime are also becoming serious issues, and consequently effective protection of the IT resources requires ever-increasing efforts (Globan-Klas, Sienkiewicz, 1999, pp. 40-117). The aim of the analysis is to apply a selected taxonomic method – the maximum gradient method – to identify groups of countries with a similar level of Internet usage.

## 2. THE MAXIMUM GRADIENT METHOD IN THE INVESTIGATION INTO THE INFORMATION SOCIETY

The object ordering methods can be divided into linear and nonlinear methods; each of them can be used to identify sets of objects. The maximum gradient method is of the first type - it uses the values of the synthetic distance measures based on Hellwig's measure. The synthetic variable aims to combine the aggregated characteristics of the variables which were used for its construction (Panek, 2009, pp. 58-114). The calculated Hellwig's measures usually take the values from the interval [0; 1]. However, if the analysis covers a very big number of objects, their values can be negative. Based on the matrix, whose elements are standardized variables, we determine the reference object:

$$W_0 = [w_{0j}], j = 1, \dots, m. \quad (1)$$

its coordinates are calculated according to the following procedure:

$$w_{0j} = \begin{cases} \max_i \{w_{ij}\}, & \text{variable type of stimulant} \\ \min_i \{w_{ij}\}, & \text{variable type of destimulant} \end{cases}, \quad j=1, \dots, m; \quad i=1, \dots, n. \quad (2)$$

The synthetic indicator is calculated according to the  $s_i$  formula:

$$s_i = \frac{d_0 - d_{i0}}{d_0}, \quad (3)$$

where:

$$d_0 = \overline{d_0} + 2S(d_0), \quad (4)$$

$$\overline{d_0} = \frac{\sum_{i=0}^n d_{i0}}{n}, \quad (5)$$

$$S(d_0) = \sqrt{\frac{\sum_{i=0}^n (d_{i0} - \overline{d_0})^2}{n}}. \quad (6)$$

Next, it is necessary to determine the number of groups of objects ( $s$ ) which best reflects the phenomenon under examination (Panek, 2009, pp. 58-114), (Pociecha and others, 1988, pp. 36-100). Based on the series of objects which were ordered linearly according to the increasing values of the synthetic variable, we determine the differences for particular pairs of objects. In order to obtain the final grouping, the series of objects is divided into a pre-specified number of subgroups  $s-1$  in the places which correspond to the  $s-1$  highest absolute value of the synthetic variable. In the final stage of the study, the inter-group and intra-group variances  $S_M^2$ ,  $S_W^2$  are calculated to test the validity of the subgroups:

$$S_M^2 = \frac{\sum_{j=1}^n n_j (\overline{x_j} - \overline{x})^2}{\sum_{j=1}^n n_j}, \quad (7)$$

$$S_W^2 = \frac{\sum_{j=1}^n n_j S_{x_j}^2}{\sum_{j=1}^n n_j}, \quad (8)$$

where:

$$S_{x_s}^2 = \frac{1}{n} \sum (x_i - \bar{x})^2, \quad (9)$$

$$S_{x_j}^2 = \frac{\sum_{n=1}^{T_s} S_{x_s}^2}{T_s}. \quad (10)$$

If the calculated value of the inter-group variance exceeds that of the intra-group variance, the subgroups have been identified accurately. The significance of the differences can be verified by means of an appropriate test. The test hypotheses are as follows:

$$H_0 : S_M^2 = S_W^2, \quad (11)$$

$$H_1 : S_M^2 > S_W^2, \quad (12)$$

Test statistics:

$$F = \frac{S_M^2}{S_W^2}, \quad (13)$$

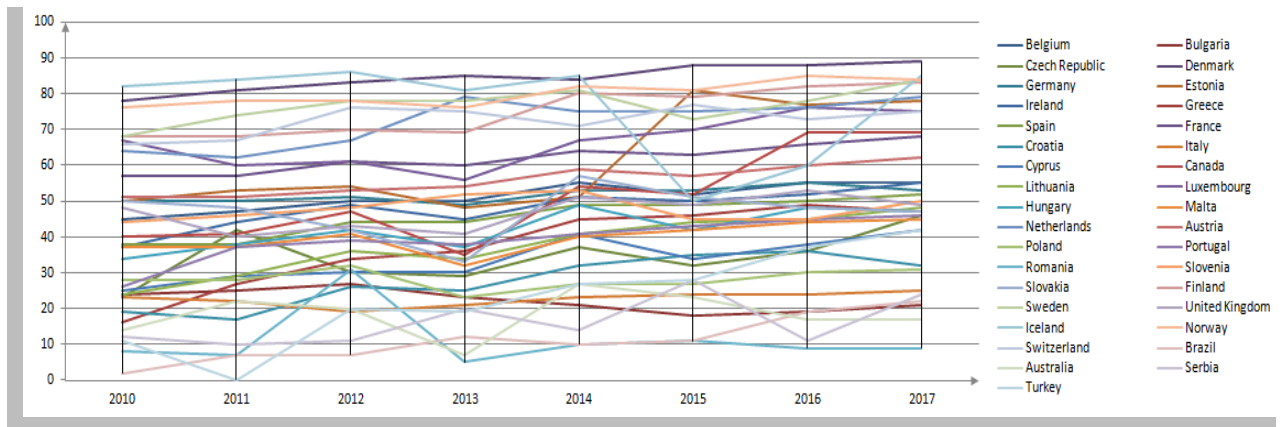
In the case when  $F \geq F^*$ , hypothesis  $H_0$  is rejected and hypothesis  $H_1$  is accepted, which means that the inter-group variance is significantly higher than the intra-group one while inequality proves the accuracy of the grouping for the pre-specified significance level.

### 3. IDENTIFYING HOMOGENEOUS GROUPS OF COUNTRIES IN TERMS OF THE INFORMATION SOCIETY DEVELOPMENT

The data on the level of information processing by means of the Internet comes from the statistical yearbooks. It covers 35 countries in the years 2010 and 2017 (Janiga-Ćmiel, 2016, pp.94-103), (Janiga-Ćmiel, 2017a, pp.283-288), (Janiga-Ćmiel, 2017b, 787-795), (Janiga-Ćmiel, 2013, pp.120-133). The following variables, presented in the charts spanning over the years 2010-2017, were taken into consideration:

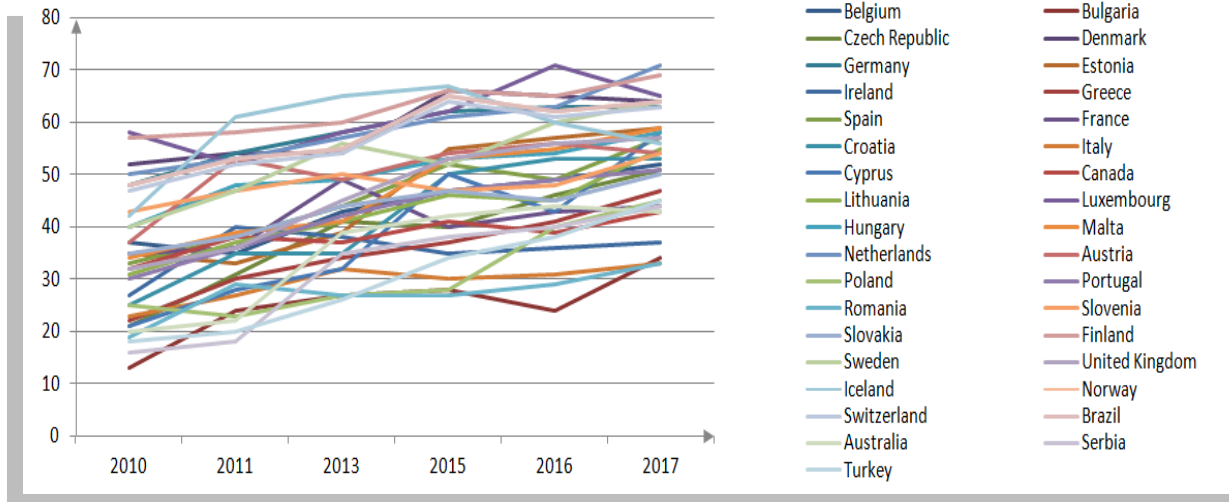
*Figure following on the next page*

*x<sub>1</sub>- Individuals using the internet for interaction with public authorities*



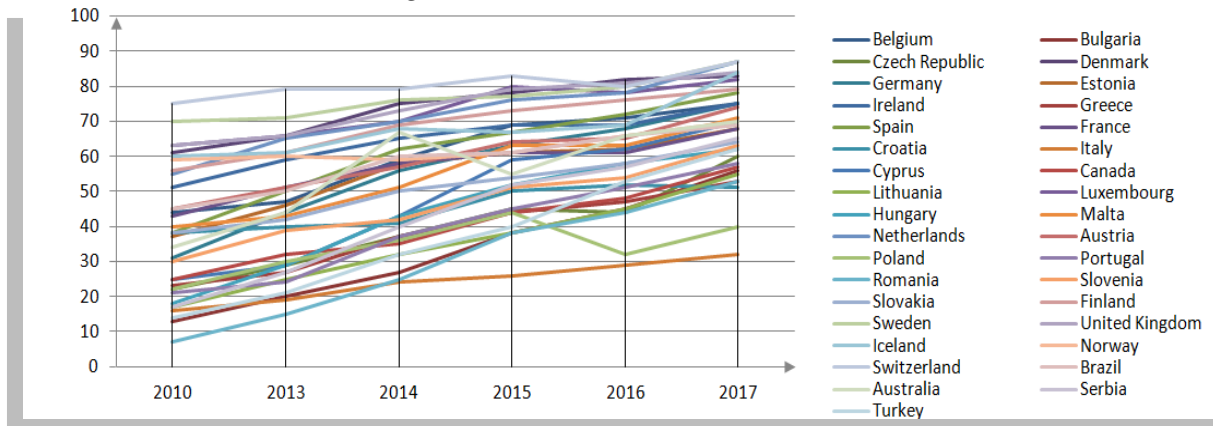
*Chart 1: Individuals using the internet for interaction with public authorities (based on own research)*

*x<sub>2</sub>- Individuals using the internet for seeking health-related information*



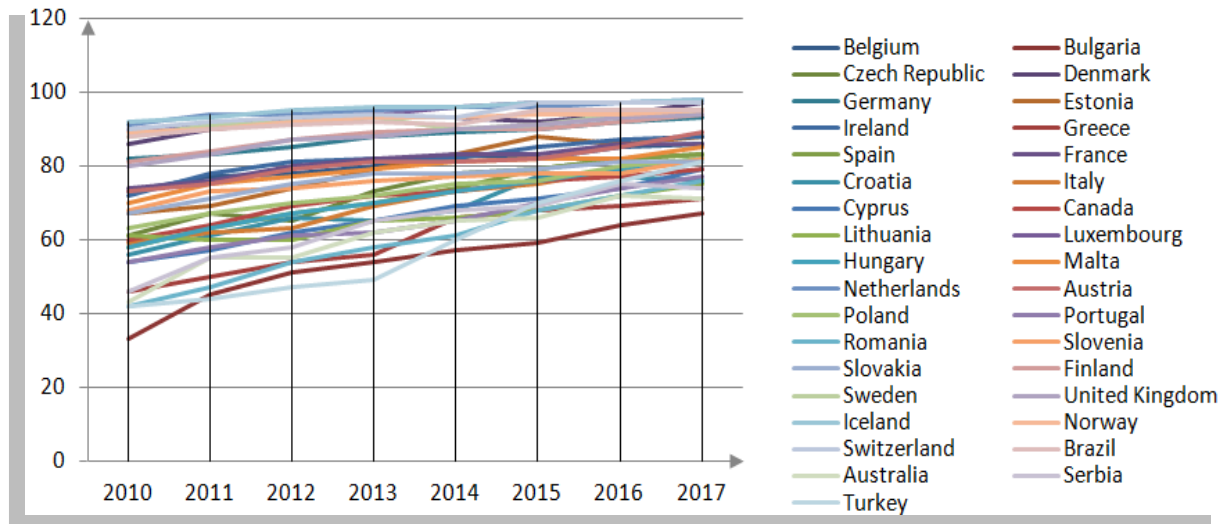
*Chart 2: Individuals using the internet for seeking health-related information (based on own research)*

*x<sub>3</sub>- Individuals using mobile devices to access the internet on the move*



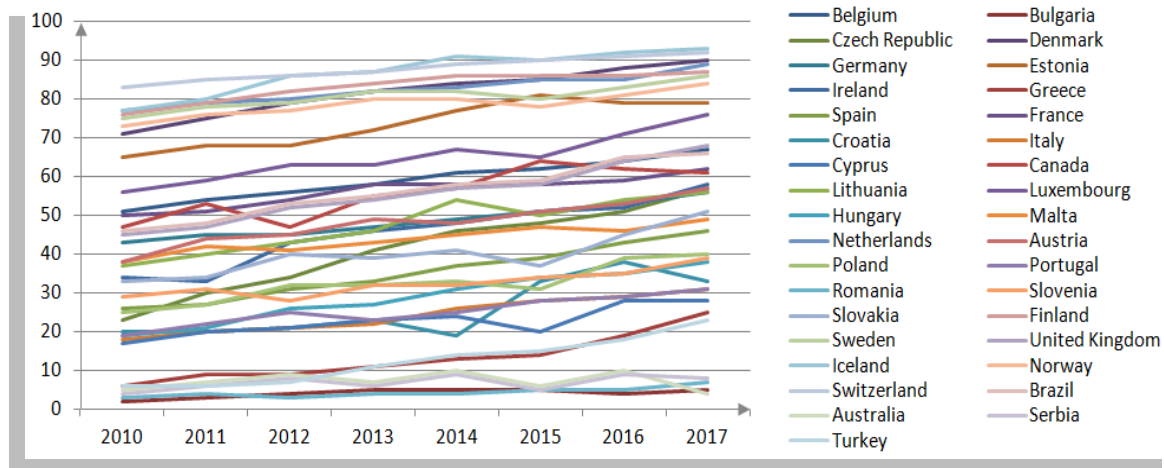
*Chart 3: Individuals using mobile devices to access the internet on the move (based on own research)*

*x<sub>4</sub>- Level of internet access – households*



*Chart 4: Level of internet access – households (based on own research)*

*x<sub>5</sub>- Individuals using the internet for internet banking*



*Chart 4: Individuals using the internet for internet banking (based on own research)*

Using the established values of the stimulated and standardized variables, the coordinates of the reference object (reference country) were calculated according to the following formula (1).

	$x_1$	$x_2$	$x_3$	$x_4$	$x_5$
2017	0.60	1.66	1.06	1.98	0.67

*Table1: Reference country - 2017(based on own research)*

and:

	$x_1$	$x_2$	$x_3$	$x_4$	$x_5$
2010	0.70	1.66	1.06	1.98	1.06

*Table2: Reference country - 2010 (based on own research)*

The Euclidean matrix was used to calculate the distance between each of the countries and the reference country, and next – the synthetic measure for each country. The results are presented in the table:



<i>2010</i>	<i>Country</i>	<i>d<sub>io</sub></i>	<i>s<sub>i</sub></i>	<i>Countries ordered by variable s<sub>i</sub></i>
1	Belgium	3.458	0.941	Sweden
2	Bulgaria	3.544	0.913	Denmark
3	The Czech Republic	3.370	0.556	Finland
4	Denmark	3.765	0.511	Norway
5	Germany	3.345	0.508	France
6	Estonia	3.686	0.484	Switzerland
7	Ireland	3.488	0.483	Luxembourg
8	Greece	3.290	0.364	The United Kingdom
9	Spain	3.412	0.305	Germany
10	France	3.626	0.216	Belgium
11	Croatia	3.331	0.213	Austria
12	Italy	3.306	0.195	Slovakia
13	Cyprus	3.363	0.124	Brazil
14	Canada	3.512	0.109	Ireland
15	Lithuania	3.299	0.108	Iceland
16	Luxembourg	3.434	0.069	Romania
17	Hungary	3.302	0.068	Estonia
18	Malta	3.359	0.060	Turkey
19	The Netherlands	3.571	0.053	Portugal
20	Austria	3.495	0.051	Serbia
21	Poland	3.337	0.047	Greece
22	Portugal	3.267	0.044	Lithuania
23	Romania	3.213	0.043	Hungary
24	Slovenia	3.341	0.042	Italy
25	Slovakia	3.517	0.041	Australia
26	Finland	3.642	0.035	The Netherlands
27	Sweden	3.775	0.034	Croatia
28	The United Kingdom	3.576	0.033	Poland
29	Iceland	3.822	0.032	Slovenia
30	Norway	3.842	0.027	Bulgaria
31	Switzerland	3.486	0.026	Malta
32	Brazil	3.024	0.025	Cyprus
33	Australia	3.307	0.023	The Czech Republic
34	Serbia	3.275	0.018	Canada
35	Turkey	3.242	0.011	Spain

*Table 3: Hellwig's measures-2010 (based on own research)*

And the second table:

2017	Country	$d_{io}$	$s_i$	Countries ordered by variable $s_i$
1	Belgium	3.3756	0.210	Brazil
2	Bulgaria	3.0916	0.200	Sweden
3	The Czech Republic	3.1450	0.198	The United Kingdom
4	Denmark	3.8121	0.183	Finland
5	Germany	3.0495	0.183	Luxembourg
6	Estonia	3.6964	0.181	France
7	Ireland	3.4788	0.176	Germany
8	Greece	3.1001	0.164	Austria
9	Spain	3.1655	0.160	Iceland
10	France	3.5665	0.156	Denmark
11	Croatia	2.9135	0.148	Norway
12	Italy	3.0597	0.123	Belgium
13	Cyprus	3.0467	0.120	Estonia
14	Canada	3.6571	0.117	Croatia
15	Lithuania	3.0577	0.113	Switzerland
16	Luxembourg	3.3912	0.109	Canada
17	Hungary	2.9806	0.106	Serbia
18	Malta	3.0342	0.097	Hungary
19	The Netherlands	3.5428	0.088	Poland
20	Austria	3.2781	0.084	Romania
21	Poland	3.0077	0.080	Malta
22	Portugal	3.0428	0.078	Portugal
23	Romania	3.0234	0.077	Cyprus
24	Slovenia	3.0536	0.075	Australia
25	Slovakia	3.1399	0.074	Slovenia
26	Finland	3.6728	0.074	The Netherlands
27	Sweden	3.7464	0.073	Lithuania
28	The United Kingdom	3.2675	0.073	Italy
29	Iceland	3.8254	0.063	Bulgaria
30	Norway	3.7861	0.060	Greece
31	Switzerland	3.2948	0.060	Turkey
32	Brazil	2.6636	0.054	Ireland
33	Australia	3.0517	0.048	Slovakia
34	Serbia	2.9495	0.047	The Czech Republic
35	Turkey	3.1007	0.040	Spain

Table 4: Hellwig's measures-2017 (based on own research)

The next stage, in compliance with the presented method, involved preliminary partitioning of the countries into  $s=4$  subgroups - 2010. The process, for step 1, is presented in the table below.

Country	$s_i$	The absolute value of differences
Sweden	0.941	
Denmark	0.913	0.028
Finland	0.556	0.357
Norway	0.511	0.045
France	0.508	0.003
Switzerland	0.484	0.025
Luxembourg	0.483	0.000
The United Kingdom	0.364	0.119
Germany	0.305	0.059
Belgium	0.216	0.089
Austria	0.213	0.003
Slovakia	0.195	0.018
Brazil	0.124	0.071
Ireland	0.109	0.015
Iceland	0.108	0.001
Romania	0.069	0.039
Estonia	0.068	0.000
Turkey	0.060	0.008
Portugal	0.053	0.007
Serbia	0.051	0.002
Greece	0.047	0.004
Lithuania	0.044	0.003
Hungary	0.043	0.001
Italy	0.042	0.001
Australia	0.041	0.000
The Netherlands	0.035	0.006
Croatia	0.034	0.001
Poland	0.033	0.002
Slovenia	0.032	0.001
Bulgaria	0.027	0.005
Malta	0.026	0.001
Cyprus	0.025	0.001
The Czech Republic	0.023	0.002
Canada	0.018	0.005
Spain	0.011	0.007

Table 5: The absolute value of differences- 2010, first step (based on own research)

For the calculated differences in the value of the synthetic variable the maximum difference occurred between the synthetic variables of Denmark and Norway, thus leading to the clustering of the countries into two subgroups. This value was removed and the procedure started anew for the second step. This time, the maximum value stood at respectively: 0.357. Consequently, the following groups emerged:

$G_1 = \{ \text{Sweden, Denmark} \}$

$G_2 = \{ \text{Finland, Germany, Norway, France, Switzerland, Luxembourg, the United Kingdom, Belgium, Austria, Slovakia, Brazil, Ireland, Iceland, Romania, Estonia, Turkey, Portugal,}$

Serbia, Greece, Lithuania, Hungary, Italy, Australia, the Netherlands Croatia, Poland, Slovenia, Bulgaria, Malta, Cyprus, the Czech Republic, Canada, Spain }

Ultimately, the countries were divided into the following groups:

$G_1 = \{ \text{Sweden, Denmark} \}$

$G_2 = \{ \text{Finland, , Norway, France, Switzerland, Luxembourg, the United Kingdom,}$

$G_3 = \{ \text{Germany} \}$

$G_4 = \{ \text{Belgium, Austria, Slovakia, Brazil, Ireland, Iceland, Romania, Estonia, Turkey, Portugal, Serbia, Greece, Lithuania, Hungary, Italy, Australia, the Netherlands, Croatia, Poland, Slovenia, Bulgaria, Malta, Cyprus, the Czech Republic, Canada, Spain} \}$

The same procedure was adopted for the year 2017. This time, the following groups were created:

$G_1 = \{ \text{Brazil, Sweden} \}$

$G_2 = \{ \text{the United Kingdom, Finland, Luxembourg} \}$

$G_3 = \{ \text{France, Germany, Austria, Iceland, Denmark, Norway} \}$

$G_4 = \{ \text{Belgium, Estonia, Croatia, Switzerland, Canada, Serbia Hungary, Poland, Romania, Malta, Portugal, Cyprus, Australia, Slovenia, the Netherlands, Lithuania, Italy, Bulgaria, Greece, Turkey, Ireland, Slovakia, the Czech Republic, Spain} \}$

For all the groups, formed both in the year 2010 and 2017, the differences between the inter-group and intra-group variances were examined. It was found out that in each case the inter-group variance is significantly higher than the inter-group variance. Thus, the calculated difference is statistically significant and there is no need for further delimitation of the groups.

#### 4. CONSLUSION

In the article, a taxonomic clustering method based on a calculated synthetic variable was used to examine data concerning the Internet-based information processing in selected countries in the years 2010 and 2017 with the aim of separating them into groups of countries showing similarity in this respect. In both years four homogeneous groups were identified. However, we can observe differences in their composition between the years 2010 and 2017. The first group, representing countries with the highest level of the phenomenon under study, consisted of Sweden in both years, and additionally of Denmark in 2010 and Brazil in 2017. The second group included the United Kingdom, Luxembourg and Finland in both years, but in 2010 the group comprised also Norway, Switzerland and France. The third group was a single-element group in 2010, including only Germany, and was enlarged with France, Austria, Norway, Denmark and Iceland in 2017. The fourth group, which brings together countries with the lowest level of information processing by means of the Internet, is made up of all the other countries. The composition of the identified groups is determined mainly by Internet access and the frequency of Internet use in particular countries. Although the number of Internet users keeps growing, for example, in 2017 one in five Poles admitted they had never had any contact with the Internet. It is symptomatic that in 2017 the European countries with the highest percentage of households having Internet access included Luxembourg, Denmark, Sweden, the United Kingdom, Germany and Finland while the lowest share was recorded in Bulgaria, Spain, Greece, Romania and Turkey. In many countries, Internet services are available in big cities only, leaving out rural dwellers deprived of any internet access. Another factor affecting the results of the study is access to the mobile Internet – the countries belonging to the first and second groups have the highest mobile Internet penetration rates. The countries from the first three groups have also the largest percentage of their population active in social media, on Facebook or Twitter, as well as ordering and buying goods and services online.

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## THE INFLUENCE OF CLIMATE CHANGE ON SUSTAINABLE DEVELOPMENT

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### ABSTRACT

*Climate change produces major changes in all sectors of the economy, especially in agriculture for plants, animals, forests, aquatic resources, invertebrates and micro-organisms. All the climate change scenarios considered have led to decreases in wheat and corn production and animal production, with direct consequences on population nutrition. Conclusion: Climate change can cause substantial reductions in international cereal and livestock production. Agriculture and livestock are among the most climate sensitive economic sectors in developing countries, while rural communities are more vulnerable to the adverse effects of climate change. Climate change is real and is happening now. In this context, risk management in managing the effects of climate change is a useful and extremely important leverage.*

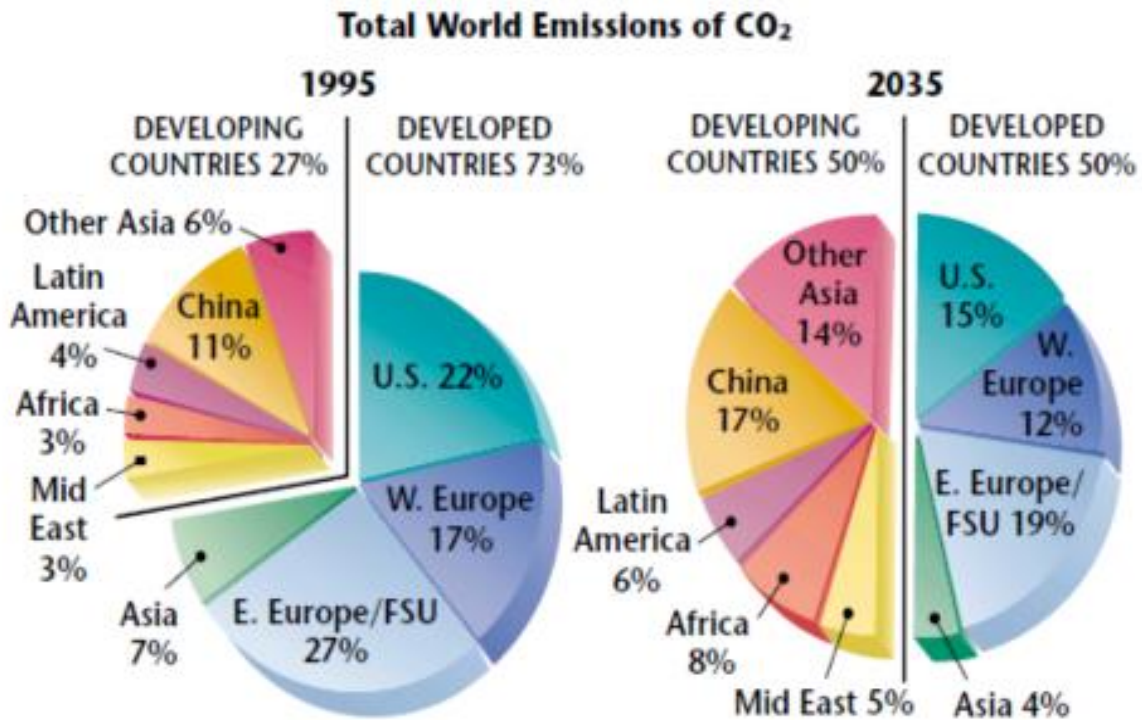
**Keywords:** *climate change, poverty, economic disturbance, risk management, preventive measures*

### 1. INTRODUCTION

Climate change is a real fact that is getting worse at every moment and is due to fuel consumption (oil, carbon and gas) instead of renewable energy. The type of energy used today is based on the burning of fossil fuels. In Europe, climate change has a negative impact on all regions: increased flood risk, drought, increased erosion due to torrential rains and sea level rise, melting glaciers in the mountain area, low snowfall, extinction of species and natural habitats degradation, lack of drinking water, increased risk of fire and reduction of natural vegetal resources. If we really want to avoid all these disasters due to climate change, the exploitation of hydrocarbon resources must be halted. Otherwise, the consequences will be terrible: changing ecosystems, affecting drinking water distribution, spreading disease, unusual meteorological phenomena.[1] The first action to combat the phenomenon took place in 1992 in Rio de Janeiro by signing the United Nations framework Convention on Climate Change, ratified in our country by Law no. 24/1994, whereby the 194 signatory states agreed to act on long-term in order to stabilize the concentration of greenhouse gases in the atmosphere at a level that would prevent the dangerous influence of human on the climate system.[2] Climate changes, according to specialists, represents a possible irreversible threat for entire planet, therefore, the adoption of measures to reducing greenhouse gas emissions, which take into consideration respecting the objectives and principles of the United Nations framework Convention on Climate Change and of the Kyoto Protocol, is a fundamental component of national policy on climate changes domain. Climate change is already impacting, and will increasingly impact, for food security and nutrition, through effects on agro-ecosystems it impacts agricultural production, the people and health in general.[3]

*Figure following on the next page*

Fig.1 Total World Emissions of CO<sub>2</sub>



Source: U.S. Environmental Protection Agency.

Source: <https://www.epa.gov/> [4]

## 2. MATERIALS AND METHODS

What is risk management? Risks management includes „all processes regarding risks identifying, evaluating assessing, setting responsibilities, taking measures of mitigation or anticipation of them, periodic review, and progress monitoring”. [5] The risk is any element that has a measurable probability to deviate from the plan. This, of course, suppose the existence of a plan. Strategies, plans and programs are elements that allow the prefiguration of reality and then the confrontation of concrete achievements with the expected results. In order to achieve the objectives set, it is necessary to develop some sets of activities. An activity, labeled (a), may be considered a risk element if the following two conditions are simultaneously met:

$$0 < P(a) < 1 \quad (1)$$

$$L(a) = 0 \quad (2)$$

where:  $P(a)$  = probability of an event (a) to occur  
 $E(a)$  = the effect of the event (a) on the objectives  
 $L(a)$  = monetary evaluation of  $E(a)$

Risk management is a cyclical process, with several distinct phases: risk identification, risk analysis and reaction to risk. During the risk identification phase, the potential hazards, the effects and probabilities of their occurrence are assessed, in order to decide which of the risks must be prevented. Practically, at this stage, all elements that satisfy conditions (1) and (2) are identified.

Also, the inconsistent risks are eliminated, meaning those risk elements with reduced probability of occurrence or with an insignificant effect. This means that those elements for which  $P(a)$  or  $L(a)$  tend to zero can be neglected. Thus, according to the definition established in the domain, the risk can be defined as „a problem (situation, event, etc.) that has not yet occurred, but which may occur in the future, in which case the obtaining of previously results set is threatened or potentiated. In the first situation, the risk represents a threat, and in the second situation, the risk represents an opportunity. The risk represents the uncertainty in achieving the desired results and should be seen as a combination of probability and impact” [6]. To identify the risks related to climate changes, it is necessary to identify and inventory the activities that take place at the level of an entity, geographical area, economic branch, generally wherever there is an intervention that may have consequences. There are several stages in identifying risks:

- inventory of activities (which requires a good knowledge of the domain under consideration);
- association of one or more risks for each activity;
- quantification of risks based on the two indicators: impact and probability;
- risk ranking: high, medium, low;
- risk analysis, especially those with high values.

Based on the risk analysis carried out regarding the climate changes occurred, the identification of major risks has been realized.

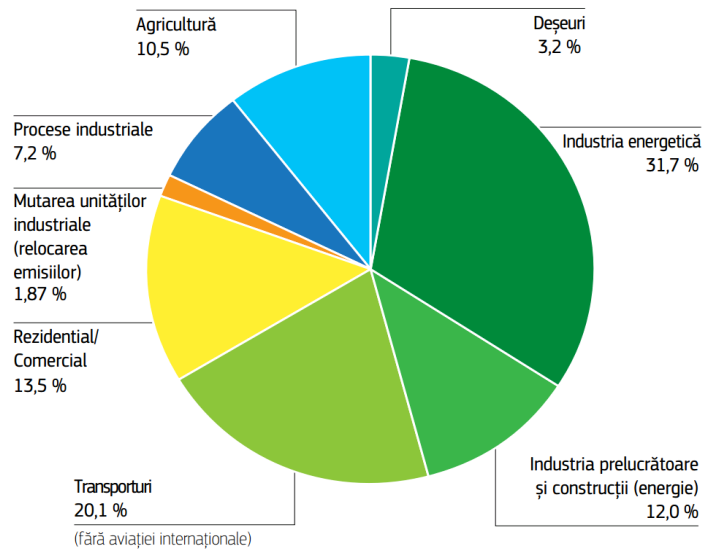
Risks:

- the earth globe is warming up, influencing the climate change,
- increasing global average temperature becomes dangerous and the major consequences are for our society and economies;
- the consequences of climate changes are: increasing average temperatures at global level, increasing the sea level, diminishing glacial calotte and the visible increasing in the frequency of extreme weather phenomena;
- according to studies, climate changes generate costs for every inhabitant of the globe at a level of about 14% of average consumption;
- climate changes are considered by many experts in the domain as the main threat for global stability and security;
- In Europe, is already observed an increase in the level and intensity of precipitation, waves of heat with a growing frequency and duration and the aggravation of the drought in southern Europe. At the same time, in central and northern Europe can be observed increasing precipitations, leading to intense flooding on the watercourses and the coastal area. Extreme weather events are increasingly related to climate changes. [7]

*Figure following on the next page*



*Fig.2 Total greenhouse gas emissions from the 28 EU Member States, in 2012*



Emisiile totale de gaze cu efect de seră pe sectoare, în cele 28 de țări membre ale UE în 2012

Source: [https://europa.eu/european-union/topics\\_ro](https://europa.eu/european-union/topics_ro) [8]

The possibility of an ante factum determination of potential major risks, in our situation, those referring to climate changes with the help of risk management, can help to preventing their production, through measures designed to mitigate or even eliminate the devastating effects of factors leading to climate changes at Earth level.

### 3. RESULTS AND DISCUSSIONS

Preventing climate change as a result of risk analysis:

Besides the obvious benefits, of avoiding instability, insecurity and rising costs of climate changes, there are the economic and strategic benefits, but also major social benefits that may result from ambitious measures to reduce emissions of greenhouse gases.

- Applying on the global market of measures in the domains of green goods and services has led to low carbon emissions reaching over 4,000 billion € and is in a continuous increasing with over 4% per year. These aspects turn it into one of the most dynamic and prosperous sectors globally.
- Ambitious measures in the domain of climate changes can assure a first place to Europe in terms of benefits obtained from this growing demand for green goods and services and with low content in carbon dioxide, at global level.
- Also, they will provide Europe with an advantage regarding innovation and development of cutting-edge technologies, thus maintaining the competitiveness of industry and business environment. This thing can be achieved by placing on the market the best-performing low carbon technologies worldwide.
- Establishing clear and early measures regarding policies of climate changes will end the current uncertainty that delays the investments in the energy sector that we need urgent and that will help boost our economies, as well as the development of a modern and competitive infrastructure with low carbon emissions.
- Ambitious measures in the domain of climate changes are also needed to strengthen energy security. We can see a decrease in fossil fuels resources in Europe, an aspect that transforms us in one of the most dependent areas of the imports of these fuels. Currently, Europe

imports over 80% of the necessary oil and over 60% of the necessary natural gases. The forecasts of the International Agency for Energy show that by 2035 they will increase to 95% for oil and 80% for natural gases. Moreover, the global demand for energy is in continuous increasing, aspect that would leave Europe exposed to a volatile and rising evolution of the energy price due to the instability of some areas of the globe. Through climate change policies, we can develop clean internal energy sources and can use this energy more efficiently, thereby increasing energy security and new jobs.

- There are also other indirect benefits of these measures to reduce greenhouse gas emissions such as: by reducing the use of fossil fuels we can also ensure a reduction of air pollution and costs in the domain of health, reduce energy bills for the population by increasing the energy efficiency of houses. At the same time, we can increase the conservation degree of biodiversity, by protecting and maintaining the main carbon reservoirs, such as forests. [9]

#### **4. CONCLUSIONS**

- Following the risk management, the EU and the international community have made considerable progress in combating climate change over the last decade;
- The EU is currently on track to go beyond its 20% reduction target by the end of the decade. This is due to its 2020 strategy, the legislation already agreed, and the new measures being adopted;
- Another measure taken is to further reduce the emissions of fluorinated gases used in refrigeration and air conditioning that determine global warming. The heating effect of the fluorinated gases is up to 23,000 times higher than that of CO<sub>2</sub>. The EU Regulation, applicable from January 2015, strengthens existing measures. Until 2030, fluorinated gas emissions will be reduced by two-thirds from the current level.
- The year 2030 is the next milestone in the process of building a low-carbon, competitive European economy by the middle of the century.

#### **5. RECOMMENDATIONS**

As a result of the analysis of the climatic changes effects that are foreseen over 25-30 years as a result of global warming it is recommended:

- reducing of CO<sub>2</sub>, methane and other pollutant gases, by measures taken at the level of political leaders of the states, especially in highly industrialized countries;
- reducing the energy consumption based on fossil fuels and adopting conventional forms of energy (sun, wind, water, biological mass, underground heat);
- replanting destroyed forests and protecting the existing ones by creating national parks, protected by drastic laws;
- reducing paper consumption and recycling cellulosic waste to reduce the amount of wood resulting from cutting down forests;
- restoration of irrigation arrangements for agricultural crops as major measures in providing food for the population;[10]
- reducing soil degradation because is a serious problem in Europe. It is driven or exacerbated by human activity such as inadequate agricultural and forestry practices, industrial activities, tourism, urban and industrial sprawl and construction works. These activities have a negative impact, preventing the soil from performing its broad range of functions and services to humans and ecosystems. This results in loss of soil fertility, carbon and biodiversity, lower water-retention capacity, disruption of gas and nutrient cycles and reduced degradation of contaminants;[11]

- global poverty can be reduced only by applying measures capable to cope with climate change. Agricultural farms must therefore diversify production by adapting to climate change.[12]

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## THE EFFECT OF OVERFLOW AT WORKPLACE ON EMPLOYEES PRODUCTIVITY AND WELL BEING

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### ABSTRACT

*The constant inflow of e-mail messages, documents or the need to deal with workplace procedures has resulted in many employees being exposed to information overload. Experiencing overload can be problematic from an organizational perspective diminishing the accuracy of decision-making, personal well-being, levels of experienced stress, job satisfaction, but also decision making, innovation, productivity, and fulfillment of job responsibilities. Two studies investigated the effect of overflow induced by email segregating task on cognitive performance and physiological markers of stress and cognitive load: heart rate (HR) and heart rate variability (HRV). In Study #1. 134 participants were assigned to the overflow or control conditions and their subjective feeling of overload and cognitive performance were measured. In the overload condition participants reported higher levels of overload and exhibited lower levels of cognitive performance in a subsequent task as measured by mean response time and number of errors in the Stroop task. In Study #2. Twelve participants completed 3 sessions consisting of 3 tasks each. HRV was lower during the overflow task than during baseline indicating a greater cognitive load during the overflow condition. This effect did not diminish with repeated exposure to the overflow task. HR decreased during subsequent overflow tasks relative to baseline indicating the within-session habituation of stress in response to repeated exposures to the overflow task. Participants' self-response regarding core affect showed no difference between the overflow tasks relative to baseline. This indicates that physiological measurement of overflow may provide insight into monitoring overflow not available with questionnaire methods. Negative consequences of overloading are very important from the point of view of the organization, because impairment of cognitive tasks can translate into worse decision making and more mistakes made by employees, while a decrease in heart rate variability can lead to health consequences.*

**Keywords:** *Cognitive Load, Employees Well-Being, Heart Rate Variability, Stroop Task, Workplace Overflow, Workplace Stress*

### 1. INTRODUCTION

Whether it is managing a constant influx of emails, organizing documents, or dealing with organizational procedures, we all experience overflow. This phenomenon has been recognized as a defining feature of the modern workplace (Klausegger, Sinkovics, & Zou, 2007). Overflow can manifest itself as information overload, increasing the cognitive load experienced by individuals, which can pose risks both at the individual and organizational level. The experience of overflow has been extensively studied from the historical, managerial, economical, and sociological perspectives (Czarniawska & Löfgren, 2013).

The objective of the two studies presented in this article was to investigate the experience and consequences of information overflow on cognitive and physiological processes of employees dealing with the email task. Based on previous research, it is unclear how experience of information overflow affects subsequent cognitive performance and physiological measures.

## **2. COGNITIVE AND PHYSIOLOGICAL REACTIONS TO OVERFLOW: THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT**

Problems associated with dealing with the overflow of information are a function of human information processing capabilities. Researchers agree that our ability to select, organize, process, and remember novel information is severely limited (Gilchrist, Cowan, & Naveh-Benjamin, 2008). The level of cognitive load depends on the speed and volume of incoming information, as well as other situational (e.g. noise, presence of other people) and personal factors (e.g. stress, motivation, fatigue, and an individual's cognitive complexity) (eg. Cowan, 2005; Huber & Daft; 1987). What is more, high cognitive load is more often experienced when dealing with tasks that are novel, performed under time pressure, and include punishments. We note that these are some of the characteristics of overflow experienced in organizational settings.

### **2.1. Performance and affect under conditions of overflow at the workplace**

Experiencing high levels of cognitive load can be problematic from both a personal, as well as an organizational perspective. Studies indicate that too many stimuli can adversely affect not only personal well-being, levels of experienced stress, job satisfaction, or health, but also decision making, innovation, productivity, and fulfillment of job responsibilities (Hemp, 2009; Klausegger, Sincovics, & Zou, 2007; Waddington, 1996). It is related to subjective experience of stress, confusion, pressure, anxiety, and low motivation (Pijpers, 2010). On an organizational level, information overflow generates increasing costs associated with the collection, transformation, storage, and transfer of information. It is estimated that this accounts for more than 50 per cent of overall costs to businesses in the USA (Klausegger, Sincovics, & Zou, 2007). Another area affected by high cognitive load is task performance. Cognitive load that exceeds the limits of working memory diminishes the effort put into completing it and hinders performance (Aasman, Mulder, & Mulder, 1987). One of the most prominent sources of overflow in the organizational world comes from a need to deal with a vast amount of email messages. According to the report of The Radicatio Group (2015) the number of emails sent and received per day total over 205 billion and around 122 business emails are sent and received daily. The majority of white-collar workers recognize email as the leading cause of information overload (Farhoomand & Drury, 2002; Janssen & Poot, 2006). Incoming messages need to be somehow managed - deleted, read, or responded to. Additionally, their constant influx interrupts the performance of other tasks, which may negatively affect performance (Speier, Valacich, & Vessey, 1999). For this reason, the overflow in the current study was induced with an email segregation task performed under time pressure. The same task performed without time pressure (self-paced) served as a control condition. This is because high overload is experienced when the control over the pace of task progression is taken away from the individual (Bargh & Thein, 1985). What is more, information overload becomes especially evident when the time allotted for the activity is not enough to thoroughly process all the information (Nunamaker, Dennis, Valacich, Vogel, & George, 1993). In consequence, we propose the following hypothesis: H1. Information overflow results in a worse performance on the email segregation task compared to the control condition.

### **2.2. Overflow and performance on a subsequent task**

A question that is not yet answered, to our knowledge, by existing studies is whether

information overload impairs subsequent task performance. On one hand, studies have shown that high cognitive load increased consumers' subsequent vulnerability to priming (a greater tendency to choose a brand displayed on a poster) and were more prone to the primacy effect (judgments based on the first item on the list) (Dewitte, Pandelaere, Briers, & Warlop, 2005). On the other hand, some studies indicated that, since failure enhances vigilance, decreasing cognitive load increases attentiveness and information integration (Rothmund, 2003). This prediction is also consistent with the opponent process theory (Solomon, 1980), which postulates that people under high cognitive load generate opponent processes to enable better coping with this difficulty. When the load is diminished, the opponent, facilitating process prevails and increases performance of a subsequent task. Based on this we state the following hypothesis: H2. Information overflow results in worse performance during a subsequent, cognitive task, compared to the control condition.

### **2.3. Moderating role of individual differences**

The experience of overload is not only connected to individual's cognitive capacities, but also dependent on individual differences, such as temperamental characteristics (Agrawal & Clay, 2010) or preferred activity styles (Wieczorkowska-Wierzbńska, 2014). High emotional reactivity, defined as "a tendency to react intensively to emotion generating stimuli, expressed in high emotional sensitivity and in low emotional endurance" (Strelau & Zawadzki, 1995, p. 208), may intensify the experience of overload. What is more, information overflow may be especially exhaustive for individuals exhibiting high preference for precision. Information overflow - especially in the context of time pressure - forces an individual to act quickly, without a thorough evaluation of his or her own actions and decisions. H3. The influence of overflow task on perceived overload is moderated by individual differences: the level of emotional reactivity and the preference for precision.

### **2.4. Physiological response to overflow**

Although the experience of overflow is usually studied with the use of subjective measures, the advantage of using physiological measures of overload is related to our limited ability to retrospect and accurately assess the level of experienced load (Liu et al., 2016). In the current article, we decided to concentrate on Heart Rate Variability (HRV) and Heart Rate (HR). They are deemed to be especially useful tools for uncovering adverse effects of the occupational hazards, including job strain and cognitive load, on the cardiovascular system (e.g. Nickel & Nachreiner, 2003; Togo & Takahashi, 2009). It is well established that HRV decreases during increased cognitive load (Horsten et al., 1999). Changes in HRV are also associated with an experience of work stress and low control during task execution (Collins, Karasek, & Costas, 2005; van Amelsvoort, Schouten, Maan, Swenne, & Kok, 2000). Decreased HRV is considered a sign of reduced ability to respond to stressors, making the person more vulnerable to their negative health consequences (Horsten et al., 1999). But does the person learn to cope with the overflow task, and the physiological response normalizes, or does the repeated overflow continue to evoke HRV and HR response? According to the theory of habituation, a repeated exposure to a stimulus should result in the reduction of the body's initial response (Thompson & Spencer, 1966). On the other hand, theory predicts slower habituation to stimuli that are complex than to those that are simple and non-salient (Siddle, Stephenson, & Spinks, 1983). Overflow is generally related to more complex and personally relevant stimuli; hence the process of habituation could be slower. Based on literature we suggest the following hypotheses: H4. Physiological reaction in response to overflow task is stronger relative to the baseline task. H5. Physiological reaction to the overflow task habituates within and between experimental sessions.

### 3. STUDY 1

The goal of Study 1 was to see whether an experience of information overflow results in diminished performance on the task at hand, as well as the subsequent, cognitively challenging task, compared to the control condition.

#### 3.1. Method

##### 3.1.1. Participants

122 participants ( $M = 46$ ,  $F = 76$ ; age: 18-23 years,  $M = 19.35$ ,  $SD = 0.82$ ) took part in the study. The participants were all undergraduate Management students who participated in exchange for bonus points for one the courses.

##### 3.1.2. Procedure

An email with a link to an on-line survey was sent to the participants, inviting them to take part in a study on information categorization. A study started with the email-segregating task. The participants were randomly divided in two groups. In the overflow group, the emails were displayed at an increasing pace. In the control group, the participants were able to control the pace of the incoming emails. After completing this task, participants answered questions about perceived overload experienced during the email task. In the next step, participants completed the Stroop task. The study ended with two subscales of the Activity Styles Inventory (scale: reactivity, precision) and items related to sociodemographic data (year of birth, gender). All computer based tasks, including the email-segregating task and online questionnaires were carried out using WebEx computer software (Król, 2016). The study was approved by the Ethical Board of University of Warsaw, The Bob Zajonc Institute for Social Studies.

##### 3.1.3. Materials

Email segregation task. This task was developed in the Department of Psychology and Sociology, University of Warsaw. Participants take on the role of university office employees administrating an email account. Their task is to decide the appropriate recipients (lecturer or office) and subject (e.g. psychology, management, etc.) and place the email into one of six appropriate folders. There are three versions of this task that differed in the subject and mail content. The performance during the three versions of the test did not differ,  $\chi^2(2) = 1.14$ ,  $p = 0.57$ . Therefore, all three versions of the e-mail task were treated as equivalent.

Stroop task. We used the modified version of the Stroop task with 160 stimuli. Test series consisted of 10 stimuli, which used neutral sequence of letter XXXX presented in different colors. The proper study consisted of 150 alternating stimuli: 100 congruent (the content and the color of the font matched) and 50 incongruent (the content and the color of the font did not match). We decided to mix stimuli, as it is said to strengthen the manipulation (Engle, Sedek, von Hecker, & McIntosh, 2013). The time interval between subsequent stimuli was 500 milliseconds. In accordance with previous research we used the difference in the number of mistakes made in the incongruent and congruent conditions as a measure of cognitive performance.

Overload questionnaire. Overload questionnaire consisted of seven questions about perceived overload (on a scale from 1-not at all to 6-a lot; e.g. "I felt overwhelmed with the amount of emails to segregate")

Reactivity and Precision. Subscales of emotional reactivity (e.g. "If stressed, person A has problems with focusing on the task. Person B can easily concentrate in every situation") and precision (e.g. "For person A details are very important. Person B has a tendency to overlook

details") were selected from the Activity Styles Inventory (Wieczorkowska-Wierzbinska, 2014). Answers were indicated on a 5-point scale, where 1 indicates a greater similarity to Person A, 5 - a greater similarity to Person B.

### 3.2. Results and discussion

#### 3.2.1. Mailing task and perception of overload

First, we tested whether the perception of overload depended on the mailing task type - overflow condition (time pressure) vs. control condition (self-paced). An independent-samples *t*-test confirmed that the level of overload was perceived as higher by participants in the overflow condition ( $M = 3.57$ ,  $SD = 0.93$ ) compared to those in the control condition ( $M = 2.73$ ,  $SD = 1.21$ ),  $t(91.46) = 4.11$ ,  $p < .001$ ,  $d = 0.78$ . Participants also perceived their performance in the mailing task as worse in the overflow condition ( $M = 3.22$ ,  $SD = 1.28$ ) than in the control condition ( $M = 4.59$ ,  $SD = 1.30$ ),  $t(116) = -5.707$ ,  $p < .001$ ,  $d = 1.06$ . The level of involvement in the mailing task did not depend on the task type,  $t(116) = 1.46$ ,  $p = .147$ . The Wilcoxon Signed Ranks test confirmed that the median rank of errors (incorrectly classified emails) in the control condition was lower ( $Mdn = 19$ ) than in the overflow condition ( $Mdn = 91$ ),  $Z = -9.29$ ,  $p < .001$ .

#### 3.2.2. Task type and Stroop task

The Mann-Whitney U test indicated that the Stroop difference score was larger in the overflow condition ( $Mdn = 6$ ) than in the control condition ( $Mdn = 4$ ),  $U = 1383.00$ ,  $p = .018$ .

#### 3.2.3. The moderating role of activity styles

A multiple regression analysis was performed to check whether the perception of overload associated with the mailing task depended on participants' temperament (reactivity) and their activity style (precision). All variables were standardized for this analysis. The results indicated that the perception of overload was lower for the participants who declared higher preference for precision (see Table 1), but a significant interaction revealed that this was true only for the control condition. What is more, a statistical tendency was found, in which the more reactive the participants were the higher was their perceived overload (see Table 1). The interaction between reactivity and task type was not significant. Regression model accounted for 22% of the variation in participants' perception of overload,  $F(5,112) = 7.55$ ,  $p < 0.001$ .

Table 1. Multiple regression coefficients for individual differences on perception of overload

	Regression coefficients			
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Constant	.02	.08	0.26	.80
Experimental condition	-.35	.08	-4.18	< .001
Precision	-.19	.08	-2.30	.023
Reactivity	.15	.08	1.79	.076
Precision x condition	-.25	.08	-3.04	.003
Reactivity x condition	-.10	.08	-1.19	.238
$R^2 = .25$				



## 4. STUDY 2

The goal of the study was to verify how the physiological response to overflow induced by email segregating task, changes as a result of multiple execution of difficult tasks.

### 4.1. Method

#### 4.1.1. Participants

Twelve employees and PhD students at the University of Warsaw participated in the study. Four were males and eight were females. They were aged between 27 years and 61 years ( $M = 37.5$  years;  $SD = 8.76$  years). All were verified to have no known heart conditions and signed an informed consent form prior to the study.

#### 4.1.2 Procedure and materials

Procedure. The study took three consecutive days, thus each of the participants was measured three times. Before the study, participants filled out the consent forms, instructions were provided to them and sensors were placed on two fingers of the non-dominant hand. The procedure started with 5 minutes of the base-line measurement. In that time participants looked at the computer with the countdown clock. After this time each participant was asked to complete the first email segregating tasks with time-pressure. Next, the person completed the second and third email segregating tasks, with 5-minute baseline measurements in between each task. The tasks differed in terms of email content, to lessen the effect of content memorization on task difficulty. The study was approved by the Ethical Board of University of Warsaw, The Bob Zajonc Institute for Social Studies.

Heart rate and Heart rate variability. In this study we used mobile device (GSR Development Kits produced by Shimmer) with optical sensors to measure heart rate (HR) and heart rate variability (HRV). The sensors were fixed to the subjects' ring finger of the non-dominant hand, to enable accurate measurements and enable the free manipulation of a computer mouse during the experiment. Based on previous research, we decided to use the frequency domain analysis method to compute HRV, and took the low frequency component (LF) of the pulse wave signal as its decrease is often used as a marker of increased cognitive load, as multiple studies found that this component decreases during tasks requiring high mental effort, engagement, and time pressure (Taelman et al., 2011). According to standard procedure we took the logarithm of this measure.

#### 4.1.3. Overview of statistical methods

Statistical analyses were carried out using mixed modeling with random intercepts for participants. The mixed model was used to test the linear fixed effects of task and session as well as their interaction on self-report and physiological variables. Analyses were performed using the nlme package in the statistical program R assuming a compound symmetry covariance structure. Intraclass correlations and likelihood-ratio tests were performed to assess overall model fit. Residual normality was assessed using quantile-quantile plots.

## 4.2. Results and discussion

Within and between-session effects of repeated overload exposure on heart rate and heart rate variability. Hypothesis 4 was confirmed: the HRV amplitude was lower during the overflow task than during baseline ( $B = -0.78$ ,  $SE = 0.24$ ,  $t(65) = -3.28$ ,  $p = .002$ ). Within and between session changes of HRV relative to baseline were non-significant indicating a lack of habituation. The value of HRV did not differ significantly among trials ( $B = -0.03$ ,  $SE = 0.16$ ,  $t(65) = -0.18$ ,  $p = 0.86$ ), sessions ( $B = 0.16$ ,  $SE = 0.15$ ,  $t(65) = 1.07$ ,  $p = 0.29$ ) or their interaction ( $B = -0.01$ ,  $SE = 0.12$ ,  $t(65) = -0.07$ ,  $p = 0.95$ ).

Overall individual differences HRV from baseline accounted for 34% ( $ICC = 0.34$ ) of the variance. The model did not have a significantly greater Likelihood relative to the null model ( $\chi^2(3) = 2.64, p = 0.45$ ). Within and between-session changes of heart rate in response to overload exposure. Hypothesis 5 was partially confirmed, the HR declined significantly relative to baseline, within one session, indicating within-session habituation but this effect did not carry over between sessions. During the first overflow task participant's heart rate was not significantly different from to baseline ( $B = 2.21$  BPM,  $SE = 1.75$  BPM,  $t(65) = 1.26, p = 0.21$ ). However, the average heart rate decreased significantly by  $-3.21$  BPM,  $SE = 1.17$  BPM ( $t(65) = -2.74, p = 0.01$ ) with each consecutive task. Participants' heart rate relative to baseline did not significantly change in consecutive sessions ( $B = -1.50$  BPM,  $SE = 1.10$  BPM,  $t(65) = 1.36, p = 0.18$ ). The interaction effect of session and task index on heart rate was also non-significant ( $1.28$  BPM,  $SE = 0.87$  BPM,  $t(65) = 1.47, p = 0.15$ ). Overall individual differences in heart rate from baseline accounted for 31% ( $ICC = 0.31$ ) of heart rate's variance and the model had a significantly greater Likelihood relative to the null model ( $\chi^2(3) = 12.75, p = 0.005$ ).

## 5. GENERAL DISCUSSION

In the present paper we examine the effect of overflow on cognitive performance, cognitive load, and stress. To sum up, Study 1 confirmed that the mailing task performed under the condition of time limit created overflow, manifested both through participants' declarations of perceived overload and their decreased performance (Hypothesis 1). What is more, participants in the overflow condition made more errors in the task indicating more trouble in inhibiting the automatic response. This confirmed the Hypothesis 2 and indicated that cognitive overload affects not only the execution of a task at hand, but can also negatively affect performance on subsequent, cognitively challenging activity. In Study 2 there was a stronger, physiological reaction to the overflow condition than during rest (Hypothesis 4), with this effect diminishing during repeated exposure to overflow for heart rate, but not for heart rate variability (Hypothesis 5). These results suggest that cognitive load during the overflow task was consistently greater than during baseline and did not decrease with repeated exposure, even though stress did. It seems that the detrimental effects of overflow on an individual are not just restricted to the task at hand, but can carry over to subsequent tasks. Interestingly, this is contrary to the assertion that high cognitive load generates vigilance and opponent processes, which might increase performance of a subsequent task (Rothmund, 2003; Solomon, 1980). To illustrate the consequences of this finding in the workplace we could imagine a situation in which an employee, after spending some time performing an overflow-inducing task (for example preparing a database under time pressure), moves on to another assignment. Although they will be unaware of the fact, their cognitive resources have been depleted, which will make them more susceptible to increased biases and committing errors during this new task. In light of this, it seems that the implications of overload on both the individual and organizational level are broader than previously considered. Another finding was that individual characteristics determined how overloading an overflow situation is perceived as (Hypothesis 3). We found that participants declaring high preference for precision felt less overloaded during the control condition than during the overflow condition. Those low in the preference for precision felt overloaded by the mailing task regardless of the condition. We also found there was a tendency for more reactive participants to perceive the overflow task as more overloading than the less reactive participants irrespective of the experimental condition. Although this suggests that the susceptibility to overload in an overflow environment could be determined by a mix of individual characteristics and task type, further studies are needed to understand this relationship more fully in a workplace environment. We found no evidence of cognitive load habituating, so the detrimental effects of overflow are unlikely to lessen over time spontaneously.

This raises the question of how the detrimental health effects of overflow could be lessened in the work environment? Regular physical activity could positively affect HRV as well as cognitive functioning (Kramer et al., 1999). It can also beneficially influence the relationship between psychosocial stress and cardiovascular diseases (Hamer, 2012). One of the limitations of the studies was the chosen task. The email-segregation task was repetitive, monotonous, and also probably not very engaging for participants. This is in contrast to most work situations that require quickly adapting to additional tasks and are can be highly engaging and personal. Taken together Studies 1 and 2 show that overflow has an effect on cognitive performance and are physiologically straining. Furthermore, this effect can carry over to other tasks. An individual's decreased cognitive performance can pose a risk to the organization he or she works in via poorer decision-making capabilities and more errors. Stress and decreased heart rate variability, on the other hand, can pose a risk to his or her health. Because of the impact of overflow on both the individual as well as the organizational level, it is advisable to consider these effects when managing overflows.

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## PERFORMANCE APPRAISAL SYSTEM FOR ADMINISTRATIVE STAFF: A PILOT IMPLEMENTATION STUDY AT THE UNIVERSITY OF WARSAW

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### ABSTRACT

*This paper presents a reflective pilot implementation study aimed at the development of a performance appraisal system for the administrative staff of the University of Warsaw. Such systems are relatively rare in academic institutions and until now there was no general performance appraisal system for administrative staff at this particular University. This paper describes a preliminary attempt to create an adequate model and methodology, as well as its initial implementation. The pilot implementation study was conducted at the University's Faculty of Psychology and – after some adaptation - in two offices of the University's central administration (number of employees  $N=70$ ). The authors' model of administrative staff performance appraisal consists of three pillars – (a) an auto-evaluation form filled by the employee, derived from the positive psychology theory of Martin Seligman, (b) a behavior-based employee evaluation form tailored by the manager and filled by him, and (c) a “plans and goals” form filled by the employee and the manager together, derived from Peter Drucker's management by objectives (MBO) theory. The implementation methodology was focused on a coaching and training process with the managers performing the staff evaluation. In order to assess the reception of the performance evaluation system some qualitative methods have been used (interview,  $N=2$ , survey,  $N=17$ ). Based on the results of the pilot implementation study further research directions are presented for future studies and practical application.*

**Keywords:** *Administrative Staff Management, Higher Education Institutions, Performance Appraisal System*

### 1. INTRODUCTION

According to some management researchers the higher education institutions represent a specific and unique type of organization (Parker, 2011, Bleiklie, 2007). Traditionally they have been perceived as a decentralized type of collegial authority, autonomy and free decision making (Mackay, 1995), while being subject to advanced internal bureaucracy in Max Weber's meaning (Bleiklie, 2007). A Humboldtian approach to the idea of higher education have been imposing a holistic and comprehensive self-rule model in opposition to the Anglo-American market-oriented model. (Dobbins, 2011). The past years have however shown an expanding process of corporatization and commercialization among the academia and the academics, which might be the reason of changes in the culture, governance and structure of colleges and universities all over the world (Parker, 2011). The governmental monitoring and the resulting financial implications for the universities have given place to a strong need of accountability of various higher education activities (Parker, 2011). From the scientific productivity of academics to the accurate financial monitoring performed by the administrative staff - all competencies and activities are subject to an increasing control from the government. Although being argued (Parker, 2002) this approach has important consequences for the academia.

The New Public Management theory in one of the possible responses to the changing mission of the education and the emerging new bureaucracy (Parker, 2011). Albeit these changes induce dissatisfaction among academics (Parker, 2002, Barry and Clark, 2001, Simmons, 2002), there is also a growing need of professional personnel management in higher education (Mackay, 1995), which should be focused not only on the traditional trust and ethos expectations, but also on a modern and possibly uniform system of human resource management. When introducing new procedures to the traditional world of academia, the managerial methods should however be adapted to the specificity of the university and respect the fundamental need of flexibility of the knowledge-based institutions (Simmons, 2002). In the market-oriented view of the academia, performance management usually concerns the work of academics - their productivity expressed in number of publications, their engagement in the organization's life, their administrative accuracy and their teaching skills (Humphrey and Gendron, 2015, Simmons, 2002). In this context, it is their ability to attract research funds and students that is nowadays more recognized and valued (Mackay, 1995). This – so called - new role of the university as a supplier of education being a service requires that the higher education institutions act like an enterprise and adopt commercial standards of customer service to the students and other stakeholders (Parker, 2011). A number of scholars and academics treat these tendencies as a possible threat for the academia's future, especially in matters of research innovation that seems to be less or not rewarded anymore (Parker, 2011, Simmons, 2002, Sennett, 2010, Ochowski, 2013). Nonetheless, in these arising circumstances new competencies are required from academics and administrative staff as well. The role of administrative staff (or „non-academic staff” or „non-faculty staff”) in the general outcome of higher education institutions activity is rarely noticed in the literature. However, in the last years some interest has been given to this occupational group, as the one providing specialized administrative services that are required because of the growing corporatization of the universities (Szekeres, 2004, 2011). The professionalization of administrative staff is starting to be recognized and professional standards are slowly introduced to organize the relationships - often tense and difficult, and therefore not constructive - between the academics and the administrative employees (McNay, 2005). The visibility of this occupational group is however still an issue - in the literature as well as in their own identity perception. In many countries and languages this group of employees is defined by an ontological „non” identity, as the „non-academic” group, what often leads to increased and unnecessary frustration (Collinson, 2006). In Poland the administrative staff is defined as the „employees not being academic teachers” (pracownik niebędący nauczycielem akademickim). The invisibility (Szekeres, 2004) of a whole group of employees in a hierarchically organized structure (Park, 1992) despite their competencies, seniority or knowledge, may lead to poor or inexistent management methods and tools. Although the increasing accountability of the organization concerns their work too, there is little knowledge about performance management of the academia's administrative staff. An additional challenging area is the important difference between the already practiced criteria of performance of academics, which have been comprehensively defined and described in governmental laws and provisions versus the possible criteria applied to non-faculty workers, whose work remains unnoticed by the governmental expectations and legal provisions (a progressive lack of interest concerning this occupational group can be observed in the Polish law, which is currently facing major changes and reforms: Ministerstwo Nauki, 2015, Ustawa, 2018). The aim of this contribution is to start filling the gap of the performance appraisal issue among the administrative staff of higher education institutions as an element of the performance management of this occupational group. We believe that there is a need to better understand the managerial challenges related to the changing role of universities and other higher education institutions.

The accountability of universities is growing with each change of legal context and despite the critique of the increasing role of managerialism in the world of academia we believe that the occupational group of administrative staff can benefit from better acknowledgment and stronger management, and in consequence the whole academia will profit from it, too.

## **2. THE METHODS: A REFLECTIVE CONTRIBUTION TO THE ISSUE OF PERFORMANCE APPRAISAL SYSTEM. THE CASE OF THE UNIVERSITY OF WARSAW**

In this paper we present a reflective pilot implementation aimed at the development of a performance appraisal system for the administrative staff of the University of Warsaw. This institution did not have a performance management system for non-academic workers before. We defined this occupational group as the non-academic employees working at the University, i.e. the students' affairs officers, finance specialists, research administrators, infrastructure and building managers, IT specialists, communication officers, marketing specialists, legal affairs specialists, research equipment operators, technical and maintenance workers, security workers, etc., pursuant to the definition applied by the Personnel Bureau of the University (Statut UW, 2015). This group consists of ca. 3600 employees, whereas the whole university counts ca. 7400 employees. We use the term rater as the person performing the appraisal and ratee as the person being subject of the appraisal. The pilot implementation of the performance appraisal system was conducted as a reflective process and it used some elements of the methodology of participatory action research (PAR) (Greenwood and Levin, 2007). This activity was treated as a reflective implementation practice and was meant to be a starting point for further analysis and research. We have been observing the organization mainly through qualitative methods. The method of diagnosis consisted in combining theoretical knowledge and practical experiences in order to create an applicable model for this institution. The data was collected through interviews, surveys, group discussions, field notes and reflections. A set of documents and reports was prepared at each stage in order to give the decision-makers the possibility to reorient the process on the base of collected data.

## **3. THE PROCEEDINGS: THE PILOT IMPLEMENTATION OF PERFORMANCE APPRAISAL SYSTEM FOR ADMINISTRATIVE STAFF AT THE UNIVERSITY**

The study consisted of 3 stages: the preparation of the model (system + strategy), the pre-pilot stage and the pilot implementation stage. After each stage there was a period of reflection and decision making. Changes were introduced to the model at each period of reflection. The study lasted 15 months and was conducted by researchers-senior managers of the University of Warsaw.

### **3.1. The preparation of the model**

The performance appraisal model consists of (a) a system of performance appraisal and (b) a strategy of its implementation. The model was prepared on the base of a literature review of the existing performance appraisal models and their philosophies. Having in mind the specificity of the occupational group addressed by this system and their position in the hierarchical structure of the institution, it was decided to focus on the behavioral and positive aspect of the appraisal, with the view of identifying the most important competencies (Messa et al., 2016, Boyatzis, 2009). It was also decided to prepare a simple system, easy to be accepted by the rated employees and comprising understandable notions (Woodruffe, 1993, referenced by Messa et al., 2016), as well as easy to be applied by the raters, identified as middle management of the administrative staff. The positive component was derived from the positive psychology (Seligman, 2011), according to which people want to be happy and need to experience positive



emotions in order to pursue happiness. A form to be filled by the employee was prepared (so-called form A), in which the ratee was asked to mention a couple of his behaviors or projects that were a success for him or the institutions. Another positive and motivating element of the system was its connection to a financial gratification (the annual prize of the Rector, available to a chosen group of the employees, previously distributed by managers with no relation to the employee's achievements). The third positive element was the possibility to nominate a colleague as the person that should receive the Rector's prize. The behavioral component was included in the form to be filled by the rater (so-called form B). A Behavioral Observation Scale (BOS) was prepared comprising ca. 20 behaviors to be evaluated on a 3-degrees graphic scale: less than expected, according to expectations, more than expected. The criteria included basic and observable behaviors of the employee and were drafted in result of several formal and informal discussions of senior and middle managers of the university. The form to be filled by the rater was intentionally non-finished, and the instruction given to the raters suggested that additional or specific criteria could be added at any moment of the process, especially competencies related to a specific post and to specific professional expectations. Finally, the third pillar of the system was based on the Management By Objectives theory (Drucker, 1954). In order to create a system of development for the employees, a third form was prepared, to be filled by both the rater and the ratee during the appraisal meeting (so-called form C). Objectives and plans were to be drafted in a SMART form (Doran, 1981), i.e. Smart, Measurable, Achievable, Relevant and Time-Bound. Apart from the three above mentioned forms (A, B, C) to be discussed during an appraisal meeting by the rater and the ratee, a procedure of general adoption of the system in the institution was proposed suggesting the realization of a pilot implementation before the general introduction at the university. It was stressed that a series of trainings for raters should be performed in order not to demotivate the ratees because of wrong or unprofessional feedback (Levy and Williams, 2004).

### **3.2. The period of reflection 1**

The model (the performance appraisal system and its proposed adoption procedure) was presented to the university authorities. It was decided to proceed to the realization of a first pre-pilot study at the faculty of one of the researchers-senior managers, the Faculty of Psychology. The system was accepted as a whole, however a risk analysis performed by the senior managers revealed the possibility of internal conflicts resulting from employees' emotions apprehending the appraisal (Ferris, 2008).

### **3.3. Pre-pilot stage**

The pre-pilot stage lasted 2 months and concerned ca. 50 employees of the faculty. The performance appraisal system was introduced by the researcher-senior manager in charge of the administrative staff. At first the middle managers of the faculty adapted the details of the system (the schedule of the process, the rules concerning the financial gratification and the criteria in form B), then the rules of the new system were communicated to the whole group of administrative employees. The information was distributed by e-mail and the observed reactions were diversified - from slightly positive to strongly negative. A group of employees did not want to fill the form A, arguing that „it was not their obligation to inform the rater about their successes”. They also did not want to nominate their colleagues in the form A, arguing that „it would be whistle blowing”. The managers did meet with the employees and some further changes to the system were introduced - the form A became optional. Although the expressed emotions were strong and not constructive, the senior manager decided to continue the pre-pilot stage. A short training on feedback rules was given to the middle managers and they proceeded to the performance meetings with their employees. The senior manager performed the appraisal of the middle managers. A post mortem group discussion among the middle managers was

performed at the end of the process and revealed the following conclusions: the system should have been introduced earlier to the employees, the lack of introductory meeting was a mistake, the training for middle managers was unsatisfactory because of its shortness. The final element of the pre-pilot study was a meeting of the faculty's authorities with the administrative staff and the presentation of the employees having received the Rector's prize. Again, the emotions expressed by the employees were strong, more positive during the group meeting and more negative in private discussions.

### **3.4. Period of reflection 2**

A series of group meetings with the university's authorities and the researcher-senior manager was organized in order to prepare a pilot study at the central administration of the university. On the base of the pre-pilot study conclusions, the model was enriched with a set of suggestions concerning the process of communication and information to be ensured during the introduction of the system. Two medium sized offices were chosen to participate in the pilot implementation (of a total of ca. 20 employees), their managers agreed to join the study. It was decided to give the whole process more time than at the pre-pilot stage, in order to better prepare the managers to their role.

### **3.5. Pilot implementation stage**

The pilot implementation stage lasted 3 months and concerned 18 employees of two offices of the university's central administration and their 2 managers. The researcher-senior manager performed the role of coach and consultant for the two managers participating in the process. At first the managers adapted the details of the system (the schedule, the rules and the evaluation criteria, as it had been done in the pre-pilot stage). The performance appraisal system was then communicated and explained to the teams during a meeting. The observed reactions were mainly positive or neutral, a group of employees expressed strong interest in participating in the pilot implementation. The preparation to the process was then focused on the managerial skills of the managers. The training on feedback giving lasted twice as long as the training during the pre-pilot stage and included among others an analysis of the cognitive biases and errors of raters. Both managers had more time to prepare the evaluation meetings. The appraisal meetings were performed and no specific problems occurred. At the end of the process, an anonymous survey was distributed among the ratees (N=17) in order to collect their feedback about the system and the participation. A final meeting of the researcher-senior manager with one of the team was organized in order to communicate the results of the pilot implementation. It was also an opportunity to collect additional feedback from the participants. Two unstructured and informal interviews were conducted with the managers. In the course of the pilot implementation many informal discussions were conducted with employees from other offices. The details concerning the pilot implementation were also published in an internal quarterly of the university.

### **3.6. Preliminary results of the pilot implementation**

The anonymous survey consisted of 37 closed questions and 3 open questions. It was answered by 17 respondents. Because of the small group of respondents, it was analyzed as a qualitative method and perceived as source of qualitative information rather than statistical results. A 4-degrees graphic scale was proposed: definitely not, rather not, rather yes, definitely yes. No neutral response was possible. The results revealed that the overall reception of the performance appraisal system and its realization was positive (more answers „rather yes” and „definitely yes” than „rather no” and „definitely no”). The manager was perceived as fair, competent and well prepared. The Rector's prizes were perceived as distributed in a fair way. The experience was in general positive and the atmosphere of the meeting was perceived as good. A couple of

persons were surprised by the manager's evaluation. The most frequent emotions felt after having received the form B (criteria evaluated by the rater) were: calmness, surprise, satisfaction. The most frequent emotions felt after the appraisal meeting: calmness, satisfaction, relief (the respondent could do a multiple choice form a closed list of emotions). Almost all the respondents declared that thanks to the process they learned what is expected from them. The individual interviews with the raters revealed that the pilot implementation was of great benefit for both of them. It was perceived as a valuable period of coaching and managerial training. Both of them declared to have learned a lot and improved their managerial skills. Both managers are decided to continue to use this system as performance appraisal tool even if the system is perceived as time-consuming. They are persuaded that the administrative staff of the university should have access to such a system, which is fair, transparent and predictable. Both of them highlighted the fact that in order to perform a good appraisal the manager needs to have strong managerial competences.

### **3.7. Period of reflection 3**

Another series of meetings and reports were given to the university's authorities after the end of the pilot implementation. The information about the system was spread among other faculties of the university and new entities expressed their interest in adopting the system. Instead of imposing a general adoption of a performance appraisal system for the administrative staff, the university's authorities proposed to continue the introduction of the system in chosen offices and willing faculties. A strong emphasis was given to the fact that as a side effect of the model, it is important to increase the managerial skills of the middle managers of the administrative staff and this process should be conducted at a slow pace.

## **4. DISCUSSION**

The purpose of this reflective pilot implementation study was to prepare and describe an initial implementation of a performance appraisal system for the non-academic staff in an academic institution. As a result of the Participatory Action Research methodology the subsequent stages of the process consisted of recurring cycles of changes that were proposed and introduced by the various participants - the senior managers, the middle managers, the employees and the decision makers. The readiness of the stakeholders and their engagement into the process give a lot of positive prospective to the future general adoption of the system in the whole organization composed of ca. 3600 administrative employees. The suggestions and recommendations noted at each reflection period by the researchers and the decision makers can be the base of a performance management roadmap for the institution and should be the starting point of an analysis in-depth before the general introduction of the system. A risk analysis should be performed in order to determine the possible risks related to the raters and their rating competencies as well as the ratees and their readiness to be appraised. The findings of the pilot implementation revealed that the adoption of a performance appraisal system is easier to conduct when the communication to the employees is comprehensive and satisfactory. The lack of information is source of negative emotions and it can disturb the process. This finding needs to be further analyzed in order to verify the implication of the lack of information. The managers performing and introducing the appraisal need a strong support in the course of the process. Their participation in the appraisal may increase their managerial skills, what was an unexpected side effect of the pilot implementation, however further research is needed in this area in order to check what are the determinants of this management development. Moreover, as the system is based on the individual activity of the manager performing the appraisal, an additional pilot implementation may include a group of managers with diversified levels of managerial skills in order to verify the implications of an appraisal performed by a manager with low or weak managerial skills and by a manager being in conflict with the

employees. Although the performance appraisal may be source of difficult emotions for the ratee, the overall reception of the pilot study was positive and constructive according to results of the anonymous survey, whereas the pre-pilot stage revealed a lot of negative reception of the system. Again, further research is needed to check the determinants of positive versus negative perception of an appraisal system. Moreover, a procedure of complaint and appeal should be prepared in order to respond to the possible conflicts and unsatisfactory results of the appraisal. Based on the observations of the researcher-senior manager, a limitation of the pilot implementation should be noticed. In the pre-pilot stage the researcher conducting the implementation of the system was also the senior manager performing the role of rater for the middle managers. This double role might have biased the reception of the system by the middle management and in consequence it might have disturbed the attitude of the employees, whose knowledge about the system came primarily from the middle managers. On the contrary in the subsequent pilot implementation stage the researcher conducting the introduction was unknown to the managers and the employees. This external role was more compliant to the ethnographic qualitative research methods and the negative reception of the system was this time unnoticed. The double role of the manager should be subject to further investigation in order to understand the possible limitations of the Participatory Action Research methodology. Another limitation of this reflective implementation activity was the lack of feedback from the ratees after the pre-pilot stage. The survey component of the model was introduced later, at the pilot implementation stage. In order to perform an in-depth analysis of the reception of the system, a survey should be conducted during a future performance appraisal process at the faculty of psychology. Finally, it should be noticed that albeit this performance appraisal system was introduced using an action research methodology and therefore was subject to regular actualizations and changes, the model was prepared with no participatory input of the employees and therefore it might have been perceived as imposed, whereas the participation could have given more commitment and engagement, as well as trust, which is one of the most important element of an effective feedback (Levy and Williams, 2004). The possible implications of a participatory input of the employees in the development of the system might be further investigated. These practical recommendations were presented to the university's authority as well as the suggestions for future research and further general implementation.

## 5. CONCLUSION

Our work was intended to highlight the importance of a specific and adapted performance appraisal system for the often overlooked and invisible occupational group of administrative staff in a higher education institution. We have presented the theoretical and reflective development of such a model and its initial practical implementation performed through a series of pre-pilot and pilot stages. Further in-depth analysis of this reflective pilot implementation is to be performed in order to prepare a general implementation of the model at this university. It should be mainly aimed at minimizing the risk of a dissatisfactory and, in consequence, inefficient reception among the administrative raters and ratees. Moreover, further research concerning this occupational group and its organizational context is to be conducted in order to better understand the determinants of its development and the implications of its management in view of the specificity of the academia. The research should critically examine the consequences of the growing expectations related to the accountability of the higher education activities. This changing reality demands nowadays more bureaucratic competencies from the academics and requires more professionalization and specialization of the non-faculty employees. It should be verified whether this evolving process has effect on the organizational culture of the knowledge-based institutions and whether these consequences prove themselves important from the point of view of more effective management of the universities and other higher education institutions.

Finally, it should be examined whether a conversation between the academia and the business corporations is possible, in order to investigate new options of effective management for the knowledge-based organizations. (Hoopes, 2017).

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## THE LEGAL ASPECTS OF INSOLVENCY OF THE ENTERPRISE (SELECTED ISSUES)

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### ABSTRACT

*The aim of the study is to determine possible legal actions that should be taken in case of insolvency or threat of insolvency of the enterprise and their legal and practical consequences both for the enterprise itself and for the members of the management body which is responsible for running the company. The paper concentrates on legal crisis prevention measures that can be taken to continue the activity of the enterprise under Polish regulations. In particular, three arrangement procedures and the remedial procedure are in focus. The article not only pays attention to legal regulation of the abovementioned procedures but also to practical consequences of initiating each of them and possible threats to the wellbeing of the enterprise after initiating them. Subject to analysis is also the right time to initiate restructuring procedures and possible consequences of not initiating proper procedure in the right time. Description of the bankruptcy procedure is limited with the stress being put on the possibility to avoid liquidation of the company and continue the activity of the enterprise.*

**Keywords:** *bankruptcy, insolvency, arrangement procedure, remedial procedure, restructuring procedure*

### 1. INTRODUCTION

Since 1 January 2016 the procedure in case of financial problems or insolvency of the enterprise in Poland has been regulated mainly by the texts of two acts - the Bankruptcy Law of 28 February 2003 (until 1 January 2016 known as the Bankruptcy and Reorganisation Law) and the Restructuring Law of 15 May 2015 (which is an entirely new legal act). These two acts regulate the situation of enterprises that are struggling with severe financial problems – both at an early stage (the threat of liquidity loss) and at its very advanced stage (bankruptcy). Both acts together provide a comprehensive set of rules of conduct used in cases of insolvency or threat of insolvency of a debtor. (Niewczas, Mientkiewicz, 2017, p. 232) The acts implement into Polish legal system two EU directives – Directive 2001/24/EC of the European Parliament and of the Council of 4 April 2001 on the reorganisation and winding up of credit institutions and Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II). The scopes and goals of the Bankruptcy Law and the Restructuring Law are appreciably different and so are the aims of the procedures regulated by those acts. The Bankruptcy Law governs the principles of joint vindication by creditors of claims against insolvent debtors being entrepreneurs, the principles of vindication of claims against insolvent debtors who are natural persons pursuing no economic activity, the effects of declaration of bankruptcy and the principles of remission of liabilities of a bankrupt who is a natural person. The main purpose of the procedure introduced under this act is to enable the claims of the creditors to be satisfied to the greatest extent and, where the practical conditions allow, the existing enterprise of the debtor to be preserved. In respect of natural persons (entrepreneurs in the sense of the Act of 23 April 1964 Civil Code (hereinafter referred to as “the Civil Code”), partners in commercial partnerships, who are liable for the obligations of the partnership without limit with the entirety of their assets and partners in a professional partnership) another goal is to conduct the procedure in such a manner to enable a reliable debtor to be discharged of debt.

The Restructuring Law regulates making by an insolvent debtor or debtor threatened with insolvency an arrangement with creditors and effects of the arrangement and introducing remedial actions into the enterprise. The purpose of the restructuring proceedings shall be to avoid declaration of bankruptcy of a debtor through enabling him to undergo restructuring by making an arrangement with creditors and, in the case of remedial proceedings, also through conducting remedial actions, while securing legitimate rights of creditors. As the aforementioned regulations demonstrate, the effect of introducing the bankruptcy procedure – as a rule – is the liquidation of the enterprise, while the effect of the restructuring proceedings is avoiding liquidation and continuing the activity of the enterprise after restructurisation.

## **2. BANKRUPTCY AND RESTRUCTURING CAPACITY - THE RIGHT AND OBLIGATION TO INITIATE PROPER PROCEEDINGS**

### **2.1. Bankruptcy and restructuring capacity**

Both the Bankruptcy Law and the Restructuring Law apply to entrepreneurs as defined in the Civil Code; limited liability companies and joint-stock companies which do not carry on an economic activity; partners in commercial partnerships, who are liable for the obligations of the partnership without limit with the entirety of their assets and partners in a professional partnership. Exclusions from applying the Bankruptcy Law are defined in art. 6 of this act and exclusions from applying the Restructuring Law – in art. 5 of that act. Regulations of the subjective scopes of the Bankruptcy Law and the Restructuring Law do not give rise to substantive questions concerning their interpretation. The main doubt that can arise is the interpretation of the term "entrepreneur". Both the Bankruptcy Law and the Restructuring Law refer to the Civil Code in this matter. Pursuant to art. 43 (1) of the Civil Code, an entrepreneur shall be a natural person, a legal person and an unincorporated entity in which a separate law vests legal capacity that carries on economic or professional activity on their own behalf. The notion "entrepreneur" is defined by two criteria: subjective and functional. In addition third condition can be enumerated – carrying on economic activity on their own behalf (Judgement IV CSK 371/09). The essence of the subjective condition comes down to a statement that capacity as entrepreneur can be given to each subject of civil law relations, e.g. natural person, legal person and an unincorporated entity in which a separate law vests legal capacity, if they carry on economic or professional activity. The crucial role in defining the notion of entrepreneur belongs to the functional element which is connected with carrying on economic or professional activity. Both the Bankruptcy Law and the Restructuring Law require the entrepreneur to carry on economic or professional activity. The term "to carry on activity" implies a sequence of scheduled activities. As a result single activity is not enough to fulfill the definition. An entrepreneur shall be only the one who performs repetitive activities in such a way that they create a whole and are not only single supplies of certain goods or services. If such activities are of economic or professional character there are reasonable grounds to consider that the unit performing them is an entrepreneur. (Judgement I ACz 441/06). Such interpretation of the notion 'entrepreneur' allows to apply this notion to companies in organization (Katner, 2014, Lex; Żelechowski, 2017, LegalisPinior, 2018, p. 306) and does not allow to apply it to residential communities (Gniewek, 2017, p. 91; Dmowski, Trzaskowski, 2014, p. 217, Żelechowski, 2017, Legalis; Pinior, 2018, p. 307). As a result residential community does not have the bankruptcy capacity. (Judgement I CSK 387/06). In case of natural persons – because of the wording of art. 5 paragraph 1 of the Civil Code and the interpretation of the term entrepreneur on the ground of the Civil Code – fulfilling the obligation to register and unregister in Central Registry and Information about Business Activity must be seen as important circumstance creating a legal presumption, but presumption that can be rebutted. Crucial importance must be given to the actual pursuit of an economic activity.



## **2.2. The right and obligation to initiate bankruptcy proceedings, selected sanctions for not fulfilling the obligation to initiate bankruptcy proceedings**

Pursuant to art. 10 of the Bankruptcy Law a debtor shall be declared bankrupt if he has become insolvent. Insolvency occurs when a debtor is no longer able to pay his liabilities. A legal presumption of the lack of ability to pay one's liabilities occurs if the delay in the payment of liabilities exceeds three months. A debtor who is a legal person or an unincorporated entity in which a separate law vests legal capacity shall also be considered insolvent if his liabilities exceed the value of his assets and such situation continues for more than twenty-four months. Declaration of bankruptcy is the result of procedure that can be initiated only by the bankruptcy petition. Such petition may be filed by a debtor or by each of the debtor's personal creditors. What must be stressed here – property creditors of a debtor who are not personal creditors of that debtor at the same time – do not have legal standing to file a bankruptcy petition. In case of a general partnership, professional partnership, limited partnership or a joint-stock limited partnership the petition may also be filed by each partner who is fully liable for the partnership debts and in the case of legal persons or unincorporated entities in which a separate law vests legal capacity - by any person authorized to represent the debtor and to manage its affairs under the law or articles of association, either individually or jointly with others. In case of a legal person, general partnership, professional partnership, limited partnership or a joint-stock limited partnership in the process of liquidation the petition may be filed by any liquidator. Further cases in which other individuals may initiate the bankruptcy procedure are defined in article 20 paragraph 2 of the Bankruptcy Law. Obligation to file a bankruptcy petition is imposed on a debtor. A debtor is obliged to file a bankruptcy petition with the court no later than within thirty days after the grounds for declaring bankruptcy arise. If a debtor is a legal person or an unincorporated entity in which a separate law vests legal capacity the obligation shall rest on any individual authorized to represent the debtor and to manage his affairs under the law or articles of company association either individually or jointly with others. The bankruptcy Law provisions and also other acts impose sanctions for breaking the obligation to initiate the bankruptcy procedure in proper time. Pursuant to article 21 paragraph 3 of the Bankruptcy Law the persons enumerated above (debtor and individuals authorized to represent the debtor and to manage his affairs under the law or articles of company association) shall be liable for any damage caused by their failure to file a petition within the time limit, unless they are not at fault. Such persons may be released from liability in particular if they prove that restructuring proceedings have been opened or an arrangement has been approved in arrangement approval proceedings within the time limit to file the bankruptcy petition. The abovementioned persons are not liable for failing to file a bankruptcy petition at the time when execution through compulsory receivership or the sale of the enterprise is being carried out in accordance with the Code of Civil Procedure, if the obligation to file the bankruptcy petition arose in the course of execution proceedings. Apart from article 21 paragraph 3 also article 491 (4) paragraph 2 point 3 of the Bankruptcy Law imposes sanctions for not fulfilling the obligation to initiate the bankruptcy procedure in proper time. Pursuant to the lastly mentioned provision the court shall dismiss a bankruptcy petition issued by a person not performing economic activity if, within ten years preceding the filing of the bankruptcy petition the debtor, being under such obligation, has not filed a bankruptcy petition within the prescribed time limit in breach of the provisions of the Act. This provision applies to natural persons who had the status of entrepreneur in the past and also to individuals authorized to represent the debtor and to manage his affairs under the law or articles of company association who have not fulfilled their obligation to initiate bankruptcy procedure in due time (Judgement XIII Gz 443/18). Another provision that imposes sanctions for breaking the obligation to initiate the bankruptcy procedure in proper time is article 299 paragraph 1 – 2 of the Commercial Companies Code.

Pursuant to this provision, where execution against the limited liability company proves ineffective, the members of the management board shall be liable jointly and solidary for the obligations of the company (par. 1). A member of the management board may extricate himself from the liability referred to in paragraph 1 by showing that a bankruptcy petition was filed in due time or that at that time a ruling on opening of restructuring proceedings or on the approval of an arrangement in the proceedings in the matter of approving the arrangement was issued or that the failure to file a bankruptcy petition was not through his fault, or that the creditor suffered no damage even though no bankruptcy petition was filed and no ruling on opening of restructuring proceedings was issued or no arrangement was approved in the proceedings in the matter of approving the arrangement.

### **2.3. The right to initiate restructuring proceedings**

In opposition to the Bankruptcy Law – the Restructuring Law does not impose obligation to file the restructuring petition to the court but only confers the right to initiate arrangement or remedial proceedings. Pursuant to article 6 of the Restructuring Law the restructuring proceedings may be conducted against an insolvent debtor or a debtor threatened by insolvency. The state of insolvency occurs when a debtor is no longer able to pay his liabilities. The Restructuring Law refers to the definition adopted in the Bankruptcy Law in this matter. The state of threat of insolvency is defined in the Restructuring Law and occurs when an economic situation of a debtor indicates that he may become insolvent in short time. Legal standing to initiate restructuring procedures is limited to the debtor, as a rule. The only exception is the possibility to initiate remedial proceedings with the petition issued by a personal creditor of the debtor. When it comes to arrangements proceedings without the petition of a debtor no arrangement procedure can be initiated. That means that the restructuring petition filed by any subject different than debtor (especially the petition of a creditor other than remedial petition) should be dismissed by the court. As initiating restructuring procedures is only the right and not the obligation of an insolvent debtor the law does not provide for any sanctions in case of not filing the restructuring petition.

## **3. LEGAL PREVENTION MEASURES TO CONTINUE THE ACTIVITY OF THE ENTERPRISE DESPITE INSOLVENCY**

### **3.1. The choice and overlap of procedures**

Both – the bankruptcy procedure and the restructuring procedures can be initiated in case of insolvency of the entrepreneur. In addition restructuring procedures can be initiated in case of threat of insolvency. Insolvent debtor and persons representing insolvent debtor being a legal person or an unincorporated entity in which a separate law vests legal capacity have the choice of procedures and can choose among four restructuring procedures and the bankruptcy procedure. Other subjects – especially personal creditor can only initiate the bankruptcy procedure or remedial procedure. In case of a debtor initiating any of the abovementioned procedures it is worth reminding that filing the bankruptcy petition in due time and getting a court ruling on opening of restructuring proceedings or on the approval of an arrangement in the proceedings in the matter of approving the arrangement extricates a member of the management board of a limited liability company from the liability for the obligations of the company. What must be noted is that in case of initiating bankruptcy proceeding the decisive role is awarded to the sole fact of effective filing of the bankruptcy petition in due time. The effect of the decision of the court - opening bankruptcy procedure or dismissing the petition – is irrelevant from the point of view of extrication from the liability. Effective filing means filing a petition that can be duly processed – complying with all the formal requirements and paid properly from the beginning or in case of errors and omissions - which has been remedied in due time.

As pursuant to art. 130 paragraph 1 and 2 of the Code of Civil Procedure - applied to bankruptcy proceedings on the basis of art. 35 of the Bankruptcy Law – a petition that has not been remedied within the time limit shall be returned to the party. A returned petition shall not produce the effects which the law provides for the filing of a petition with the court. On the other hand in case of initiating restructuring proceedings the decisive role is awarded not to the sole fact of effective filing of the restructuring petition but to the effect of the court proceeding initiated by the petition. Only in case of positive decision - a court ruling on opening of restructuring proceedings or on the approval of an arrangement in the proceedings in the matter of approving the arrangement a member of the management board of a limited liability company can extricate from the liability for the obligations of the company. The court shall make negative decision and refuse to open restructuring proceedings if the effect of such proceedings would be a detriment to creditors. The court shall also refuse to open arrangement proceedings or remedial proceedings if the ability of the debtor to cover, on a current basis, the cost of proceedings and the liabilities arisen after their opening has not been credibly established. Otherwise if the petition is filed effectively and the provisions of initiating the restructuring procedure are fulfilled the court shall open the restructuring proceedings or approve an arrangement in the proceedings in the matter of approving it. The procedures that aim at sustaining activity of the enterprise despite the state of insolvency or threat of insolvency of a debtor are, as a rule, the restructuring procedures. The Restructuring Law distinguishes four of them: proceedings for approval of the arrangement, accelerated arrangement proceedings, arrangement proceedings and remedial proceedings. The bankruptcy procedure regulated by the Bankruptcy Law aims at ensuring, to the maximum possible extent, satisfaction of creditors' claims and, only where reasonable, allowing for the debtor's existing enterprise to be continued. The measure dedicated to continue the activity of the enterprise despite insolvency of the debtor is regulated in Title Va of Part One of the Bankruptcy Law (art. 266a – 266f) and it is the possibility to make an arrangement with creditors. Restructuring procedures differ from each other and depending on the situation of the enterprise the debtor may be limited in his choice of them. The purpose of all restructuring proceedings is to avoid declaration of bankruptcy of a debtor through enabling him to undergo restructuring by making an arrangement with creditors and, in the case of remedial proceedings, also through conducting remedial actions, while securing legitimate rights of creditors. All restructuring procedures finish with concluding an agreement with creditors which is based on arrangement proposals submitted by a debtor as a rule. The restructuring measures that can be included in the agreement in particular include the deferment of the date of satisfaction; spreading repayment into instalments; reducing the amount thereof; converting receivable debts into shares; amending, exchanging or repealing the right which secures the specific receivable debt. In case of the overlap of the restructuring petition and the bankruptcy petition, article 11 of the Restructuring Law obliges the court to examine the restructuring petition first, as a rule. A restructuring court shall notify the bankruptcy court of the restructuring petition filing immediately after becoming aware of the bankruptcy petition filing. The bankruptcy court shall stay the examination of the bankruptcy petition until a valid pronouncement on the restructuring petition has been issued, which shall not preclude the possibility of securing assets. What must be stressed while interpreting the abovementioned regulations is the priority given to restructuring procedures and so to the possibility of continuing the activity of the enterprise even in the situation of the bankruptcy petition being issued as previous to the restructuring petition. The priority given to the restructuring petition is not absolute. Regulations secure also the interests of creditors. If staying of examination of the bankruptcy petition is against the interest of all the creditors, the bankruptcy court shall issue a ruling on taking over the restructuring petition for joint examination with the bankruptcy petition and for settlement of the issue by one ruling. And if taking over the restructuring petition for joint examination with the bankruptcy petition would lead to a significant delay in

issuing of a pronouncement in the matter of declaration of bankruptcy, to the detriment of creditors, and the grounds for restructuring, as presented by the debtor in the restructuring petition, are known to the bankruptcy court, the bankruptcy court shall not issue a ruling on taking over the restructuring petition for joint examination with the bankruptcy petition and shall examine the bankruptcy petition instead and notify the restructuring court to this effect. After the debtor has been declared bankrupt and the ruling on that matter has become valid the restructuring court shall refuse to approve the arrangement in the proceedings for the approval of an arrangement or refuse to open the restructuring proceedings. This situation is regulated in art. 13 of the Restructuring Law. However, the consequences of opening restructuring procedure or approving of the arrangement being the result of collecting creditors' votes by the debtor himself are not defined by the law. Especially there is no regulation on the influence of the abovementioned decisions on the proceedings initiated by a bankruptcy petition concerning the same debtor. Article 9a of the Bankruptcy Law states only that an entrepreneur may not be declared bankrupt during a period from the opening of restructuring proceedings until their completion or valid discontinuance. In that matter there is a loophole in the regulations. Due to this loophole the jurisprudence of the bankruptcy courts has gone in many directions – there can be found decisions to dismiss the bankruptcy petition, to reject the bankruptcy petition as inadmissible or to discontinue proceedings as unnecessary. All of these decisions of the bankruptcy courts can be argued both for and against but none of them takes enough attention to securing creditors interests connected with issuing the bankruptcy petition. The solution that seems best from this point of view (especially in case of creditors' petitions) was suggested by The District Court in Warsaw in case number XXIII Gz 215/17 and is worth promoting. The court suggested the possibility of applying per analogiam article 9b paragraph 2 of the Bankruptcy Law, due to which the bankruptcy court shall stay the examination of a bankruptcy petition pending the issuance of a valid pronouncement on the restructuring petition. That means in case of opening restructuring procedure or approving of the arrangement being the result of collecting creditors' votes by the debtor himself the bankruptcy court should stay the examination of a bankruptcy petition until the restructuring proceedings is finished. Such decision secures the interests of the creditors best due to the regulation of articles 127 and next of the Bankruptcy Law governing the effect of debtors acts on the bankruptcy estate.

### **3.2. The proceedings for approval of the arrangement**

The proceedings for approval of the arrangement enable to make an arrangement as a result of collecting creditors' votes by the debtor himself, without court involvement. The proceedings may be conducted if the sum total of disputed receivable debts giving the right to vote on arrangement does not exceed 15 per cent of the sum total of receivable debts giving the right to vote on an arrangement. Proceedings for approval of the arrangement is dedicated to debtors who are able to reach an agreement with most of their creditors without intervention of the court. Elements that are to protect interests of the body of creditors are in particular the involvement of a person holding a restructuring counsellor licence (and so possessing civil liability insurance), detailed regulation of the content of written vote determining its validity, the possibility for the creditors to get information about the economic situation of the debtor, the possibility for the creditors to raise objections as to the process of gaining votes (which is complementary to the sole possibility to challenge approval of the arrangement) and introducing special condition to require qualified majority. The proceedings for approval of the arrangement in comparison with other restructuring procedures is cheap and fast. The pace of this procedure depends only on the parties – the involvement of the court is reduced to minimum. The agreement supervisor acts on the basis of the contract with the debtor and gets the remuneration agreed in the contract. The first step to start the proceedings for approval of the arrangement is concluding an agreement with a person holding a restructuring counsellor

licence. In this procedure it is the debtor who chooses the arrangement supervisor among all natural persons and legal persons fulfilling the formal criteria – which is a difference in comparison with other procedures where the supervisor is chosen by the court as a rule. The list of natural persons holding a restructuring counsellor licence is published on the webpage of the Ministry of Justice. In case of legal persons entitled to act as supervisors the list is not carried out. It is inevitable to verify the fact of possessing licence by the members of management of the capital company or members of the partnership. What is also important, pursuant to art. 36 of the Restructuring Law, the conclusion of a contract with the arrangement supervisor shall not limit the debtor in administration of his assets. Debtor retains the right to administer his properties belonging to the company – both within the scope of the regular management and also exceeding it. Within the framework of the supervision exercised, the arrangement supervisor may inspect the debtor's acts regarding his assets as well as his enterprise and verify whether debtor's properties not constituting part of the enterprise are adequately secured against destruction or loss.

### **3.3. The accelerated arrangement proceedings**

The accelerated arrangement proceedings enable the debtor to make an arrangement after the preparation and approval of the list of receivable debts in a simplified procedure. The proceedings may be conducted if the sum total of disputed receivable debts giving the right to vote on arrangement does not exceed 15 per cent of the sum total of receivable debts giving the right to vote on an arrangement. The accelerated arrangement proceedings is dedicated to debtors who are not able to reach an agreement with most of their creditors without intervention of the court. The procedure, in most cases, is longer and more expensive than the proceedings for approval of the arrangement, but cheaper and faster than the other two restructuring procedures. The court shall examine an application for the opening of accelerated arrangement proceedings at a closed session exclusively on the basis of documents attached to the application. The application shall be examined within a week of the application filing date – which is a non-mandatory time-limit of course. The accelerated arrangement proceedings is easier for the entrepreneur than the proceedings for approval of the arrangement, as the only obligation of the debtor is to effectively issue the restructuring petition and follow the instructions of the court and supervisor. The rest is done by the court with cooperation of the supervisor. In comparison to the previously characterised proceedings in the accelerated arrangement proceedings it is the judge-commissioner that shall schedule the time limit of the meeting of creditors in order to vote on the arrangement and afterwards run the meeting and supervise the content of the agreement. It is also the court that chooses as a rule the supervisor and grants supervisor's remuneration. The debtor shall make an advance payment towards the expenses incurred during the accelerated arrangement proceedings equal to the average monthly remuneration in the sector of enterprises, without awards paid from profit in the third quarter of the preceding year, said average remuneration being announced by the President of the Central Statistical Office, and together with the application he shall present the receipt of payment thereof. After opening of the accelerated arrangement proceedings the debtor holds administration of his assets as a rule. Pursuant to article 239 paragraph 1 of the Restructuring Law the court may ex officio revoke administration by the debtor in possession and appoint a receiver in the event that the debtor, even unintentionally, violated the law in the exercise of the administration, the result of which was to the detriment of creditors or could have been detrimental to them in the future; or it is obvious that the manner of exercising administration does not give warranty of the performance of the arrangement or a curator has been appointed for the debtor; or the debtor fails to execute the instructions of the judge-commissioner or court supervisor, in particular he failed to submit lawful arrangement proposals within the time limit fixed by the judge-commissioner.

### **3.4. The arrangement proceedings**

The arrangement proceedings enable the debtor to make an arrangement after the preparation and approval of the inventory of receivable debts. It may be conducted if the sum total of disputed receivable debts giving the right to vote on an arrangement exceeds 15 per cent of the sum total of receivable debts giving the right to vote on arrangement. The arrangement proceedings may last much longer before opening than the accelerated arrangement proceedings. The court shall examine the application for the opening of arrangement proceedings at a closed session within two weeks of the day when it was filed, unless it is necessary to schedule a hearing. In such a case the application shall be examined within six weeks. As the procedure may last a few weeks or even exceptionally months the court may secure the assets of the debtor by appointing a temporary court supervisor and suspend execution proceedings conducted in order to seek the recovery of receivable debts covered by the arrangement and set aside the attachment of a bank account if this is necessary to attain the goals of the arrangement proceedings. While setting aside the attachment of a bank account, the court shall appoint a court supervisor if none has been appointed yet. Instructions of the debtor concerning cash means in the bank account whose attachment has been set aside, shall require consent of the temporary court supervisor. After opening the proceedings the time of conducting it is also longer in case of arrangement proceedings than in case of the accelerated arrangement proceedings. In the arrangement proceedings it is inevitable to establish a list of creditors, which may last for some time. There are also some similarities between those two procedures. Just like in case of accelerated procedure in the arrangement proceedings the debtor holds administration of his assets as a rule but the court may ex officio revoke it and appoint it to a receiver in the events enumerated in the previous subchapter. Pursuant to article 278 paragraph 1 and 2 of the Restructuring Law execution proceedings concerning a receivable debt covered by the arrangement, initiated prior to the day when arrangement proceedings are opened, shall be suspended by operation of law on the day when arrangement proceedings are opened. Sums obtained in the course of suspended execution proceedings and not yet released shall be transferred to the arrangement estate forthwith after the ruling on the opening of arrangement proceedings has been issued.

### **3.5. The remedial proceedings**

The remedial proceedings enable the debtor to effect remedial actions and to make an arrangement after the preparation and approval of the inventory of receivable debts. Remedial actions are acts in law and factual acts which lead to improvement of the economic situation of the debtor and are aimed at restoring the debtor's capability to discharge obligations, while ensuring protection against execution. The remedial proceedings are definitely the longest of all restructuring procedures. However they are also the proceedings that give a debtor the widest possibilities of financial recovery and improvement of the situation of a company. The remedial procedure is the only one restructuring procedure that is not limited to concluding the list of creditors, preparing the restructuring plan and organising creditors meeting to make agreement with the debtor. In remedial procedure apart from the abovementioned steps and before organising the meeting of the creditors there is also the time to implement the restructuring plan after its approval by the judge-commissioner. The period of time to implement the restructuring plan is not limited. Just like in case of the arrangement proceedings in the proceedings for the opening of the remedial proceedings, the court may secure the debtor's assets by appointing a temporary court supervisor and suspend execution proceedings conducted in order to seek the recovery of receivable debts covered by the arrangement by operation of law and set aside the attachment of a bank account if this is necessary to attain the goals of the arrangement proceedings. After opening of the remedial proceedings, pursuant to article 312 paragraph 2 of the Restructuring Law execution proceedings directed at the debtor's assets included in the

remedial estate initiated prior to the day of the opening of remedial proceedings shall be suspended by operation of law on the day of opening the proceedings. Upon the motion of the debtor or receiver, the judge-commissioner may set aside the seizure effected prior to the day of the opening of remedial proceedings in execution or securing proceedings directed at the debtor's assets included in the remedial estate if it is necessary for further running of the enterprise. After the day of the opening of remedial proceedings it shall be inadmissible to direct execution at the debtor's assets included in the remedial estate or execute a ruling on securing a claim or order that a claim be secured on these assets.

#### 4. CONCLUSION

Polish system of law provides comprehensive set of legal actions that can be taken by an entrepreneur in case of insolvency or threat of insolvency of the enterprise. Regulations of these procedures are incorporated in the Bankruptcy Law and the Restructuring Law. Procedures regulated by the Restructuring Law aim at continuing the activity of the enterprise despite financial problems and suggest recovery measures that should bring the enterprise back to wellbeing. Depending on the situation of the enterprise and on the personal skills of the entrepreneur there is a choice of four restructuring procedures that are to recover the enterprise. If the situation is not complicated – the entrepreneur has a clear and undisputed list of creditors (not more than 15 per cent of all debts giving the right to vote on arrangement) he can choose between two fastest and cheapest procedures – the proceedings for approval of the arrangement if one is able to make an arrangement with creditors as a result of collecting creditors' votes by the debtor himself, without court involvement or the accelerated arrangement proceedings – if one prefers to have the meeting for voting organised by the court. If the situation is more complicated - the sum total of disputed receivable debts giving the right to vote on an arrangement exceeds 15 per cent or the situation of the enterprise demands some remedial actions to be taken before the debtor can dispute over the arrangement there are two longer and more complex procedures – the arrangement proceedings and the remedial proceedings. All of these four give the entrepreneur the chance to continue the activity of the enterprise without liquidation. On the other hand – when the debtor does not reveal the will to initiate restructuring procedure or the situation of the enterprise is so bad that there is a risk of a detriment to creditors or - in case of the arrangement proceedings or the remedial proceedings - if the ability of the debtor to cover, on a current basis, the cost of proceedings and the liabilities arisen after their opening has not been credibly established – there is only the possibility to initiate the bankruptcy procedure. The bankruptcy procedure is regulated by the Bankruptcy Law and aims first of all at satisfying the interests of the creditors up to the maximum level which usually means liquidation of the enterprise. However, in specified circumstances, even after declaring bankruptcy the law gives the entrepreneur the chance to rescue the enterprise and continue its activity by making an agreement with the creditors. In 2017 the number of bankruptcy and restructuring procedures of Polish enterprises was 885, which is 16 per cent higher than in the previous year 2016. Since the beginning of 2016 there is no possibility to declare bankruptcy with the agreement option. This type of procedure was replaced by four restructuring proceedings. When it comes to the types of proceedings the highest number is for bankruptcy procedures – 537, which is 61 per cent. Restructuring proceedings are more and more often. Their percentage in the total number of procedures increases and in 2017 was 39 (in comparison to the year 2016 when there were only 27 of them). Among the restructuring procedures the highest number is for the accelerated agreement proceedings (209), and the lowest for the proceedings for approval of the arrangement (11). Substantial increase (by 66 per cent in comparison to the previous year) can be observed in the number of remedial proceedings. As to the sectors - the highest number of bankruptcies was declared in production sector, it was

11 per cent more than in 2016. In trade and transport sectors there has also been an increase – respectively 14 and 29 per cent more. In the building sector the situation has not changed.

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## THE INFLUENCE OF THE TYPE OF CUSTOMER (INDIVIDUAL VS INSTITUTIONAL) ON THE PRINCIPLES OF WRITTEN COMMUNICATION OF A LARGE ORGANIZATION

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### ABSTRACT

*The overall objective of communication is to achieve the common understanding of a specific content. A letter is as an indispensable tool of communication in business. In order to increase the efficiency of written communication it is important to shape the message in such a way, so that it is properly understood by the recipients. The market segmentation is the basic tools for matching marketing mix instruments with the recipients. An important segmentation criterion that differentiates the clients is the type of customer - individual or institutional. The objective of the paper is to investigate whether there are significant differences in the expectations of individual and institutional customers regarding written correspondence, justifying the necessity of dividing customers into separate market segments in order to conduct different written communications with them. The paper reviews the available literature and contains the results of a qualitative research conducted by the authors in cooperation with a large energy company in Poland.*

**Keywords:** *Qualitative research, Market segmentation, Individual consumers, Institutional customers, Written communication*

### 1. INTRODUCTION

This article is another publication from the series on written communication of a large organization (Rosa et al., 2018, Gracz et al., 2018, Ostrowska et al., 2018). The objective of the paper is to investigate whether there are significant differences in the expectations of individual and institutional customers regarding written correspondence, justifying the necessity of dividing customers into separate market segments in order to conduct different written communications with them. The article will analyze the results of our own research, which concern the behavior of two segments of the market of individual clients and institutional clients - interchangeably referred to as business (see research methodology). A text message is a message consistent with the syntax and grammar of a given language, which is given a particular meaning by the sender, expecting the recipient to know the interpretation code used (Niedzielska, 2000, p. 24). From the point of view of the effectiveness of written communication, it is important to shape the message so that it is properly understood. Written communication with clients takes place directly and is personalized (Stachowicz-Stanusch,

2007, p. 21). H. Mruk notes that: the category of needs is the most broad category for customers. They can be defined as states of deficiencies, desires, in relation to things, activities and ideas (Mruk, 2012, p. 46). In order to know the expectations and preferences of clients in the field of written communication qualitative research was carried out in cooperation with a Polish large energy company (electricity seller, one of the five largest energy sellers in Poland). The energy company, which has about 2 million customers, sends thousands of letters every day, and every employee dealing in written correspondence responds to dozens of customer inquiries. This makes it necessary to use ready-made response templates that employees can further modify. It is important that these templates are professionally prepared, easy to personalize and, above all, adapted to the changing expectations of customers. In order to increase the efficiency of written communication it is important to shape the message in such a way, so that it is properly understood by the recipients. Factors affecting the implementation of this goal include primarily a properly worded content and proper layout of the written communication in terms of the graphic layout

## **2. THE REASONS FOR CLIENTS' SEGMENTATION**

The communication subject is a general definition of a communication partner - physical, organizational or legal. The communication subject alternately functions as an active sender and passive recipient of messages, unilaterally transferred or multilaterally exchanged. The physical subject can be a person, i.e. an individual client. The organizational subject is, for example, a branch or department, i.e. an organizational unit that builds permanent or occasional communication links with other entities. The legal subject is any object of the market economy operating in a specific external environment (Niedzielska, 2000, p. 24). Segmentation is the process of partitioning markets into groups of potential customers with similar needs and/or characteristics who are likely to exhibit similar purchasing behavior. It has emerged as a key marketing planning tool and the foundation for effective strategy formulation (Weinstein 2013, p4-5) The market segmentation is the basic tools for matching marketing mix instruments with the recipients. As indicated by Clarke and Freytag, the segmentation purposes determines the choice of segmentation model (Clarke, Freytag, 2008, pp.1023-1038). According to J. Boejgaard and Ch. Ellegaard, "extant literature has identified segmentation implementation as a core challenge for marketers, but also one, which has received limited empirical attention." (Boejgaard, Ellegaard, 2010, pp. 1291-1299). The subject of practical use of market segmentation was analyzed by Sagan, 2017, Avlonitis, 2016, Bałandynowicz-Panfil, 2016, Zaborek, Mirońska, 2014, Kusińska, 2014, Karasiewicz, 2013, Jarosiński 2013, Czubala, Jonas, Smoleń, Wiktor, 2012, Ostrowska, 2010, Kicinska, 2009. Customers (recipients) are all those who pay for purchased products or services of the enterprise (Janasz et al., 2010, p. 173). The ideal client is a person who regulates their obligations on time without being prompted, does not complicate the handling process with additional requirements, appreciates the work done, is insensitive to the price, i.e. willing to pay more for a higher value of the service, and recommends the company to friends (Mohr, 2006, p. 63). In the age of social media, the opinions of customers about companies are particularly important. Clients get information from informal sources because, as noted by Ch. Anderson: "the most reliable information is usually obtained from other consumers, because their needs are usually closest to our own" (Anderson, 2008, p. 86). Customers are different, not only in terms of their needs, preferences, but also in terms of the value they generate for the company, the potential they present themselves, as well as the opportunity for development (Stachowicz-Stanusch A., 2007, p. 34). An important segmentation criterion that differentiates the clients is the type of customer - individual or institutional. This division is often used in the business practice and is the result of many differences in servicing business customers, as well as their different expectations. However, "even in the industrial marketing literature, where the most practical implementation guidance

is offered, it is suggested that organisations tend to over-emphasise the mechanics of segmentation, while failing to correctly implement the findings" [Dibb, Wensley, 2002, , pp.231-251]. What is more, according to R. Palmer and P. Miller "there is wide agreement that segmentation is a fundamental component of marketing strategy. Numerous methods are identified, but there is little guidance on how segmentation can be applied in practice." (Palmer, Miller, 2004, , pp. 779-785). It constitutes the rationale for the paper, that aims at elaborating different written communications guidelines with the abovementioned two market segments.

### **3. SPECIFICITY OF INSTITUTIONAL CLIENTS**

The first difference is related to the necessity to issue invoices for institutional clients, whereas individual customers often receive a receipt confirming the purchase. In the case of an energy company, this difference is not visible, because all clients receive VAT invoices. However, business customers often buy more quantities of products and use services more intensively, which is related to their business operations. Especially large companies and organizations have a high demand for electricity, and often require specialized services related to connecting machines or devices. Such clients must be taken a special care not to make them decide to switch to competition. Power cuts to schools, stores, offices or hospitals are severely affected not only by those working there, but also by a wide range of people who are clients of these organizations. Any planned repairs of networks requiring interruptions in energy supply must be planned and announced in advance so that the institutions can prepare for them. Sudden network failure should be removed as soon as possible so that it does not adversely affect the activities of such institutions. There is also an important issue of relations. On the one hand, it is profitable to provide more personalized service to institutional customers by the dedicated customer service personnel but on the other hand, these personnel has to be better educated and well-oriented in the specifics of a given industry. It is important to have a deep understanding of the customers' characteristics, needs, future directions, as well as identification of what kind of overall relationship is required by the customer (Freytag, Clarke, 2001, pp.1023-1038). That is why it is worth checking whether written correspondence should also be constructed in a different way depending on who the recipient is. According to J. Laughlin and Ch. Taylor "the goal of industrial market segmentation is not always to look for homogeneous markets, but rather homogeneous responses to marketing stimuli." (Laughlin, Taylor, 1991, pp. 127-136) The company is made up of people, and the correspondence is addressed to the person, not the machine. Hence the research problem arises: do the people working in and representing companies have decidedly different expectations regarding the written communication than persons who are individual clients? The approach of the representatives of individual market segments to the communication channel is certainly different. E-mail is a favorite global form of business written communication, due to the well-known form of use, formal importance and speed in relation to postal correspondence. The next step in the development of written communication will include tools for filtering messages, increasing the efficiency of using e-mail (Kozioł, 2014).

### **4. SPECIFICITY OF INDIVIDUAL CLIENTS**

The segment of individual customers is an important, but also a difficult segment for a large company, because it is characterized by high fragmentation and diversification. Therefore, one should carefully examine and analyze the level of relationship perception, understanding of written communication and sending feedback to individual clients. The importance of segmenting retails market has been researched, among others, by M. Hylanda, E. Leahya and R. Tol (Hylanda, Leahya, Tol, 2013, pp. 349-359). Correspondence with an energy company is incidental, occasional for an individual client, therefore it must put a lot more effort into understanding the information contained therein than an institutional client with specialized

staff dealing with constant correspondence with individual entities on the market. Considering also the diverse intellectual level of individual clients, one should analyze the level of difficulty of correspondence addressed to them, so that the relationship runs smoothly and without negative emotions. Age is an important factor influencing the behavior of individual clients - in younger generation, the more emphasis is placed on relations, feedback and clearly defined principles of cooperation, it is more demanding and critical. Taking into account the direction of message transmission, we can distinguish one-way communication, i.e. without waiting for a response and bidirectional, when a feedback signal is expected (Potocki, Winkler, Żbikowska, 2003, p. 47). In the case of individual clients, communication with an energy company is often unidirectional, which results from the obligation to inform customers, for example, about tariff changes.

## **5. RESEARCH METHODOLOGY**

The presented research was conducted in Szczecin, in the focus workshop in the Service Inter Lab center from 13.06 to 06.07.2017. The authors of this article were responsible for the scenario of the research, selection of respondents and moderation of interviews. The energy company provided sample templates of written communication and participated in adjusting the scenario of the research to the specifics of the industry. People using the services of the energy company, selected in a targeted manner were the respondents. Differentiating criteria included: gender, age, education, as well as the type of customer - individual or business. In the first stage of the study, three focus group interviews (FGI) were conducted - two among individual consumers divided into young people (up to 40 years of age) and mature people (over 40 years) and one of the company's representatives. During the second stage of the study, i.e. the verification stage, two research groups were accepted - individual persons and corporate customers. Each group interview (FGI) was attended by 7-8 participants, this is the optimal number due to the duration of the study and possibility of an effective examination. The objectives of the focus studies and individual interviews were as follows:

- Objective 1: Analysis of customer behavior and preferences regarding written communication.
- Objective 2: Analysis of the current state of written communication in visual terms.
- Objective 3: Analysis of selected elements of the written message in terms of its affordability.

The written communication presented during the research included, for example, personalized letters based on templates provided by the energy company and which concerned the most common cases of correspondence with consumers.

## **6. DESCRIPTION OF RESEARCH CONCLUSIONS**

### **6.1. General expectations related to communication**

#### *6.1.1. Communication channel*

There is a greater variation in the approach to choosing a written communication channel among individual customers. Young people (up to the age of 40) prefer e-mail communication because of its virtual character, i.e. the ability to check it anywhere where internet is available. Meanwhile, mature people (after 40 years of age) prefer mail correspondence. This is due to habit - such a letter is easier to archive and attach photocopies with possible cancellations. For mature people, the waiting time for a week or two is acceptable. Business customers prefer electronic correspondence. They indicate that the use of this communication channel improves the communication process and also allows for better time management. However, entrepreneurs expect from electronic correspondence to create maximum comfort for the user. The message should be short and concise, contain the most important information, such as the

date of payment or the invoice amount to be paid. They also expect all facilities to improve their work: an invoice or document in the form of a PDF should be included in the attachment, and if a payment is necessary, they expect to receive a link enabling online payment in the body of the e-mail.

#### *6.1.2. Frequency and understanding of messages*

Business clients are more likely to apply for additional services or changes in contracts, which is why correspondence with an energy company is more frequent. Understanding the content of most of the presented samples of the letters was not a great difficulty for them. However, they believe that it is worth shortening and simplifying the letters so that they do not have to spend so much time reading. Correspondence with individual clients is less frequent (several times a year) and is limited to sent invoices and changes in tariffs. Individual clients are much worse at understanding the content of official letters, which include correspondence from an energy company. Individual customers, regardless of age, consider that such letters industry terms and abbreviations are not commonly used. Many of these terms should be replaced by their colloquial language equivalents, for example, instead of a "measuring and accounting device" a meter can be written.

#### *6.1.3. Explanation of a complicated procedure*

Many procedures in the energy industry are extensive and multistage. Customers who turn to the company for example to get connected to the network have to go through several stages before the company can connect it to the installation. For this reason, it is necessary to provide the client with guidelines on what to do. The previous practice in the energy company was that the client received a several-page letter with detailed explanations. All research groups believe that such a letter is very difficult to understand and not very pictorial. Also in this case, differences between the groups can be observed. Mature people think that it is enough to describe everything step-by-step in writing. Young people expect additional use of pictograms or infographics illustrating activities in individual stages. For the young, an additional information leaflet could be helpful, and this could be attached to the letter. In this respect, representatives of companies have similar expectations - they suggest using infographics and accept adding leaflets with information, provided that the same information would not be repeated in the content of the letter. The main purpose of a person writing should be to increase the readability and display subsequent stages in such a way that the client realizing the procedure knows which steps they can already check as implemented.

#### *6.1.4. The length of the written communication and the construction of sentences*

All groups of respondents believe that the presented models are too extensive. Writings that have 3-4 pages are difficult to read, and a lot of information is not repeated or described too eloquently. The perfect letter should fit on one page or on one sheet. Individual customers more often have a problem with understanding the extensive letters. Then they turn for help by calling the hotline (younger people) or going to the customer service office (mature people). The conclusion for companies is that the simpler and clearer the letter will be written, the smaller additional service costs will be borne by the company. Business clients also think that letters should be shorter. In their opinion, they can contain up to two three information sentences and, for example, an additional leaflet attached to a specific standard procedure. Business clients emphasize that the most important information should be at the beginning of the written communication. For example, "positive decision in the case" followed by specific justification. Numbers of pages are an important element for them, and young people also pay attention to this aspect. For business customers, two-sided printing is an important element, so that they do not have to archive a large amount of paper.

Business clients rarely ask for help in explaining the letters, but they state that they sometimes need to read the content several times to understand what they have to do. It is a tiring and frustrating job for them and it causes a waste of time. That is why they consider all conveniences and simplifications in communication as a valuable.

#### *6.1.5. The appearance of the letter*

For all surveyed groups, the look of the written communication is important, as it is for them a manifestation of the professionalism of the company. They notice the role of letterhead - color logo, properly placed permanent information. Both young individual clients as well as business representatives expect the visual layout of individual paragraphs to be thought over, so that the letter is not too compact or too "distracted". They suggested a space between the lines of min. 1.15 - max. 1.5 and clear separation of individual paragraphs by adding intervals (before and after). Both mature and young people paid attention to the need to standardize the margins, which should not be too large (from 2 to 3 cm).

#### *6.1.6. The font and bold size*

All respondents believe that people who write letters need to bold some information. Bold must be used skillfully and in a limited way because it may cause distortions of the message. Bold, for example, may refer to information about a positive or negative decision, date and payment amount, account number, period of notice. In the presented patterns of letters, such information was not bolded, which made it difficult for the addressees to understand the content. Young respondents have pointed to the need to unify fonts in all communications, while older people expect larger fonts to help read the letter without glasses.

### **6.2. Analysis of standard elements of written communication**

#### *6.2.1. Contractor's number*

The templates of letters presented had this number in the upper left corner. All respondents believe that it is helpful and often used when communicating with the company. For this reason, it should be bold and can even be written in a larger font. Only mature people have suggested that this number be moved to the address field so that it is directly under their name and they know that it applies to their person. For business customers the second important issue is the number of the letter, which allows to organize information and facilitate the electronic circulation of documentation.

#### *6.2.2. The phrase "concerns"*

All groups surveyed consider it helpful to put this element in front of the material content of the letter. The young said that it causes the reception of the letter as official, but it suits the image of the energy company. Individual customers, however, had reservations regarding the wording of this phrase. It was too extensive and sometimes incomprehensible. Young people think that this is where information about the company's decision can be found. For example, "Positive consideration of complaints ...".

#### *6.2.3. Polite phrases*

All study groups believe that the greeting "Dear Sir", "Dear Madam" or "Ladies and Gentlemen" are the most appropriate. However, they must be adapted to the gender of the addressee in the entire content of the letter. It is unacceptable to use the "/" sign in correspondence with customers. Mature individual customers do not mind putting a name in this place - "Dear Mr. Smith", while younger businessmen are willing to accept even the greeting "Dear Mr. Jan". However, the ending of the letter should have a formal form "Yours sincerely".

#### *6.2.4. Signature*

All participants in the survey agree that the company's representatives should write in the first plural person, because they turn to the client on behalf of the whole organization. However, all groups of respondents negatively referred to the proposal of the signature of the letter "Sincerely, Customer Service Office". The person who sends letters should take responsibility for them, and the client has the right to know who they can contact in a given matter. Business customers express the expectation that it would be worth having a designated customer care with whom they can always contact. The respondents pointed out that sometimes they are approached by various people from the company they work with, which confuses them. One contact person is a convenient solution for the business client and facilitates the flow of information.

#### *6.2.5. Legal basis*

Quoting legal provisions in the letter's content is poorly perceived by correspondence recipients. For this reason, older people often give up reading the content because they assume that they will not understand it. Young people admit that they do not read the quoted paragraphs. And entrepreneurs see such references to regulations as scaring and disorienting the recipient. The solution accepted by all analyzed market segments is the use of references in the form of footnotes. The references to laws or specific paragraphs may be placed under the letter, and they do not interfere with the reception of the message contained in the letter.

#### *6.2.6. Contact information*

In the case of business correspondence, contact information is usually found on letterhead. The respondents who are representatives of various market segments accept this solution. The letterhead presented by the company in the headline of the letter contained a color logo (on the right side), and the contact details were placed in the footer in the columns. Contact information includes e-book, website, helpline number and e-mail address. Young people also believe that it is helpful to put infographics illustrating particular ways of contact. In addition, individual customers expect to place a mailing address to which they can send a reply. Mature people in the content are looking for a contact to the person in charge of the case, and they value the contact through hotline negatively. Their main reservations are the long waiting time for the call and the need to pay higher connection fees. Business clients negatively perceive the repetition of contact details in the content of the letter, for example the helpline number, if it is in the footer. In the letter, in their opinion, they can put a contact to a specific person who can be contacted to discuss a given matter.

#### *6.2.7. Advertising of company's products*

In the letters presented to the respondents on the back, a colored advertisement for another service, offered by the company, was printed. Also in this case, different opinions of representatives of particular customer groups appeared. Mature people and entrepreneurs have stated that they do not like this solution. Mature people believe this information makes the letter too long, and entrepreneurs are of the opinion it the rank of the communication. Young people are not bothered by advertising, but they would prefer it to be at the bottom of the page. A separate advertising leaflet was well evaluated by the representatives of entrepreneurs but it was considered not ecological by the young.

### **7. CONCLUSIONS**

Comparison of the expectations of individual and business clients regarding written correspondence allows to find differences between these groups, as shown in Table 1.

*Table 1. Comparison of the expectations of individual and business clients*

	Individual clients	Institutional clients
Communication channel	Young people: e-mail. Mature people: correspondence by letter.	E-mail.
Frequency	Communication several times a year, mainly letters attached to invoices.	Frequent communication related to additional services or changes in contracts.
Understanding the message	Great difficulty in understanding the content of the letters caused by the use of technical terminology, incomprehensible abbreviations and legal provisions.	They have no problem understanding the presented patterns of letters. Technical terms are understandable.
Explanation of complicated procedure	Explanations divided into stages "step by step". For older people, a detailed description of the procedure in the content of the letter is enough. Infographics are suggested by young people and they accept separate information leaflets.	Entrepreneurs accept the use of infographics and separate information leaflets. However, the information should not be repeated - the leaflet with a short introductory letter.
Length	The letters are too long. 1-2 pages are preferred. Page numbering required.	
Sentences structure	Sentences are too complex. Reduction of fillers and repetition of information	
Appearance	The letterhead is important. Young people pay attention to the technical aspects of writing - spacing between lines and paragraphs. For mature people, harmonization of margins is important.	The letterhead and professional and standardized arrangement of the content are important.
Fonts and bold size	Older people - bigger font. Young people - company fonts. Using bolds.	Bolds.
Contractor's number	Bold and enlarged font. For older people, with their personal data.	An important element. They do not have special requirements for its appearance. Required writing number.
Phrase concerns	Formalization of the reception. It must be simplified and informing about the company's decision.	Important information element
Polite phrases	Individualized communication Greeting: "Dear Sir", "Dear Madam", "Ladies and Gentlemen". The mature accept the form: "Dear Mr. Smith."	Individualized communication Greeting: Dear Sir, "" Dear Madam, "" Ladies and Gentlemen. "Young entrepreneurs accept the form: "Dear Mr. Jan".
Signature	The phrase "Sincerely" The signature with the name, surname and position. Unacceptable form "Sincerely Customer Service".	
Legal basis	Quoting legal provisions in the letter is not well perceived. A better solution: footnotes (under the letter's content) with references to specific documents.	
Additional information	For mature people, a traditional correspondence address is necessary. Young people also expect infographics. Mature people negatively perceive contact through the helpline, better contact to the person conducting the case.	Customer consultant is appreciated.
Advertising	Mature people - they prefer letters without advertising. Young people - advertisement under the letter's content.	Separate leaflet.



Based on the results of the authors' research, the division of clients into market segments seems to be justified and necessary. As a result of the conducted analysis, one can notice differences between individual clients that justify the division of segments: young people and mature people. This problem will be discussed in a separate article. Written communication with an energy company is often the main channel of information flow and often it is a one-sided transmission. In particular, individual customers who receive invoices and information letters from their vendor several times a year do not have to make another contact with the company. Therefore, it is important that contact correspondence is perceived positively and is professional. Business customers are distinguished by a more professional approach to correspondence, causing that letters can be more specialized, but at the same time they require briefness and non repetitive information. They prefer e-mail communication and they expect a quick response. The specificity of running a business means that they have higher expectations for personalized service and expect to be assigned to a dedicated customer service they can contact if problems arise. Effective communication should be done in a proper timing, taking into account the interests and needs of participants, should engage the right persons and guarantee a common understanding of the message content. In company correspondence sent on a mass scale, the recipient of the letter is usually anonymous. In order to increase the effectiveness of the message, it is possible to make the market segmentation and adapt the communication method to the expectations of particular segments. Adaptation of the communication method to the recipient affects a better understanding of the message, which is the goal of effective communication, and in addition, it can strengthen the sense of customer satisfaction with the relationship with the service provider and reduce its propensity to change the brand.

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## CHANGE OF THE PREVIOUS PATH OF DEVELOPMENT IN THE ACTIVATION OF PERIPHERAL AREAS OF WEST POMERANIA IN POLAND

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### **ABSTRACT**

*Peripheral areas of West Pomerania in Poland underwent marginalization since the beginnings of the political transformation. Attempts at activating them failed to bring intended results. Therefore, the aim of this article is to design a path of development for the studied areas which would be different from the hitherto taken actions. The proposed approach is based on the polarization-diffusion model with the use of seaports as growth poles. Both primary and secondary sources of information were used in the article. To this end, the literature on the subject and numerous publications and scientific studies were reviewed. Research was conducted in the form of in-depth interviews with selected representatives of municipalities and seaports. Research results showed that the main barriers limiting the development of the peripheral areas of West Pomerania are the low quality of human capital and insufficient mobility of the workforce. The resulting high unemployment rate lowers the purchasing power of the local community. As a consequence, the studied areas are not attractive to investment capital. In the polarization-diffusion model, the main player is the key enterprise which involves local entities in the production process. The produced goods are exported to foreign markets characterized by a high purchasing power of their consumers. The development of local entrepreneurship increases the demand for workforce. Money introduced into the economic cycle stimulates other sectors of the local economy. The efficiency of the new path of development requires the involvement of public authorities in the acquisition of the key enterprise and creation of conditions for diffusion and absorption of developmental impulses. The proposed model solves the key problems of peripheral areas, which are: limited mobility of the workforce, insufficient local demand, and low quality of human capital. The polarization-diffusion model is in line with the change in the current thinking about regional development, which should be seen as a chance for its implementation.*

**Keywords:** *growth poles, regional development, seaports*

### **1. INTRODUCTION**

The peripheral areas of West Pomerania have been undergoing marginalization since the beginning of political transformation, an evidence of which are the growing development disproportions in the region. The polarization of development is particularly visible between agglomerations and rural areas. Attempts at the activation of peripheral areas did not bring about the expected results. So far, the key problems of local communities have not been resolved (UMWZ, 2017). The above circumstances lead to a change of approach to the issues of regional development. Therefore, the purpose of this article is to elaborate a new path of development for the studied areas on the basis of the critique of the hitherto undertaken actions. In reference to the purpose of research, the following research hypothesis was formulated: the development opportunities of West Pomerania's peripheral areas are not sufficient to overcome the barrier of underdevelopment. A new approach was proposed, based on the polarization-diffusion model with the use of seaports as growth poles. The territorial scope of the article includes the peripheral areas of West Pomerania. The studied areas are located in the south-eastern part of the region, mainly on territories occupied by former state farms, which have still

not been thoroughly restructured. As far as production structure is concerned, it is dominated by agriculture and forestry, while in the northern, much better developed part of the region, there is a network of local seaports. According to the polarization-diffusion concept, the seaports may become centers of economic activity, drawing the local businesses into the orbit of mutual connections (Luks, 2011; Hernik, Ściana, 2014). Especially that the peripheral areas belong to the natural economic base of seaports. The literature on the subject of the operation of seaports and regional development is quite extensive. On the other hand, the body of work concerning the possibilities of using seaports, especially those of regional and local significance, in the development of peripheral areas, is much more scarce. This gap in knowledge was one of the premises in the choice of this article's subject. Both primary and secondary sources of information were used in the article. Literature on the subject and numerous publications and scientific studies have been consulted. The research was conducted in the form of in-depth interviews with representatives of selected municipalities and seaports. In the empirical part of the article, focusing on the change of the previous development model for the peripheral areas of West Pomerania, the classic works on the theory of polarized development were used, by authors such as: F. Perroux, G. Myrdal, A. Hirschman, J. C. Perrin, J. R. Lasuèn, P. Pottier, and J.-R. Boudeville. Reaching straight to old proven concepts is one of the main research trends related to the use of polarization theory in regional development (Simmie, 2005; Grzeszczak, 2007).

## **2. CONCEPTS OF REGIONAL AND LOCAL DEVELOPMENT IN THE LIGHT OF SUBJECT LITERATURE**

In the literature on the subject, one finds numerous classifications of regional development theory. Perhaps the most versatile division was presented by Stackelberg and Hahne (1999). Many researchers dealing with regional development issues are referring to this work (Strzelecki, 2008, Kogut-Jaworska, 2008, p. 21). Stackelberg and Hahne distinguished theories referring to four major economic trends, i.e. the neoliberal, the equalizing model referring to Keynes' theory, unsustainable development, and endogenous development. Neoliberal theories, whose beginnings date back to the nineteenth-century trend of classical economics, refer to sustainable development. In Stackelberg and Hahne's terminology, they belong to the group of top-down theories, which means that the processes of spreading development proceed from the growth centers to the peripheral areas. Neoliberal theories assume an automatic elimination of development disparities. The condition is a well-functioning free market mechanism. In order to improve its functioning, the intervention of a public factor is allowed. However, direct participation of public authorities in the course of economic processes is inadvisable, as excessive interference can lead to an accumulation of developmental differences. The main essence of the neoliberal concept is the assumption of perfect mobility of production factors, i.e. capital and labor, whose allocation is determined solely by economic factors. In neoliberal models, the violation of the initial state of equilibrium results in the emergence of surplus capital and shortage of labor force as well as a different system of relations in the peripheral regions. The leveling of development takes place as a result of the flow of labor from peripheral regions to growth centers while the capital flows in the opposite direction. In fact, regional variations are growing for decades and the regions are not as homogeneous as the neoliberal models assume. Therefore, the process of equalizing the disproportions is usually longer. Insufficiently functioning free market mechanism may additionally prolong it or completely prevent full convergence. Also, the society is not always guided by economic factors in its choices. An additional weakness of the neoliberal model is the assumption of declining marginal returns from capital. With the identical productivity of production factors, the increase in the cost of economic activity in growth centers reduces the profitability of production, which in turn leads to the reallocation of capital.

In reality, the development potential of growth centers may increase the productivity of production factors enough to neutralize the negative consequences of the agglomeration. In that case, polarization may occur instead of a reduction of development disparities (Adamczyk-Łojewska, 2011). The proof of the unreliability of the free market mechanism in the automatic restoration of balance was the crisis of the 1920s and the 1930s. Its negative consequences have contributed to the birth of a new economic doctrine – state interventionism, with J. M. Keynes credited as its creator. According to the scholar, the reality was more complex than the assumptions on which the neoliberal theories were based. The market differs from the model structure of perfect competition. The mechanisms of the free market will not lead to convergence of development, on the contrary, the regional disproportions will only be increasing. Repealing the assumption about decreasing marginal revenues from capital leads to the accumulation of development processes in growth centers while decreasing the economic activity in peripheral areas. The additionally limited mobility of labor force may lead to its shortages in the centers and surpluses in the peripheral areas. In the latter, there is an increase in unemployment and, as a consequence, a decrease in the purchasing power of the population. Insufficient demand additionally decreases the investment activity of enterprises. The self-perpetuating mechanism of economic imbalance can only be interrupted by state intervention, far beyond the actions permitted by supporters of neoliberal concepts. It is the conviction of a balanced course of development processes that makes the Keynes' model similar to neoliberal theories. With time, the development disproportions should disappear, however, not as a result of operation of the free market mechanism, but on the contrary, owing to a state intervention. Another common element for both trends is the conviction about top-down control of economic processes. In the case of Keynes' model, the external factor stimulating the development of peripheral areas is a public intervention of state authorities. A question emerges, however, about the effectiveness of regional policy realized on the basis of Keynes' concept. Numerous experiences of European countries show that despite the domination of the compensatory policy model, regional – and especially interregional – differences increase (Ederveen et al. 2006, pp. 17-42). Nonetheless, the abandonment of regional policy in its present form would probably further increase development disparities. However, this does not change the conviction that forceful striving for a more even development - through the help of peripheral areas - is inefficient from the economic point of view and tantamount to inhibiting general well-being (Korenik, 2009). The postwar reality did not confirm the assumption about a balanced course of economic processes neither on the basis of the free market mechanism, nor on public intervention. Not only were the development disproportions not diminishing, but often the opposite process was observed. Thus beginning in the 1950s there was a rise in popularity of theories assuming an accumulation of development processes in places already developed. In accordance with the basic premise of the polarized development concept, eliminating regional disparities occurs as a result of concentration and then diffusion of development onto peripheral areas. It is based on the assumption that the concentration of activities is a natural and at the same time desirable phenomenon. It should not be stopped by "punishing" the developed centers for having many assets. However, the spread of development impulses requires exceeding the threshold level of development, the so-called "critical mass." A special role in the accumulation of development processes is attributed to large, innovative enterprises called dominant or key ones. The public authorities play a very significant role in leveling regional disparities. They are responsible for strengthening the existing growth centers, creating new ones, and creating conditions conducive to diffusion of development. For this purpose, it is recommended to expand the transport infrastructure that is conducive to the spread of development impulses. The improvement of the quality of human capital in turn increases the peripheral areas' ability to assimilate development. Public support is especially needed in the initial phase of the development of a growth pole.

Exceeding the limit of accumulation of economic processes results in spontaneous development, and without the explicit help of public authorities. In the longer term, the "burden of responsibility" for the development of the periphery is transferred onto the growth pole. It should be noted that in the neoliberal concept we are also dealing with the process of diffusion of development, which should eventually lead to full convergence. According to polarization theory, a full convergence is a state impossible to achieve. It is only possible to diminish the disproportions. Growth centers will always dominate over their peripheries. Such an arrangement can lead to permanent diversification of geographical space. However, the goal of economic policy should not be to strive – often at all costs – for even development, but to increase prosperity, which, due to greater efficiency, is guaranteed by the polarizing model (Korenik, 2009). For the polarization theories, like the two previously presented concepts of regional development, the common denominator is the conviction about the top-down course of economic processes. However, there is a lack of faith in the possibility of self-development of peripheral areas based on their own endogenous potential. The concepts of regional development discussed so far have not been able to explain the intense development of the areas hitherto considered regressive, which began in the 1980s without a significant contribution of external factors. That is because they underestimated the importance of endogenous resources, that is, grass-roots forces that are able to break the mechanism of the vicious circle of underdevelopment. Theories of endogenous development question the law of diminishing returns on capital, on which neoclassical models were based. This means that market processes must lead to the deepening of development disproportions. Therefore, the development of peripheral areas requires – especially in the initial period – the intervention of public authorities, which should support bottom-up activities. In the initial period, the intervention may involve significant expenditures, but as self-sufficiency increases, the scope of aid should decrease. In the discussed concept, the development is based on specific resources of a given region, which makes it independent of external factors. In polarized development, the danger may lie in a different business profile of growth centers which may make the peripheral areas dependent on them. Similarly in the case of compensatory model, which is more centralized, and thus does not always account for the diversified specificity of regions. The concept of endogenous development does not deny the need for support of a given area by external capital (Porter, 2003, pp. 549-578). However, in the manufacturing process it should be modified or endogenized, that is, it should take into account the specificity of regional resources, and ultimately only be complementary to internal development mechanisms. It should be noted that the activation of peripheral areas based on their endogenous potential is not always an easy task. Areas that in the 1980s experienced intensive development, e.g. regions of north-eastern Italy, so-called "Third Italy," were only seemingly deprived of development potential. There was always a seed of entrepreneurship in them. However, it was only the change in economic conditions, i.e. the shift from mass production to flexible specialization, that "ignited the fire" of development (Grosse, 2002). Not all regions considered peripheral experience an equally intense development. In fact, a radical improvement in the quality of endogenous resources is a complex and long-lasting process (Adamczyk-Łojewska, 2010). Therefore, it is difficult to expect problem areas to suddenly enter the path of dynamic development.

### **3. ACTIVITIES OF PUBLIC AUTHORITIES IN THE ACTIVATION OF THE PERIPHERAL AREAS OF WEST POMERANIA**

The local development of West Pomerania in the last three decades has mainly been influenced by two circumstances, i.e. the transformation of the economy and integration with the EU structures (Hajduga, 2013). In the 1990s, the regional policy or the lack thereof was part of the overall doctrine of economic development: the neoliberal concept. It was expected that the mechanisms of the free market would automatically, without a significant interference from the

public factor, diminish the developmental disproportions (Korenik, 2011). However, the situation in that period was far from the model assumptions of the neoliberal concept. The community of the peripheral areas was characterized by a low professional mobility, which was partly conditioned by the state of the economy, that is, high unemployment in urban centers. The insufficient mobility of the labor force was accompanied by the poorly developed transport infrastructure and communication difficulties. Additionally, in the peripheral regions there was a barrier unaccounted for in the neoliberal concept, namely the social barrier: the mentality of the local community manifested in a reluctance to migrate. The studied areas were not attractive enough for investment capital, which largely resulted from the low and not always suited to the requirements of the labor market qualifications of the workforce. The mentioned barriers limiting an efficient operation of the free market mechanism required public intervention. However, public authorities did not sufficiently counteract negative economic phenomena (Korenik, 2011; Szlachta, Zaleski, 2010, referenced by Hajduga, 2013). Yet, it is worth pointing out positive actions in this respect, and that should be considered the creation of Special Economic Zones (SEZ), offering entrepreneurs numerous tax and administrative facilitations, which refers to the neoliberal concept (WUP, 2010). On the other hand, creating privileged conditions for investors may violate the principles of free competition and be problematic in the context of the ban on granting state aid in the EU. In the 1990s, SEZs were localized within the most developed centers, that is: Szczecin, Goleniów, Koszalin. The inflow of capital, mainly foreign, additionally stimulated their development, deepening the polarization processes. It was not until later that the range of SEZ's influence was extended to the more peripherally located cities of the region, such as: Białogard, Gryfice, or Łobez. They are not, however, very popular with investors. An example is the subzone of Łobez, created in 2011, in which no investor has initiated operation so far. After nearly three decades since the beginning of the transformation, the situation has barely changed. There is still insufficient mobility of production factors, despite the systematic removal of obstacles limiting their flow (WUP, 2017). Workforce shortages are more and more frequent in growth centers. At the same time, in the peripheral areas there is a double-digit unemployment rate (WUP, 2018). The main reason for inadequate labor mobility are non-economic factors, i.e. social considerations mentioned earlier, to a lesser extent transport barriers, which should be related to the improvement of the communication infrastructure. In turn, the barrier limiting the inflow of investments is still the quality of human capital (IBnGR, 2016). Despite insufficient interest of public authorities in the problems of regions in the 1990s, attempts were made to influence the situation of peripheral areas in the spirit of state intervention. However, they were aimed at mitigating the negative effects rather than addressing the causes of the growing disparities (Korenik, 2010). An example may be social assistance, albeit improving the living conditions of the population, but at the same time reducing professional activity, especially of those with the lowest qualifications, dominating in peripheral areas. At the same time, the amount of funds even for solving immediate, short-term problems was insufficient (Gorzelak, Jałowiecki, 1999). In 2004, Poland became a member of the EU and at the same time the largest beneficiary of funds for the implementation of cohesion policy. Integration with EU structures has enabled public authorities to more actively influence the course of economic processes. The availability of EU funds has significantly improved the socio-economic situation of the peripheral areas, but it has not solved the most important problems. Many of the studies carried out underline the improper use of EU funds (Geodecki et al. 2012, pp. 54-67; MRR, 2013; Grosse, 2014; Gorzelak, 2014; referenced by Kozak, 2015). The EU fund administrators focused mainly on spending the available funds, and to a lesser extent on achieving the set goals. Hence the low effectiveness of public intervention in the studied areas. The undertaken activities did not bring the expected supply effects in the form of an increase in production potential. However, short-term demand effects prevailed. Moreover, during prolonged intervention, local communities were dependent on state aid, which only

deepened their reluctance to professional activation. The small effectiveness of the assistance offered also resulted from the weakness of the local economy. Insufficient demand, which was a manifestation of high unemployment and low wages, limited the opportunities for the development of local entrepreneurship (Sołtys, 2013). Few businesses offered products on external markets characterized by a higher purchasing power of consumers. Unfavorable conditions did not encourage effective attempts to activate the local economy. It is even pointed out that public aid is harmful when the co-financing of activities disrupts the conditions of competition. Since the early 1990s, polarization of geographical space has been intensifying in the West Pomeranian Voivodeship. The economic activity accumulated in the few growth centers, which included major cities – local growth locomotives. They attracted productive factors from the peripheral areas, mainly the best qualified resources of the workforce. Brain drain further weakened the development potential of peripheral areas, deepening their marginalization. The diffusion of development impulses, if it occurred, included the immediate surroundings of growth centers, but did not reach farther located areas (Adamczyk-Łojewska, 2011).

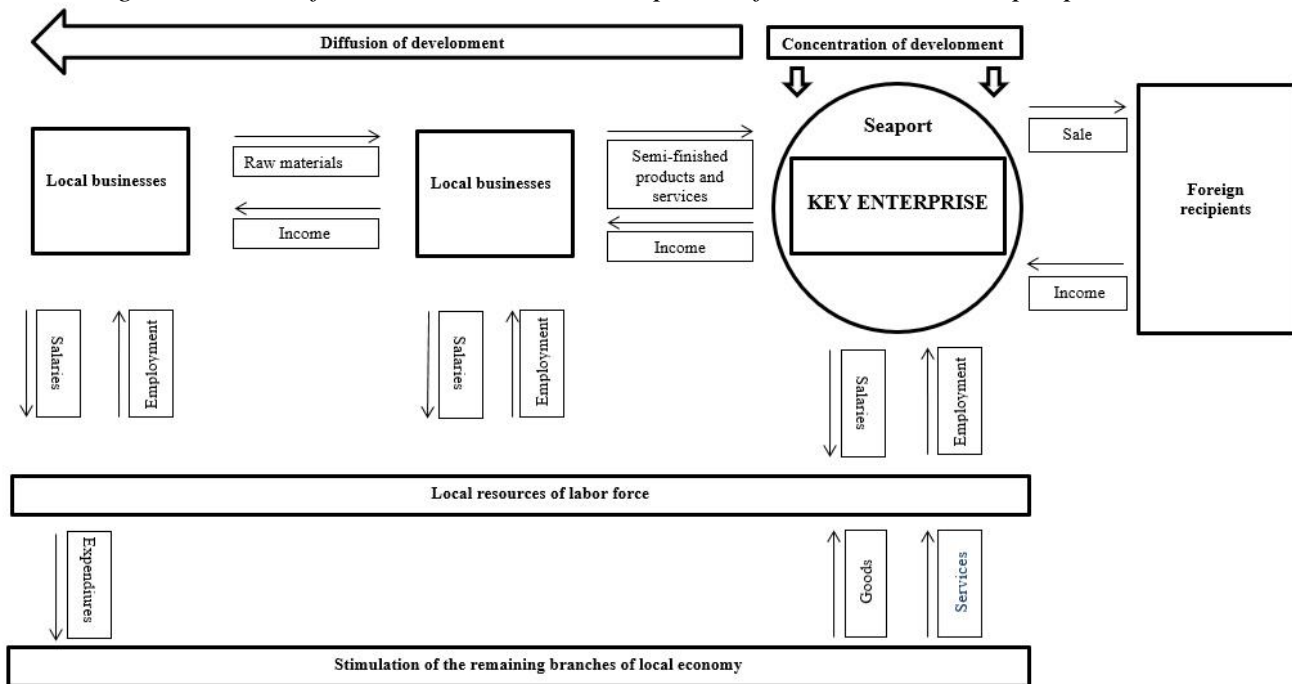
#### **4. PROPOSAL FOR DEVELOPMENT OF PERIPHERAL AREAS OF WEST POMERANIA BASED ON POLARIZATION-DIFFUSION MODEL**

Previous attempts to improve the economic situation of the peripheral areas of West Pomerania have not yielded satisfactory results, which is connected with the occurrence of numerous development barriers and improper public intervention. The question is whether the peripheral areas of West Pomerania can be saved from stagnation at all? According to the author of the article, it is possible, but it requires a change of the current development path. The development of peripheral areas can be based on a polarization-diffusion model using seaports as growth centers, i.e. growth poles. The proposed model combines investment opportunities of external capital with endogenous resources of the region (Rynio, 2014). Why the polarization-diffusion model? Due to the natural tendency of economic processes to concentrate in geographical space. Why seaports? They have often been used in the regional policies of European countries to stimulate the development of peripheral areas (Hozer, 2000, p. 14, Wasilewska, 2003, Grzelakowski, Matczak 2012, pp. 91-95). How can the seaports in West Pomerania stimulate the development of peripheral regions? The most significant element in the theory of polarized development is the key enterprise (Hermansen, 1974, Grzeszczak, 1999, pp. 11-28, Fujita, Krugman, 2004, p.140). Only large economic entities guarantee a proper concentration of development processes enabling diffusion of development. The above statement concerns peripheral areas incapable of self-development, and such is the case in West Pomerania (Sołtys, 2010). What qualities must a large business have in order to be able to activate the geographical space? First of all, it must engage in the production of innovative products and have a dominant position on the market of suppliers and recipients. Innovation guarantees a high unit value of manufactured products and flexibility of reaction to changes taking place on the market. The dominant position among customers gives the opportunity to sell products on many markets. On the other hand, a significant share in the supplier market engages numerous suppliers. This is a very important feature of a key enterprise in view of the weakness of the local enterprise sector in West Pomerania. The guarantee of the sale of raw materials and semi-finished products reduces the aversion to taking risks related to economic activity, which in the long term results in an increase in entrepreneurship. The improvement of the economic situation allows the absorption of unused labor resources. At this point, it should be mentioned that the quality of human capital in problem areas is quite low, however, more than 2/3 of the unemployed are professionally active, and the main reason for not taking a job is the lack of appropriate job offers (WUP, 2017). In addition, the development of local enterprises would solve one of the most important problems which is the limited occupational mobility of the unemployed.



It should be added that the surplus of workforce in peripheral areas, though not very mobile, is an asset in itself in the face of increasing shortages in the labor market. The production profile of a key enterprise would be based on the endogenous resources of the region to which agriculture and forestry belong (UMWZ, 2017). The agriculture of West Pomeranian Voivodeship is effective (large farms), but not very competitive (sales of unprocessed products with a low unit value). A similar situation applies to the wood industry, which focuses on the sale of raw material. Therefore, the first production link in the proposed development model would be local agricultural farms and wood industry plants (raw material), and the second – local production and service enterprises (semi-finished products and services). The last link would be a key enterprise (final product) that would produce highly processed food and furniture products, for which there has been a great demand on foreign markets for many years (Figure 1). The production profile based on endogenous resources has the undoubted advantage of linking the key enterprise to the region, reducing the risk of relocation that often occurs in case of e.g. rising labor costs.

*Fig. 1. Network of connections in the development of West Pomerania's peripheral areas*



*Source: own study on the basis of subject literature and own research.*

The target place for the sale of final products would be foreign markets, but only those characterized by high purchasing power of consumers, such as the countries of the Baltic Sea region. The choice of external markets is understandable due to the shortage of demand in the peripheral areas of West Pomerania. The benefits of exporting final products would not only apply to companies directly involved in the industrial activities. Money from the sale of products would stimulate the entire local economy. Local enterprises would have to be involved in the production cycle as much as possible. This would reduce the risk of "outflow" of money outside the local economy. In the polarization-diffusion model, transport infrastructure is conducive to the spread of development impulses. It increases workforce mobility and facilitates cargo transport. The research carried out in West Pomerania shows that an expressway would increase the acceptable distance traveled to work to 30 km, which would coincide with the area of several coastal communes (Sołtys, 2013). Therefore, the improvement of transport infrastructure is becoming a necessary condition for linking the local economy with

the network of seaports. A question should be asked: who would prepare the conditions for the application of the polarization-diffusion model in the peripheral areas of West Pomerania. Such possibilities are available to public authorities (Nowaczyk, 2017). It is the public factor's responsibility to improve the condition of transport infrastructure and the quality of human capital. In this context, the construction of the S6 expressway running through the natural facilities of the examined ports should be positively assessed. It is only necessary to ensure the quality of the local roads leading to the ports. The actions of public authorities in the activation of local manpower resources should aim at raising and appropriately changing professional qualifications. The previous intervention of public authorities in this area proved ineffective due to limited employment opportunities. In the proposed model, the actions implemented take into account the presence of a key enterprise, that is real demand for labor. The public factor should also take measures to obtain a key enterprise. The possibility of extending the existing SEZs to port areas and their surroundings together with preferential conditions for start-up enterprises should be considered. It may be important to promote ports as attractive investment locations or to ensure direct contacts of public authorities with potential investors. Finally, it should be noted that the proposed local development model is part of the new philosophy of the state approach to regional development included in the National Strategy of Regional Development<sup>1</sup>. The mentioned document departs from traditional thinking about regional policy based on the equalization model. It allows, and even recommends, supporting the concentration of development processes and their subsequent diffusion onto peripheral areas. At the same time, it does not break with the current model of regional policy, anticipating intervention in areas particularly at risk of marginalization (Korenik, 2010).

## 5. CONCLUSIONS

The article presents the basic concepts of regional development, ie: neoliberal, compensatory – referring to Keynes' theory, polarized development, and endogenous development. There are major differences between the concepts mentioned. Neoliberal theory assumes automatic equalization of regional disparities based on the free market mechanism. State intervention is limited to removing obstacles to the free flow of production factors. At the core of the remaining three concepts lies the conviction about the growing regional inequalities. The reduction of disproportions requires an intervention of public authorities in the course of economic processes. Regional policy based on the Keynes' model is more centralized. Its main premise is direct assistance to peripheral areas. In the concept of endogenous development, help from public authorities takes on a more pro-development form. It consists in supporting the local community in pursuit of independent development based on the specific resources of the region. In turn, in the concept of unsustainable development, the concentration of development processes in growth centers and their subsequent diffusion activates peripheral areas. The peripheral areas of West Pomerania have been marginalized since the beginning of the systemic transformation. Attempts at their activation were not bringing about the desired results. The ineffectiveness of the neoliberal concept resulted from the transformation problems of the economy, and now from the insufficient mobility of the workforce, the causes of which should be seen in non-economic factors. On the other hand, the barrier limiting the inflow of investments is the low quality of human capital. Public intervention often perpetuated unfavorable phenomena. The improvement of the situation – if it occurred – was based on demand effects, so it was not developmental in character. The scarcity of local demand and the weakness of human capital prevented development based on endogenous potential. Economic processes accumulated in growth centers. Drainage of the best qualified workforce additionally deepened the problems of peripheral areas.

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<sup>1</sup> The NSRD is the most important document defining the framework of regional policy in Poland until 2020.

The ineffectiveness of the actions undertaken so far requires a change of approach to the problem of marginalization of the peripheral areas of West Pomerania. The author of this article proposes to base the development of the studied areas on a polarization-diffusion model using seaports as growth poles. The weakness of the endogenous potential of peripheral areas requires the involvement of a key enterprise, the production of which would be based on the endogenous resources of the region, which are agriculture and forest management. A large network of connections would involve local actors in the activity, whose development would allow the absorption of unused labor resources. The strong position of a key enterprise among recipients would guarantee sale of products on foreign markets. Money from export activity introduced into the economic cycle would stimulate other sectors of the local economy. The successful implementation of the polarization-diffusion model requires the involvement of public authorities in obtaining a key enterprise and in improving the conditions for diffusion (transport infrastructure) and absorption of development (qualifications of the workforce). The proposed model solves the most important problems of peripheral areas, i.e. limited mobility of the workforce, insufficient local demand, and low quality of human capital. It also fits in with the new philosophy of thinking about regional development, which increases the chance of its implementation.

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## USING THE APPARATUS OF SIMULATION MODELING IN THE PROCESS OF DEVELOPING ADVERTISING STRATEGIES OF ENTERPRISES

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### ABSTRACT

*The main problems in the field of advertising strategies development of enterprises, as one of the important factors in increasing the efficiency of their marketing, production and economic activity, are determined. The peculiarities of the formation of advertising strategies in the market of pharmaceutical goods are considered. The expediency of using a flexible mathematical apparatus in the process of developing and approbation strategies and their consequences for the future is substantiated. The model-simulator of the advertising strategies formation of the enterprises is offered, that developed on the software platform of the integrated system of multilevel imitative modeling - AnyLogic. The developed model-simulator is intended for daily application in the process of making managerial decisions regarding the formation and adjustment of the advertising strategy of enterprises in commodity markets. The model is quite typical and can be easily adapted to the specifics of not only concrete pharmaceutical companies, but also for enterprises in other industries.*

**Keywords:** *advertising strategy, AnyLogic, enterprise, pharmaceutical model-simulator, simulation modeling*

### 1. INTRODUCTION

Advertising activity of domestic enterprises is gaining momentum today as a result of marketing processes activation in the conditions of consumer-oriented economy formation. First of all, it concerns the formation of an advertising strategy, as one of the determining factors of the advertising effectiveness, and also marketing and production and economic activities of enterprises in general. Pharmaceutical industry is one of the most complexes in developing effective advertising management strategies. In today's Ukrainian pharmaceutical market, the process of using advertising funds is shifting to a qualitatively new stage in its development, due to the significant segmentation and diversification of the pharmaceutical goods market; high level of competition; import dependence; significant state control; creation of new information and communication technologies that cause the emergence users of a new type with complicated behavior and dynamic change in the benefits. In the given context, the use of special models-simulator in practice for the preliminarily working off of various advertising strategies and their possible consequences becomes significant. The development and application of such a management tool requires the use of highly flexible mathematical research methods on modern software platforms. One of the ways to solve the problem is using simulation modeling apparatus. A significant contribution to the study in the problems of advertising strategies formation of enterprises in commodity markets has been such scientific

works as [2, 5, 13, 17, 19, 20, 23, 26, 32-36, 39]. In particular, in the case of pharmaceutical companies should be emphasized works [1, 6-8, 25, 42]. Thus, a review of analytical decision support tools for marketers (including *SWOT* analysis) is considered in [1, 6, 13, 25, 34, 39]. Research and improvement of customer feedback to increase sales is highlighted in [5, 7, 13, 35]. In recent years, it has become popular to promote products and services in the global Internet network, especially in social networks. A great deal of research is devoted to the development of marketing strategies using on-line video advertising [19, 20], communication "Word of mouth" (*WOM*) [26], viral advertising [35], promotion of products in Instagram [17] and Twitter [32], etc. The structural equations modeling (*SEM*) and mathematical modeling (including the use of spreadsheets) are studied in detail in works [1, 2, 7, 23, 33, 35, 42]. Scientific developments [7, 8, 17, 19, 20, 23, 26, 35] emphasize the need to create dynamic models and identify the most effective indicators of advertising, external and internal factors of influence on potential buyers. The theoretical and applied questions of using simulation modeling as a device for conducting research in various fields of economics are considered in numerous literary sources, for example [11, 27, 32, 36]. There is a specific range of model applications in the field of socio-economic systems management at the micro level [3, 27], in particular, in the management of marketing activities of enterprises various industry directions [18, 30]. With regard to the simulation of various aspects of advertising, it need note the achievements, the results of which are covered in [9, 21, 30]. Models by the study field are regularly submitted at the international forums of the simulation models development: Winter Simulation Conference (*WSC*) [41], International System Dynamics Conference [38], *ASIM* (German-language simulation community) [4], *IMMOD* ("Imitation Modeling, Theory and Practice") [40], European Congress of *EUROSIM* [31]; webinars and publications by one of the world's leading corporations in the simulation industry - The AnyLogic Company [28]. Despite the existing developments of scientists and practitioners, the problem of the formation of effective advertising strategies for enterprises, in particular the pharmaceutical industry, based on the use of modern mathematical tools remains unexplained. On the one hand, this is due to the specifics of advertising companies in this area, on the other hand - with difficulties in the process of creating and implementing model applications. When developing a marketing strategy, it is necessary to consider the possibility of emerging new information and the need to change the taken decisions; the initial objectives of the strategy may varied, be corrected [24]. The development of a marketing strategy from the beginning to the end should be cyclical [5]. This process may be accompanied by difficulties associated with translating into the digital indicators of the utility of the taken decisions. Therefore, it is necessary to involve specific means to support decision-making and reduce potential risks. With regard to the mathematical basis of research, then, of course, the simulation apparatus has advantages along with the analytical approach due to the possibility of taking into account the dynamic nature of the development of processes, the influences of various stochastic factors, many inverse relationships, nonlinearity. In the course of an analytical decision it is often impossible to obtain an unambiguous result due to the lack of corresponding equations or the presence of recursiveness formulas. At the same time, for tasks arising in the process of advertising strategies development, as a rule, it is enough to provide a numerical solution and visual representation of the results based on a series of numerical experiments. Exactly method of simulation modeling is allows it. The limited application of the method in the activity of economic systems at the micro level is due to the presence of a number problems and "bottlenecks" in the industry. For example, the means of production, implementation of models and planning of simulation experiments are need to improve. The further development of software platforms for the implementation of simulation by creating a single research space within specific integrated systems is topical. This will lead to the transition from the outdated classical concept of organization and simulation to the practical implementation a system

approach of simulation research. With regard this, it is expedient to develop model applications using multi-approach paradigms of simulation on the corresponding software platforms of integrated systems, as well as the involvement of modern Internet technologies for the exploitation of ready-made models. The paper goal is revealing the possibilities of applying simulation modeling methods on the software platforms of integrated systems in the process of advertising strategies formation of pharmaceutical enterprises.

## **2. THE MAIN RESULTS OF THE RESEARCH**

Pharmaceutical advertising goals do not differ from the advertising goals of any product group and consist in the purchase of the advertised product. However, the specifics of the industry affect advertising processes and the advertising strategy formation for pharmaceutical companies in different regions of the country. Currently, according to the Law of Ukraine "On Advertising" there are restrictions on advertising of prescription medicines. Advertising of prescription medicines can be used taking into account the basic principles of advertising, all legislative requirements regarding its form and content, but only among a limited number of subjects - it is placed in specialist publications intended for medical institutions and doctors, and also distributed at seminars, conferences, symposia on medical topics. Therefore, the study considers the advertising activities of enterprises in relation to non-prescription medicines. Any company is interested in increasing sales and expanding its customer base, but the means to achieve these goals are not always obvious. Professionals need to analyze a huge number of factors that influence success to select the most rational marketing and sales strategy, for example: income levels, product features, competitors' actions, trends in the development of modern technologies, market and customer requirements, production capacity, market segmentation, national peculiarities of potential buyers. In addition, most of the factors need to be considered in dynamics [22]. The simulation models offer many advantages over the implementation of experiments on a real system and the use of other methods, namely: cost, time, accuracy, visibility, universality, etc. Within the framework of the creation the model complex of the production and marketing system of the pharmaceutical enterprise, a module is developed, that studies the influence of certain factors in different regions of the country on the level of income, sales volume and number of customers in the context of various strategies for the marketing of medicines. The software platform for the implementation of the model is the system of multilevel simulation modeling AnyLogic, which supports on a single platform all existing approaches for discrete-event and continuous simulation (flowcharts of processes, system dynamics, agent modeling, condition maps, equation systems, etc). A fragment of the model is shown in Figure 1.

*Figure following on the next page*





pharmaceutical company *OJSC "Farmak"* - one of the largest pharmaceutical manufacturers of various pharmacotherapeutic groups in Ukraine. According to [16], the company's advertising costs for the first half of 2017 amounted to 28,725.8 thousand dollars. The company holds 6.5% of the market for pharmaceuticals among all producers (including foreign producers) and 16.8% of the medicines market among Ukrainian producers [29]. Approbation of the model was carried out on the indicators of the group "Cold remedies". Seasonal fluctuations for demand are typical for this group. The main sources of informing potential buyers about the medicines of this group with the corresponding rating are viewed in [37]. The process of informing the target audience is described by the model of Nerlow-Errow (N-A model), which has the form of differential equation of the 1st order:

$$\frac{dA}{dt} = b \cdot q(t) - k \cdot A, \text{ where} \quad (1)$$

$A(t)$  – awareness about product (number of informed people about product in period  $t$ );

$q(t)$  – advertising activity (advertising costs in period  $t$ );

$b$  – advertising effectiveness (rating of the source of advertising);

$k$  – the speed of oblivion of information. In the simulation model this coefficient is defined as a random variable of 10% to 80%, which is due to the forgetting curve of Ebbinghaus.

An important parameter for making a decision on the purchase of a medicinal product is the cost of the product. The monthly costs of advertising and product cost are the variables when performing experiments on the simulation model. Here are specific examples. The results of three experiments that investigate the change in time of such parameters as Target\_Audience, Potential\_Buyers and Buyers under different conditions for the cost of advertising the product are shown in Figure 2.

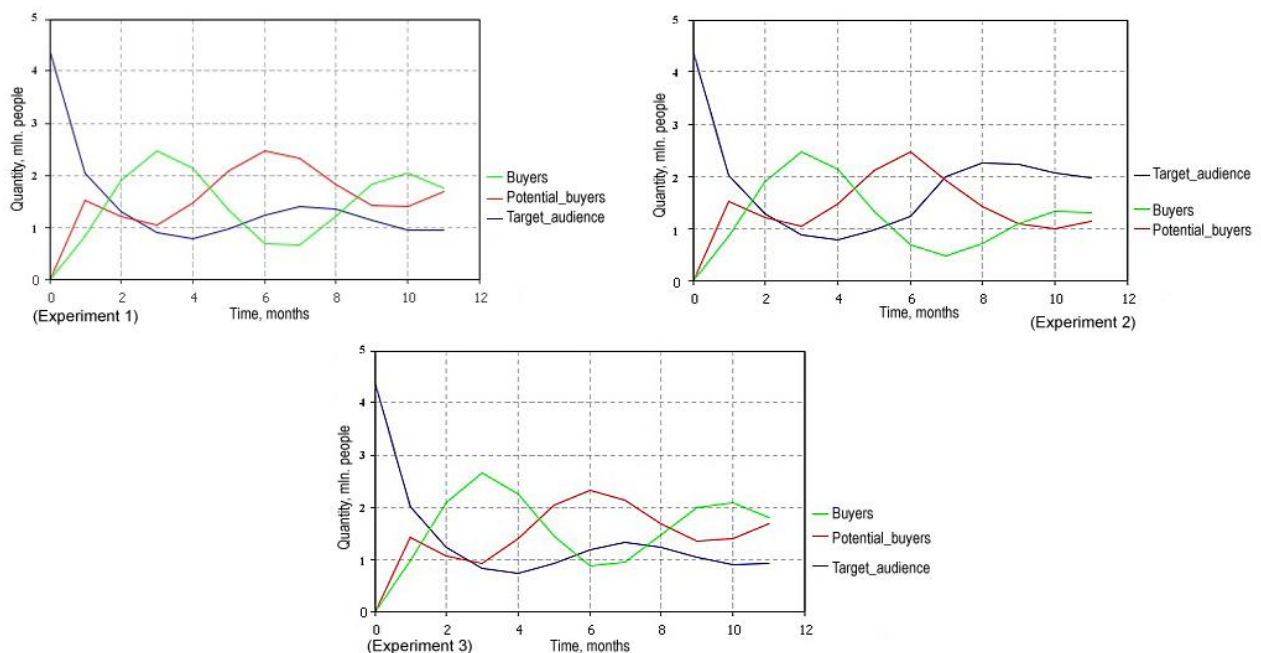


Figure 2 – Time charts of parameters Target\_Audience, Potential\_Buyers and Buyers

- Experiment 1. The costs of product advertising are evenly distributed over the entire simulation period.

- Experiment 2. The costs on product advertising are implementation only for the first 6 months (evenly distributed), starting from the 7th month they cease.
- Experiment 3. During the first six months, the advertising costs amount to 80% of the total, and starting from the 7th month the remaining 20% are distributed.

Experiment 1 shows that the first 6 months of advertising is quite effective, but starting from the 7th month, advertising costs are unreasonable and do not have the expected response of the target audience. Experiment 2 shows that after the cessation of advertising, the number of users, as well as the number of information carriers, has rapidly decreased. Experiment 3 shows that the strategy of uneven distribution advertising budget between the first and last months of advertising keeps the number of users at a fairly high level. The number of purchases in the first months has increased significantly, with a high proportion of target audiences being carriers of information. For large pharmaceutical enterprises operating throughout Ukraine and abroad, the conditions analysis of specific regions for determining the optimal plan of an advertising strategy is a prerequisite for successful business conduct. For example, in different regions of Ukraine vary greatly the levels of morbidity, existence pharmacies and special stores, people's incomes, medicines costs, age limits of the population, etc. Making decisions on setting price for medicines, distributing funds between sources of advertising, placing medicines on pharmacies depending on demand and other complex issues are priority tasks for managers of pharmaceutical companies in each region. Results of the experiment Comparison of "runs" is presented on the example of analysis the dynamics of studied parameters in the section of regions of Ukraine. Experiments were conducted for the Kharkov and Odessa regions. In them compared the behavior of variables Regular\_buyers, Income, Number\_packages at different values of the Cost\_product parameter. The sources of incoming data are the State Statistics Service of Ukraine [14] and pharmacy sales in the regions of Ukraine [15]. Experiment results the Comparison of "runs" for the parameters Regular\_buyers, Income and Number\_of\_packages at different values of the variable Cost\_product for the Odessa and Kharkov regions are shown in Figure 3. In both regions the maximum number of regular buyers is achieved at the lowest cost of the product. The feedback between these parameters is clearly reflected. At the maximum cost of a product the number of regular buyers is kept at one level throughout the simulation period. This is the part of buyers, for which the purchase decision does not depend on the price. The obtained results prove that in Kharkov and Odessa regions the enterprise will receive the maximum income at the product cost 170 UAH. However, income in the Kharkov region is much higher due to larger population and higher level of morbidity. One of the important parameters for the pharmaceutical industry is the number of sold packages in natural expression. The graphs show that in the Odessa region residents buy in 1.5 times less medicines, with a population less in 1.1 times. The income in Kharkov region is higher than in Odessa in 1.7 times at a lower level of material maintenance of the population. Given the health status and the level of prosperity in different regions, it can be argued that in the Kharkov region the population will continue to buy medicines even with the small advertising efforts of pharmaceutical companies. Therefore, it is necessary to increase the amount of funds for an advertising campaign in the Odessa region. Due to the low level of morbidity in comparison with the Kharkov region, it is recommended to promote vitamins and biological activity supplements (BAS) on the pharmaceutical market [10].

*Figure following on the next page*

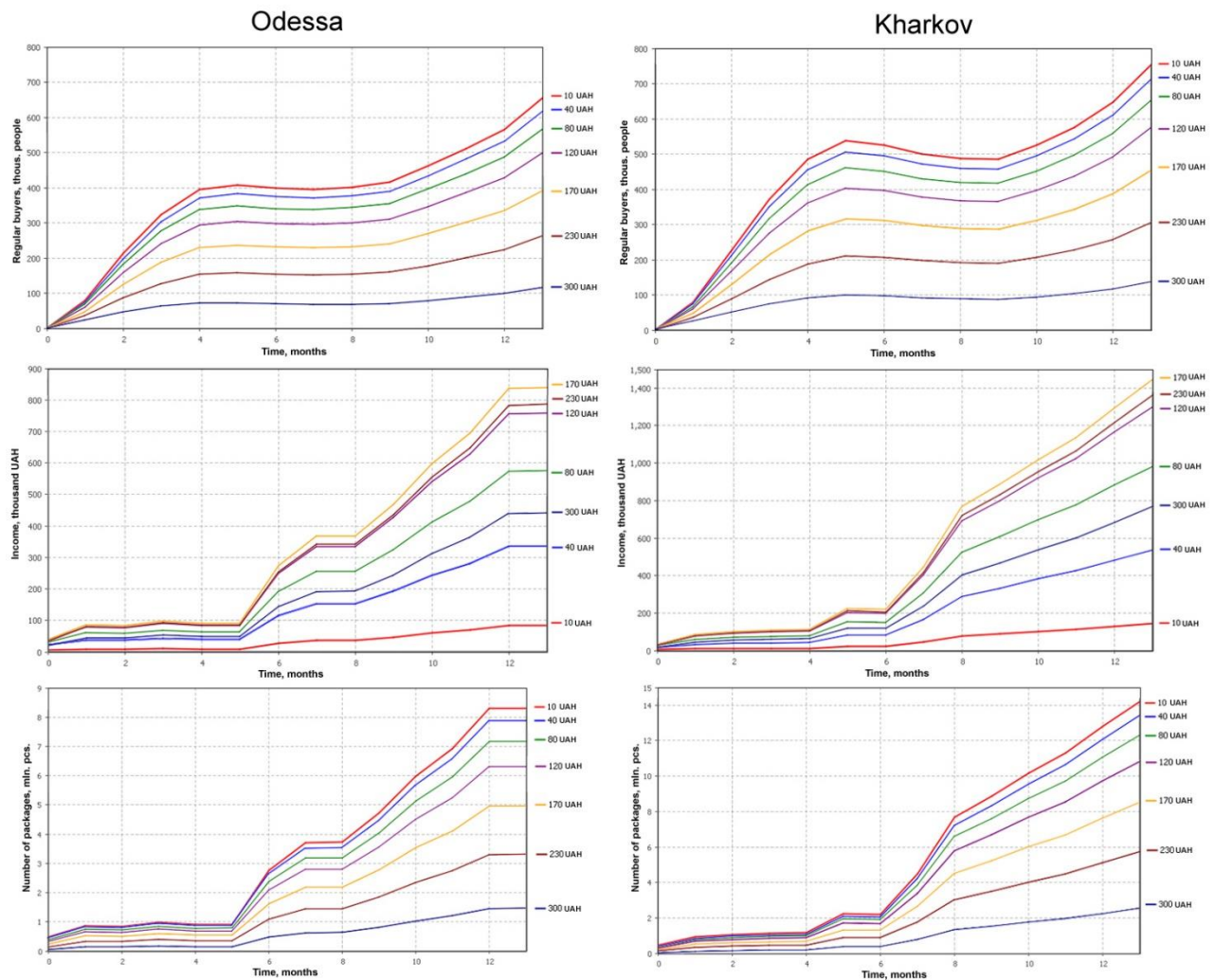


Figure 3 – Comparison of "runs" Odessa and Kharkov regions  
(for the parameters Regular\_buyers, Income and Number\_of\_packages)

Experiment the Analysis of model sensitivity is a procedure for evaluating the influence of input hypotheses and the values of key factors on the model's output indicators. An experiment with variation of parameters and analysis of the model reaction helps to assess how sensitive the model's forecast from change the hypotheses underlying it. In the analysis of sensitivity the change in the values of factors is performed separately, which allows to rank their influence on the final indicators. AnyLogic has a mechanism for automatically launching a model the given number of times with a change in the value of the selected parameter. The analysis of sensitivity performs several "runs" of the model, varying the value one of the parameters and showing how the simulation results depend on these changes. The run of experiment provides opportunity to study and compare the behavior of the model at different values of the parameters using graphs. For this model the experiments Analysis of sensitivity were conducted on the following parameters: Target audience; Cost of product; Advertising costs in the pharmacies; Advertising costs on the Internet network; Rate of oblivion and other. Execution of experiments showed that:

- In the Kharkov region a greater influence has advertising on the network of pharmacies, whereas in the Odessa region preference is given to Internet advertising;
- With increasing spending on advertising and increasing the intensity of advertising decreases the rate of oblivion and increases the number of regular buyers;

- The target audience of the Odessa region is less than Kharkov, but the effectiveness of advertising in it is higher;
- In the Odessa region the sale of more expensive products prevails, whereas in Kharkov population buy cheaper goods, but considerably more in terms of the number of packages.

The presented examples of realization three types of experiments prove their informativeness for the enterprises of the investigated industry. However, in actual practice, the experimental circle can be significantly expanded according to the needs of users (a list of possible types of experiments provided by the AnyLogic platform is given above). Particular attention should be paid to the simplicity using of the finished model-simulator, as a daily apparatus to support managerial decisions making, and the possibilities of its adaptation to the specifics of certain enterprises and situations in the pharmaceutical market. In addition to the traditional advantages of simulation modeling - the modularity and openness of the model, the user interface of the high level, service support of the application, etc. - this is facilitated by the use of modern cloud technologies (AnyLogic platform provides an instrumental base for the implementation of cloud service). Migration of the imitation model-simulator into the cloud significantly increases its efficiency in the following directions [12]:

1. There are appears additional computing power. The browser provides a new approach to working with the created model. According to the developers of the AnyLogic platform, the typical scenario for such exploitation is to work with model versions; setting / changing input parameters; observation the animated run and on-line interactive with it; planning complex experiments; configuring the control panel (dashboard) with inputs and outputs of the model; performing experiments; viewing, analyzing (for example, comparing) and exporting results.
2. The scheme of interaction with customers is changing. If, for example, it is necessary to adapt the developed model to the specifics of the certain object, make the corresponding changes, etc, it is enough to download the model with the data and the configuration of concrete experiments in the cloud and send the appropriate link to the customer. The user will be able to download the model, run the submitted experiments or generate their own, change the parameters, make the necessary model runs and, on this basis, formulate proposals and requirements for its further setting. All work is done in the browser and takes a few seconds.
3. New opportunities for teamwork are creating. In AnyLogic the following principle is realized: the single base stores the input parameters and the corresponding results of all anytime user launches of the model by anyone user. Then, if new startup options are found in the database, simulation isn't performed. In addition, the cloud with the model is a social network. Thus, any enterprise-user can use the results obtained by colleagues in the presence of access to the model in the cloud, as well as make in their composition appropriate enhancements. This can be convenient for large pharmaceutical companies with a developed network of subdivisions, affiliates.

### 3. CONCLUSION

Summing up all the above, it should be noted that the processes of advertising strategies formation of enterprises in the conditions of the increased entropy of modern commodity markets, the emergence of new trends in the consumer-oriented economy and the development of digital marketing technologies are not only local application tasks, but require the creation of a single theoretical and instrumental basis for their implementation. The presented model-simulator for the development scripting of advertising strategies clearly reflects the general tendency to involve the mathematical apparatus of simulation modeling to create a base of models of decision support systems (DSS) on the micro-level.

The proposed model application and plans for simulation experiments demonstrate the application of a system-dynamic approach to provide a quantitative assessment of the components of advertising strategies for a diverse time perspective with a significant degree of aggregation. Due to the high level of structuring, the flexible user interface and the ability to implement the cloud service on the software platform AnyLogic, model can be deepened and expanded in order to increase its functionality and adaptability to specific situations of concrete enterprises. Further research is aimed at increasing the detail of the components of advertising strategies with the expansion of the range factors of external environment influence. In particular, it is about reproducing the dynamic behavior of products consumers, which is being promoted to the market. This is achieved through the use of the hybrid simulation paradigm in the AnyLogic environment as a base for providing various levels of aggregation of processes and conducting various types of simulation experiments. The main task of these improvements should be considered the creation of a convenient and parametric-tuned support device for making managerial decisions in the field of advertising.

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## COMMUNICATION WITH EXTERNAL AND INTERNAL PUBLIC ACCORDING TO STAKEHOLDER MANAGEMENT PRINCIPLES: EXAMPLE OF SPORTS ORGANIZATIONS

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### ABSTRACT

*Sport became a lifestyle, which influences the behaviour and the way of living of a growing number of people. The goal of this paper is to conceptualise and develop a theory about the work of contemporary sports organizations based on stakeholder management. Theoretical discourse of this paper focuses on internal and external stakeholder – influential publics and includes: communication with employees, volunteers, consumers, club members, sponsors, donors, investors and state authorities. Mentioned perspective sets public relations on a level of strategical management function, because it is able to influence the way that stakeholder – influential groups support organizational goals. Successful communication implies respecting the needs of customers with which it enters into business, representation of potential benefits or additional funding. Measuring of sports organizations' public relations effectiveness is necessary in order to determine the desirable level of business success in the public relations department.*

**Keywords:** *sport, public relations in sport, internal public, external public, measuring effectiveness in public relations practice*

### 1. INTRODUCTION

Under communication, which makes part of sports organizations' section of public relations, we understand the communication with external public such as consumers, fans, journalists and investors and with the internal public - employees. Employees are the most important internal public of each organization. Maintaining good communication channels within organization, regarding formal and informal subjects, is a key component which leads to a successful business. Targeted groups outside business organizations that sports public relations are trying to influence are buyers (firstly buyers of seasonal tickets which represent a large proportion of buyers, regular members of sport clubs and gyms, regular buyers in sports equipment stores,...), potential investors and state bodies, followed by individuals or groups which want to invest into organization – sponsors and donors.

### 2. SPORT –SOCIAL PHENOMENON AND LIFESTYLE

Whether they play some sport professionally or they are only passive observers, people define themselves more and more often through the type of sport they are practicing or are fans of. Through its broad influence, sport changes psychological, anthropological and sociological views on life and world. Speaking of psychological aspects of sport, audience has the biggest influence on athletes' performance. There are some very aggressive football groups which are, especially in Croatia, filling newspaper lines and send a bad image to the world (Žugić, 2000, pp. 84 – 90). Within the public, the most visible fans are the most extreme ones whose interest is less focused on competitive aspect of the match, and more focused on social aspect of the event. Their common features are: they are young, mostly male and students.

Their behaviour is a result of social situation of the youth: impossibility to influence socially important decisions; exclusion from the professional division of labour; dependence on parents. They are in the process of searching themselves. Connection to the club is the basis of their identity. Football stadium is an opportunity to show, present and express them. The goal of violent behaviour is a broader echo, i.e. gain of political connotation of actions on a stadium (Lucić, 2016; referenced by Zulić, A., & Frapporti – Roglić, M., 2016). When speaking about anthropological views on sports, it is important to emphasize that sport is especially interesting because its consumption is not directed only to physical, but also to emotional effects within its users. In many cases, sport heroes are the source of collective identity and proud. The case of Argentine football player Diego Maradona is a clear illustration of 'transnational' heroism. Fans used to treat him as a 'god' while he was playing for the football club Napoli from Naples. The situation was the same while he was playing for the representation. The cult of sports heroes assures a social model where it is possible to study paradoxes and dramas in a society, but also to recognise questions of crucial values within representatives in a community (Lucić, 2016; referenced by Archetti, 1998, p. 98). Social influences come to the fore mostly in situations where professional athletes are being idolised, which is more often the case, because they are a group that is regularly being used in promotional campaigns of sport and non-sport products and services.

### **3. STAKEHOLDER MANAGEMENT ON THE EXAMPLE OF SPORTS ORGANIZATIONS**

Mentioned trends in the sports world are being noticed by sports organizations, whose goal is to identify strategic business questions from their own surrounding and to implement them in the planning process. Scope and nature of communicational task comes down to defining the general and specific goals, public and content or messages. Research helps to identify key publics for a certain program of sports organizations. Some stakeholder groups which appear in sports industry are for example: players, coaches and professional staff, employees, organizational administrators, stakeholders, investors, donors, sponsors, suppliers, organization members, fans, media, society, etc. With each organization is connected a group of people who are more or less interested in business success or on which the business depends to a bigger or smaller extent. Modern approach to business comprises paying attention to those groups in order to include their stands or resources into management. Based on the public relations classification, there are three models of relations with stakeholder groups in dependence of the way the organization constitutes socially responsible business: (1) informational stakeholder strategy, (2) stakeholder responsibility strategy and (3) involvement stakeholder strategy (Morsing, Schultz, 2006, p. 325). Stakeholders or interested persons are groups which might have some benefits from the organization. Stakeholders can be grouped in following ways: internal stakeholders, i.e. those who make part of project team or those who finance the project and external stakeholders – groups effected by the project. Another possible demarcation is the one on primary and secondary stakeholders. Primary group of stakeholders are the ones without whose continuous participation the corporation cannot survive in due course, while secondary stakeholders are those on which the organization has an influence, but they are not inevitable for its success. (Lucić, 2016; referenced Chinyio, Olomolaiye, 2010, p. 1 – 3). After the identification of stakeholders and their problems, the next step is to achieve that stakeholders understand what the organization wants to do, organization must respond to their concerns or, at least, admit them and find out whether it can satisfy their needs. It is achieved through the analysis or mapping of stakeholders (Chapter 7. Section 8. Identifying and Analyzing Stakeholders and Their Interests. Retrieved (18.Aug. 2016.) from: <http://ctb.ku.edu/en/table-of-contents/participation/encouraging-involvement/identify-stakeholders/main>). Stakeholder map recognizes the role and activity area for each stakeholder and shows a relative advantage which

should be given to the fulfilment of stakeholders' interests, which estimates the importance of each individual stakeholder for success of a project. (Aligica, 2006, p. 80). Stakeholder management includes identification and classification of stakeholders, which eases beginning and subsequent engagement with them in a timely planned and coordinated manner (Lucić, 2016; referenced by Chinyio, Olomolaiye, 2010, p. 4). In order to assure a smooth functioning of all components in stakeholder management, the organization needs to make a stakeholder communication plan. Nowadays, two way models of communication are being used more often. Although they are many times better than one way communication models, they are not yet completely defined. One way models of communication with stakeholders demand intense efforts in coordination and management, but they can also be illusionary if they suggest the possibility for a company to control certain meanings between and within interest groups. On the other side, interactive ways of dialogue with stakeholders can offer significant advantages, but also yet unexplored risks. Namely, stakeholders dialogue can be double or: (1) instrumental and superficial, which results in cynicism and mistrust, with subsequent negative effects on organizational image; or (2) if it was really adopted, it can result in cacophony and opposites, resulting in inaction or fragmentation within the organization (Crane, Livesey, 2003, p. 3 – 4).

### **3.1. Communication with internal public**

Employees of each organization are the most important actors which enhance everyday successful business. Good relations with employees enhance their motivation and success at work, which is reflected in their relation with buyers.

#### *3.1.1. Employee relations*

Good relations with employees are important in order to promote employee motivation and progress. Employee relations or employee communication is a public relations function whose goal is to create favourable relations between the organizational management and their employees. Although there are still some stereotypes and issues, modern sport organizations attribute more and more attention to the heterogeneity within working groups. Although some improvements are visible, women still remain in unfavourable position in comparison with their male colleagues. (Cunningham, 2008, p. 137). Lucić, 2016, referenced by Cunningham and Melton, 2011., p. 647 –652 furthermore emphasize the fact that members of LGBT community contribute in several ways to the successful management in sports organizations. Group diversity brings a series of advantages, but one of most frequently cited is connected with better understanding of market segment which comprises LGBT community, which is especially attractive for sports organizations. With the growth of employees which make part of LGBT community (Ciszek, 2018), the ability of an organization to become a part of a market intended for that community is also growing.

#### *3.1.2. Importance of volunteers for sport organization functioning*

Volunteers are an integral part of growing number of sports organizations. Volunteers can be recruited from sports clubs (if it is required for them to possess specific knowledges about some segments of the event), or from general public (if specific sport knowledge is not required) (Lucić, 2016; referenced by Komnenić, Mihajlović, Mojislović, et.al: 2009, pp. 16-17, 23-25). With prompt task distribution and motivation of volunteers, it is possible to maximise and use volunteer knowledge in the best possible way for the benefit of the organization and volunteers themselves. Volunteer engagement might be short – when volunteers are being engaged for the conduct of sport events, or long-term – if volunteers are being engaged for a longer period of time in order to support everyday functioning of an organization. (Lucić, 2016; referenced by Cuskelly, Hoye, Auld, 2006, p. 35).

### **3.2. Communication with external publics**

#### *3.2.1. Consumer relations*

When speaking about consumers within a sport organization, we firstly think of all persons who purchase tickets for matches, members of sport clubs, gyms, fitness centres, those who buy sport equipment in specialized stores, those who buy online, etc. The goal of public relations within sports organizations in this area is to establish loyalty between a buyer and an organization. Keeping a long-term buyer is difficult, but necessary, because it is much cheaper to keep an existing buyer or user of sport services than to attract a new one. Customer relations management is defined as a systematic process of customers' management from the beginning, through its duration and ending in order to increase the value of a portfolio (Reinartz, Krafft, Hoyer, 2004, p. 4). Each buyer can be considered as a capital unit and it is possible to follow its spending in that manner. This practice includes expenses and revenue measurement which is used order to acquire and keep a client, but also in order to add a value to the relation between a client and an organization. This process moves in a cycle which goes from a person – or a potential buyer to the benefit user and a permanent member (Lucić, 2016; referenced by Stolt, Dittmore, Branvold, b, 2012, p. 279). Highly appreciated buyers and those who provide a certain higher amount of profit to the organization must obtain more resources and benefits, because they are expected to pay it back through a certain level of spending. On the other hand, it is necessary to dedicate less of the attention and funds to buyers who do not contribute to the organization in a significant extent, because the investment in them is not profitable (Wyner, 1996, p. 36). Each business entity, as well as a sport organization, aims to keep its buyers as long as possible.

#### *3.2.2. Sponsor relationship management*

Sport sponsorship consists of a distribution of limited resources with the intention to achieve certain organizational goals (Slack, Bentz, 1996, p. 176). From the legal point of view, the sponsorship is a contract relation between two parties. Firstly, organizations expect a free publicity from the sponsorship, while sponsored subject speaks about its sponsor and its values, orientation and priorities. Organization which becomes a sponsor wants to obtain an image of a person or an organization that it sponsors and wants to use them in business purposes (Lucić, 2016; referenced by Skoko, 2006, p. 280). It is an opportunity for a sponsor to promote itself in public as a company that stimulates and supports sport behaviour and sport lifestyle. Sponsorship is becoming more and more important source of funds for professional athletes, who sometimes earn more from sponsor contracts than from sport achievement. (Lucić, 2016; referenced by Bartolucci, 2003, pp. 266 –267). Sport organization sponsors are divided in two big groups. Those are: (1) sport equipment producers and (2) all other organizations which appear as sponsors. Sport equipment producers do not bond themselves to only one team or association. They are looking for the most successful clubs. It is important for those organizations to maintain good relations with journalists, photographers and reporters in order to keep their brand logo present in a focus of a camera as often as possible. For companies from non-sport sector sponsorship of clubs or associations could be only one, but not the most important form of marketing activity (Lucić, 2016; referenced by Džeba, Serdarušić, 1995, pp. 396 – 400). Nowadays, it is very popular to use top athletes in marketing purposes. American basketball player LeBron James signed the most profitable sponsorship contract with *Nike*. It is a contract for life and James will double his gains each year, while gaining the biggest part of sales of the snickers from „Lebron Shoe Series“ (TOTAL SPORTEK. Biggest Athlete Endorsement Deals In Sports History. Retrieved (29. Aug.2016.) FROM: <http://www.totalsportek.com/money/biggest-endorsement-deals-sports-history/>).

Furthermore, the best known football player in the world, Portuguese Cristiano Ronaldo, a star of Real Madrid, will probably be the richest athlete in the world in 2016. Last year he earned 80 million dollars and it is plausible that his earnings will surpass 100 million. It would make him third athlete in history to earn more than 100 million dollars in 12 months. So far, only American boxer Floyd Mayweather and golf player Tiger Woods managed to earn so much. Portuguese player has 11 sponsorship contracts with international companies such as Emirates Airline, Nike, Samsung, Toyota and other. His company CR7, which manufactures underwear, has spread its assortment and started to sell T-shirts, shirts and shoes. Underwear and shoes might become the most important source of profit for Ronaldo in the future. (Newest Forbes list of richest athletes. Retrieved (18. Aug. 2016.) from <http://sportske.jutarnji.hr/portugalska-tvornica-novca-pogledajte-forbesovu-listu-najbogatih-sportasa-na-svijetu/1309013/>). One of the most important reasons why professional athletes are being used as a face of certain products is that they are a group whose influence on product or service perception is huge. All companies, whether they make part of sport sector or not, use professional athletes in promotional purposes in order to create emotional or rational motivation in the purchasing process. Activation of rational motivation, i.e. activation of satisfaction within consumers because of functional characteristics of goods was dominant in the period when competitive sport represented an overall market potential for sports equipment producers. But, the gradual democratisation of sport as a lifestyle influenced the fact that activation of rational motives resulted in loss of its former importance. Even today, professional athletes are considered to be 'opinion leaders', i.e. excellent experts in sports fashion and quality of sports equipment. Nowadays, when a big part of market potential of sports equipment producers goes on recreational athletes, promotional campaigns are being directed on psychological motives regarding a purchase. This category of buyers is interested in products' communicational function, i.e. image that results from the possession and the use of certain pieces of sports equipment. Professional athletes are more often becoming a reference social group that strongly influences the conformist behaviour and purchase decisions. Influence of popularity of top athletes does not arise only from their popularity, but also from attributes that are being associated with them (e.g. talent, beauty, persistence, power, masculinity,...). (Džeba, Serdarušić, 1995, p. 414 –416). Sponsorship contracts carry a big importance within sports organizations. Good sponsorship contract is profitable for both parties. Sport organization is being emphasized as quality and successful, while sponsor becomes recognizable on the market. The use of professional athletes in promotional purposes is a whole other pair of shoes. Because of their success and popularity, they have a big influence on consumers, which are idolizing them and consider them as experts for fashion and quality on sports and non-sports products.

### *3.2.3. Donor and investor relations*

Donors are becoming more and more necessary to sport organizations. Managers need to try harder more than ever to get as much money as possible from donors. Donors are persons who want to financially help sport clubs or organizations. Sport programs have a special relation with donors because of the passion and enthusiasm that they have toward the sport program. The goal of fundraising is to keep donors and develop quality fundraising level with them (Lucić, 2016; referenced by Stolt, Dittmore, Branvold, b, 2012, p. 290). It is necessary to prove to each potential and existing donor that their funds are not thrown in the wind. When donor has a clear image of his role in an organization, then it is more probable that he/ she will invest their funds in that specific sport organization. As it was already emphasized, good public relations understand a realisation of a positive communication between an organization and its public. In such a circle, investors appear as one of the most important parties, because a growing number of organizations depends on financial means of a third part. Investor relations are defined as strategic responsibility management which uses finances, communication and

marketing in order to run the protocol and the content of information toward financial and other publics with the goal of maximisation the value of markings (Hockers, Moir, 2004, p. 86). Investor relations practitioners, who are often a part of the corporative communication team, must possess knowledge from the financial domain, public relations, state laws related to financial publicity, rules of national bourse, strategies and operations of parent company (Lucić, 2016; referenced by Stolt, Dittmore, Branvold, 2012, p. 270). Main activities of investor relations practitioners are: writing annual reports, planning and conducting meetings with shareholders and investors. Annual report is financial and narrative report which shows business success in the last business year. Its content is mainly dictated by law, accounting and stock market regulations (Stittle, 2003, p. 3). It should represent a detailed report of financial situation, together with detailed notes. Basically, a report should provide readers with an opportunity to understand the organization and its business (Carpenter, 2010, p. 57). Due to advantages offered by modern technology, annual meetings are more often conducted via Internet, which significantly reduces costs and increases the number of investors who attend these meetings. Growth of so called 'low cost' annual meetings with shareholders resulted in better relations between an organization and its investors, which ultimately leads to committees strengthening their legitimacy and improving their decisions (Latteman, 2005, p. 112). There are two key changes in future which will influence investor relations: (1) development of technologies and (2) creation of investment brand. Technology significantly changed communication with investors, for which computer platforms are more oftenly used. The area of investment brand demands investor relations practitioners to tell an invitational story; it is necessary to turn the investment into something interesting and needed (Gažić, Grgas, 2015, p. 68). In every case, it is necessary to give the potential and existing investors and shareholders an insight in financial state of sport organization in order to provide them with foundations for their decision.

#### *3.2.4. Relations with state authorities*

With its laws and regulations, the state influences functioning of each business organization. Public affairs do not concern only parliamentary politics, but other public politics such as stakeholder groups of an organization. Practitioners recognize the importance of media in public business. Media can reflect and shape public opinion and apply pressure on politicians (Thomson, John, 2007, p. 4). Developing public affairs strategy starts with the process of strategical planning in order to identify political groups with which they have or will have significant relations. This process includes determination of key problems standing on the way of an organization, as well as the identification of political and regulatory hypothesis that will serve in the achievement of highest profits. Classical jobs that comprise a domain of public relations are not clearly visible. In this context, they have a task to maintain good relations with state bodies through monitoring their activities as well as through inclusion in their regulatory processes in order to reduce or eliminate eventual points which can result in breaking of rules (Lucić, 2016; referenced by Stolt, Dittmore, Branvold, b, 2012, p. 293). In public relations domain, formulating and planning an influential strategy is one of the most important steps of the public relations department. Strategy influences further procedures during interaction not only with the state, but also with other subjects which might appear in business organization. Planning in public relations includes decisions based on influential strategies. Numerous organizations, such as sports organizations, are included in lobbying activities, in most of the cases through a third, impartial part. Lobbying can be defined as an attempt to influence legislators or other public officers and politicians and other influential individuals or groups. Lobbying is the practice which tries to convince employers or officials to suggest, support or deny laws or assertions. Lobbying is being conducted on international, national, state, local and municipality level, wherever a government or an organization of any kind has an influence on

decisions on public politics. In most of the cases, a lobbyist is a professional paid to work in favour of a special interest of a group or influential individuals (Dragojlović, 2010, p. 106). Nowadays, lobbying is a legal activity which, unfortunately, still carries a stigma acquired in the past. It was considered that lobbyists are unscrupulous persons who come exclusively with an intention to bribe. Nowadays, lobbying is a growing procedure, and in most of the cases it is related to politics.

#### **4. EVALUATION OF ORGANIZATIONAL RELATIONS WITH INTERNAL AND EXTERNAL PUBLICS**

A question on public relations success logically comes to our mind. All previously cited activities can be measured by methods which will give a clear answer on question whether conducted activities were successful or not. It is very important to measure success of activities achieved in public relations department in order to establish a degree of organizational success or failure in the attempt to have quality, long-term relations with its most important stakeholders. In order to conduct a successful evaluation it is necessary to set two questions: (1) what is public relations effectiveness? and (2) why it is important? Public relations effectiveness measurement is a form of research which determines a relative efficiency of campaigns or public relations programmes through measurement of their results (changes in the level of awareness, understanding, attitudes, opinions and / or public behaviour) in opposition to previously defined set of goals (Stacks, 2007, p. 7). Tools and techniques for measuring results of certain public relations activities in relatively short terms exist for years. Modern public relations practice lacks tools to measure long-term public relations efficiency. It is very important to measure relations in public relations because most organizations lack a detailed estimation of public relations effectiveness which would surpass usual measurement of efficiency and results of some specific activities whose results are easily measurable (Lucić, 2016; referenced by Hon – Childers, Grunig, 1999, p. 2). When approaching the evaluation, it is necessary to pass through certain phases or steps. Three phases that lie ahead of evaluation are: (1) Who are the persons and organization with whom it is desirable to establish relations? (2) What strategies to apply to establish and maintain these relations? (3) What are the results of relations? (Lucić, 2016; referenced by Lindermann, 2003, pp.14-22). The first step is to identify with which publics it is possible to establish strategic relations. Strategic relations are created when organizations influence publics or when a public influences the organization. These connections contain situational and behavioural components and connect at least two persons. Second step consist of the developing and applying strategies which used to establish and maintain long-term connections with publics. Those strategies are:

1. **APPROACH STRATEGY** – this strategy is based on the principle that an organization and its public need to enable each other access to certain information and to decision -making process.
2. **POSITIVITY STRATEGY** – is being related to all efforts that public relations practitioners undertake in order to make the relation to stakeholders as successful as possible.
3. **STRATEGY OF OPENNESS** – share of ideas and opinions among parties.
4. **STRATEGY OF WARRANTY** – ties both parties to prove to each other that their concerns and commitments are legitimate.
5. **NETWORKING** – creation of connection with organization and publics that are important for successful business of an organization.
6. **DIVISION OF TASKS** – division of tasks such as managing social problems, employment insurance helps to strengthen the connection between the two parties.
7. **INTEGRATIVITY** – symmetrical strategy whose goal is a win-win situation in which organization and its public have benefited from the search for complementary interests in problem solving situations.

8. **DISTRIBUTIVITY** – this strategy is asymmetrical, win-lose strategy because one part has a benefit at the expense of the other. It tries to maximise benefits and minimise losses.
9. **DOUBLE CARE** – it is very important that an organization and public take care about other part in the decision making process or program realisation (Hon – Childers, Grunig, 1999, pp. 13 - 17).

The third step is to determine the possible results of relations which will be statistically measured. The possible outcomes are:

1. **CONTROL MUTUALITY** - It can be defined as a degree or situation where the voice of each part can be heard in final result or as a degree to which parties agree on who has the power over whom and how the power is distributed within the relation or whether parts share same goals, whether they understand each other, etc. Such a distribution of power reflects in symmetrical or asymmetrical relation.
2. **THRUST** – emerges when parts have trust in partner's integrity and when believe him.
3. **SATISFACTION** – the principle and task of public relations is to establish and maintain a satisfied public. This is very important because it comprises emotions and affection, which are positively or negatively, connected to the organization.
4. **COMMITMENT** – applies to implicit or explicit pledges or relational continuity among partners. It can be defined as a wish to maintain a valuable connection or as a measure to which one side thinks that the partnership is worthy of time and money invested in its promotion (Lucić, 2016; referenced by Jo, 2003, pp. 24-26).

After the conduction of previously explained steps it is necessary to statistically measure the success or failure of activities in public relations. Numerous models have been developed to explain how and when to apply the evaluation and research in public relations and corporate communications. Five leading models are: (1) The PII Model, (2.) The Pyramid Model of PR Research, (3) The PR Effectiveness Yardstick, (4) The Continuing Model of Evaluation, (5) The Unified Model of Evaluation (Lucić, 2016; referenced by MacNamra, 2008, p. 15). The evaluation phase appears at the end of the campaign, although it can also be measured before corporate campaign with clients has ended, because the corporation wants to check whether the estimated results correlate with business results (Michaelson, Wright, Stacks, 2012, p. 5). Such value is mostly measured via statistical calculation called Cronbach's Alpha. Alpha is an overall measure which measures how good the items, measuring the same characteristic, mutually correlate. The general rule is that the result under alpha 0.60 does not give a strong reliability, but Alpha which approaches to 0.90 shown an excellent result (Zinberg, R., Revelle, I. Yovel., Li, W. 2005, pp. 123-133). From studied literature it is possible to make a conclusion that there are no general systematisations or methods in determining public relations effectiveness. To this day many scientists have not agreed on a unified calculation system. However, each sport organization must determine its own importance of evaluation and research in conceptualisation and design of a communicational programme.

## 5. CONCLUSION

Good communication with employees encourages motivation and good mood at the working place. Happy and satisfied employee is more motivated and efficient and in that way he directly influences the success of the organization where he works. Public relations efforts in organization's communication include three groups of participants. Those are consumers, sponsors and government. Consumers are the most important aspect of business because they bring profits. One of the goals in public relations is to maintain their loyalty to the organization. Consumers who contribute to a higher extent to positive financial state of a sport organization gain more means and attention.



Contracts with sponsors become more and more important for sports organizations. Sponsorship contracts are valuable source for sport organizations, where the contract represents an opportunity for promotion. Big sponsorship contracts that athletes obtain to promote sport or non-sport products or services became the main source of their revenues. Professional athletes are an especially attractive segment, because they have a big influence on consumers. They are favoured in public because of their success, glory, money and beauty. Consumers and fans idolize them and consider them to be experts in quality and popularity of some products, especially of sport equipment. In order to attract as many donors as it is possible, it is favourable to organize fundraising campaigns or annual celebrations where funds can be raised. The last factor that shapes external public of a sport organization is the government. An important procedure in public affairs is the formulation of influential strategy which can be based on lobbying activities. It is necessary to convince representatives of state authorities that procedure and decisions of sport organization are correct, profitable and legal. The last subject is the measurement of public relations effectiveness. Although there still are some disagreements and issues on determinaiting the standards and directions in the very measurement, it is necessary to emphasize that a growing number of big organizations is dedicating its time to public relations effectiveness, which finally helps to determinate the overall success in business and communication with internal and external publics.

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## ANALYSIS OF THE CORRELATION BETWEEN CORPORATE GOVERNANCE AND THE ECONOMIC-FINANCIAL PERFORMANCE OF THE ECONOMIC ENTITIES

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### ABSTRACT

*Performance is a combination of efficiency and effectiveness. If efficiency is to achieve maximum effects with minimal effort, effectiveness is the quantification of the extent to which the objectives are met. The new economic configuration of commercial transactions, characterized by change and unpredictability, leads to a shift from a reactive approach, based on previous planning and subsequent control, to a dynamic, proactive, characterized by the quantification-action-reaction. The quantification of the performance of the economic entity is carried out with the help of the indicators. The indicator thus becoming a decision support tool that verifies whether the actions taken are registered in the direction approved by the General Meeting of Shareholders and the Board of Directors. Therefore, quantification of performance involves identifying a methodology in which the following components appear as the main directions of action: customers, shareholders, business partners, own staff, various interested audiences, widening the company's responsibility to groups other than shareholders, managers, employees and trade unions, internal processes, quality system, information system. In this paper I propose to analyze the correlation between corporate governance and the performance of economic entities, known to be the fact that economic agents with poor corporate governance have low economic performance (low yield of assets, equity and investments, etc), expose themselves more often the risks (eg stock price volatility of BSE listed companies, low interest rate, etc.). I believe that it is necessary to create a new global governance model that takes into account the organizational and evolving dimension of the entity, but also other partners whose actions can maximize the efficiency, performance or value of the brand, and which puts particular emphasis on creating value or wealth for stakeholders. We need a new policy to maximize shareholders' wealth.*

**Keywords:** *performance, indicators, corporate governance, quantification, well-being*

### 1. INTRODUCTION

The performance of the economic entity (firm, corporation) is given by the efficiency-effectiveness binomial on the one hand, but also by the way the entity is governed, on the other. The economic-financial performance of the economic entity is measured not to control but to drive and control. Measurement of performance (Robu and all, 2014) results from the need for action and is carried out with the help of indicators in order to satisfy the clients, shareholders, business partners, employees, various categories of audience that increase the responsibility of the entity and other interested categories. In most of the papers it has been shown that there is a strong relationship between corporate governance, the performance and value of the firm (Bebcliuck et al., 2009; Core et al., 2006). The value of the entity can be influenced by corporate governance in two ways. First, a good implementation of corporate governance practices within the entity can lead investors to anticipate raw material prices, and through cash-flows can determine what percentage of the firm's profit can be redirected as a dividend (Ammann et al., 2011). Secondly, corporate governance can reduce the expected return on equity to the extent that audit costs can be reduced, thus lowering the cost of capital (Ammann et al., 2011).

However, it is not clear whether the implementation of corporate governance mechanisms can lead to an increase in company value, as the costs associated with the implementation of corporate governance mechanisms are greater than the benefits (Bruno and Claessens, 2010). In this paper we analyzed the relationship between the corporate governance level of a firm and its value based on the corporate governance indicators used by Governance Metrics International, comparing 36 companies listed on the Milan stock exchange. In comparison, we used 47 corporate governance attributes, with which we built a corporate governance index (Mărghidanu, 2014). Following the analysis, we identified a positive relationship between the built-in index and the firm's value, measured using the Market-to-Book Ratio (MBR) indicator. This paper provides an empirical evidence of the correlation between company performance and corporate governance for companies listed on the Milan stock exchange. Using data from listed companies during 2014-2016, we identified a positive relationship between corporate value and corporate governance as measured by a corporate governance index. The link between the two variables is mainly due to the high degree of implementation of corporate governance policies in these companies.

## 2. LITERATURE REVIEW

Corporate governance consists of a set of actions and mechanisms that influence the way a corporation operates. It deals with the wealth and goals of stakeholders, including shareholders, employees, management, banks, board of directors, and the economy as a whole. The primary objective of corporate governance is to achieve maximum wealth for all parties involved and to promote the company's efficiency. Thus, most corporate governance studies start from the idea that a company, the better it is, the more likely it is to get higher performance. The efficiency of corporate governance is an essential element for all economic transactions, especially with respect to economies in transition. One of the methods of assessing the effectiveness of governance is to collect data and to publish it for review by entities external to the company. Unfortunately for emerging economies, in most cases data is not collected, reports are not published, and those that can be accessed are not correlated with reality. One of the elements of monitoring a company's perceptions is the separation of the roles of the CEO and the company's president. In cases where there is no separation of roles, the CEO is also president. This situation is known as the "CEO duality" and raises problems with the prospects of a company because monitoring and evaluating performance is difficult. Most empirical studies that analyze the relationship between "CEO duality" and the performance of an entity have been made by large corporations in America. Judge, W., Naoumova, L., Nadejda, K., (2006) have exhibited consistent evidence suggesting the negative effects of the "CEO duality" on the entity's performance as the big corporations in Russia. Although Russia's law prohibits the CEO from taking over the position of company president, there is evidence that some companies of the latter are allowed to handle the board of directors. There are conflicts of interest that hinder the proper functioning of the company.

Among the many effects of corporate governance on an economic entity, we can also recall the correlation between this and the increase in stock prices. Such an analysis was dealt with by Black, B., Andrei Rachinsky, Inessa Love (2006) on the case of Russia. Another element that can monitor the prospects of a company is a Board of Directors composed in a high proportion of independent directors. In this way, these independent directors can bring superior benefits to the company, being independent of the company's manager. In the case of such an organizational structure, conflicts of interest can be avoided and evaluated more objectively. Regarding the composition of the Board of Directors, non-executive directors may or may not function independently of executive management. Baek, J.S. Jun-Koo Kang and Kyung Suh Park (2004) demonstrated in their demand the importance of corporate governance in the development of financial markets. The research started from the studies by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997, 1998, 1999,

2000), which claimed that differences between the laws of different states explain the differences between the development of financial markets and demonstrate their development can be promoted through better investor protection. To demonstrate these assumptions, economists have tested that corporate governance measures influence the company's performance during an economic crisis, pointing their attention to Korean companies. As the data analysis horizon, economists chose the economic crisis of 1997. The advantage of analyzing a period of crisis, the authors said, is to clearly observe the effects of corporate governance without including information generated by the economic environment, on the value of the firm. Data from 644 listed companies in Korea in November 1997 and December 1998 were used to develop the model. Lise Aaboena, Peter Lindelof, Christopher von Koch and Hans Lofstend (2006) in the paper "Corporate Governance and Performance of Small High Tech Firms in Sweden" included information on management, control and the ability to finance small but innovation-oriented firms (advanced technology firms). They studied the relationship between corporate governance and the innovation process of companies in Sweden. The study started from the idea that with regard to these newly established firms their leadership is decisive in the development process as there are many problems, starting from production, bureaucracy and recruitment management. N. Balasubramanian, Bernard S. Black, and Vikramaditya Khanna (2010) in "The Case Study of India" have also focused their attention on the influence of corporate governance on value. A survey was conducted using 370 Indian firms that had central offices in one of the six major cities - Bangalore, Chennai, Hyderabad, Kolkata, Mumbai and New Delhi. The composition of the board of directors and the number of independent directors, as well as the existence of the "CEO duality" mentioned above and in the other studies presented.

Another important feature is the practice of the council, focusing on organizational elements (the maximum period in which the council is re-elected - between 3 and 5 years, the minimum number of council meetings per year, etc.). The composition of the Audit Board, the existence of an external auditor as well as the shareholder policy were also considered. Following the aggregation of these elements, a corporate governance index was constructed that was analyzed against sales, stock market capitalization and the ratio of EBIT to turnover. Finally, by drawing up the model, the three economists concluded that, overall, there was a significant influence between the corporate governance index and the company's value on the Indian firms. But in the process of realizing the empirical model, they noticed that there is no significant influence on the value of the company in terms of organizational elements of the company (information on the number of meetings of the board, as well as the period when its members are re-elected). Achim Monica (2012), in her paper "Company Theories and Entrepreneur: Re-evaluations and Prospects", investigates the components and importance of the corporate governance system, national development of Romanian enterprises. Following an empirical study aimed at assessing the performance of the corporate governance system at the Romanian stock market (BVB), he applied the methodology for substantiating a corporate governance score at the level of companies operating on the Romanian stock market. The research highlighted the extent to which the companies listed on the BSE adhere to internationally recognized corporate governance principles and integrated under the Corporate Governance Code of the Bucharest Stock Exchange. The overall results reflect a degree of adoption of around 60% good practice principles for outputs available at the end of 2012. The results have improved markedly since 2009 with the adoption of the Governance Code by the BSE and voluntary requests for companies traded on the regulated market operated by BVB, to align with this code of good corporate practice. Despite all the progress made in this respect, many of the good corporate governance practices of Romanian companies are well below the European average or even below the average for other emerging countries.

### 3. CASE STUDY

In the first part of the case study I will describe the corporate governance data used in the study. In the second part, financial data are chosen as independent variables and can influence the value of the firm.

#### 3.1. Description of corporate governance variables

For the construction of the corporate governance index, we have used corporate governance attributes offered by Governance Metrics International (GMI) and those published in specialized articles (Ammann et al., 2011). GMI provides data on corporate governance mechanisms implemented by companies since 2003. Data is collected from US and US outside companies covering MSCI World and MSCI EAFE index. The corporate governance ratings published by GMI are built on a proprietary calculation algorithm. To calculate the rating, GMI uses the information provided by individual corporate governance attributes (Ammann et al., 2011). Starting from these individual corporate governance attributes we built our own corporate governance indices. The starting point in our study is 50 companies listed on the Bourse in Milan, Italy for a period of 3 years (2004-2016). Of the 50 companies, companies operating on the financial intermediation market (banks, insurance companies, etc.) were eliminated. We also removed companies that did not provide the data needed for our study (corporate governance reports or complete annual financial statements), leaving 43 companies. For the construction of the corporate governance index we used 47 corporate governance attributes provided by GMI and used in the literature (Ammann et al., 2011; Aggarwal et al., 2009). These attributes are grouped into six categories: 1) the duties of the Board of Directors; 2) financial information and internal control; 3) shareholders' rights; 4) remuneration of directors; 5) market control and 6) corporate behavior (corporate social responsibility). Table no. 1 shows an overview of the 47 attributes used and the percentage at which the companies surveyed implemented these corporate governance attributes (mechanisms). In comparable studies with ours (using a corporate governance index instead of dummy independent variables that measured certain criteria of corporate governance), 17 (Chhaochharia and Laeven, 2009), 44 (Aggarwal et al., 2009) and 64 corporate governance attributes (Ammann et al., 2011). The 47 corporate governance attributes were adopted by each company differently. For example, for the first category, the Board of Directors' attributions, nine out of 17 corporate governance attributes have been met by more than 70% of companies. For the second category, financial information and internal control, 3 of the 5 attributes were adopted by more than 60% of companies. For the third category, shareholders' rights, all attributes have been adopted by more than 50% of companies. Of the corporate governance attributes specific to fourth and fifth categories, directors' remuneration and market control, 5 out of 7 attributes were adopted by more than 50% of the companies surveyed. For the last category, corporate social responsibility, 5 out of 7 attributes have been adopted by more than 70% of companies. Comparing the results obtained in this paper with the results obtained in the literature (Ammann et al., 2011; Aggarwal et al., 2009) it can be said that there are similarities.

*Table following on the next page*

*Table 1: List of corporate governance attributes and percentage of firms that meet the requirements for these attributes*

Individual attributes of corporate governance	% companies that meet attributes
<b>Attributes of the Board of Directors</b>	
1. Members of the Committee shall be elected annually by all shareholders	37,21
2. The new members of the Committee have an official meeting once a year	41,86
3. The performance of the Board of Directors feel regularly evaluated	86,05
4. The company publishes a code of ethics for executive directors	55,81
5. The Board of Directors or other committee is responsible for the succession plan of the CEO	74,42
6. The Company has published corporate governance or corporate governance guidelines	74,42
7. All executive members of the Board of Directors hold shares after exclusion of options	39,53
8. All non-executive members of the Board of Directors hold shares after exclusion of options	16,80
9. The Company has the Chairman of the Board of Directors different from the CEO	72,09
10. All committee members attributed to at least 75% of the sessions	93,02
11. The company has appointed a "leader" of non-executive members of the committee	69,77
12. The Governing Board is made up entirely of independent members	79,07
13. Nr. the shares of directors did not decrease by 10% or more	34,88
14. Nr. executives' shares increased by 10% or more	37,21
15. The Committee on Corporate Governance respects certain references	81,4
16. The Board of Directors has more than 5. but less than 16 members	83,72
17. The Committee has more than 50% external independent directors	34,88
<b>Informații financiare si control intern</b>	
18. Compania nu a înregistrat pierderi în ultimele trei exerciții financiare	60,47
19. Compania nu a auditat situațiile financiare în ultimii doi ani fiscali	11,63
20. Compania nu este investigată pentru nereguli contabile	97,67
21. Comitetul de audit este compus din membri independenți	62,79
22. Altcineva, exceptând CEO. are atribuții în angajarea auditorilor din exterior	47,62
<b>Rights of shareholders</b>	
23. The result of the votes of the last shareholders' meeting was published in 14 calendar days	55,81
24. All ordinary shares held offer one vote. without restrictions	72,09
25. The company offers the possibility of confidential voting without restrictions	79,07
26. The right to vote may be exercised to hold a percentage of the company's shares	95,40
<b>Directors' remuneration</b>	
27. Non-executive members are paid in cash and a form of compensation through the granting of	55,81
28. The company published the expected financial performance for the next fiscal year	30,23
29. Non-executive members of the board of directors are paid by shares	9,30
30. The CEO has not made a commitment that guarantees certain bonuses	46,51
31. The objectives used to determine bonuses are the same as the company's financial targets	83,72
32. The CEO is not part of the remuneration committee	74,42
33. The remuneration committee shall be composed of independent members	55,81
<b>Market control</b>	
34. The bad company adopted a plan of shareholders' rights ("poison pill")	37,21
35. The company does not have separate boards (classified boards)	95,35
36. The shareholders' rights plan was ratified by the shareholders' vote	53,49
37. The Company practices fair pricing or price protection in accordance with current legislation	41,86
38. The company does not need the supermass of votes to approve a merger	51,16
39. There are no shareholders with majority voting power	53,49
40. The company accepts cumulative votes in the election of directors	51,16
<b>Corporate Behavior (CSR)</b>	
41. The company has a safety policy at work	74,42
42. The Company does not have criminal-related litigation against it	95,35
43. The company published its environmental performance	34,88
44. The company has published safety reports at the workplace	34,88
45. The company is not investigated for irregularities other than accounting	81,40
46. The company has not been investigated for workplace breaches in the past 2 years	97,67
47. The company has not been investigated for the use of children as a workforce	100,00

*Source: own processing*



Starting from these corporate governance attributes we assigned the value of 1 each attribute adopted by each company and the value of 0. If that attribute was not adopted or the company did not publish data on how it adopted that attribute. Thus, the first corporate governance index, CGQ, is determined as the percentage of attributes met in the total attributes. If a company meets all the attributes, the value of the index will be 100. This method is similar to that used by (Ammann et al., 2011). For the second index, CGQPCA, we used 14 main attributes of governing attributes (Ammann et al., 2011). These attributes are: the company has appointed a "leader" of non-executive members of the committee; The Board of Directors has more than 5 but less than 16 members; the company has not suffered losses in the last three financial years; the company did not audit the financial statements for the past two fiscal years; committee members are elected annually by all shareholders; all ordinary shares held offer the possibility of a single vote, without restrictions; the right to vote can be exercised without holding a percentage of the company's shares; the company does not have separate boards (classified board); the company does not need the majority of votes to approve a merger; there are no shareholders with majority voting power; the company accepts cumulative votes in the choice of directors; the audit committee is composed of independent members; the committee has more than 50% external independent directors. For the third index, CSRI, we used the 7 attributes specific to the last category of CGQ index. This index was built in the same way as CGQ, namely assigning the value 1 if the attribute was adopted by the company and the value 0 if there were no references to that attribute in the corporate governance reports published by the companies. The three indices, CGQ, CGQPCA and CSRI, are additive indices. The attributes we assigned the value to the construction of the index 1, assumed that they were implemented by the companies, because there was sufficient information on these attributes in the corporate governance reports.

### 3.2. Description of Financial Data

We obtained the financial data from the annual financial statements published on the Milan Stock Exchange website and on the websites of the companies analyzed. It is important to note that in order to be able to measure the value of the company, Market-to-Book (Ammann et al., 2006; Sami et al., 2006; Ratio (MBR). The MBR was calculated as the ratio between market value (stock market capitalization) and book value of equity. In this analysis, we also used other variables that measure company performance:

LNTA - the natural logarithm of total assets, measures the size of the firm:

- PGCA - sales increase over the last 2 years;
- CASH - ratio of company's assets to total assets;
- EPP - the ratio of fixed assets to sales revenue;
- EBTR - The ratio between EBIT (the result before deducting interest expense and income tax) and sales revenue; LEV - the ratio of total debts to total assets;
- ROA - financial return, calculated as the ratio between the net profit and the asset total;

All variables used were denominated in EURO, using the average rate of the year for which the denomination was carried out. For the calculation of stock market capitalization, where the companies did not provide details in the annual financial reports, the average price of the last quotation month (period 01.12 - 31.12) and the number of shares quoted at that time were used. The descriptive statistics on the variables analyzed are reported in Table no. 2. Average and median of the two indices, CGQ and CGQPCA, are 0.604 (0.617), respectively 0.600 (0.643), indicating a distribution symmetry.

*Table following on the next page*

*Table 2: Descriptive statistics of the variables analyzed*

	Mean	Median	Maximum	Minimum	Std. Dev.	Obs
<b>CASH</b>	0.086636	0.075610	0.308107	1.07E-05	0.066895	126
<b>CGQ</b>	0.604357	0.617021	0.808511	0.319149	0.108027	126
<b>CGQPCA</b>	0.600340	0.642857	0.928571	0.142857	0.154966	126
<b>CGQCONTR*</b>	0.579167	0.575000	0.800000	0.250000	0.116694	126
<b>CSR</b>	0.724996	0.714286	1.000000	0.285714	0.173348	126
<b>EBITR</b>	0.089538	0.102656	0.553264	-1.645718	0.218389	126
<b>LNTA</b>	7.282883	6.599703	12.04241	3.535145	2.170446	126
<b>LEV</b>	0.631414	0.606516	5.704895	0.195146	0.505507	126
<b>MBR</b>	1.549501	1.151114	7.185708	-0.11539	1.152907	126
<b>PGCA</b>	0.035836	0.041615	0.744546	-0.713169	0.228122	126
<b>PPE</b>	0.659438	0.229058	6.573011	0.009578	1.220535	126
<b>ROA</b>	0.008285	0.033860	0.376204	-2.576315	0.241145	126

*\*CGQCONTR - is an index built from the 40 corporate governance attributes that were not included in the CSR*

In table no. 3 presents the correlation matrix between the dependent variable, the corporate governance indices and the other independent variables. Between the dependent variable, MBR, and corporate governance indices is a strong positive correlation.

*Table 3: Matrix of correlation between the variables analyzed*

Correlation	CASH	CGQ	CGQPCA	CGQCONTR	CSR	EBITR	LNTA	LEV	MBR	PGCA	PPE	ROA
CASH	1.0000											
CGQ	-0.1351	1.0000										
CGQPCA	-0.1743	0.7149	1.0000									
CGQCONTR	-0.1773	0.8593	0.8156	1.0000								
CSR	-0.2023	0.4209	0.1996	0.3161	1.0000							
EBITR	-0.0237	-0.0471	0.1319	0.0932	0.0491	1.0000						
LNTA	-0.1242	0.1011	0.0810	0.2212	0.1153	0.3325	1.0000					
LEV	0.0235	-0.1291	-0.0925	-0.1509	-0.0196	-0.2155	-0.0170	1.0000				
MBR	<b>0.1235</b>	<b>0.1047</b>	<b>0.1671</b>	<b>0.0715</b>	<b>0.2174</b>	<b>0.2675</b>	<b>-0.1043</b>	-0.0343	1.0000			
PGCA	-0.0157	-0.1234	-0.0472	-0.0648	-0.0153	0.1730	0.0737	-0.0315	0.0223	1.0000		
PPE	-0.3078	0.0595	0.2177	0.2322	0.0824	0.5016	0.3595	-0.0364	0.0411	0.1099	1.0000	
ROA	0.1573	-0.0591	0.0529	-0.0279	-0.0031	0.7998	0.1252	-0.1606	0.1819	0.0733	0.0559	1.0000

*Bold correlation coefficients are significant in relation to the variable dependent on a significance regression level of 1%, 5%, 10%.*

### 3.3. Equations and interpretations of the data obtained

In table no. 4 are the results of the first test in which we used the first corporate governance index, CGQ. Analyzing the data obtained, one can observe the positive correlation between the value of the firm, measured by the MBR value and the governor index. Also, the CGQ is significantly different from zero for a significance level of 10%. The analyzed model is valid, the value of the F-matched regression model is significant for a significance level of 1%. Also, the coefficients associated with LNTA, EBITR, PPE, ROA and CGQ are significant for a significance level of 1%, 5%, 10%. There is a negative correlation between LNTA (company size) and MBR (firm value), as can be seen in the case of PPE (capital invested in fixed assets). The same negative relationship between the value of the company, its size and the capital invested in fixed assets was also discussed in the literature of the literature (Sami et al., 2011) on the Chinese listed companies.

*Table 4: Results of the first test*

Dependent Variable: MBR				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.624827	0.547422	1.141400	0.2561
LNTA	-0.131479	0.050270	-2.615484	0.0101
LEV	0.279195	0.184087	1.516645	0.1321
EBITR	4.723659	1.230129	3.839970	0.0002
CASH	2.196216	1.390313	1.579656	0.1169
PGCA	0.227783	0.476370	0.478165	0.6334
PPE	-0.250454	0.110821	-2.259974	0.0257
ROA	-2.386535	0.812475	-2.937365	0.0040
CGQ	2.100563	0.741733	2.831968	0.0055
R-squared	0.248165			
Adjusted R-squared	0.182788			
F-statistic	3.795904			
Prob(F-statistic)	0.000192			

Starting from the specialized studies (Ammann et al 2011, Aggarwal et al., 2009; Chhaochharia and Laeven, 2009), we used a second corporate governance index, CGQPCA, consisting of 14 main variables. To analyze the effects of this corporate governance index on company value, I replaced the first index, CGQ, in the base regression.

*Table 5: Results of the second test*

Dependent Variable: MBR				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNTA	-0.121355	0.048315	-2.511744	0.0134
LEV	0.172843	0.195637	0.883485	0.3788
EBITR	4.695023	1.185300	3.961043	0.0001
CASH	2.365191	1.534535	1.541308	0.1259
PGCA	-0.166990	0.427964	-0.390195	0.6971
PPE	-0.270903	0.126254	-2.145690	0.0340
ROA	-2.398182	0.903814	-2.653402	0.0091
CGQPCA	1.388691	0.638523	2.174850	0.0317
C	1.069697	0.561945	1.903562	0.0594
R-squared	0.203553			
Adjusted R-squared	0.149095			
S.E. of regression	1.063493			
F-statistic	3.737813			
Prob(F-statistic)	0.000629			

It can be seen that the corporate governance index CGQPCA is significant and in a positive relationship with the company's performance. LNTA and PPE are also in a negative relationship with the value of the firm. By comparing the results obtained with those obtained from the specialty studies it is observed that they are somewhat similar. According to the results obtained by Ammaim et al. (2011) and Aggarwal et al. (2009) the coefficient of the PPE variable is negative and significant (in the study published by Aggarwal this is insignificant). The LEV coefficient is positive and insignificant, according to the results obtained by Aggarwal et al. (2009). In the study published by Ammann et al. (2011) the LEV coefficient is negative and significant in most of the tests performed.

#### 4. CONCLUSIONS

In this paper, we analyzed the correlation between corporate governance and the value of the economic entity using the information gathered from the annual financial reports and the corporate governance reports. In our analysis, we used the corporate governance attributes used by other authors (Ammanii et al., 2011; Aggarwall et al., 2009; Chhaochharia and Laeven, 2007; Black et al., 2006) and the data published by Governance Metrics International (GMI) for 42 companies listed on the Bourse in Milan for a period of 3 years. Starting from previous studies. Aggarwall et al. (2009), Chhaochharia and Laeven (2007) and Ammanii et al. (2011) we created three additive indices, using 47 individual co-potent governing attributes using different techniques. First of all I used all the attributes to create an additive index. Secondly, starting from the study by Ammanii et al. (2011) we created an index of 14 attributes considered the main ones. Finally, we investigated how attributes specific to the company's social behavior influence its value. Our results are statistically and economically reflected in the company's value. For most companies surveyed, the costs of implementing corporate governance mechanisms are too low compared to the benefits they have gained, materialized by high cash flows directed at investing at a low cost of capital. In conclusion, for corporate perspectives, the implementation of corporate governance mechanisms should be understood as an opportunity and not as an obligation or a factor generating additional costs. I believe that it is necessary to create a new global governance model that takes into account the organizational and evolving dimension of the entity, but also other partners whose actions can maximize the efficiency, performance or brand value, and put particular emphasis on creating value or wealth for stakeholders.

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## ANALYSIS OF THE ECOTOURIST PROFILE IN ROMANIA, HUNGARY AND BULGARIA

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### ABSTRACT

*Applying the current principles of developing sustainable tourism in protected natural areas and adjacent areas has led to the emergence of ecotourism as a distinct form of tourism designed to respect the integrity of natural landscapes and ecological biodiversity in line with the requirements of certain tourist segments that want to spend their holidays in nature and at the same time to create opportunities for community development. The present study aims to present the current stage of development of this form of tourism at national and international level and to come up with a set of directions that guide the efforts to capitalize through ecotourism of areas where the nature and the local culture occupy a central place, in accordance with the requirements of national law, as well as international conventions. Ecotourists cover a broad spectrum of travelers more and more motivated to experience, being interested in the natural environment of the places they visit, as well as in learning about local communities. They are especially attracted to rural areas where there is a mix of traditional landscapes and villages. They are in a constant search for various experiences that can not be ensured through holidays for mass tourism. The work we are proposing is the result of a study by university teachers, master students and PhD students from the management and agro-tourism specialty at the University of Agronomic Sciences and Veterinary Medicine of Bucharest. The study was carried out during 2010-2017 period, the target group consisting of 300 ecotourists: 100 from Hungary, 100 from Bulgaria, and 100 from Romania. Based on research into their behavior, preferences and motivation, it has emerged that an ecotourist is characterized by a high level of education and training, above average income and willing to spend more in a destination during a stay extended.*

**Keywords:** *The ecotourist profile, Sustainable tourism, Ecotourists, local communities*

### 1. INTRODUCTION

Applying the theory of sustainable development in tourism is a more recent approach that has been widely accepted by most international and national organizations. Since 1991, the concept of sustainable tourism has been defined by the International Union for the Conservation of Nature, the World Wildlife Fund, the European Federation of National and Natural Parks: "the development of all forms of tourism, tourism management and marketing that respect natural, economic environment, ensuring the exploitation of natural and cultural resources and for future generations. " According to the OMT, "the development of sustainable tourism meets the needs of the tourists present and the host regions, while protecting and increasing the opportunities and opportunities for the future. It is seen as a way of managing all resources so that economic, social and aesthetic needs are fully satisfied, while preserving cultural integrity, essential ecological dimensions, biological diversity and the living system. "

*Table following on the next page*

*Table 1: Content of Sustainable Tourism (International Union for the Conservation of Nature, 1991)*

<b>quality</b> - sustainable tourism requires a valuable experience for visitors, while improving the quality of the host community's life, cultural identity, poverty reduction, and environmental protection	<b>continuity</b> - sustainable tourism ensures optimal exploitation, the continuity of the natural resources on which it relies, and the preservation of the culture of the host community with satisfactory experiences for visitors	<b>balance</b> - sustainable tourism ensures a balance between the needs of the tourism industry, the partisans of the environment and the local community, with economic and social benefits well distributed to all actors involved
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There is currently no unanimously defined definition, but there are agreed and predominantly accepted definitions, adopted and used. The International Ecotourism Society (1990), the most prestigious international organization in the field, defines ecotourism as: a responsible journey towards a natural area that contributes both to the preservation of the natural heritage and to the welfare of the local population. In the definition proposed by the IUCN, ecotourism is seen as: a respectful journey to the environment and the "untouched" natural sightseeing in order to admire nature and to feel good. Through ecotourism nature conservation is promoted, a negative negative impact produced by visitors and the involvement of the local population for beneficial socio-economic purposes.

*Table 2: The characteristics of ecotourism (World Tourism Organization UNWTO)*

1	the main motivation of the tourists is to observe and appreciate the nature and traditional culture that dominate the natural areas
2	includes education and interpretation activities
3	as a rule, but not exclusively, are addressed to small groups organized by local or small business operators in the area
4	minimizes the negative impact on the natural and socio-cultural environment
5	supports the protection of natural areas
6	generating economic benefits for local communities, organizations and authorities that support nature conservation
7	creating alternative jobs and income opportunities for local communities
8	raising the awareness of the necessity of preserving natural and cultural values both among locals and tourists

After a large-scale process involving academic academic names at international level (Fennell, 1999; Weaver, 2001; Honey, 2008) and the World Tourism Organization (1999), ecotourism has benefited from a unanimously accepted definition (Quebec Declaration, UNEP / OMT, 2002). Accordingly, ecotourism is a form of tourism that respects the principles of sustainable tourism related to economic, social and environmental impacts, but also includes a number of specific principles.

*Table 3: The principles of ecotourism (World Tourism Organization UNWTO)*

1	ecotourism actively contributes to the preservation of natural and cultural heritage
2	ecotourism includes local communities in their planning, development and operation activities and contributes to their well-being
3	ecotourism involves the interpretation of the natural and cultural heritage of the destination for visitors
4	ecotourism is intended primarily for individual visitors but also for small organized groups

## **2. MATERIAL AND METHOD**

The work we are proposing is the result of a study by university teachers, master students and PhD students from the management and agro-tourism specialty at the University of Agronomic Sciences and Veterinary Medicine of Bucharest. The study was carried out during 2010-2017 period, the target group consisting of 300 ecotourists: 100 from Hungary, 100 from Bulgaria, and 100 from Romania. Sustainable tourism covers all forms and activities in the hospitality industry, including conventional mass tourism, cultural, mountain, coastal, spa, business, rural, etc. Sustainable tourism development is a must, and the link between tourism and the environment is much stronger than in other industries. Tourism has often created negative economic, social or environmental effects, and their countermeasures can only be achieved through a professional management that attracts all stakeholders involved in tourism development into the decision-making process. Collaboration between authorities (which have legislative, economic, social instruments), economic agents (initiating planning and tourism services), advocates for environmental protection and preservation of cultural heritage, local service providers, tour operators and travel agencies and last but not least, tourists, as beneficiaries, is absolutely necessary for the sustainable development of tourism.

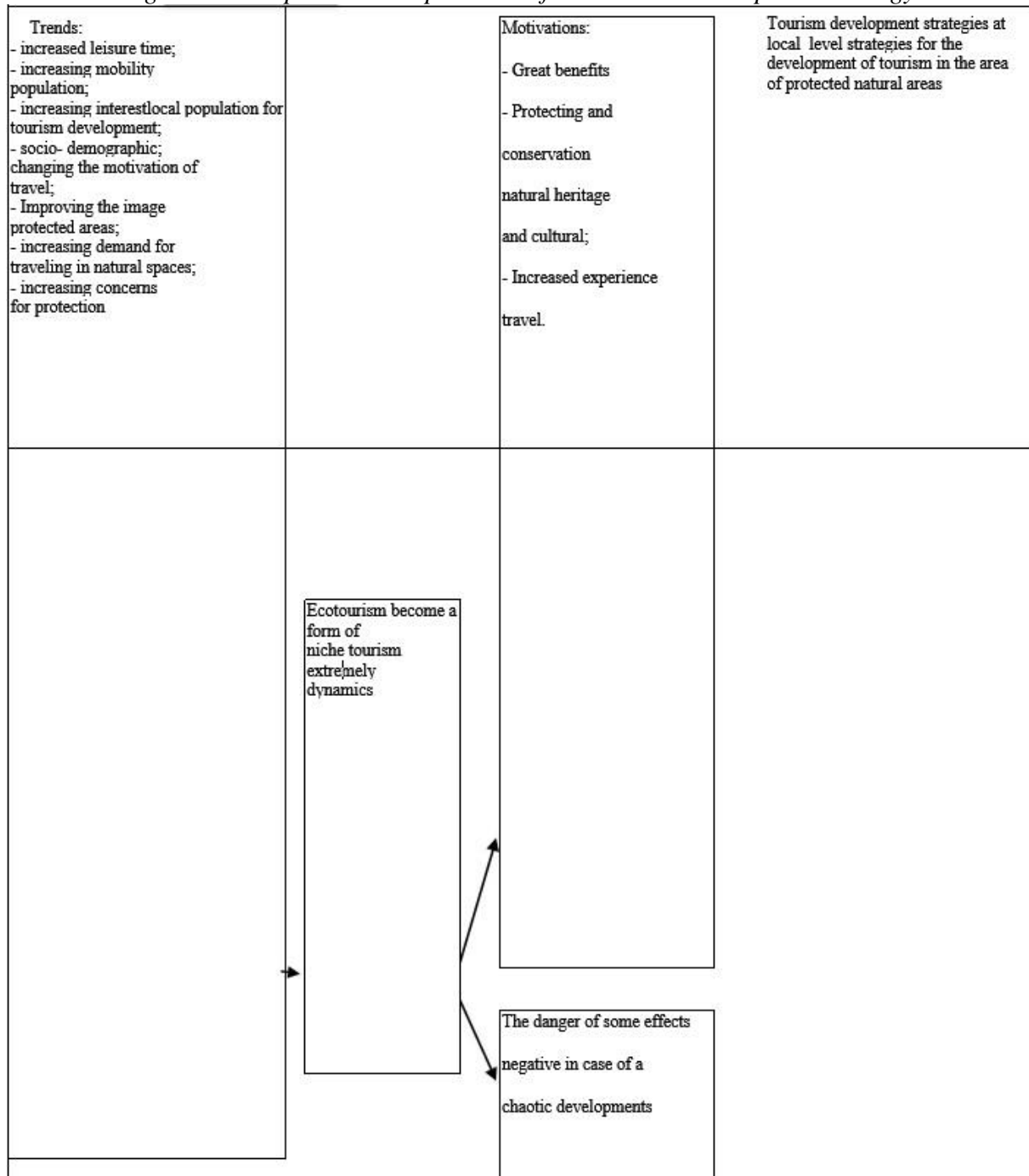
## **3. RESULTS AND DISCUSSIONS**

Ecotourism is viewed from different perspectives on geographic areas. Thus, if in North America ecotourism develops in virgin natural areas, where human intervention is minimized, in Europe, where the natural landscape is generally linked to human presence and the local community, there are quite close connections between ecotourism and rural tourism. In recent years at European level, natural landscapes have become more important for biodiversity and ecotourism. In Romania, ecotourism has a wide recognition - at governmental level, in the private sector and at the public level. Ecotourism is recognized as being specific to rural areas within communities that have a tradition in farming, and covers both access to flora and fauna in the area, as well as to the social habits and lifestyles of people in the visited areas (Hontus, 2015). Exploiting the natural environment is one of the fundamental requirements of ecotourism. This statement leaves a wide open door to a wide range of activities, provided they comply with the conditions outlined above. From this perspective, ecotourism interferes with other forms of travel based on nature.

*Figure following on the next page*



*Figure 1 - The place and importance of ecotourism development strategy*



*Source: Center for Responsible Travel CREST (2015), The Case for Responsible Travel: Trends & Statistics*

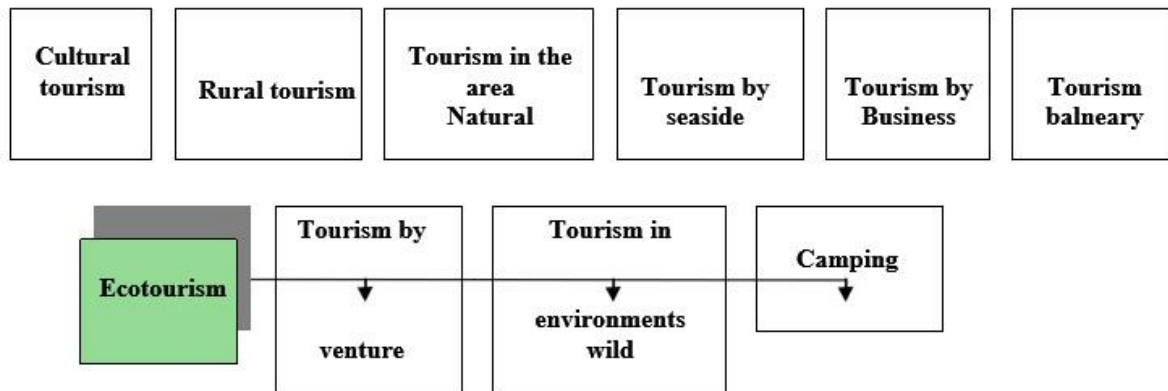
Thus, in ecotourism activities can be included:

- Types of adventure activities (eg rafting, canoeing, equestrian tourism on pre-arranged routes, cross-country skiing, bike trips on arranged routes, etc.);
- Guided tours / hiking;
- Nature observation tours (flora, fauna);
- Excursions to experiment with nature conservation activities;
- Excursions to local communities (visiting cultural objectives, visiting traditional farms, watching traditional cultural events, eating traditional food, purchasing non-traditional food

products, etc.). Activities that, although occurring in nature, have an obvious negative impact on the natural or socio-cultural environment (off-road activities) can not be considered as ecotourism activities.

The following figure shows the place of ecotourism in the tourism market, as it appears as a subsoil of tourism in natural areas, while having strong links with cultural and rural tourism.

*Figure 2 - Ecotourism as a market segment*



*Source: Megan Epler Wood, Ecotourism: Principles, Practices and Policies for Sustainability (2002); Eagles P., International Ecotourism Management (1997)*

The application of ecotourism as a model for the development of tourism and its principles has a double target: on the one hand the integrated capitalization of the exceptional natural and cultural resources, with the improvement of the quality of life in the local communities, and on the other hand satisfaction of the motivations and requirements of the tourists in consistency with environmental conservation for future generations. The development of ecotourism mainly targets four plans:

- economic, by increasing the capitalization of resources, especially the least known, to reduce the pressure on the most intensely exploited;
- ecologically, by ensuring the rational use of all resources, reducing and eliminating waste, recycling, preserving and protecting the environment, reducing the process of avoiding agricultural and forestry land in the agricultural and forestry;
- social, by increasing the number of jobs, maintaining traditional crafts, attracting the population into practicing different forms of tourism;
- cultural, by capitalizing on the elements of civilization, art and culture, expressing a certain cultural identity and developing the spirit of tolerance.

Through ecotourism it is possible to extend the spectrum of traditional economic activities without marginalizing or replacing them, so that the local economy is not subordinated to external and internal changes and influences. Tourism activities under the emblem of ecotourism offer specific opportunities, with the local population and the tourism industry having to use natural resources in a sustainable manner and appreciate the valuable natural and cultural objectives. By extrapolating it can be said that ecotourism requires an excellent opportunity for the development of the areas that have the resources and conditions necessary for its valorization, a safe alternative for the integration of the natural landscapes and the ecological biodiversity into the tourism activity (Patterson, 2007). Over the last six decades, tourism has experienced continuous expansion, with average annual growth rates ranging between 5 and 10%, becoming a major sector, providing global economic and development

opportunities. According to the World Tourism Organization, international travel arrivals increased from 25 million in 1950 to 278 million in 1980, 527 million in 1995 and reaching 1,133 billion people in 2014. Also, international tourism receipts have risen from \$ 2 billion in 1950 to \$ 104 billion in 1980, \$ 415 billion in 1995 to \$ 1,245 billion in 2014.8. The tourism industry contributed \$ 7.6 trillion or 9.8% to global GDP in 2014. Also, last year, about 277 million people were employed (directly or indirectly) in the tourism sector<sup>9</sup>, and by 2025 their number is expected to grow to 356 million, and the contribution to the global economy is estimated to reach \$ 11 trillion. In line with the long-term OMT (Tourism Toward 2030) forecast, the number of international tourists' arrivals worldwide is expected to increase by 3.3% per annum over the 2010-2030 period. By 2020, international arrivals to tourists are expected to reach 1.4 billion, and by 2030 to 1.8 billion people. Tourism is not only an increase in the number of tourists, it has turned out to be a diverse and complex activity. Although mass tourism remains the predominant form, other tourism activities related to culture, environment, education, health, etc. they came out. They reflect the preferences for environmental quality and a much more energetic and participatory form of recreation. Skiing, hiking, cycling, canoeing etc. have become increasingly demanding activities, satisfying the need to be close to nature, moving, exploring and learning. Ecotourism, as a market niche in tourism, is considered to be one of the fastest growing segments of the tourism industry. It is estimated that the interest for ecotourism is increasing from 25% to 30% (Wood, 2002) and this is possible due to the continuous concern for nature protection, but also due to the growing interest of tourists for experiences in nature. OMT also estimates ecotourism, natural tourism, cultural tourism and adventure tourism will have rapid growth over the next two decades, and it is estimated that spending on ecotourism products will grow in the future at a higher pace than the tourism industry in its whole. According to estimates by the International Society for Ecotourism (TIES), ecotourism could increase over the next six years to around 25% of the global travel market, and revenue could reach \$ 470 billion a year. Ecotourism attracts those tourists who want to interact with the natural environment and want to widen the level of knowledge, understanding and appreciation. One of the tendencies that fuel the growth of this form of tourism is the preference for travelers to choose educational holidays that enrich their existence (Stefan, 2018). The desire to learn and experience the experience of nature is influenced by at least three major factors:

- Changing attitudes towards the environment, which are based on recognizing interdependence between species and ecosystems;
- Development of environmental education in primary and secondary schools;
- Development of media on environmental issues.

In recent years, with increasing awareness and awareness of ecological and environmental concerns, travel enthusiasts have begun to move to new destinations that have little to do with economic development, such as Costa Rica, Botswana, Peru, Belize, the Galapagos Islands, etc. One of the most important trends influencing the demand for ecotourism, especially for soft (light) activities, is the aging of the population in developed countries, especially in those countries where the demand for the international ecotourism market is centered: North America, Europe North and less Japan. At the opposite end, the youth tourism market (Millennials, also known as Generation Y) is also an important source of ecotourism, especially for outdoor activities, offering good potential for future development of this form of tourism. The tendency to depersonalize the workplace and the ultra-technological environment also contributes to an increase in demand for ecotourism holidays (Foris, 2014). The upward trend of ecotourism is also influenced by the growing desire of urban society to be more active. In a report on adventure tourism, the American Travel Industry Association (TIA) found that about half of the United States population had participated in the last few years in various forms of "active

travel" included in ecotourism or adventure tourism. the tendency is determined by people's desire to overcome their limits, maintain their physical condition, and the need to spend quality time with friends or family. All these trends indicate not only an increase in demand for ecotourism, but also a transformation from a market niche into a major segment. If initially ecotourism was addressed to experienced tourists with high levels of income and education, the clientele would now expand to include a wide range of income, studies and travel experiences. Tourism is also a positive development in protected areas, with an increase in interest in this type of travel. It is estimated that worldwide protected areas receive 8 billion visitors annually, of which 80% are registered in protected areas in Europe and North America. Quantitative developments will be accompanied by a suite of qualitative mutations, the most important being listed below:

- increasing demand for tourism in protected natural areas, motivated in particular by increasing the role of these areas in preserving the natural ecosystems in most countries of the world;
- the diversification of the offer by the fact that at present the protected natural areas offer numerous opportunities for spending holidays, meeting the needs of the various tourists;
- Improving the services offered in protected natural areas has become a goal that many tour operators in these areas want to reach, due to the increasing demands of tourists arriving here;
- active participation is one of the significant trends of tourism in protected areas, motivated by the fact that tourists feel the need to actively involve themselves in the conservation, awareness and promotion of these areas;
- promoting ecotourism as the main tourism activity in the protected areas - their managers and tour operators around the world see ecotourism as the main tourist activity that takes place, on the one hand, with a low, almost minimal impact on the environment, and on the one hand another part through its educational role.

In the years to come, the quality of the environment, the lack of pollution, the cleanliness and the attitude of the local population will be more important for potential tourists than the variety of entertainment and shopping opportunities. In the world, this innocuous style of travel has begun to have more and more followers. With the development of this form of tourism, the tourists' preferences have also changed a lot. In recent years, various market studies have shown a strong interest among consumers in tourism products and services that protect the environment and respect local culture and traditions:

- About 43% of Blue & Green Tomorrow's survey respondents said they would have considered the environmental footprint during their holidays in 2014;
- 66% of consumers around the world have mentioned that they prefer the products and services of companies that have implemented corporate social responsibility programs, with 46% willing to pay extra for them;
- one in five consumers (21%) said they were prepared to pay more for a holiday to a company that has an impressive record of environmental and social responsibility activities; this percentage has seen an upward trend from 14% in 2012 and 17% in 2010 (research done by ABTA - the UK's largest tour operators' association);
- 24% of research workers surveyed by Travel Guard in 2013 said that interest in "green" trips is now the highest level in the past 10 years;
- Nearly two-thirds of US tourists who have made at least one trip in the last year consider the environment when choosing hotels, transport and food services (a survey conducted by TripAdvisor.com in 2013);
- Consumers expect tourism companies to bring sustainable products into their tourism offer. A majority of 70% believe that companies should be more involved in protecting the natural

environment, 75% of consumers want a more responsible holiday, and 66% would like to be able to identify a "green" holiday easily (2012 report, conducted by Travel Foundation and Forum for the Future);

- a significant number of international tourists are looking for experiences based on natural and cultural resources such as visiting historical sites (40%), cultural sites (23%) and national parks (20%) (National Tourism and Traveling Strategy, USA, 2012). This strategy has identified similar trends among US citizens traveling abroad: tourism based on nature, culture, heritage and outdoor adventure is an important segment of the foreign tourism market;
- 95% of business people believe that the hotel industry needs to undertake "green" initiatives and that sustainability will become a defining aspect for the hospitality industry (according to a Deloitte report of 2015);
- 35% of adults said they would like to try a holiday involving a volunteer component, and 6% said they had already done so (according to a Mintel survey in 2012).

On the other hand, sustainability has been increasingly integrated into the tourism industry, with an increasing number of operators in this field adhering to various voluntary environmental certification schemes. Following researches in the analyzed field, the following aspects were identified:

- 85% of US hoteliers mentioned that they have implemented "green" practices within their units (according to a study by TripAdvisor in 2013).
- Most tourism structures (91%) agree that it is very important to operate in an environmentally friendly way, using clean technologies. Currently over three-quarters of them (77%) have taken action to reduce the negative impact and optimize the positive impact of their work on the environment (according to a TripAdvisor survey, 2012-2013).
- 73% of a sample of 120 multinational corporations in Europe and the US identified as the top priority "integrating sustainability into their corporate strategy" (Conference Board survey in 2013).

In addition to concerns about the sustainability of individual businesses, in recent years, special attention has been paid to protecting and improving the sustainability of the environment in tourist destinations. Progressively, various measurement tools and criteria have been developed to certify "green" destinations, through initiatives of the WTO, the European Union, Ethical Traveler, EarthCheck, Green Globe or Sustainable Travel International. In November 2013, the Global Sustainable Tourism Council (GSTC) launched the Global Criteria for Sustainable Tourism Destinations (GSTC-D), which is a common understanding of the minimum requirements for a sustainable destination.

#### **4. CONCLUSION**

Based on research into their behavior, preferences and motivation, it has emerged that an ecotourist is characterized by a high level of education and training, above average income and willing to spend more in a destination during a stay extended. Ecotourists cover a broad spectrum of travelers more and more motivated to experience, being interested in the natural environment of the places they visit, as well as in learning about local communities. They are particularly attracted to rural areas where there is a mix of traditional landscapes and villages. They are in a constant search for various experiences that can not be ensured through holidays for mass tourism. Generally, ecotourists want "content holidays", that is holidays to help them discover new skills and talents, experience new emotions through their various experiences. They expect unique experiences at that destination and the accumulation of information about its distinct specificity.

They respect environmental factors, prefer to visit intact natural and cultural environments, and expect tourism product suppliers to demonstrate that they respect the local environment and operate in accordance with environmental principles. Based on research into their behavior, preferences and motivation, it has emerged that an ecotourist is characterized by a high level of education and training, above average income and willing to spend more in a destination during a stay extended. People who are involved in ecotourism activities are proven to be more environmentally aware and more active than other "normal" consumers. Most travel alone or in small groups and prefer low-capacity accommodation. Based on these studies, it appears that the eco-tourism market is divided into four segments based on their behavior and motivation.

*Table 4: The main types of ecotourists (Personal calculations)*

1	"hardcore" ecotourists - scientists or people traveling for educational purposes
2	ecotourist "table" - people who visit famous natural destinations
3	"occasional" ecotourists - tourists who come into contact with nature during a holiday, incidentally
4	"dedicated" ecotourists - people who travel to protected areas to understand natural and local history. Their main motivation is to choose a sustainable holiday, they are interested in comfort but are ready to accept the small inconveniences to support the protection of environmental factors

From the behavioral point of view, the soft / hard model prevails. A typology has been identified and ecotourists have been grouped into three categories:

- a) "hard" ecotourists: tourists with strong attitudes towards protecting and preserving the environment and who prefer to travel in small groups. They are interested in long journeys with a small number of services offered, are physically active and enjoy challenging activities. He generally organizes his own trip to feel that he is a unique journey, a real life experience.
- b) "soft" ecotourists: travelers who prefer both ecotourism activities and traditional holidays and are motivated by the experience and quality that an ecotourism destination can offer them. They opt for tourism in organized groups, want to have a certain level of comfort and good quality services and are not very physically active. This category tends to appeal to a travel agency that offers them unique, complex experiences in the context of protecting the traditions and culture of the community and the protection of the environment.
- c) "structured" ecotourists: these travelers are a combination of "hard" - because they prefer to interact with nature and practice physical activities - and "soft" as they are looking for short and multiple tours in larger groups with comfortable accommodation and dining.

From a demographic point of view, ecotourists were grouped as follows:

- a) young ecotourists: aged 18-44 years old, differentiated as follows:
  - young professionals who have high incomes, but only a limited amount of time to travel. They generally travel to the couple, although there is also a market for those who travel alone and are looking for unusual experiences. They choose the experience and comfort of a luxury ecotourism holiday, and their sustainability is not their primary motivation.
  - Backpackers and young people who take a break. They travel around the world, have a very small budget, and sometimes resort to couchsurfing (a cheap way to travel through the hospitality of people from all corners of the world who open their homes for travelers or excursionists, with the only benefits of interacting social and winning new friends). Such a vacation gives tourists the opportunity to experience the way of life of the locals and to try the traditional products. They can also combine their journeys with volunteer

work on various conservation projects. Most of these young people will travel to that region for long periods of time.

- b) Families with children older than 8 years who are looking for experiences where they can relax and enjoy with their children, being very interested in the activities that combine fun and adventure with learning. For this segment of ecotourists, the health and safety of that destination is also very important.
- c) "Empty-Nesters" - these are people aged 45 to 65, who enjoy good health, have time to travel alone, without children, and often have a high financial potential. They are experienced travelers and have high expectations regarding the quality / price ratio of tourism services, but still, if they are, they are willing to pay more for high quality eco-experiences.

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## TOURISM NETWORK: KRAPINA – ZAGORJE COUNTY CASE

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### ABSTRACT

*Tourism networks may be defined as social structures that enable business entities to build the level of mutual trust in order to create and develop jointly local tourist product. They are imaginary organizations, both formal and informal, which present social construct of people, activities and ideas. Complex or better said structured nature of tourism includes a number of stakeholders into building networks: entrepreneurs, public organizations, NGOs. The survey was used to question 148 stakeholders who participate in creating joint tourist product in NUTS3 region of Krapina-Zagorje County, Republic of Croatia. They are enterprises, craftwork, small family agriculture businesses, public institutions and bodies, NGOs and individuals who participate and contribute to creating and implementing tourist product, which do not have formal business linkages, but function as informal tourism network. The survey questioned their level of cooperation in 9 areas, divided into 3 benefits. Results, further checked by T-test, show that within informal network public sector better understands cooperation and higher values benefit i.e. the test proves correlation in attitudes of public sector examinees in comparison to private sector examinees.*

**Keywords:** *tourism networks, Krapina-Zagorje County, community involvement and participation, building linkages*

### 1. INTRODUCTION

This paper researches how different actors at the regional level, the NUTS3 region, assess the benefits of informal tourism network led by the public sector. Tourist network is focused on linking the tourism resources in a huge number of small interconnected localities and marketing them as a single destination. That involves facilities such as accommodation, spa resorts, farms, restaurants, sites and craft centres. Its goal is to increase the flow of tourists and create new jobs. The network is centralised, organised by the public sector agencies at a local and regional level, but also opened to non-members. Case is considered to illustrate type of network seek to build some understanding of the nature of the local community as part of how they can be regarded as a tourism destination. Tourism is connected to geographical place and communities with a social and cultural history of the county. One of the most precious elements in the study of community networks is the vital role that entrepreneurs in the private, public or voluntary sector play in starting up and working with those networks.

### 2. TOURISM NETWORKS

The problem of small and medium-sized private enterprises in tourism in rural destinations is primarily the problem of lack of competences in organizational forms and the lack of basic knowledge and sources of funding (Morrison and Thomas, 1999, Androit, 2002, Hajdaš,



Horvat and Šmid 2007.). One way of handling such situation is the establishment of networks (Copp and Ivy, 2001) as part of a clustering process associated with a value chain established as a lateral or vertical network (OECD, 1999.). Networks can be defined as social structures that enable small and medium-sized businesses to build a level of mutual trust and to jointly create and develop a local tourist product. Perhaps the best explanation of what the networks are, was given by Gummesson, who used the expression of an imaginary organization, referring to the fact that the networks are not tangible objects, but a social construction that contains people, activities and ideas that need not be limited to a spatial location (Gummesson, 1994.). The term networking can therefore be seen as a process already used in networks for mobilizing relationships and the postulate of learning of each other. Networks can be observed in several ways. In this paper, examples of Conway will be used, as shown in Table 1., which has designed a network classification method.

*Table 1. Network classifications (Adapted from Conway, 1998. Shaw and Conway 2000.)*

Classification	DESCRIPTION
Network membership	Diversity of actors (professional, user, social)
Nature of linkages	Formal versus informal
Type of exchange or transaction	Information, goods, friendship or power
Network function or role	Problem solving or idea generation
Network morphology	Size, diversity, density, stability of links
Geographical distribution of network	Balance between local, national and international members
CYBER network	forums, Internet, Facebook

Conceptualizing the Networks through Social Identity (Michell, 1969, O Dannel, 2001, Van Laere and Heene, 2003) and describing them as social networks that contain set morphological dimensions of patterns and structures, their social dimension and a complex combination of social parameters which depends on the functioning of the network are emphasized. In small rural communities, such social connectivity is even more pronounced through the integration of small tourist entities with the local community and the significant interconnection between local economic and non-economic factors. That is why networks are observed as social phenomena. The main issue remains the level of intensity of social inclusion in different structures. Szarka speaks of three categories of economic and social determinants of inclusion:

1. Network of exchanges - include economic entities and organizations with which small business entities have commercial transactions;
2. Communication networks - include a set of organizations and individuals with whom small businesses have non-commercial transactions, such as development agencies, chambers of commerce, consultants, local and regional self-government. The relationship is characterized as official and / or semi-functional;
3. Social networks - include links between family, friends and acquaintances of the network and have two components; a personal and a deeper cultural dimension. (Szarka 1990).

Being a part of the network often causes frustration, sacrifice and compromise. For network members, participation in the network often means assessing their social contributions and creating new tools to facilitate local tourism development. If benefits of networks are observed in building a prominent tourist destination, then one can talk about the process of learning and exchange, business activities and communion. Through learning and sharing knowledge within a network, participants gain benefits that have been translated into positive business activity and community outcomes. The value of the existing networks has only the lack of real measurement of that value and many of them are socially difficult to quantify. (Nilsson, Peteren

and Wanhill, 2005.). There are two key reasons for an emphasis on community networking. The first is that tourism is linked to a geographic place or community with social and cultural history that must be included in any development tourism project as well as the development of the entire destination (Hall 2000.). The second is the complexity and multiplication of tourism, which is quite different from other industries (Urry, 1990.). A complex or fairly complex nature of tourism involves several stakeholders: private entrepreneurs, public organizations, civil society associations. Tourist links within the community are therefore seen primarily as a stakeholder group whose actors are involved in tourism at different stages and levels. Michael defines them as groups whose identity can be identified with common goals and values that come in formal or informal organizations and have an impact on particular economic and social processes (Michael 2006., 109).

*Table 2. Benefits of networks for building profitable tourism destination (Source: adapted from Lynch, 2000, Gibson, Lynch 2007.)*

Benefit category	Identified network benefits
Learning and exchange	Knowledge transfer, Tourism education process, Communication, Development of new cultural values, Accelerating speed of implementation of support agency initiatives, Facilitation of development stage of small enterprises
Business activity	Cooperative activities, for example, marketing, purchasing, production Enhanced cross referral, Encouraging needs-based approaches, increased visitors numbers, extension to visitor season, increased entrepreneurial activity, internal trading within network.
Community	Fostering common purpose and focus, Community support for destination development, Increases or reinvests a sense of community Engagement of small enterprises in destination development More income staying locally

Successful networks in tourism are conceived as groups that play a full role in all the benefits as explained in Table 2., which generate vital contribution, or better said, contribution of the development in tourism in a particular community. Examples of such networks are Guldriet in Sweden, Leith in Scotland and Yykkasjarava in Sweden. (Gibson, Lynch, 111).

## **2.1. Krapina-Zagorje County**

Krapina-Zagorje County is a county situated in north of Croatia with an area of 1,229 km<sup>2</sup>. Krapina-Zagorje County encompasses 25 municipalities and 7 cities. There are around 132 900 inhabitants. The area contains the excavation site of a 100,000-year-old Neanderthal man in caves near the central town of Krapina. Tourism is an important industry for Krapina-Zagorje County. The county attracts tourists, with the spa resorts, medieval castles and agro-tourism offers. Rural tourism and recreation close to nature is popular in county. Many agro-tourism farms offer attractive locations, interesting features and additional services. In many of them you can both sleep comfortably and eat tasty and healthy food.

County has launched a project called "fairy tale at hand", which serves as the framework of a number of tourism activities that have already been carried out. After creating brand and platforms based on the county history, beautiful scenery, the warmth and hospitality of the people and the magical, fairy-tale impression that this place leaves its appearance and emotion and slogan fairy tale supports visual identity. Project branding has already brought positive changes and this project in long term fostered the network common purpose and focus, engaging support for enterprises in the destination development. Krapina-Zagorje County as a public entity has established public sector led tourism network that encourage business entities to build the level of mutual trust in order to create and develop jointly local tourist product.

### **3. RESEARCH GOALS**

The main goal of the research is to show how different actors evaluate the efficiency of the network, i.e. what is the need for the tourist network. Furthermore, the paper researches the benefit of the tourist network in accordance with the Lynch & Gibson division of benefits, and what is the deviation of private from public sector actors. Two hypotheses can be set out from the research goals:

- H1: The public sector higher values benefits of the network
- H2: Informal network members who generate revenue through the sale of tourist services recognize the lower benefit of that network, while members of the informal network who support those who generate revenue through the sale of tourist services within that network recognize greater benefit from the network.

This actually means that informal networks are more in function of those who support the network, i.e. that informal networks do not increase the quality of tourist services.

### **4. METODOLOGY**

A total of 148 surveys were submitted (16 spas / hotels / boarding houses, 29 restaurants, 2 special hospitals, 27 agrotourism-vineyards, 8 supporting institutions, 9 travel agencies, 23 organizers of tourist events, 27 food and beverage producers and 7 traditional crafts). Out of the total number of respondents, the survey was completed by 46, where their interrelationships either do not exist or are informal, through a network of cooperation. Out of these 46 respondents, 25 are privately owned (only one with foreign owners, while 24 are owned by domestic companies or private persons) and 21 are either NGOs or owned by local government and self-government or state-owned. The survey, presented in Table 3., consisted of 9 questions about cooperation with other stakeholders within the county, and the responses were valued at grades 1 to 5; 1 meant no cooperation, while 5 meant that cooperation is very intense.

*Table following on the next page*

*Table 3. Survey questions*  
*Rate how much you work with other actors in Krapina-Zagorje County*

**PARTICIPANTS** – subjects in Krapina-Zagorje County (local community). These are companies, crafts, family farms, institutes, institutions, cooperatives, associations, independent professions, supporting institutions and individuals involved in the creation and realization of a common tourist product.

**COMMON TOURIST PRODUCT (CTP)** – a set of tangible and intangible services and goods created by multiple actors based on their creativity and willingness to work together.

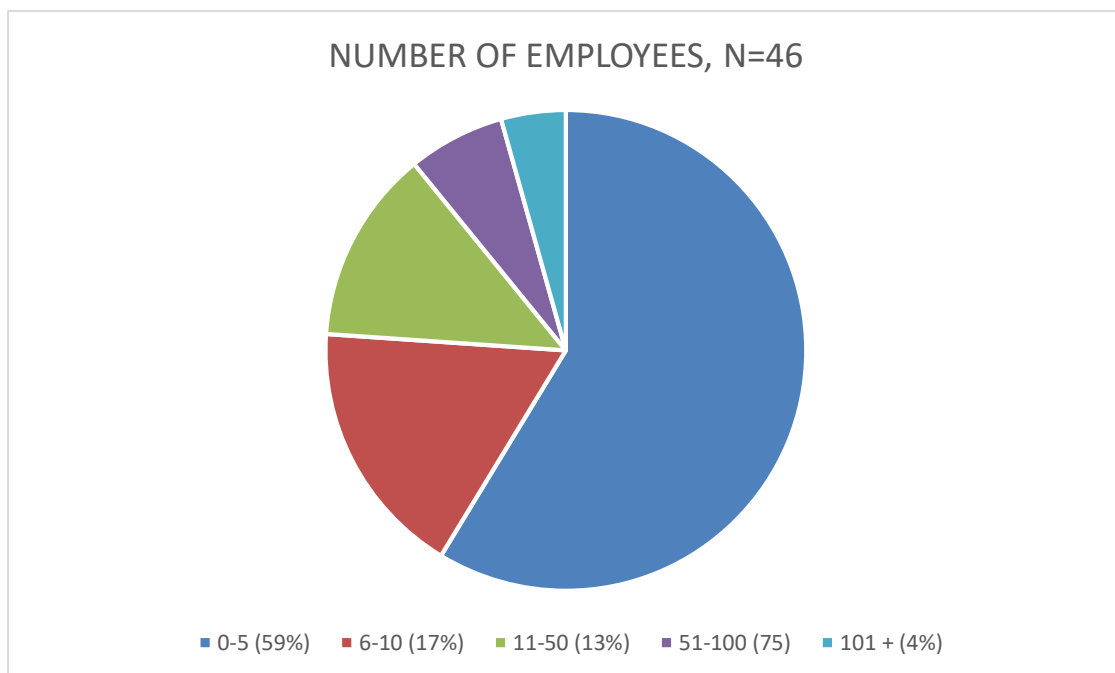
	not-at-all	little	medium	much	very-much
a) commercial cooperation (I buy raw materials and products from others and sell own raw materials and products to others)	1	2	3	4	5
b) cooperation through the exchange of information on production of goods and services, market trends, production technologies, new ideas, products and services, labour force, management, investment, financing, regulations,	1	2	3	4	5
c) cooperation in planning the production of goods and services for CTP, (in planning investments for new products and services, quality raising, promotion and sales)	1	2	3	4	5
d) Production cooperation (producing part of a joint product or service, with a partner/s).	1	2	3	4	5
e) development cooperation (together with others I invest in research to improve the existing ones and create new products and services / innovations / and buy new technologies.)	1	2	3	4	5
f) cooperation in human resource management (joint education and training of employees, employee exchange, joint search for employees in the labour market)	1	2	3	4	5
g) cooperation with local community associations	1	2	3	4	5
h) cooperation with the local and county administration in Krapina-Zagorje County in the identification and implementation of development projects (planning and investment in communal infrastructure, education, employment, incentive programs)	1	2	3	4	5
i) cooperation with other supporting institutions (educational, public institutions, development agencies)	1	2	3	4	5

The data analysis is divided into two parts:

- Descriptive statistics (structure of respondents by area of activity, number of employees, average salaries and types of ownership)
- Tests of significance (T-test for small independent samples - less than 50 respondents, separated by private and public participants - less than 30 respondents)

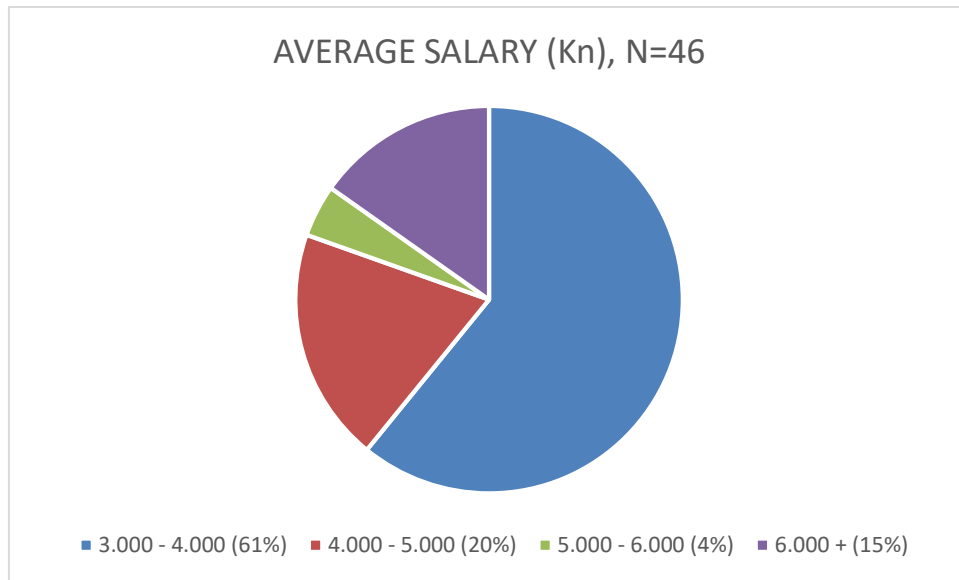
## 5. RESEARCH RESULTS

In the survey, besides answering questionnaires, the respondents asked for data on ownership, number of employees, average wage level, and data on the activity of the respondent, with all the data being divided by categories. The reason why these data are requested is to see according to which categories there are significant differences in the assessment of mutual cooperation with actors in the Krapina-Zagorje County. Thus, ownership was divided into two categories; private property and the public sector (all that was not privately owned), while still being checked whether the owners were from R Croatia or from abroad. As only one respondent is in foreign ownership, no statistically significant deviation could be obtained compared to the level of respondents in domestic or foreign ownership.



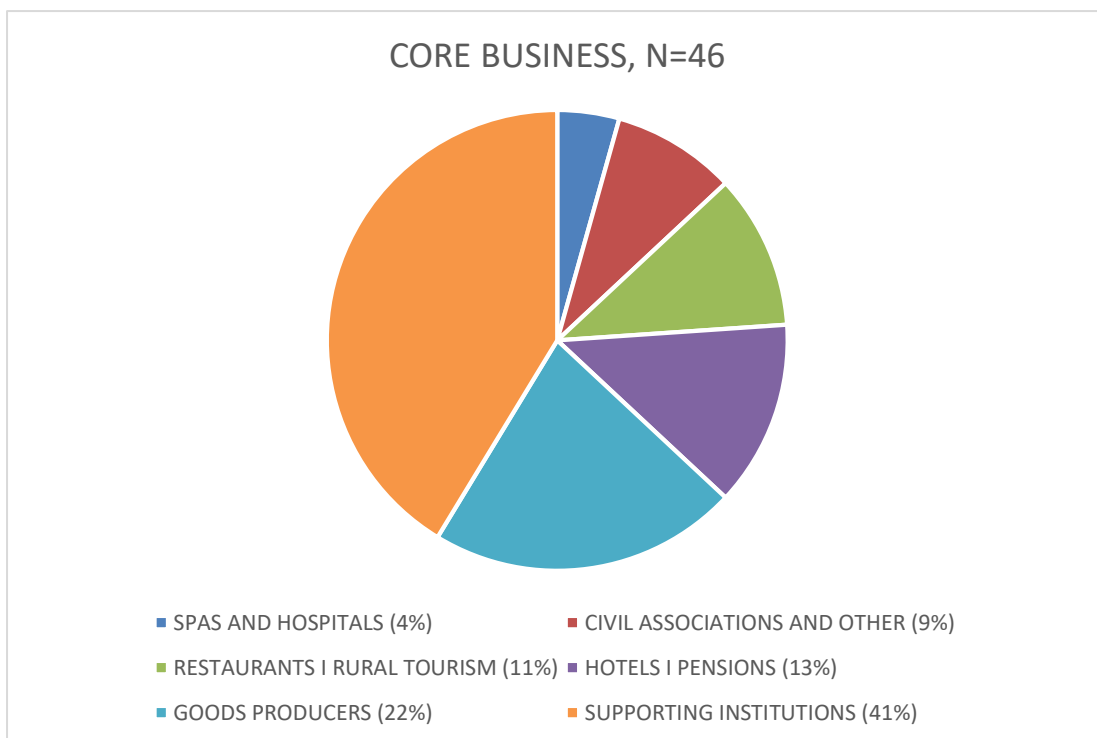
*Chart 1. Distribution of respondents by number of employees*

Distribution by number of employees is given in Chart 1., and the respondents are divided into 5 categories, as the vast majority of small businesses (family farms, crafts and small businesses), while only 2 respondents have over 100 employees (one has 135, while others have 765 employees). Those to whom networks are most important and needing to join this type are small businesses because they do not have enough staff to structure their organization and can't hire a larger number because they do not earn enough income. Salaries are divided into 4 categories, which can be seen in Chart 2., with the highest wage category the one with wages greater than the average wages in the Republic of Croatia. With this data, reality can't be reliably considered, as family farms and crafts are usually reported at a minimum wage as well as small businesses with one owner because it is simpler and cheaper to take personal income through cost to companies. For large companies this is not possible because they are structured with clear business rules, and the ownership structure is not on the way that owner is in the same time and employee (in the most of the cases general manager).



*Chart 2. Distribution of respondents according to average salary level*

Chart 3. shows the distribution of respondents in the area of activity (core business) or activity of enterprises, divided into 6 categories, with the largest number of supporting institutions (41%) and all supporting institutions represent public sector (not private property). The field of action could be grouped in even more detail, however, then a sample is obtained for which it is generally difficult to look for statistical significance. Therefore, only 6 categories remained.



*Chart 3. Distribution of respondents by core business*

Data analysis showed that there are statistically significant deviations in the evaluation of cooperation between private sector actors and public sector actors, so T-tests have been conducted for this data and all conclusions will be made in comparing the public and private sector.

If sum of all 9 ratings is compared in the private sector and the public sector, then the following data is obtained:

T-test (SUM)	PRIVATE SECTOR	PUBLIC SECTOR
MEAN	25,24	28,52
VAR	35,77	17,56
df	44	20
s	5,243606703	
t	-2,068436194	
t5	2,02	
t1	2,69	
t10	1,68	

So, the result is such that with a probability of error of less than 5% it can be argued that there is a statistically significant difference in the sum of the ratings of the private and public sector. Furthermore, as it is apparent that the average sum of the public sector rating is 28,52, which is higher than the average private sector rating (25,24), it can be concluded that more ratings are given by the public sector (better value the cooperation). If the first question from the survey was to be excluded, as commercial cooperation is generally "reserved" for the private sector, then we have more significant data, so with a probability of error of less than 1% it can be argued that the public sector (26,67) statistically significantly better evaluates the informal network system than the private sector (22,08). Thus, as a result of the analysis carried out above, H1 results, and that is, as in informal networks, private participants in the network weaker evaluate the efficiency (benefits) of the network than are evaluated by the public sector participants. If the questions are divided in accordance with the benefits of Table 2., then the questions e) and f) belong to "LEARNING AND EXCHANGE", the questions under a), b) and d) belong to "BUSINESS ACTIVITIES" and questions under c), g), h) and i) belong to the "COMMUNITY". If the average rating of each respondent is taken, separately for the private sector, and for the public sector, then with a probability of error of less than 1% it can be argued that the public sector (3,19) is statistically significantly better evaluated by an informal network than private sector (2,34) for benefits related to LEARNING AND EXCHANGE. If the same would be done for benefits related to BUSINESS ACTIVITIES, then it could not claim that the private sector (2,91) would higher evaluates benefit from the public sector (2,44), because the likelihood of error of such a claim would be greater than 5% the public sector has negligible benefits for business activities. But, still less than 10%. For community-related benefits, the public sector, with a probability of error of significantly less than 1%, argues that the public sector (3,70) is statistically significantly better rated by the informal network than the private sector (2,96).

T-test G&L-LEARNING		PRIVATE (AVERAGE)	PUBLIC (AVERAGE)
MEAN		2,34	3,19
VAR		1,02	0,812
df	44	24	20
s		0,96056441	
t		-2,924354	
t5		2,02	
t1		2,69	
T10		1,68	

Thus, as a result of this part of the analysis comes **H2**, namely that members of the informal network that generate revenues through the sale of tourist services recognize lesser benefits of that network, while those members of the informal network who support those who generate revenue by selling tourist services within that network, see greater benefit from such a network. When in all these categories the difference in assessment was considered with regard to the breakdowns within the salary category (social aspect), no statistically significant difference in assessment could be observed.

## 6. CONCLUSION

Managing tourist networks is the process of designing and maintaining an environment in which individuals, working together in groups, efficiently realize the chosen goals. If applied to the management of a tourist destination, then it is clear that management needs the community, work in groups, what actually represents tourist network. Tourism as an amalgam of business branches involves many stakeholders of society: private entrepreneurs, public organizations, civil society associations. Tourist links within the community are visible through stakeholder interests, whose actors are involved at different levels either through commercial cooperation, either through information sharing, production cooperation, or human resource management cooperation, as well as different degrees of cooperation. Participants are defined through groups whose identity can be identified and which have common goals and values, but each of them independently generates revenue through the sale of tourist services. The network should give them added value they are not able to accomplish independently, whether due to insufficient revenue, insufficient number of employees, or insufficient knowledge. However, this paper shows that informal networks in the case of Krapina-Zagorje County do not give the expected value added to those who sell tourism services and because of which the network actually exists. It is to be expected that the networks will be formalized with clearly defined goals and defined interconnections within the network or if the revenues of those within the network (public sector) depend on the results of private actors within the network to assess the usefulness of public and private network participants less statistically significantly different, that is, to make such a network more useful for tourism commercial activity.



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## ANALYSIS OF CROSS-BORDER ACQUISITIONS OF FAMILY-OWNED COMPANIES IN THE REPUBLIC OF CROATIA

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### ABSTRACT

*In today's world of constantly changing national economies, businesses are increasingly looking for appropriate growth strategies that will ensure sustainability and competitive advantage in the long run. Mergers and acquisitions represent one of the most accepted and most widely used model of implementation of growth strategies. Expanding the borders of the European Union the doors of the international market opens in which apply entirely new business rules and where large multinational companies dominate. The issue of competition and competitive bidding is especially challenging in the context of small family-owned companies. This paper represents the case that serves as an example of good practice and successful takeover motivated by the quest for market power and long-term survival of business. The case presents a takeover in which the French multinational company Atalian Global Services took over Ekus d.o.o., a family-owned company in Croatia.*

**Keywords:** *cross-border mergers and acquisitions, mergers and acquisitions (M&A), outsourcing, family-owned companies, performance indicators*

### 1. INTRODUCTION

In today's world of constantly changing national economies, companies are increasingly looking for appropriate growth strategies that will ensure sustainability and competitive advantage in the long run. Since the outbreak of the global financial crisis in the second half of 2008, the phenomenon of mergers and acquisitions was faced with challenges related to managerial aversion to risk and problems related to debt financing. The whole M&A industry, along with other industries, found itself in crisis, and the question of survival in a dynamic global environment has come to the decision – to change or not. Those owners who do not want to change their business practice should sell company, and if they decide to change, then the merger and acquisition is one of the models, even the necessary prerequisites for the survival on market (Vujisić-Sardelić, 2007). What is observed in the times after 2008, and it became apparent from 2014 onwards is a waste of the so-called crisis mentality which is characterized by the previously mentioned risk aversion. Namely, the business world raised awareness that the present time represents another unstable era in terms of market growth, but companies are beginning to realize volatility as a new standard of existence. After all, there will always be economies that will be conditioned by wars and difficulties in managing public debt. In such environment it becomes clear that companies cannot rely solely on organic growth and cost cutting; while still expect consistent financial results. In other words, it appears that managers are again starting to act in accordance with the belief that growth is easier to buy than to develop internally (Cordeiro, 2014).

Expanding the borders of the European Union the doors of the international market opens in which apply entirely new business rules and where large multinational companies dominate. The issue of competition and competitive bidding is especially challenging in the context of small family-owned companies. For that very reason those entities are increasingly opting for mergers and acquisitions as well as ways for growth, where a small family-owned companies are targets of larger acquirers, primarily multinational companies. Cross-border mergers and acquisitions are thus one of the most common forms of growth in the last decade. On the other hand, one of the phenomena present in today's market, which forms the horizons of the company, is outsourcing. Outsourcing, externalization of activities or separation of non-core activities describes the process of transferring activities that have so far been performed within the organization to external partners, and which will be performed in the future by other company instead of headquarters (Galetić, 2011, 287). This very strong business tendency directly affected on the change of traditional boundaries of the organisation and become extremely important as one of the fundamental areas of restructuring. In theory, there are many ways in which mergers and acquisitions can create value for the acquirers and the shareholders. Some of the main sources of value are synergies effects, increased market power, and others. However, evidences on capital markets in America and Europe imply that more than 50% of mergers and acquisitions fail to create value for shareholders. Wrong motives of mergers and acquisitions are often cited as the main reason of failure. Namely, some managers have personal interest in creation and control of large company, which is also known under syntax the construction of an empire. In such situations, due to the separation of ownership and control in public companies, described behaviour can lead to M&A transactions that are not based on solid strategic arguments. In other words, the value for shareholders is not always the primary objective of transaction and control in public companies, and human behaviour can lead to mergers and acquisitions (Bieshaar and others, 2001, 64-73).

## **2. M&A IN THE WORLD OF OUTSOURCING**

There are two basic strategies for growth of the company: internal and external growth. Internal growth describes the strategy of the development of companies on the basis of existing resources and own resources, i.e. through the reinvestment of profit whereby it can stimulate development of the existing products, the introduction and development of new technologies and production processes, production (service) innovations and so on. On the other hand, external growth is achieved through mergers and acquisitions, and the dominant distinctive character comparison to the internal development is the rapid entry into the market and the takeover of an established business system (Filipović, 2012, 436). Whether it is domestic or cross-border mergers or acquisitions, the main reason for merging or takeover is the fact that the newly established union will enable company to faster and cheaper achieve strategic objective than if company achieved/accomplished these objectives independently. In a global survey conducted by KPMG consulting firm in 2013, more than 1,000 mergers and acquisitions experts argued that the main reasons for launching mergers and acquisitions, with increasing revenue or cost reductions, introducing new products, entering new production lines, expanding geographic scope, expanding customer base, and opportunism due to, for example, sudden availability of the objective (KPMG, 2014). What is interesting about these results is the fact that most of these motives focuses on cross-border acquisitions (Al Masud and denHertog, 2014, 16).

### **2.1. Cross-border mergers and acquisitions**

In the 1990s, one of the most dynamic forms of internationalization of business became the integration processes of mergers and acquisitions. A powerful wave of cross-border mergers and takeovers in that period had several specific features, with the most obvious scope and pace

of these activities. Namely, on a global scale, the value of cross-border mergers and acquisitions between 1990 and 1999 increased by more than five times from 153 billion USD (the United States dollar) in 1990 to 792 billion in 1999 (Lazibat and others, 2006, 65). The benefits of cross-border mergers and acquisitions include, inter alia, accelerating the time required to enter on the market, gaining access, scaling and brand recognition, as well as mitigating the effects of competitors' moves. At the same time, companies recognize the challenges that cross-border business carries, with regard to market assessments, regulatory valuation, cultural differences, etc. Over the past two decades, several studies have tried to understand who are initiators of a volume in cross-border operations. A generally accepted assumption is that the main drivers of these operations are complex and vary between sectors. Generally speaking, mergers occur when people who have control over a company believe that a value derived from combined companies surpasses the value of the individual subject. A large number of factors play a role in determining these values, especially when it comes to international affairs where national borders come into centre of the game. As previously noted the two fundamental motives behind the merger and acquisition are growth and synergy. Other motives which create value include, among other things, diversification, tax relief and increased market power. Synergy is mentioned as the most common reasons behind mergers and acquisitions both domestically and internationally. Besides the motives which are the main initiators of the process, there are also challenges with which cross-border mergers and acquisitions encounter. The two most commonly mentioned challenges are two-layered acculturation and liability of foreignness (LOF). These two phenomena have a negative impact on creating value in cross-border mergers and acquisitions (Al Masud and denHergot, 2014, 16). LOF can be defined as a set of responsibilities in terms of all the additional costs that is generated by a company which operates on an international market, and for which it is assumed not to be incurred in the situation where the company operates on the domestic market (Zaheer, 2002, 351). Two-layered acculturation implies a combination of two companies with different organizational cultures in which are involved different national cultures. The inability of adaptation to new cultures can reduce the success of the acquisition. Moreover, the failure of cultural integration is considered to be one of the crucial initiator of unsuccessful merger and acquisition in general (AON, 2011, 5).

## **2.2. Outsourcing in the Republic of Croatia**

Outsourcing is based on concepts that companies traditionally apply, such as externalization, an external contracting and other business relations with complementary and affiliate companies. It should be emphasized that outsourcing itself has a much higher degree of cooperation. Namely, by applying outsourcing, allocated activities are left to specialized partners who will perform them better, more efficient and cheaper, while the company focuses on core activities (Pavić, 2009, 43). Historically, since the nineties of the last century to the present day, the use of outsourcing has increased rapidly, mostly in the US and then in western European countries. Cooperation agreements, and in particularly outsourcing contracts, due to the increased volume of market and the restructuring of the companies, have developed a certain dynamics over the last few years and the increase of the growth rate in the outsourcing market should continue in the future (Pavić, 2009, 44). Companies in the Republic of Croatia increasingly recognize the benefits of outsourcing, whereby the most used is external cleaning and maintenance services (61.7%), informatics (48.3%), and the least used are procurement (8.3%), sales (6.7%) and administrative jobs (5%), according to a survey conducted by Cronata and BNB Sklad on the sample of 60 domestic companies (Lider, 2016). As the main benefit of outsourcing, 45 percent of respondents consider the possibility of focusing on core activity, and 30 percent of respondents most appreciate the expertise of people from companies which are engaged in outsourcing (Lider, 2016).

If the practice of Croatian companies is compared with foreign practice of outsourcing, a big difference can be noticed. Namely, large corporations abroad are trying to externalize all that is not a core business. In Croatia, these markets are still closed and it is due to insufficient supply. However, it is expected that it will soon begin to offer different types of services (Oršulić, 2016). With regard to the core activity in which Atalian Global Services Croatia operates, the basic cleaning of buildings, an analysis was carried out on 244 subjects operating in the mentioned business, which in 2015 earned 448,784,767 HRK of revenue. The largest three subjects in this business sector hold 37.42% of share in operating revenue, and the highest ten 66.14%. These data indicate the relative concentration of industry, i.e. on the fact that ten players hold almost two thirds of the market. Atalian Global Services Croatia d.o.o. is in the first place in its activities accordingly to the realized revenues with a share of 17.56% (Atalian Global Services Croatia, 2017, 3). The main competitor in the field of cleaning services, technical maintenance, as well as catering services is the company Adria, while other competitors only perform cleaning services. In this case, two main competitors dictate the market, but compete with each other so that no one dictates a price. Due to the lack of supply, it is possible to conclude that there is space for the entry of new competitors on the market. As far as exit barriers are concerned, a company in mentioned activity can decide overnight to no longer deal with outsourcing. The only possibility of replacing outsourcing services is restoring its own workforce within the client's company, so considering the current market trends the danger of substitution is small, or almost none.

### **3. ANALYSIS OF TAKEOVER OF FAMILY-OWNED COMPANY EKUS D.O.O.**

Company Atalian Global Services Croatia was founded in 2010 by cross-border acquisition of the Croatian company Ekus d.o.o. by the French multinational company Atalian Global Services. The core activity of a newly-established company, as well as its "parents" that is acquirers and targets; is a service industry which through process of outsourcing, offers solutions to other companies of different industries. Basic services that the company provides to its customers are hygiene of office spaces, technical maintenance, landscaping and others.

#### **3.1. Historical development of family-owned company Ekus d.o.o.**

The idea about founding of Ekus d.o.o. was initially formed in the early 90s of last century after a conversation with members of the board of one of the leading Croatian banks and recognizing the need for outsourcing services in the Croatian market. Recognition of needs was confirmed by a thorough market analysis, which included deep interviews with members of the management of then leading Croatian companies, and in 1989, Ekus d.o.o. was founded by Tomislav Grgić, the President of the Board of directors who was CFO, and Petar Lovrić (second co-owner), a member of the Board of directors who was COO.<sup>1</sup> At the beginning, the company started with 35 employees. After only three months of activity and two signed contracts, one with company INA OKI (today's INA) and the other signed with Zagrebačka banka (one of the banks in Croatia), the company has managed to grow up to 100 employees. After just one year of activity of Ekus d.o.o., partners bought their first own space of 60 m<sup>2</sup>. Data on growth of the company shows that in the first two years the number of employees have risen to 500 employees, and realized profit at the end of the second year in the amount of 1 million Euros and revenues of 5 million Euros. Mentioned data show that there was a space for other companies to enter on the market. The opening up of Croatian market has led to a strong growth of competition until 2007, when market saturation happened (that is, supply exceeded the demand). This led to a competitive war of lowering price, which immediately affected on the decline in revenue and net profit. This market situation prompted the company's owners to think about new development direction of the company, with the aim of its long-term survival.

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<sup>1</sup> Tomislav Grgić and Petar Lovrić are relatives (cousins), which gave Ekus the character of a family business.

After an analysis of the current market situation and business projections about the future, a new strategic decision was made; it was decided to sale Ekus d.o.o. The strategic decision on the sale of the company achieved in 2010 when the company Ekus d.o.o. with 500 employees, 27 million HRK in revenue and net profit of 484,292 HRK was sold to French company Atalian Global Services. Today, seven years after the takeover, the company on the Croatian market operates at over 700 locations and maintains more than 1,200,000 square meters of space. Additionally, it employs more than 700 employees, and it can be concluded that the takeover by the French company was the determinant for its current success.

### 3.2. Performance indicators of taking over a family-owned company Ekus d.o.o. by French Atalian Global Services

The main categories of financial performance indicators are indicators of efficiency, indicators of profitability and investment indicators. For the purpose of performance evaluation of acquisition, the following indicators will be used: EBIT – Earnings before Interest and Taxes, EBITDA, Net Profit, Revenue, ROA (Return on Assets) and ROE (Return on Equity). Due to the inability to obtain high-quality data for the period prior to takeover, primarily due to the fact that small businesses in the Republic of Croatia were not obliged to submit an annual report for public announcement and uneven structure of the form of report form before and after the takeover, the analysis focuses on the post-acquisition period. In order to understand the broader image and relations before and after a takeover, it is important to present available sizes of indicators prior to the acquisition period (Chart 1).

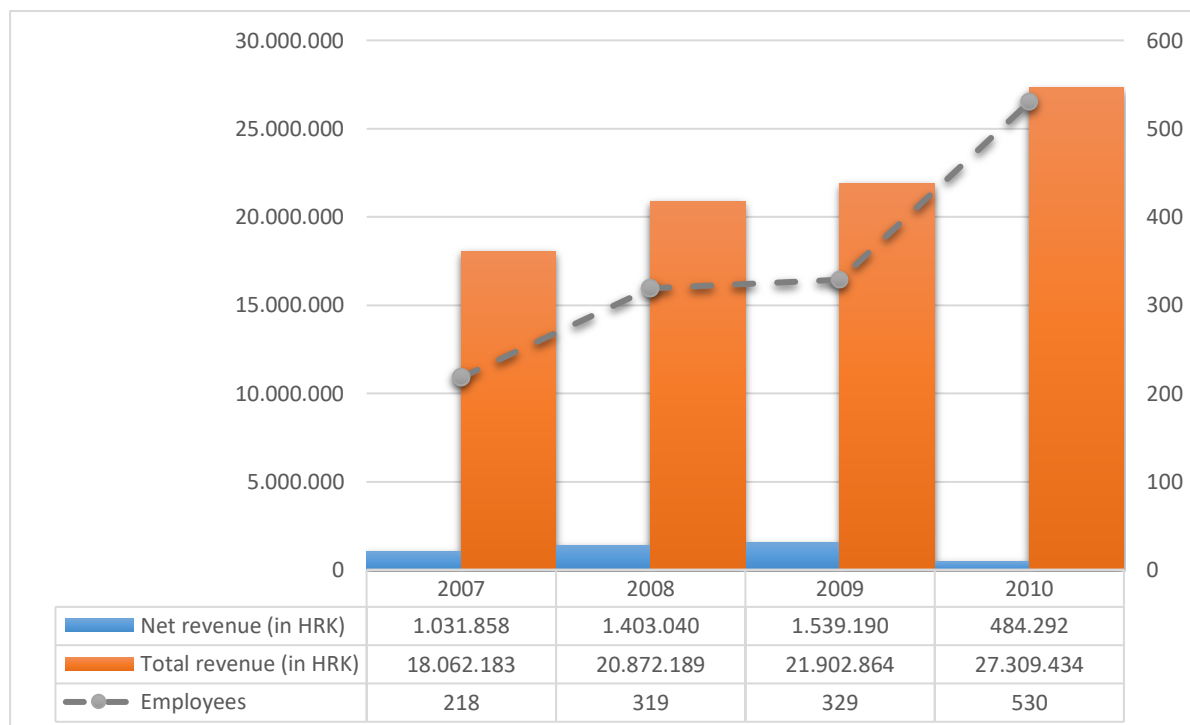


Chart 1: Key size overview in the Pre-acquisition period 2007 – 2009 (Author's elaboration<sup>2</sup>)

Chart 1 show that performance growth was present in the period from 2007 to 2009, but the profit trend, with a particular focus on 2010, indicated on damaged margins which were a consequence of the growth of competition. This situation was an additional motivation for development of the company through integration with a stronger partner.

<sup>2</sup> Author's elaboration according to the data from the financial statements of Atalian Global Services (from 2011 to 2015).

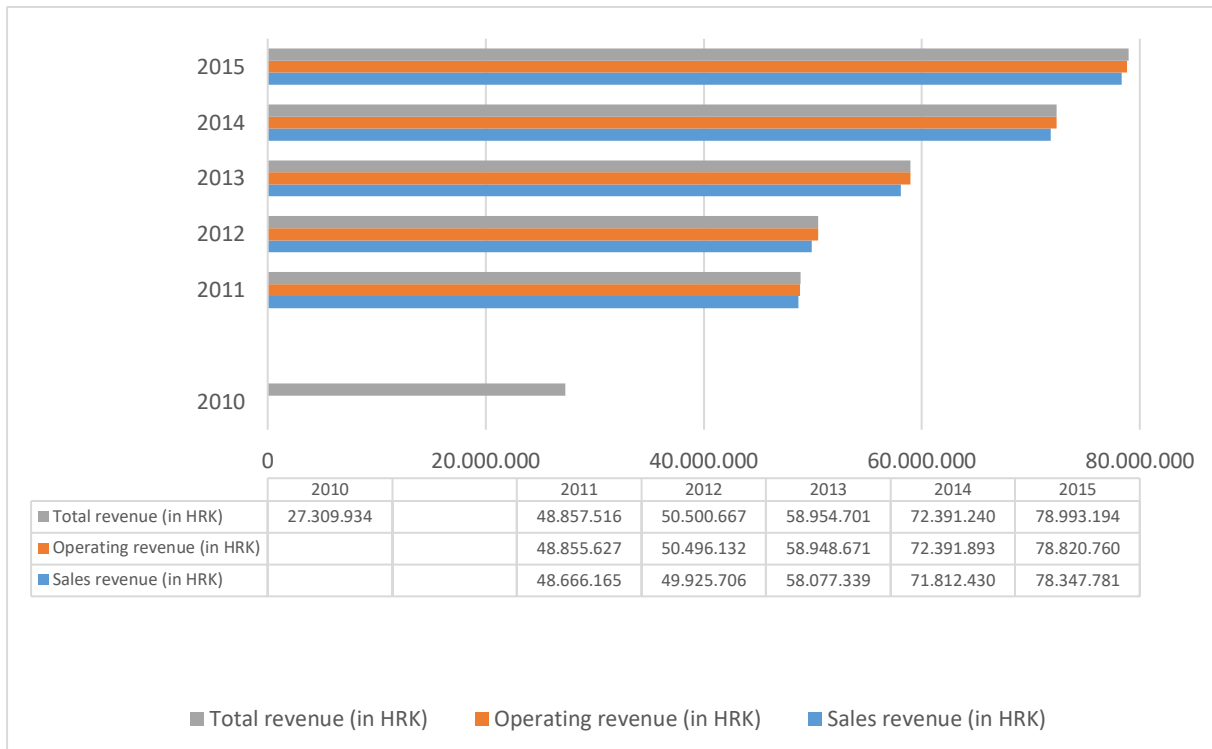


Chart 2: Revenue scope for Post-Acquisition Period 2011 - 2015 (Author's elaboration<sup>3</sup>)

Chart 2 shows the continuous growth of sales revenue in the post-acquisition period (the average annual growth rate was 13.09%). For comparison, the value of total revenue in the year of acquisition (2010) is also given<sup>4</sup> point out the growth of 78.9% in the first year after takeover the first year of activity of the newly established company. EBIT (earnings before interest and taxes) represents the operating profit of the company. EBIT serves as a tool in the initial stages of considering takeovers of small companies. EBIT as a measure performance of a subject points to the subject's profitability and it disregard the costs/price of capital, i.e. financing or tax implications. It provides useful information for assessment of a performance of a subject's operations activity, regardless of the interest costs and tax rates. As it relates to operating income result before interest and taxes, EBIT is calculated only on the basis of the income statement, as the difference between operating revenues and operating expenses. EBIT is supplemented by EBITDA which indicates the business result of the subject, but without including interest, taxes and amortization. It is calculated as the difference between operating revenue and expenses (EBIT) plus the costs of amortization, and as such neutralizes the impact of different methods i.e. amortization methods on the company's performance, given that a different methods and amortization rates can have a significant impact on the same (Racunovodja, 2017). Continued growth of sales income and the volume of work being carried out, continuous growth of operation revenue and EBITDA in the observed period is presented in the absolute (Chart 3) and in relative terms (Chart 4). In case of takeover of Ekus d.o.o., in the post-acquisition period an EBITDA margin increased in the period from 2011 to 2015. According to realized revenue, Atalian Global Services Croatia d.o.o. is in the first place in its industry with a share of 17.56%, and it occupy's the fifth place in the industry in which it operates with the realized EBITDA of 2.549.587 HRK. According to these results, it is possible to say that the takeover of the company allowed maintaining a leading position in terms of achieved revenue and fifth best performance in terms of EBITDA activity.

<sup>3</sup> Author's elaboration according to the data from the financial statements of Atalian Global Services (from 2011 to 2015).

<sup>4</sup> For comparison, total revenues in 2007 amounted 18,062,183 HRK, in 2008 revenue was 20,872,189HRK and in 2009 it was 21,902,864 HRK.

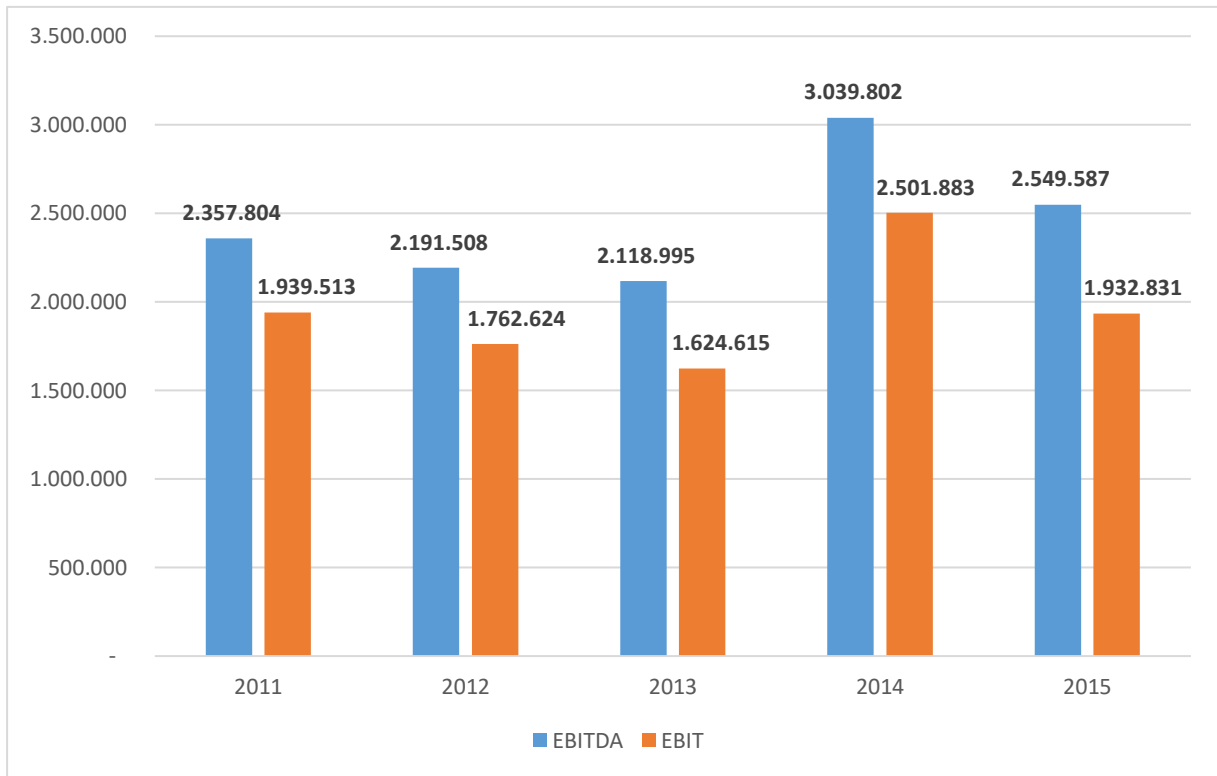


Chart 3: Movement of EBIT and EBITDA for post-acquisition period 2011 - 2015 (Author's elaboration<sup>5</sup>)

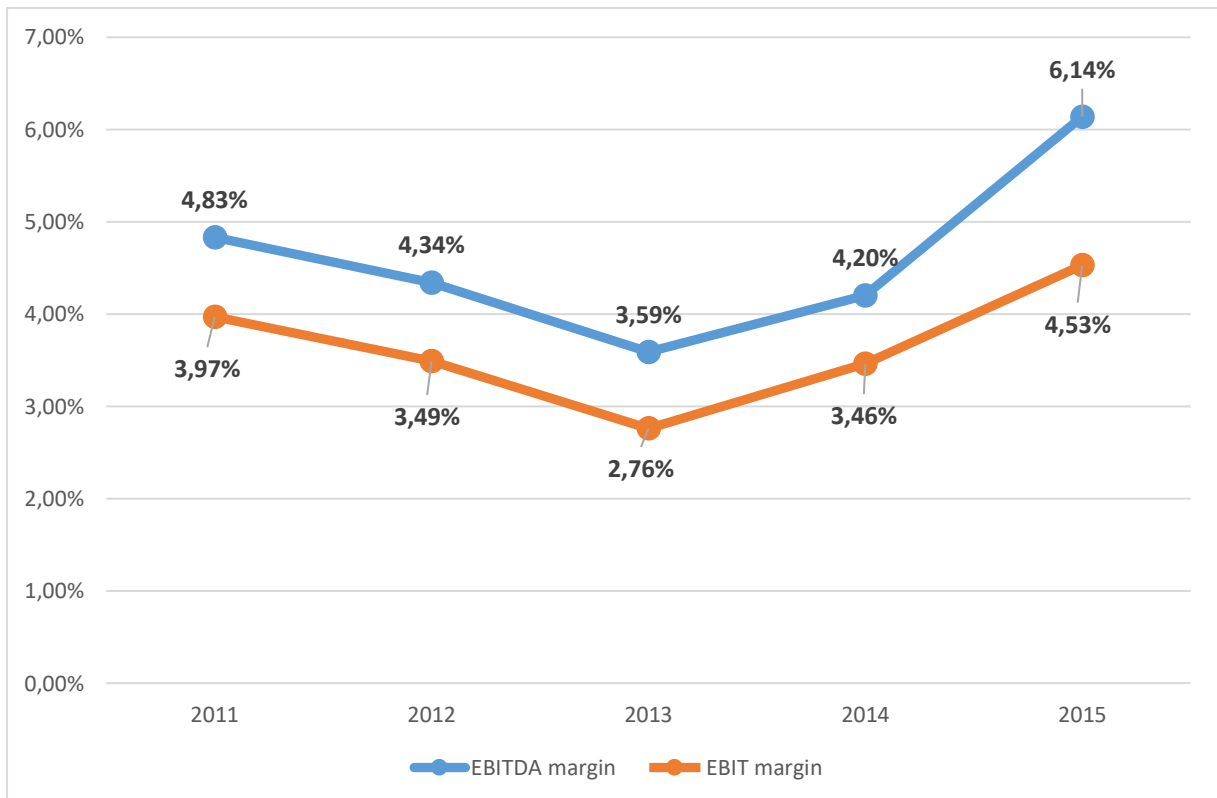
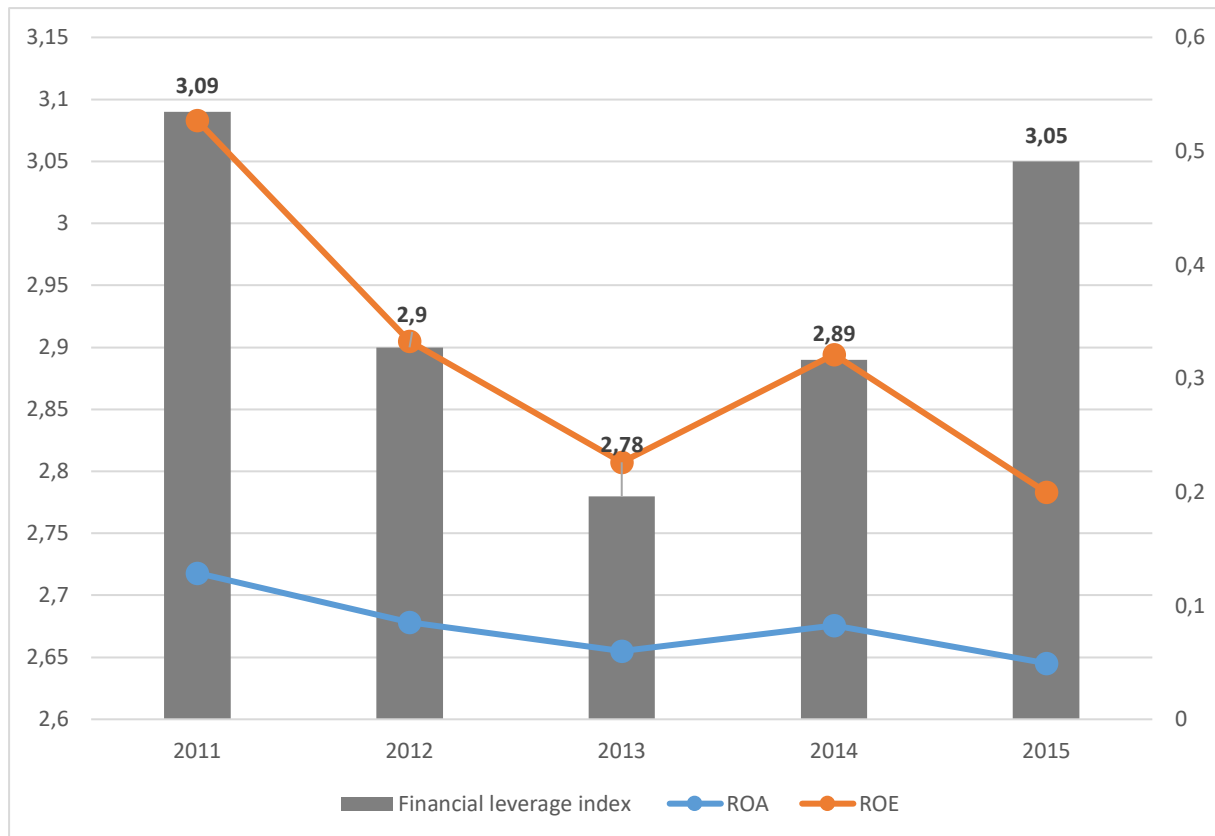


Chart 4: Movement of EBIT and EBITDA margin for post-acquisition period 2011 - 2015 (Author's elaboration<sup>6</sup>)

<sup>5</sup> Author's elaboration according to the data from the financial statements of Atalian Global Services (from 2011 to 2015).

<sup>6</sup> Author's elaboration according to the data from the financial statements of Atalian Global Services (from 2011 to 2015).





*Chart 5: Financial leverage Index ROA and ROE in post-acquisition period 2011 - 2015  
(Author's elaboration <sup>7</sup>)*

Regarding to the analysis of the performance (profitability), return on equity (ROE) is a significant measure for measuring profitability from the point of view of the capital owner and it is basic measure for profit planning. ROE shows the return on equity which owners invested in the company, i.e. the profit made by the company by using the capital which is invested by the owner (Miloš Sprčić and Orešković Sulje, 2016). ROE should be observed in relation to the indicator of return on asset (ROA), which explains how much profit the company is able to create from one unit of invested asset (Ježovita and Žager, 2014, 5). Business performance is often assessed by comparing the profitability of the property and the profitability of its own capital. The profitability of own capital is higher than the profitability of the total assets in case when the profitability of the asset surpasses the cost of financing by loan capital. If a company can generate a higher return on the loan capital than the cost of equity capital, the surplus of the repayment belongs to the shareholders. In other words, the company achieves a return that is higher than the average cost of loan capital and that happens in the situation when profitability of equity capital surpasses the profitability of asset. Explanation of such relation lies in the concept of financial leverage. The importance of the financial leverage can be seen through the financial leverage index which put ROE and ROA in relation. If the financial leverage index is greater than 1, it suggests a favourable leverage effect, which means that it is worthwhile doing business with borrowed money. Contrary to that, if the financial leverage index is less than 1, it suggests an unfavourable financial leverage effect. ROE, ROA and financial leverage index for the observed company are presented in Chart 5. Consideration of the financial leverage index is useful for management's decisions regarding to the financing of future development activities. Taking into consideration the current market developments, it is expected that the future will bring mergers and acquisitions, with the objective of consolidating market.

<sup>7</sup> Author's elaboration according to the data from the financial statements of Atalian Global Services (from 2011 to 2015).

#### 4. CONCLUSION

Cross-border mergers and acquisitions, despite the fact that a large number of these transactions fail to achieve the target objectives, are today (as well as in the past) very popular and preferred form of implementation of company's development strategy. Considering that both national and cross-border mergers and acquisitions are taking place in so-called "waves", i.e. periods determined by economic, regulatory, technological shocks (with particular emphasis on development in financial markets), the topic of cross-border mergers and acquisitions is an interesting field of research in practice and within the academic community. For the first time after the crisis in 2008, 2014 was marked as a year of re-strengthening of optimism on global financial markets, which was evident both through the increase in the value of mergers and acquisitions on globally scale. There are some recent figures which confirm this trend; cross-border mergers and acquisitions in 2015 reached record highs with the highest value of over \$ 1.38 trillion and 41% of total M & A transactions (Deloitte, 2017, 5). Research has shown that the main motive for a friendly takeover of the Croatian family-owned company Ekus d.o.o. by the French multinational company Atalian Global Services, was strengthening of market power and long-term development, considering that the outsourcing market in the Republic of Croatia, at the beginning of the new millennium, was characterized by a strong competitive dynamics, which resulted in price war and erosion of margin. Under such circumstances, a small family-owned company did not have long-term prospects for continuing business. The takeover process was based on best practice rules and in accordance with generally accepted processes, and the interesting fact about this case is how the acquirer, for the first time in its history of more than one hundred takeovers, was in a situation that the target company realized the first desired price. The main reason for achieving the first proposed price lies in the purity of Ekus's performance throughout the years on the market. The acquisition has undoubtedly positively affected the volume and value of operations on the Croatian market, which is evident in the growth of all key parameters through observed post-acquisition period. In 2015, the last analysed year, there was a slight decline in relevant indicators, which is linked not only with eroded margins on which the management of the company will have to work in the future, but also with the growth in operating expenses, due to the financing of business development (e.g. the cost of new license, costs of new acquisitions, etc.). From the aspect of services, the company will continue to work on expanding the portfolio by listening to customers' needs. Regarding to that, particularly attractive field is energy management, where Atalian records its first global successes. It is indisputable that Atalian's integration model is a very successful story and example of good practice and any future development will be marked with the power of 95,000 employees worldwide.

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## ECONOMIC ASPECTS OF VIRTUAL SERVICES

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### ABSTRACT

*A virtual service can be defined as an economic activity using ICT to contact and match the demand for a given service (real or potential consumers) with its supply (providers of that service). Virtual services offer new examples of ICT support to business and form an important and fast-growing part of service market which, in turn, is a part of labour market. We claim that each market beside its demand and supply has its own organizer who sets, often informally, rules for its demand-supply game. These three market actors (people, institutions, firms, etc.) are connected by formal and/or informal relations what can be pictured as a triangle, called the market triple. For each virtual service the rules of the demand-supply game are strictly formalized and presented by the organizer as its application (computer program) which matches virtually, through an internet platform, the demand for a given service with the supply equalizing it. We study economic aspects of that matching, including a division of responsibility for the demand-supply game among the three market actors. By an example of Uber, we introduce a concept of the organizer and study its role on the Uber's market. We show that each virtual service beside its market has its own market triple which indicates who of the three actors does the matching. For instance, it is the supply side in the case of Uber, but the demand side in the case of Airbnb, while the organizer matches demand and supply on the Forex market. In conclusion, we discuss a contribution of virtual services to a development of the on-demand economy, and demonstrate how our methodology can be used in debates on the Uberisation of contemporary economy.*

**Keywords:** *Demand-supply game, Economic analysis of virtual services, Labour market, On-demand economy, Uberisation*

### 1. INTRODUCTION

Nowadays, almost all durable goods are produced under the on-demand production model studied extensively in economics and management science with their efficient methods for an estimation and forecast of a demand for such goods. These methods do not work in case of services (Anderson, Fornell and Rust, 1997), but the recent ICT developments (cloud computing, internet platforms, smartphones, internet of things, etc.) have enabled the emergence of new forms of value creation (Pihl, 2014; Pihl and Sandström, 2013), we call them new business models, under which a demand for a given good or service is quickly matched with the supply equalizing it. By an example of Uber, probably the best known virtual service, we outline in Chapter 2 our methodology for an analysis of such services. To make our paper self-contained, we provide all definitions and concepts needed for a complete description of our methodology. Uber's application matches almost simultaneously people who have money but no time, so they need (demand) a taxi, with people who have time but no money, therefore they offer (supply) their taxi service. Thus, Uber is an example of an on-demand service and one of the fastest growing start-ups worldwide, but its rise has also led to massive demonstrations by taxi drivers and legal actions to be discussed in Subchapter 2.3. Virtual services or on-demand services form a new very important part of the contemporary economy, called the shearing or collaborative economy (Petropoulos, 2017), which we will call the on-demand economy, intensively studied in social sciences. Following this path of reasoning, the paper studies an impact of the internet on service industries which comprise about 75% of the economy of developed nations, from the economic perspective.

Under the economic perspective, in Chapter 3, we look at virtual services as a market, an important and fast-growing part of service market which, in turn, is a part of labour market. We show first that each virtual service has its own market with its own demand-supply game described by rules of such a game, and next ask, who sets these rules? Answering this question, we introduce a concept of an organizer who sets, often informally, the rules for the demand-supply game considering experiences, technology, legal regulations or lack of such regulations, tradition, etc. Thus, each market beside its demand and supply has its own organizer, and these three market actors (people, firms, institutions, etc.) are connected by formal/informal relations what forms a triangle, called the market triple (Walukiewicz, 2014, pp. 715-717). The rules of the demand-supply game of a virtual service, in contrast to a typical service, are strictly formal and presented by the organizer as a computer program, an application of that virtual service which matches its demand with the supply equalizing it. The organizer as the owner of the application makes money from such matchings, organizing the on-demand service. In Subchapter 3.3 we will explain how virtual services change both theory and practice, in fact our life, contributing to a development of the on-demand economy. This discussion will be continued further in concluding Chapter 4. The paper is organised according to principle from the particular to the general. We begin with Uber as a very specific virtual service to explain in the next chapter economic aspects of those services. Uber has been prominent in the on-demand economy, so much that the changes it introduces in the whole economy have been referred to as Uberisation to be discussed in Chapter 4. Managerial aspects of virtual services are studied in a companion paper (Walukiewicz, 2018).

## **2. UBER**

First, we present a short history of Uber as a cab company, although its definition as a new business model (economic entity) is a subject of legal debates described in Subchapter 3.3, and next compare it with a typical cab company.

### **2.1. A short history**

According to Wikipedia, Uber was founded in 2009 as UberCab by Garrett Camp, and Travis Kalanick, both having some experiences with start-ups, while the first Uber's employee was hired in February 2010. Today, Uber is officially registered as Uber Technologies Inc. (in short Uber) as a peer-to-peer ridesharing, taxi cab, food delivery, and transportation network company headquartered in San Francisco, California. For methodological reasons, we restrict ourselves to cab service, only. The name "Uber" is a reference to the common (and somewhat colloquial) word "uber", meaning "topmost" or "super", and having its origins in the German word über, meaning "above". The first (beta) version of Uber's application (in short app) was launched in May 2010, while Uber's services and mobile app were officially launched in San Francisco in 2011. Originally, the app only allowed users to hail a black luxury car and the price was 1.5 times that of a taxi. Today, Uber's platforms can be accessed via its websites and mobile apps. For methodological reasons, we concentrate on mobile apps, only. In early 2015, the company hired many researchers from the robotics department of Carnegie Mellon University and established Uber's Advanced Technologies Center in the Strip District, Pittsburgh, Pennsylvania to develop self-driving cars. So, it is quite possible that within a few years from now, for example, I can open a door of a self-driving Uber's car by a key in my smartphone, and after touching a "start" key, have a ride from my hotel to a conference hall. During the ride, I can pass through my presentation for a forthcoming lecture. Finishing the ride at the front of the conference hall, I just close the cab's door. In December 2015, Uber was valued at \$68 billion, having taken just 6 years to surpass the valuation of 100-year-old companies like General Motors and Ford, as well as "traditional" transportation companies like

Hertz and Avis (Petroopoulos, 2016). Presently, Uber operates in more than 600 cities worldwide, although some cities take legal actions against it to be discussed in Subchapter 2.3.

## **2.2. Comparisons**

For methodological reasons, we suggest looking at Uber as a pure, very smart idea how to solve, at least partially, two problems everyone faces quite often: the lack of time or the lack of money. We remark that time is the most common resource equally distributed among people, while money is definitely the next one, but distributed unevenly. The common truth “Time is money.” has a very deep meaning in market economy to be discussed in subsequent chapter. And one more assumption, we compare Uber with a typical or traditional taxi company (TC) operated in the pre-Uber time, some 10-15 years ago. We deliberately choose such TC to demonstrate how revolutionary changes have been introduced by Uber in the taxi industry and more generally in labour market in a very short time. Today's TCs adopt many Uber's solutions what shows once more that worlds of “traditional” (offline) and online services converge. We compare these two companies under the following headings.

### *2.2.1. Four main capitals*

A typical TC needs four main capitals for its every day's operations: (1) financial capital (money in different forms needed to pay salaries, cover maintenance costs, pay taxes, etc.), (2) physical capital (land, buildings, cars, computers – hardware + software, furniture, etc.), (3) human capital associated with each employee (his or her education, experiences, talent, health and so on and even a sense of humour), and finally (4) social capital originating from formal/informal relations between employees both in positive sense (collaboration, trust, etc.) as well as in negative sense (personal fights, hypocrisy, etc.). It can be shown, that these four main capitals are orthogonal to each other (Walukiewicz, 2008; 2015) and form a taxonomy (Foucault, 1976) of the value of a given TC into four disjoint parts. Therefore, we can add values of these capitals without fears that something would be counted two or more times. Obviously, all main capitals should be measured in the same units, for instance in monetary units. Uber sets the price of the ride, and transactions happen through the online platform before the ride begins. 70-80% of each fare goes to the driver and the rest is kept by Uber as a profit and to cover all operation costs including cloud computing. Uber's pricing model is dynamic, changing the price to equalize supply with demand. We will study it in more general setting in Subchapter 3.3. If there is high demand for rides and few drivers on the road, the price increases. This motivates more drivers to work, and reduces the number of possible Uber's passengers. The app informs customers when “surge pricing” takes place, and the price of the increased fare, so there is no asymmetric information. The Economist describes a case when after a rock concert at New York's Madison Square Garden at 2 am there was a huge line of people waiting for cabs. Usually, at the pre-Uber time, servicing such a line took 4-5 hours. Uber with its dynamic pricing solved this problem in an hour or so. Thus, in theory, Uber does not need financial capital for its typical operations. The same can be said about Uber's physical capital. Uber's drivers are treated as independent contractors or as a separated one-man taxi companies, called by us human capitalists, who take a full responsibility of their production tools (cabs), professional developments, etc., and they are paid if and only if they ride Uber's consumers. So, in theory, Uber does not have human capital (workers) and, in consequence, it is not interested in their collaboration (social capital), even in the form of a drivers trade union. In practice, Uber has some financial capital, has or rent some offices (physical capital), hires some workers each with theirs own human capital, who collaborate creating Uber's social capital, but their values are negligible in comparison with those of typical TC. We conclude that in the on-demand economy is possible reduce substantially, in theory to zero, operation costs.

Under the next heading, we show that this reduction is obtained mostly at the expenses of social security of Uber's drivers.

#### *2.2.2. The demand-supply game*

In a typical TC, a receptionist matches the demand (request) for a given ride with an appropriate driver (supply) using his/her knowledge, experience, informal relations with drivers, etc. In fact, he/she acts also as a middleman between demand and supply and as a referee in the demand-supply game. Thus, Uber's app takes the role of a middleman, and we can conclude that the middleman as such vanishes in the market of virtual services. This very interesting observation will be discussed further on in the next chapter. A receptionist as a referee at any sports game should keep the game under control all the time and has the last word in whatsoever situation. Again, how Uber's app acts as such a referee will be discussed later on in more general context in the next chapter. In Subchapter 3.1 we show that it is meaningful to compare the demand-supply game with that of basketball played by the NBA (National Basketball Association) professionals.

#### *2.2.3. Local vs global*

A typical TC is by its definition local, while Uber is global because its app can be relatively easily modified to new legal or economic conditions. For instance, in many cities, Uber does not require that a driver has a taxi licence, owes a car or knows city street planning what was left to a driver's professional development. Both a smartphone or tablet, and a vehicle may be leased. We will come back to this question in the next chapter. Uber also demonstrates that in contrast to traditional economy, it is better to be the first than the best. To see this, assume for a moment that our TC has invented a new, more efficient method for cab servicing, so it is the best in a given region. For obvious reasons, this market advantage cannot last for a longer time. Uber's strategy to be the first in as many cities as possible is valid because an entrance threshold on a virtual taxi market is high.

### **2.3. Protests**

Uber as a new business model creates institutional turbulences, largely by circumventing existing rules, taxes and regulations. As a result, courts in some cities have banned or restricted Uber's services for engaging in unfair competition with regular taxis (see Wikipedia for the most interesting cases and protests). The key turbulence originates from the fact that a typical Uber driver is considered as a human capitalist (independent contractor), not as an employee. According to the contract, he or she is hired and paid for a given demand (ride request) and nothing else. Uber drivers are fully responsible for their production means (cars) and their professional development as well they take all risks connected with rides like traffic accidents. Since Uber drivers are not employees, they have not social benefits like paid vacations, paid sick, pension, overtime, etc., jointly called social security. In short, Uber reduces to zero social security of its drivers, but gives more flexibility of their work, because they can work at time and place they like as well as long they like. In Subchapter 3.3 we will consider this question in more general settings.

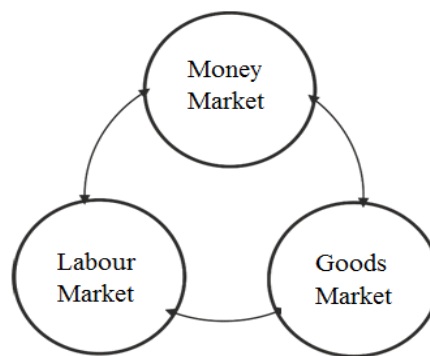
## **3. ECONOMIC APPROACH**

To study economic aspects of virtual services, we need a general definition of a market as the most universal mechanism for comparing values in a market economy. Any market transaction is realized when the value of demand equals the value of supply, when this mechanism shows that these two values are equal. Hence, a popular saying “Demand equals supply.” is a shorthand for the previous sentence and a very deep truth in economics. Therefore, in Subchapter 3.1, we redefine two very fundamental and tightly connected concepts of market and value.

In the next subchapter, we introduce a concept of the organizer of a given market and show that it plays a very important role in a market of virtual services. As an application of our methodology, in Subchapter 3.3, we consider three virtual service platforms: Uber from Chapter 2, Airbnb and Forex.

### 3.1. Two fundamental concepts

Following Keynes’s idea from 1936, we propose a model for a market economy as an interaction of three main markets: money market, labour market and goods market given in Figure 1. Each main market is represented in Figure 1 by a full circle to point out that we consider all issues connected with that particular market. Since in our considerations all main markets are of the same importance, then we picture them as circles of the same size. Market economy can be considered as a composition of, practically speaking, infinitely many different markets. These markets can be divided into three main groups shown in Figure 1. So Uber has its own market as a share in a virtual taxi market, which is a part of a market of all virtual services, which again is a part of a market of all services, which, in turn, is a part of the labour market shown in Figure 1. Similar analysis is possible for two remaining main markets.



*Figure 1: Market economy as an interaction of three main markets*

Figure 1 shows that each main market is under influence of the two remaining main markets, and vice versa it influences the two remaining main markets. Money, goods and labour are circulated between these three main markets in both direction – clockwise and anticlockwise – and no direction is distinguished as more important in our model of a market economy. This is a closed system, where everything depends on everything, what makes an analysis of such system extremely difficult and complex. Therefore, we, as all economists, will consider each market separately as an open system (black box), shown in Figure 2, with its two inputs (demand and supply) and one output (equilibrium). The meaning of parentheses in this figure will be explained a bit later. Following this way of reasoning, we note that while Figure 1 describes a whole market economy without any simplifying assumptions, Figure 2 models only a piece of market reality upon a number of sometimes very drastic simplifying assumptions, to be discussed further on.



*Figure 2: The input-output analysis of a market*



### 3.1.1. *The definition of a market*

To avoid misunderstandings, two remarks are in order before we define a market. First, we claim that only people as unique living organisms on the earth can define, form, build or modify different markets. This remark is necessary to remove a false impression connected with so called high frequency trading (HFT) where powerful computers sell and buy stocks at stock exchange or currencies at Forex market (for a short description of Forex see Subchapter 3.3). Computers are not main actors at the demand-supply game because skilled people program them, leaving the computers a role of tools in that game. In fact, people have been building markets from the very beginning of humanity and the HFT at stock exchange or the Forex market represents today's level of the market technology, and nothing else. Second, we use the concept of a (market) rule as general as possible. It can be a simple rule matching a vendor (supply) with a buyer (demand) when the price asked by the first is accepted by the second, but it can be a complex procedure (computer program) matching a Uber driver (supply) with a passenger (demand), or even more complex program matching a kidney donor (supply) with a patient recipient (demand) described by Roth, 2015. We define a (free) market as a set of rules for its demand-supply game, approved by its actors as (1) fair, (2) reasonable and (3) adequate, and regulating how a very deep truth – demand equals supply – should be understood on that market. A market is called free because its actors (people or institutions made by people) on both demand and supply sides are completely free (unconstrained) in their market decisions about making a fair exchange, for instance a dollar bill (demand) for an apple (supply) on the farmers' market. The exchange is fair because both actors on the demand and supply sides have the same access to information about market prices, and, more generally, about the rules of the demand-supply game. Thus, the first condition in our definition of a market originates from the farmers' market and its predecessors which exist from a very beginning of humanity. Generalizing, a market is a real or theoretically constructed place, called the marketplace, where fair exchanges between its demand and supply are executed under the obvious assumption that fair means fairness on the here and now basis. Saying it differently, people go to the farmers' markets because they know that their exchanges are fair and based on mutual trust, an important component of social capital (Bourdieu, 2002; Putnam, 2000; Walukiewicz, 2012). In the above example, a buyer trusts a vendor that the bought apple is not, for instance, rotten inside, and *vice versa* a vendor trusts a buyer that the received dollar bill is not a fake of the true money. As a volume and value of exchanges increase, then a mutual trust is not sufficient, and each big exchange is usually supported by a legal contract, which has to be reasonable in the light of all legal regulations valid here (on a given market) and now (presently). The rules of a demand-supply game should be described in an adequate way, understandable for all actors of a given market. Since our definition concerns a big variety of markets, then the number of rules is a unique common feature of that adequate description. Therefore, a set of rules is adequate if the number of rules is exactly as needed, we call it optimal, because its cardinality equals the minimum number of rules necessary to make the demand-supply game as efficient as possible here and now. The situation when there are not enough rules does not exist in practice for a long time, because as life pushes on, there will always be market actors to catch up and add the missing regulations or procedures. Thus, the under regulated markets, with the number of rules less than needed, do not exist. The opposite alternative is very challenging and often can be met in a contemporary economy. My paper (Walukiewicz, 2017a) discusses how to cope with the over-regulated labour market and shows that two remaining main markets are more and more over-regulated. Take Uber market as an example. Uber's app is written (programmed) to have its demand-supply game as efficient as possible. So, the number of rules for Uber market is optimal, if we consider it as an isolated market presented in Figure 2. But Uber is competing with traditional TCs, described in Subchapter 2.2 on a market of cab services, of which Uber market makes only a part. From the traditional cab service market point of view, the Uber

market is under regulated, and vice versa from the Uber market perspective, the traditional cab market is over-regulated, what indicates a direction for a possible coexistence of these two markets in the future to be discussed in Chapter 4.

### *3.1.2. The definition of a value*

To study virtual services, we have defined a market as general as possible, as the most universal mechanism for comparing values, the value of the demand with the value of the supply. This mechanism is constantly tuned up by market actors taking into account existing law, tradition, experience, technology, and last but not least economics as a science about how the equilibrium on different markets is reached (see Figure 2). Thus, in a market economy, values cannot be compared outside an appropriate market. We should remember that the term ‘value’ is a shorthand for ‘market value.’ Consequently, anything in the world has its own (market) value defined or assessed on an appropriate market, often, but not always, measured in monetary units. Thus finally, we define a value as an economic equivalent of anything around the world defined or assessed on an appropriate market. This definition may be interpreted using so-called economic scales. If an apple costs one dollar here and now, then the economic scales are balanced if we put that apple on one side and a dollar bill or four quarters or ten dimes, etc. on the other. This means that one dollar is the economic equivalent of the apple here and now. To be precise, we have to use the here and now phrase because the price of that apple can be completely different on the other farmers’ market (there) as well as at the other moment of time (then). Materially, an apple is heavier and occupies more space than a dollar bill, in which lies the difference between the economic equilibrium and the physical one. This definition also expresses common knowledge that the value of almost anything in the world is the amount of money – we call it ‘economic equivalent’ – that someone is ready to pay for it on a (free) relevant market. If we would like, for instance, to measure the extent (or the value) of welfare of a given country (Stiglitz et al 2010, Piketty, 2014), we need first to construct a model of, say, domestic welfare market that will include all the country’s resources (assets), be they tangible or intangible. Then the question, how this appropriate market looks like, or more precisely, how its demand-supply game looks like, naturally arises. We answer it in the next point.

### *3.1.3. The demand-supply game, once more*

Our definition of a market may be interpreted as a very specific basketball game between the Blues (demand) and the Reds (supply – see the parentheses in Figure 2) played on the basketball floor (the black box in Figure 2). In basketball, if at the end of the game, we have a draw, then the extra five minutes (overtime) of game is assigned. If after that overtime, we have a draw again, then the next extra overtime is assigned. And so on. In theory, both the basketball and the market game can be endless, and during the game, the difference in scores of the Blues (demand) and the Reds (supply) can be what so ever big, but the point is that at the end of the game we always have a draw (market equilibrium – see Figure 2). The rules of the basketball in Europe (here) differ from that of the NBA in the USA and Canada (there), and they have been changed many times to make the game more attractive to TV-viewers, in particular. We constantly use the ‘here and now’ phrase to point out that the rules, regulations, procedures, etc. of the market game are not stable over space, markets (here) and time (now), and name ‘demand equals supply’ a very deep truth because it is valid over all possible markets (space) and over time. In fact, any market works in equilibrium, that each (free) market transaction is executed when its demand equals its supply on the very here and now understanding of the verb ‘equal’. It is a dynamic, not a static equilibrium. At the market equilibrium, the difference between demand and supply, however measured, is not constantly zero, but fluctuates around zero over time, and, moreover, the reference level (the zero value) can be changed by rules (regulations) specific for a given market.

Thus on any market, the static equilibrium (the zero value) is constantly crashed and rebuilt as a draw in the basketball game. Therefore, the sentence ‘demand equals supply’ is the here and now equality, we will call it the core equality (in economics) because its meaning depends heavily on the market as a such (here) and time (now). Consequently, a market, understood as general as possible, is the here and now concept – a set of rules for the demand-supply game good here and now, not necessarily would be such there and then. The end of any sports game is strictly predefined either by the time, for instance four quarters of 12 minutes each in the NBA, or 10 minutes each in Europe, or by a result (score in Figure 2), e.g. winning two or three sets in tennis. For obvious reasons, the end of any demand-supply game is not predefined, and, moreover for many markets its output in Figure 2 is defined very generally. We will explain it by the following example. Many economic textbooks consider a market economy as a single market of goods and services. So in Figure 1, we have one circle instead of three ones. This approach is valid because money is a very specific, most fluent good, and any service is a specific labour. Then, as said, instead of one circle in Figure 1, we study a black box in Figure 2 with its two inputs (aggregated demand for all goods and services and their aggregated supply) and one output, an inflation, a commonly accepted measure of equilibrium at that market. In common opinion, a small inflation, say below 5%, is good, that is the market is in its equilibrium. In the case of a virtual services, the above description of the demand-supply game is too vague and cannot serve as a base for its app (computer program), but we will be back to this question in Subchapter 4.1 to discuss the concept of market equilibrium (inflation) in more general settings. Due to the recent ICT developments, the app of each virtual service almost instantly matches a given demand (request) for that service with the supply equalizing it. Thus, the demand-supply game can be stopped and any time and the market of that virtual service is in its equilibrium at any (moment of) time. Then the question naturally arises: who organize such a demand-supply game? We answer it in the next subchapter.

### **3.2. The market triple**

Studying different markets, we note that each market beside its demand and supply has its own organizer (people or institution set up by people) who sets and executes the rules of its demand-supply game taking into account technology, law, regulation, tradition, etc. These three market actors are connected by formal and/or informal relations between them, forming a triangle called the market triple. Thus, a market triple consists of the three constituent elements acting in a market game: demand (D), supply (S) and organizer (Org), as well as formal and/or informal relations and sharp/fuzzy boundaries among them. My paper (Walukiewicz, 2014) suggests a graphical representation of the market triple, shown in Figure 3, and provides descriptions of the six market triples representing the whole variety of existing markets. In other words, there are, practically speaking, infinitely many different markets, but only six different market structures or market triples. For the market triple in Figure 3, we use circles instead of vertices (points) to stress out that at this stage of our analysis of a given market, we consider all issues connected with each market actor. In a subsequent paper (Walukiewicz, 2018) devoted to managerial approach to virtual services, we introduce a number of simplifying assumptions in the description of each market actor, and then we substitute circles in the market triples by black boxes, similarly as we did in Figures 1 and 2.

*Figure following on the next page*

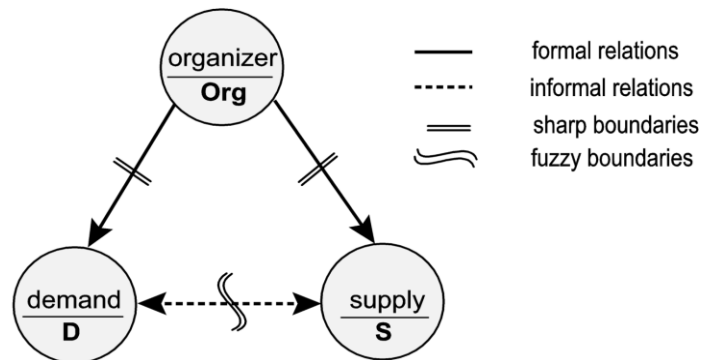


Figure 3: A universal model of the market triple

By an example of the farmers' market, treated as a predecessor of any other market, we explain how a universal model from Figure 3 should be used. From early stages of human civilization, the organizer Org of the farmers' market has been nothing but common sense, telling people where and when to organize a fair, how to put up stalls, make them accessible to customers (demand D) and easy to operate by sellers (supply S), etc. Today's organizer may operate within an organizational framework, supported by e.g. local administration, police, fire safety officials, etc. Among other duties, the organizer regulates the activity of buyers and sellers (open hours). So the relations between the organizer and demand or supply are formal as exhibited by solid arrows from Org to D or S in Figure 3. Someone buying a kilo of apples does not sign a formal contract with a seller; there must be a certain amount of trust (social capital) between them. Moreover, people usually come to a fair not only to buy but also to chat with each other or a vendor. So relations between demand D and supply S are informal – see double arrowed dashed line as a base of the market triple in Figure 3. The boundaries between the organizer, demand and supply, respectively, are sharp (there should be three straight double crossing lines in Figure 3) as their roles in the farmers' market are sharply different. So, to have in Figure 3 the market triple of the farmers' market, we must substitute the waving double crossing line between D and S by the straight double crossing line. One may doubt at this point that boundaries between demand and supply are sharp enough because a seller may sometimes buy something in his or her marketplace. In fact, it only proves the rule of the farmer' market here and now. As anyone, a buyer or seller comes and acts in a farmers' market as a free, conscious and fully responsible individual, and then he or she agrees that its rules are fair, reasonable and adequately account for the equality of demand and supply here and now as our definition of market says. The market triple of the farmers' market looks like an equilateral triangle. If we interpret an angle of this triangle as a rough measure of a responsibility of a given actor for the demand-supply game, then we can conclude that at the farmers' market, this responsibility is equally distributed between its demand, supply and organizer.

### 3.3. Three examples of virtual service markets

As an application of our methodology, we study markets of three virtual services. For each market we discuss its market triple and its demand-supply game.

#### 3.3.1. The Uber market

Uber as a company is the owner of the app for matching almost instantly a given request for a taxi (demand) with an particular driver (supply equalizing that demand), who is chosen among drivers available at the request time. Since the Uber app acts also as a referee at the demand-supply game, then it keeps the game under control all the time and has an answer to any request for a taxi. The statement like “We cannot serve your request.” is, obviously, one of possible answers. Thus, on the Uber market, each ride request is considered as a closed separated unite to be answered by the app, and Uber as the owner of the app is a natural organizer of the

demand-supply game on that market. The Uber app is based on a centralized matching algorithm which matches a ride request with a particular driver and the driver must then agree to provide the service. Next, the passenger is informed about the profile of the driver and the ride fare before deciding whether to confirm the ride. Thus, the supply side (organizer Org + supply S) solves the core equation (demand equals supply) on that market, and presents the solution (a particular driver) to the demand (potential passenger) who can accept it or not. The market triple of the Uber market, pictured in Figure 4, looks like a triangle with the right angle at supply S because the supply side solves the core equation on that market. The sides of the market triple in Figure 4 are two arrowed solid segments to show that the relations between the market actors are strictly formal, described by the app, and the information between them goes in both directions. Thus, the market triple of the Uber market indicates that its supply side (organizer Org + supply S) are more responsible for the demand-supply game than its demand D.

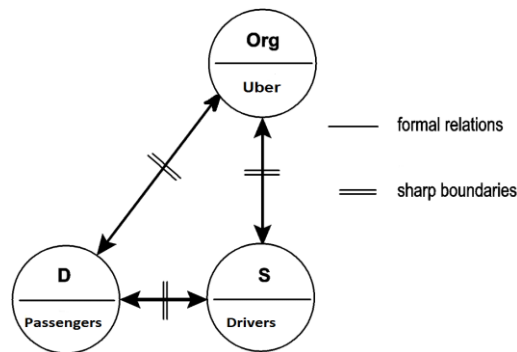


Figure 4: The market triple of the Uber market

As said, there is a large legal debate whether Uber, as a new business model and up to some extent a model for all virtual services, is (1) a typical taxi company or (2) an information society service company (Petropoulis, 2017) enjoying the freedom to provide service under lighter business authorization, licensing obligations or minimum quality standard requirements than a typical taxi company. Petropoulis, 2017 formulates two criteria that separate (1) from (2). The first criterion examines whether the drivers as the supply S are independent from the Uber app (organizer Org), whether they can work under the other apps like Lyft, or, in our terminology, whether there exist sharp boundaries between the organizer and supply as shown in Figure 4. The second criterion can be formulated as a question of who controls the quality of service – Uber through its app or the drivers as the supply? This question can be reformulated too as the existence or not the sharp boundaries between the organizer and supply. We come back to this issue in Subchapter 4.5 where we will discuss the convergence of traditional (offline) and online markets.

### 3.3.2. The Airbnb market

Airbnb is an American platform for booking by consumers (demand), we call them tourists, short stays in the other people's apartments or houses (supply). In contrast to the Uber case, the Airbnb app is based on a decentralized matching algorithm in which the tourist can simultaneously observe all potential suppliers and the price at which each of them is willing to supply the service. Only after reviewing all of this information does, the tourist selects a service provider. The suppliers of accommodation have the liberty to set the price of the service as well as some of its conditions (minimum or maximum duration of the stay, cleaning fee, etc.) The organizer keeps the demand-supply game under control all the time and facilitates payment and charges fees in the form of a percentage of the value of the transaction. In contrast to the Uber case, the demand side (organizer Org + demand D) solves the core equation choosing or not one place from a few ones offered by the supply S. Therefore the market triple of the Airbnb

market, pictured in Figure 5, looks like a triangle with the right angle at demand D. Similar to the Uber case, all relations are formal and defined by the Airbnb app, and all boundaries are sharp. Thus, the market triple of the Airbnb market indicates that its demand side (organizer Org + demand D) are more responsible for the demand-supply game than its supply S.

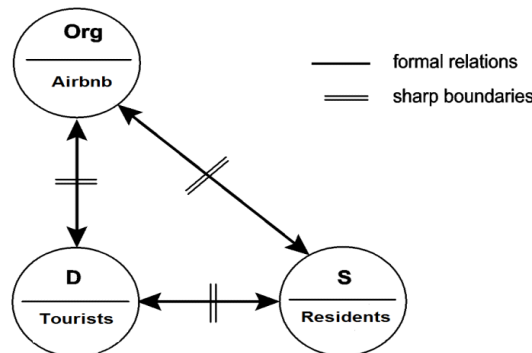


Figure 5: The market triple of the Airbnb market

The centralized matching algorithm is more suitable in the Uber market because the demand for urban rides is more homogeneous than that for accommodations. The main interest of each passenger is to arrive at his/her destination at a short time, and usually he/she cares little about the comfort of the ride or the drivers professional profile. The definition of the sharp boundaries in Figure 5 may be of some help in legal debates on relations between Airbnb and the hotel industry to be discussed in Subchapter 4.4 in more general settings.

### 3.3.3. The Forex market

The Forex (foreign exchange) market (in short Forex) is a new, fast-growing market entirely based on the internet. Unlike the stock and futures markets that have their own organizational structures and are housed in central physical exchanges, the Forex is an over-the-counter market that is completely decentralized and housed electronically. In common opinion, it is one of the largest market in the world. About 90% of its turnover is generated by currency speculators (McLeod, 2014) – we call them traders – capitalizing on price movements. Before the internet era, financial operations in foreign currencies were done mostly by (international) banks. Nowadays, the internet is a firm base for the Forex market, i.e. a worldwide place where currency pairs are traded 24 hours for five and a half days a week, from Monday early morning in Tokyo until Friday late afternoon in New York. Forex is the first market where it is possible to open the sell and buy positions at the same time, and therefore it is possible to make a profit while the price of the given currency either grows or drops (Lien, 2008). To be more specific we take eToro (<http://www.etoro.com>, see also Pan, Altshuler & Pentland, 2012; Wohlgemuth, Bergerb and Wenzel, 2016), currently one of the world's largest social trading platform (computer program), as a base for our study. eToro allows investors to trade currencies, commodities, indices, and stocks. For methodological reasons, we restrict ourselves to retail traders (investors) and to only one financial instrument – currencies. The paper by Doering, Neumann & Paul, 2015 compares Forex with the other financial markets in terms of institutional settings and empirical evidence. On the Forex market, traders almost simultaneously sell (supply) or buy (demand) currencies. Thus, on the Forex market, the demand is identical with the supply, i.e. the same traders are acting on its both demand and supply side. Therefore, the relations between the demand and supply are informal, and the boundaries between them are fuzzy as shown in Figure 6a. The platform eToro is a natural organizer of the demand-supply game on the considered part of the Forex market and its relations with both demand and supply are only formal, described to the smallest detail by the

eToro application. The same can be said about the sharp boundaries between the organizer and both demand and supply (see Figure 6a).

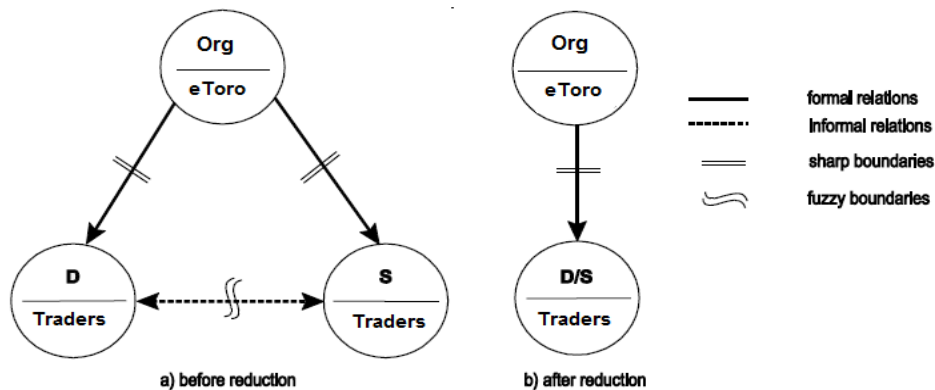


Figure 6: The market triple of the Forex market

My paper (Walukiewicz, 2014) describes the reduction procedure under which we substitute (reduce) two market actors connected by informal relations and with fuzzy boundaries between them, like the base DS of the market triple in Figure 6a, by a combined actor, like D/S in Figure 6b. Thus, the market triple of the Forex market is a vertical segment shown in Figure 6b because the demand is identical with the supply on that particular market. Therefore, looking in practice at the structure of the Forex market we see the vertical segment, not a triangle. In consequence, the organizer (eToro) alone takes all responsibility of the demand-supply game on that market, and both demand and supply should act strictly according to the rules of that game prescribed in the eToro app. Obviously, the traders buying or selling currencies may make huge profits or heavy losses, but the organizer always make money (profit) charging a fee in the form of a percentage of the value of each transaction.

#### 4. CONCLUSION

Our main conclusion says that in the case of virtual services the core equation demand equals supply can be easily solved. The recent ICT developments have reduced dramatically the computing costs and enabled the emergence of new business models under which the demand for given goods or services is almost instantly matched with the supply equalizing it. Hence, the on-demand economy is at its equilibrium since its demand, however measured, equals supply at any (moment of) time. This is a fundamental result and we will discuss its impact under the following headings.

##### 4.1. There will no inflation in the developed economies

Nowadays physical currency (notes and coins) make up a tiny part of about 10 percent of all money circulated in the American economy, while in Britain this part is even smaller – around three percent. The rest is simply computer records of balances in accounts, either at a bank (in the case of firms and individuals) or at the central bank as the organizer of the money market (Chapter 3). Since electronic payment is easier – most recently with the launch of a ‘contactless payment’ system – then economists are beginning to talk about a cashless economy. Since almost all transactions in developed economies are recorded, than the estimation of the demand for money as well as the money supply at any moment of time is far easier than it was 10-15 years ago. The inflation can be defined as the relative difference between the demand for money and the money supply on the market of goods and services (Subchapter 3.1) measured in percentage points of the money supply calculated for a given moment of time.

Since we know both these values with a sufficient accuracy, then we can keep the inflation under control, say below 5%, at any moment of time (Walukiewicz, 2017b). The ten years which passed since the financial crises of 2007-09 support my claim. The control of inflation in developed economies can be compared with a weather forecast. The recent ICT developments have enabled us to predict tomorrow's rain with a few minutes accuracy. So nowadays, the inflation can be considered as an economic weather.

#### **4.2. The division of labour, knowledge and pleasure**

From the very beginning of humanity, people work to live because of an economic necessity, and they very early recognize that a division of labour and knowledge makes their life easier. But it puts also some obvious restrictions on a personal freedom of individuals. Therefore, people always look for a balance between the economic necessity and personal freedom, which always has a here and now character and is linked with pleasure. Take Uber (Chapter 2) as an example. Since the Uber's drivers work when and how long they want, then it is rational to assume that such a work provides them with more pleasure than the work of drivers in a typical TC on shifts. Generalizing, we claim that the on-demand economy can be thought as the (so far) most developed division of labour, knowledge and pleasure in which an importance of the division of pleasure is growing (Walukiewicz, 2012) to be discussed in the next subchapter.

#### **4.3. The Uberisation of economy**

The socio-economic development can be thought as a continuous improvement of the division of labour, knowledge and pleasure, and now we show now that the on-demand economy is a natural phase of that process. Again, take Uber as an example. First of all, it facilitates the demand-supply game because with the help of the ICT demand equals supply more easily than in a traditional market economy. Second, without Uber some number of cars would be parked idle, and some number of drivers would be jobless, not to mention some number of people wasting their time for longer trips by private cars. Thus, the Uberisation of the contemporary economy is an improvement of the division of labour, knowledge and pleasure, and it is a higher stage of a market economy. Two powerful forces are pushing a market economy into the on-demand phase. The first is the ICT developments discussed in Chapter 1, and the second, are the changings social habits. The internet has changed our life completely. Nowadays, many of us can work and consume (buy) 24 hours a day, seven days a week, without prescribed holidays, etc. So, the natural rhythm of days and nights, seasons of the year, etc. is not so important as it used to be. The more important is the core equation that demand equals supply. Thus in general, the on-demand economy is based on more efficient division of labour, knowledge and pleasure and it is a natural phase of the continues improvement of that process. Today's world is increasingly being divided between people, who have money but no time and people, who have time but no money. The on-demand economy provides a way for these two groups to trade with each other. Definitely such a trade is impossible without the ICT. So we conclude that the ICT and the social habits are two sides of the same coin called the on-demand economy.

#### **4.4. The offline and online markets converge**

The on-demand economy is already provoking political debate, with Uber at the centre of it. Many cities have banned the ride-sharing company on safety or regulatory grounds. All these actions demonstrate how substantially or revolutionary the on-demand economy changes the rules of the demand-supply game in both labour and goods market. Our findings discussed in Subchapter 4.1 demonstrate that this is also true in the case of the money market. Consumers and workers who prefer work flexibility over social security are definitely winners. But workers, who prefer security over flexibility, for instance middle-aged lawyers, doctors or taxi drivers, feel justifiable threatened.



The on-demand economy as an individualistic approach brings more unfairness, since many contract workers will never built up their pensions. The on-demand economy clearly imposes more risk on individuals treated as human capitalists (see Chapter 2). People will have to master multiple skills if they are to survive in such a world – and keep those skills up to date, that is to take more responsibility for educating themselves. People will also have to learn how to sell themselves, through personal networking and social media to be an active players in the demand-supply game in the labour market. The emergence of platforms like Uber makes the market more competitive and benefits consumers through lower prices and better quality services. Liberalisation of the taxi industry may help taxi drivers to compete more effectively with Uber, by improving their services. At the same time, switching costs should be low so that Uber drivers are able to work for multiple companies. This should facilitate the convergence of traditional (offline) and online markets. In conclusion, I think we should consider three main markets, shown in Figure 1, as a mixture of traditional and on-demand economies, and proportions of this mixture depend heavily on people (human capitalists) as an active players in the demand-supply game on those markets.

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## THE INFLUENCE OF AN EXCESSIVE PUBLIC DEBT ON THE ECONOMIC TRENDS IN THE REPUBLIC OF CROATIA

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### ABSTRACT

*Lately, the problem of a public debt takes place as a central macroeconomic question. The level of public debt of the Republic of Croatia, and especially the dynamics of its growth, indicates a troublesome situation in the system of public finances. The instability of the financial system and the increase in government spending have been manifested in the strengthening of the state debt borrowing increase, whose sources of funding are already largely limited due to the financial crisis. With the goal of settling incoming debts and stabilizing the system, the economy is turning to borrowing either on the domestic or foreign markets. Previous and current situation in the Republic of Croatia suggests the existence of excessive macroeconomic imbalances caused largely by the existence of excessive levels of public debt and the profound financial crisis, which ultimately reflected on the system of the public finances. Therefore, there is a need for applying special policies and strategies for managing public debt that would lead to stabilization of state indebtedness using tailored measures on the financial market. This paper deals with the impact of public debt on the economy of the Republic of Croatia, as well as the possible measures of stabilization of the system. Given the former research, the emphasis is placed on the oscillating path of public debt growth and the budget deficit, as well as the consequences of such negative movements have on the economy. The conclusion that is to be drawn is that every measure of stabilization of the system has its positive and negative effect on the economy. What consequences will prevail primarily depends on a combination of measures that will apply economic policy makers.*

**Keywords:** *public debt, government deficits, GDP, stabilization measures, sustainability*

### 1. INTRODUCTION

Croatian economic policy is based on the neglect of production and exports and encouraging consumption and imports what resulted in greater state indebtedness, indebtedness of the enterprises and also of the general population. In recent years, high public spending and investments have created a growing trajectory, the obligations of consolidated state to the private sector (population), but for the most part they are refinanced from the sources of domestic banks on the one hand, or it's done by direct borrowing from international private and institutional creditors on the other. During the course of the last few years, there is an indication on a consecutive growth of the so-called "twin deficit" (deficits of the foreign trade balance and the budget deficit) that seems to grossly exceed the level of a sustainability that were set by the Maastricht convergence criterion. Therefore, the level of the public debt is an important macroeconomic component that affects the functioning of the entire economy and also serves for the achievement of the economic prosperity. The goal of this paper is to present the measures and policies that lead to the stabilization of the public sector. In the paper, after the theoretical definitions of terms, a brief analysis of the trend on the Croatian public debt trends, during the

course of the recent years, has been presented. The consequences of excessive indebtedness, as well as an overview of the stabilization measures are presented in the last chapter of the paper. As for the methods, the descriptive method and method of analysis were used in the methodological sense, with findings that were put forward and based upon selective sources.

## **2. THEORETICAL APPROACH TO PUBLIC DEBT**

Public debt on its theoretical basis is the cumulative of the current budget deficits, so in a certain way it represents the sum of the leading of the state fiscal policy. In theoretical literature there are many different definitions of public debt. Public debt is the total indebtedness of the state that the state records towards its domestic or foreign creditors at a given moment in time (Kesner - Škreb, 1994: 669). Government Finance Statistical Methodology defines the public debt as the sum of debts of the state budget, extra-budgetary funds and agencies, as well as the local and regional self-governmental units, i.e. as a general state debt. Public debt can be regarded as an extraordinary state income, which is mostly used to finance future activities of the state and serves for the implementation of economy policy measures. Namely, the definition of public debt in the Republic of Croatia derives from the Budget Act (Official Gazette Nos. 87/08, 136/12, 15/15), which among other things states that the total public sector debt includes: debts of the local and regional governmental units, social security funds, and the general government debt<sup>1</sup>. When looking at the possibilities of reducing the cost of borrowing there is a broad understanding that a broad and profound primary and secondary market levels contributes to reducing the cost of public debt. In accordance with the aforementioned, it is possible to perceive several terms that are closely related to the very concept of a public debt. One such term is a state deficit or a budget deficit. The budget deficit represents the net borrowing, i.e. the realization of negative accounting items by net lending during the past year (Rosen, 1999:458). It should be noted that the state deficit represents a flow variable during a real-time as opposed to the public debt, which makes debt variable at a certain point; that is, as an instrument for solving and financing a deficit debt. Given that the deficit of the state budget is only a residual one, the differences between total revenues and total government expenditures are clear and it is very difficult to determine its influence on the economy as a whole as well as on the other economic parameters. What impact will the budget deficit have on the economy alone and on other economic indicators, depend first of all on the mode of the government borrowing. During collecting of funds, the country may borrow on the domestic financial market, within the local population (internal public debt) and on foreign financial market (external public debt). The main advantage of internal borrowing is that all the funds remain in the country, and thus the possibility of bringing the country in illiquid situation is reduced in the case when increasing the debt abroad, which also leads to loss of efficiency due to imposed tax that is required for the payment of interest to the owners of government bonds. Foreign debt offer relatively lower interest rates, which also causes the drain of part of the income for the needs of service, which in turn results in reduction of resources necessary for the economic growth. Therefore, the public debt can be understood as a result of high and permanent budget deficits, which are most often the result of further borrowing in the country or abroad (Švaljek, 1999: 162). By implementing the fiscal consolidation<sup>2</sup> as well as reduction in growth of general government debt will undoubtedly result in a reduction in the deficit which, on the other hand, leads to decline of further borrowing. It's necessary to note that the implementation of fiscal

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<sup>1</sup> In accordance with the methodology of the European System of National and Regional Authorities (ESA, 2010), so called Maastricht criterion of general government debt represents gross nominal consolidated debt excluding accrue interest. Under the concept of a general state, all private and public enterprises, as well as all budgetary and extra-budgetary companies that are under control of a state body, are understood.

<sup>2</sup> Fiscal consolidation is a measure in an economic policy whose primary purpose is to "constrain", i.e. to stabilize high budget deficits, popular as a saving measure. Nowadays, the IMF, as well as the EC insists on the implementation of the same measures, especially in times of crisis.

consolidation and taking care of the fiscal balance, as well as the dynamics of public debt is very important, because the dominant borrowing and galloping pace of growth of the same undoubtedly jeopardize the stability of the economy. The accelerated budget deficit, as well as the growing public debt is burden for the future generations, because they pay taxes that will serve for the debt repayment. Very likely, the population of underdeveloped countries will find it harder to bear such fiscal burdens; it is assumed the further accumulation of debts that have arisen from the debt. On the contrary, it is anticipated that the future generations of "wealthy and healthy" economies will increasingly be able to cope with repayment of public debt, which is contributed by the positive economic situation of such individual states.

### **3. THE LIMITS OF SUSTAINABILITY OF PUBLIC LOANS AND THEIR IMPACT ON THE ECONOMY**

Today, a seemingly very simple explanation of the impact of public debt on economic activity is becoming increasingly unknown to the contemporary economic theory. Contemporary economic theory assumes that the main limitation of economic policy is excessive budget deficit which increases from year to year, what finally leads to limitations of country's liquidity capacity towards creditors. However, the opinions of the old economic schools on the impact of public debt on the economic situation<sup>3</sup> are different. Namely, neoclassicists start from the assumption of a long-term situation; they believe that society is based on long-term forecasts of the consumption itself. That is, the budget deficit and the public debt are considered as negative economical factors that ultimately destroy economic stability and prevent economic growth. They also consider that exist the limits of public borrowing that are reflected, on one hand, in decline and slowdown of the economy, which at the same time creates the point when the investments are crowded out, and on the other, the rise in interest rates, which is again a major constraint on the economy. The advocates of the traditional, classical economic schools consider the emergence of public debt and budget deficits over short-term period as justifiable, with the short-term needs but as a permanent existence when financing long-term productive projects<sup>4</sup> Eisner (1989:80). Here is necessary to note how recent macroeconomic research shows how the budget deficit and public debt have a big influence on the economy, which immediately and similarly dismisses the Ricardian paradigm, while the remaining paradigms provide analytical and theoretical framework for the analysis. Today's newer considerations "should be based on the fact that, in order to assess the impact of fiscal policy on aggregate demand, it is necessary to develop a model of economy and to specify a reference policy" (Buiter, 1985: 14). Stimulated by the knowledge and theories so far, numerous research has been undertaken to finally define the impact of public debt on the economy i.e., in order to set up a unique thesis that will in a unique way respond to the sustainability of a public debt. One of such studies were made by Babić and Krznar, at al. (2003:78) which have set the framework for the additional analysis of the sustainability of foreign debt and they have shown that public debt consists of the basic medium-term external debt (including the key assumptions projection and disintegration of changes in foreign debt) and sensitivity analysis of the share of external debt in GDP. In a theoretical aspect, it can be said that debt is sustainable at any time in which the debtor is able to settle all liabilities with an acceptable status on the income and expense side over a longer period of time. The debt sustainability depends on the market expectation and movement of these variables (Mihajlik, 2003).

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<sup>3</sup> Economic literature distinguishes three economic schools of the economic effects of fiscal deficits and public debt: Keynesian, Ricardian and Neoclassical school (Bernheim, 1989:56).

<sup>4</sup> Classical economic theories are considered by the Keynesian school, which essentially predates Neoclassical economic theory, within which the Keynesians leave the issue of influence open. Thus, they leave the possibility that the deficit yields either positive or negative effects, depending on the situation. Beside Keynesian theory, classical theory includes Ricardian School, which among other things advocates realization that the very policy of the fiscal deficit has almost no effect on economic developments, i.e. on the economy itself.

During the 1990s, with the development of the international market and the liberalization of financial markets, there was a shift to financing under market conditions whether it was borrowing from banks or issuing bonds. Economy history points to the lack of universal boundaries of the sustainability of public debt, as evidenced by the many historical experiences of European countries that were well supported the excessive budget deficits and their public debt. However, the limits of public debt sustainability have been reached in situations when the fiscal policy objectives are at stake. For it is very hard to follow, i.e. to set the upper limit of sustainability in a very precise way, often are used several guidelines to indicate whether the public debt limit has been reached. There are three basic categories of measures: (1) the assessment method that uses solvent approach, (2) methods of tracking the movement of debt in GDP, and (3) methods of analyses of time series. All three of these methods explain the sustainability of economic policy in its own unique way, i.e. through the action of particular economic variables (Heinemann, 1992). Method of evaluation by adopting the solvency approach on unique way interpret public debt sustainability via the general state budget balance in which sustainability, i.e. the debt limit depends on the quotient of real GDP, as well as the growth rate of the interest rate on issued bonds. The proposed model can be interpreted as follows:

$$b^p = (i - g^n) * dt$$

where the  $b^p$  is actual balance of the state budget from which interest is exempted due to the debt entry,  $i$  is the yield on the given bonds, and  $dt$  represents the quotient of real GDP and public debt (HUP, Croatian Employer's Association, 2010).

The equation shows the inverse proportional ratio of interest rate ( $i$ ) and the real GDP; for the interest rate on issued government bonds is higher, the total real GDP is lower, i.e. the total state debt (public debt) will be more difficult to bear, and there will be necessary to increase budget surplus to compensate for the normal economic activities. The main disadvantage of this method is that by using this method the sustainability criterion indicates that the growth rate of debt is lower than the level of interest rate. The share of total debt and GDP, as well as the share of surpluses in total GDP, must always be in progressive proportions in order to keep the public debt share sustainable and below the level of yield on the bonds. Methods of tracking of the movement of the share of debt in GDP starts from the assumption that the sustainability of public debt does not depend on the level of budget deficits, i.e. the budget deficit should not be equal to zero. To put it simply, public debt is sustainable when the share of public debt in GDP ( $dt$ ) is equal to the sum of growth in price ( $p$ ) and the real GDP (Gordon, 1993). The aforementioned method is mostly applied when comparing the indebtedness of the economy. Based on this method, numerous studies have been done, from which stemmed that the sustainability of public debt under this method depends on the accepted and rejected hypothesis based on the testing of individual economic variables. In short, if the tested hypothesis is accepted, public debt is sustainable, or if the same is rejected, the debt is unsustainable. When applying any of the above mentioned methods, there may appear greater or lesser deviations, whose values depends on how individual policy makers react, and whose work is once again valued by the potential investors. In other words, creditors will estimate the amount of public debt on the basis of which they will bring the decision of investing or not to invest in state securities. It should be noted that the very conclusion of sustainability actually depends on the objective viewpoint of an individual subject whose scenarios depend on the degree of

development of particular economies.<sup>5</sup> Although they are very specific in terms when explaining the sustainability of the public debt of this particular method, they increasingly lose their significance, i.e. they are exposed to the increasingly frequent criticisms of particular economic theorists, because of their very point of view. In other words, for the explained methods, their knowledge is based on the past activities, which also leads to greater deviations from the unique and accurate indicators, and hence the assessment of future trends varies.

#### 4. ANALYSIS OF ECONOMIC TRENDS IN THE REPUBLIC OF CROATIA

High levels of fiscal deficits, high levels of debt and the need to control the growing risks when servicing debt have created the need to establish a suitable policy to reduce public debt. The balances of a less developed economy are more likely to be hit by financial shock than in some highly developed countries (OECD, 2012). The reason for this is poorly developed financial system and difficult borrowing. In its research, the European Commission also confirmed the rapid state of affairs (European Commission, 2016), when within the research the Republic of Croatia was ranked among the countries with a relatively high level of public debt, and within the debt existence of excessive macroeconomic imbalances that has been identified. In Table 1 is shown the structure and level of Croatian public debt trends from the years 2014 through 2017.

*Table 1: General Government Debt in the period from 2014 to 2017(CNB, 2017)*

DESCRIPTION	2014.	2015.	2016.	2017. (04)
Internal general government debt	165.868,4	171.464,6	180.590,7	185.064,8
Internal central government debt	160.889,2	166.771,6	176.24,,6	180.942,9
Internal debt of social security funds	3,5	1,9	0,6	0,2
Internal local government debt	5.174,5	4.959,0	4.673,2	4.465,4
Foreign general government debt	118.314,8	118.116,3	108.484,9	106.444,6
Foreign central government debt	117.833,8	117.702,6	108.109,6	106.073,6
Foreign debt of social security funds	0,0	0,0	0,0	0,0
Foreign debt of the local government	481,0	413,6	375,3	371,0
Total general government debt	284.183,2	289.580,8	289.075,5	291.509,4

Cyclical disturbance of the economic situation followed by the continuous growth of negative financial indicators in Croatia was reported for the period 2008-2015, which resulted in a rapid and expansive growth of total debt, - which in this period has been increased by almost 47,1% of GDP. This dramatic increase of negative economic indicators represents a major burden and overall economic policy, as well as for the already weakened system of the public finance. Exit from the six-year recession started in 2015, it was felt in 2016, and deficit of the general government was decreased to 2,75 billion kunas, i.e. 0,8% of GDP (Ministry of Finance, 2017c: 03). Such positive economic trends is the consequence of a noticeable increase in total state revenues, growth of the economic activity, export growth and the growth of the real GDP, as well as a drop in the unemployment rate, reflecting moderate fluctuations in the overall government expenditures.

<sup>5</sup> If the creditor of the particular undeveloped country doubts the ability to repay their country's debt, logically he will suspend granting of further loans and will increase the premium on interest for the certain risk of their repayment. Domestic creditors can, for example, expect growth in taxes and future emission of money, both in terms of inflation and devaluation, all of which can lead to decrease in domestic currency savings, taking out of the capital and eventually led to the financial crisis or the balance of payments crisis. This scenario is common in the countries with the underdeveloped financial markets (IMF Institute, 1993). Masson (1995) explains that in countries with the developed financial markets, an unsustainable borrowing policy can cause an offer in government bond offerings, what will lead to fall of their prices and rise of the interest rate. State creditors will therefore require even higher interest rates if the bonds were not indexed, and as a protection from a possible loss, they will also require protection through the risk premiums.

The latest CNB report (Croatian National Bank, 2017b, 34) indicates a decrease of the overall budget deficit by 0,8% of GDP (-2,8 billion kunas), what is by 8,6 billion kunas less than in 2015. It should be emphasised that after six years in 2016 the first major decrease in general government debt was recorded; it amounted 289,1 billion kunas (84,2% of GDP), which is for half a million kunas less than in 2015. When one compares the amount of the total government revenue i.e. expenditures by the end of 2016, the apparent increase of total government revenue for 8,2% (12,4 billion kunas) and total government expenditure by 2,3% (3,9 billion kunas) compared to 2015 has become visible, as can be illustrated in Table 2.

*Table 2: Illustration of excessive deficit and general government debt from 2013-2016 (ESA, 2010)*

DESCRIPTION	2013		2014		2015		2016	
	mil. kn.	%	mil. kn.	%	mil. kn.	%	mil. kn.	%
GROSS DOMESTIC PRODUCT	329.571	100	329.109	100	333.837	100	343.195	100
General government deficit	-17,575	-5,3	-17,726	-5,4	-11,346	-3,4	-2,757	-0,8
Central government deficit	19.295	-5,9	-18,750	-5,7	-11,028	-3,3	3507	-1,0
Local government deficit	26,00	0,0	-304	0,1	197	0,1	-117	0,0
Social Security Funds	1.694	0,5	1.328	0,4	-514	-0,2	867	0,3
GENERAL GOVERNMENT DEBT	270.841	82,2	284.183	86,6	289.581	86,7	289.076	84,2

When it comes to achievements during 2017, the Ministry of Finance (Ministry of Finance, 2001) points out that the budget deficit growth continued during the first quarter of this year when compared to the same period of the last year. Likewise they cited, how the growth of total state revenues also continued throughout this year as a result of increasing total transfers from the EU budget. At the same time, the annual growth of consolidated general government expenditures (according to the GFS 2001 methodology) was much stronger in relation to revenue growth, as a result of the growth of total government grants and subsidies. In the same report, Croatian National Bank states that the need for the borrowing during the 2018 will grow, and it will largely satisfy the needs on the domestic market. It also states that during the mid of 2018 the Republic of Croatia will collect about 10% of the GDP, what is mostly related to treasury bills (1,5 billion EUR of treasury bills with the payment due in November), bank debt as well as interest payments on previous loans.

## 5. PROJECTION OF THE STABILIZATION POLICY FOR THE PERIOD 2018-2020

As the former economic policy measures proved ineffective in the sense of stabilization of the public finance and start-up the economy before economic policy makers, as well as the Government as the holder of executive power, there exists a major challenge with regard to the adoption of measures of fiscal consolidation that will, first of all, - create the conditions for a long-term and steady recovery of the economy, which would ultimately drive the economic growth. Consequently, it can be concluded that the emphasis has been put on a set of fiscal consolidation measures for the next three-year period. Therefore, the Government of the Republic of Croatia within the guidelines for the period till the year 2020 (Government of the Republic of Croatia, 2017:05) emphasizes that in the upcoming medium term period the macroeconomic policy will focus on exploiting positive impulses from the international and domestic environment and on creating the foundation for lasting and stable economic growth, as well as accelerating the growth rate of potential GDP. However, it should be emphasised that such fiscal consolidation measures must first meet some of the basic requirements: (1) fiscal



consolidation measures should not undermine former economic growth; (2) implementing measures should be designed in a way to reduce corporate tax burden and also signalling to the international investment public about the change of the course of the Croatian economy; (3) leaving space for further reform measures in the field of the domestic economy (Government of the Republic of Croatia, 2017:03). According to the aforementioned guidelines, the Ministry of Finance (2017b:23) foresees a reduction of the planned deficit in accordance to the traditional methodology from 1% of GDP in 2018 to 0,5% of GDP in 2019, while in 2020, it is expected an excess of 0,3% of GDP. Therefore, the biggest contribution to the overall deficit of the general budget will be given by the state budget, which will have a deficit of 1,3% of GDP in 2018; 0,8% of GDP in 2019, and in 2020 for the deficit is expected to be balanced. The surplus of revenues over expenditures of extra-budgetary users during the observed medium-term period will amount on average 0,2% of GDP, while the local and regional self-government units will record a surplus of 0,1% of GDP annually.

*Table 3: Projected budget for the period from 2018- 2020 (Ministry of Finance, 2017:24)*

DESCRIPTION	Projection for 2018		Projection for 2019		Projection for 2020	
	(in mil. of kunas)	%	(in mil. of kunas)	%	(in mil. of kunas)	%
STATE BUDGET						
Total income	127.965	34,2	132.598	34,1	136.713	33,9
Total expenditures	132.912	25,5	135.525	34,8	136.637	33,8
Overall deficit / surplus	-4947	-1,3	-2927	-0,8	76	0,0
EXTRA-BUDGETARY BENEFICIARIES						
Overall deficit / surplus	775	0,2	665	0,2	874	0,2
CONSOLIDATED LOCAL STATE						
Overall deficit / surplus	292	0,1	336	0,1	349	0,1
GENERAL BUDGET						
Overall deficit / surplus	-3880	-1,0	-1926	-0,5	1298	-0,3
CONSOLIDATED, GENERAL STATE	3132	-0,8	-1001	-0,3	1941	0,5

When taking into consideration the above mentioned goals for the year 2016, it was envisioned and presented the four-year period of fiscal consolidation that will include state budgets from 2016 to 2019, and it should allow for the budget to be in surplus in 2020. Specifically, the mentioned program is oriented to a total of five objectives that would be achieved using three strategic measures of an institutional nature that are aimed at the long-term improvement of public finance management and with a total of six operational measures, three of which are on the revenue side and three on the expense side. During implementation of the consolidation measures, the tax system will have a special role in the revenue side, and it includes amendments to nearly fifteen complete laws and regulations. The goal of reforming the tax system is to make the tax system simpler, more complete, and fairer but the most important move is to reduce a tax burden. Within the part of the tax burden, most of the changes have occurred in the system of income tax, profit tax and value added tax. In the case of income tax, a tax rate of 12% will only be retained on final taxation of properties and capital. Incomes from the self-employment and paid employment are summed up and are subject to the final annual calculation. Furthermore, the tax rate of 25 % will be reduced to 24%, as well as from 40 to 36 %. This reduction of the tax burden in the course of the middle period will contribute to reducing the overall tax burden of the pensioners to 50%; there will be an increase in the personal allowance of 3,800 kunas, as well as the introduction of the new tax class for the incomes higher than 17,500 kunas.

It should be noted that it is planned that the entire tax system of income tax from 2018 will be in the jurisdiction of the regional authorities. In the profit tax section, the news is a reduction of the general tax rate to 18% for small and medium-sized enterprises, whose annual income does not exceed HRK 3 million. To the increase on the revenue side of the state budget will also affect the compulsory payment of contributions for pension and health insurance funds. Also, the total state revenues will be positively affected by any withdrawal of funds from European funds. Following the above, the Ministry of Finance predicts a total increase in revenues in the amount of 128 billion in 2018, 132,6 billion in 2019, and 136,7 billion kunas in the course of 2020.

*Table 4: Movements of income of the state budget during the period from 2018-2020  
(projections) (Ministry of Finance, 2017:13)*

DESCRIPTION	Projection for 2018	Projection for 2019	Projection for 2020
IN TOTAL	127.965.045.339	132.597.911.042	136.712.623.599
BUSINESS REVENUES	127.142.270.339	131.866.136.042	136.099.573.599
Tax revenue	74.595.872.291	77.022.865.646	79.365.806.817
Contributions	24.058.520.688	24.957.499.657	25.857.623.208
Grants	13.807.343.437	15.126.826.657	16.117.097.335
Property incomes	2.736.486.231	2.760.554.086	2.602.186.648
Revenues from administrative fees	3.592.496.218	3.609.983.248	3.616.602.015
Revenues from sales of goods and services provided, and revenues from donations	1.336.754.418	1.262.372.684	1.282.644.225
Revenues from the competent budget and from the HZZO based on the contractual obligations	6.414.925.077	6.513.864.592	6.632.355.218
Penalties, administrative measures and other incomes	599.871.978	612.169.471	625.258.133
INCOME FROM SELLING OF THE NON-FINANCIAL ASSETS	822.775.000	731.775.000	613.050.000

On the expense side of the state budget, key efforts will be primarily focused at maintaining economic growth and for the achievement of macroeconomic stability. Special attention is given to the reduction and simplification of administrative burdens for the start-up of the entrepreneurial activities, which will further strengthen the overall economy. According to the Ministry of Finance (Ministry of Finance, 2017:15), the total expenditures of the state budget for 2018 are estimated at HRK 132,9 billion; in 2019 they are planned to HRK 135,5 billion, which is HRK 2,6 billion more when compared to 2018. From this increase, expenditures financed from general revenues and grants, contributions and dedicated receipts will increase by HRK 846,7 million, and expenditures financed from EU funds and other sources by HRK 1,8 billion. In 2020, when compared to projections amounted for the year 2019, it is expected a further increase in total expenditures by HRK 1,1 billion, which will record the level of 136,6 billion kunas.

*Table following on the next page*

*Table 5: Movement of the Government Budget Expenditures for the period from 2018-2020 (projection) (Ministry of Finance, 2017:16)*

DESCRIPTION	Projection for 2018	Projection for 2019	Projection for 2020
<b>TOTAL</b>	<b>132.911.903.291</b>	<b>135.524.990.817 1</b>	<b>136.636.761.383</b>
Business expenditures	128.916.577.074	131.532.708.219	132.896.116.719
Expenditures for the employees	27.170.680.417	27.347.875.848 1	27.684.005.054
Material expenditures	13.388.629.879 1	13.138.045.909	13.627.464.705 1
Financial expenditures	10.264.636.524	9.456.690.806	7.989.367.747
Subsidies	6.824.444.521	6.850.444.274	6.711.554.479
Grants given abroad and within the overall budget	16.267.757.466 1	17.923.285.043 1	18.763.733.488
Fees to citizens and households on insurance and other fees	47.738.823.923 1	49.167.638.950	50.365.389.196
Other expenditures	7.261.604.344	7.648.727.389	7.754.602.050
Expenditures for the acquisition of nonfinancial assets	3.995.326.217	3.992.282.598	3.740.644.664

Since total public debt has fallen by almost 83,7% of GDP in 2016, it is expected that the public debt regression trend will continue during the next period. In the course of 2017, the Ministry of Finance (Ministry of Finance, 2017:24) expects a fall in debt to 81,1% of GDP. Based on the previously set projections of revenues and expenditures, further public debt reduction is expected to be 78,3% of GDP during the 2018. However, it should be noted that during 2017 the Republic of Croatia will receive the billing account to the amount of 27 billion kunas, which is slightly less than in 2016 when the total sum was 28,7 billion kunas. In the forthcoming period is expected to see the increase in the total debt, i.e. it is visible an obvious increase in the repayment burden sum by 2020, which is the cause of government securities issuance on domestic and foreign markets.

## 6. CONCLUSION

Although the Croatian economy in the year 2016 has recorded a slight recovery, it is faced with the appearance of the crowding out effect that is caused by the high indebtedness in the country and abroad. A very high level of a budget deficit and public debt visibly slow down the possibility of economic development, and consequently, degrades the overall economy. The very nature of the cumulative budget deficit, but also the way of financing, prevents the establishment of a strong link between public debt and economic growth. During the past period, many theorists have tried to prove the positive or negative impact of the deficit itself, but also the debt to the economic growth. High government debt, and the lack of adequate macroeconomic policies, but even the autonomous functioning of the financial system, have led the Croatian economy to the "edge of survival", which can be scrutinised through a very high level of risk of lending and borrowing. For this reason, urgent and radical change in development policy needs to be established, to preclude the observed risks from materializing and to create conditions for the growth of the economy. On the basis of all the information it can be said that public debt in the Republic of Croatia has a bad influence on the economic situation itself and as such cannot be an instrument of stimulating economic growth.

By the implementation of the previously mentioned measures that are advocated by the Croatian Ministry of Finance, the improving of sustainability of the public debt and creation of valid foundations necessary for stabilization and successful economic growth will be implemented.

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## SELECTED METHODS OF PSYCHOLOGICAL MANIPULATION IN THE MARKETING OF FINANCIAL SERVICES

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### ABSTRACT

*The main purpose of this article is preliminary identification of manipulation techniques and methods used in banks for staff relationship management. The empirical contribution of this article is to discuss the influence of immediate supervisor on the consumer's consultants in the banking sector. The author has tried to answer the research questions, Are there any manipulation techniques used by bank managers? If, yes, what methods of psychological manipulations are applied by supervisors on to their employees. Data is gathered by using interviews with an experts' group and by the critical reflection on the professional experiences of the author of the article. The initial results highlight some manipulation techniques used by bank managers on the consumers' consultant, for example, the reciprocity technique, group technique, the contrast technique, authority technique, word manipulation technique, impression management technique and social manipulation techniques, such as the foot-in-the-mouth and dialogue, the door-in-the-face", stressful situations, feelings of guilt. It is also worth noting that in opposition to techniques there are examples of psychological counteraction to manipulation, for example, the instinct to restrain aggression and empathy, change assessment into opinion, violation of the principle of reciprocity, self-esteem, personality and manipulation. The author also paid considerable attention to aspects such as rights and needs of the employee in the sales of financial services and his job satisfaction.*

**Keywords:** *Customer consultant, Financial services, Manipulation, Manipulation techniques, Persuasion*

### 1. INTRODUCTION

This article presents preliminary research on exploratory charter concerning psychomanipulation techniques in relations between supervisor and subordinate in the banking sector. For the purpose of this paper, by the term of »psychomanipulation« I understand this kind of social influence, which informally could be defined as a machinations, i.e. insidious acting on someone's detriment or subterfuge, i.e. unfair behavior, scam. It is therefore social influence based on scam, which its main goal is an harm of addressee of that influence (Witkowski 2000). As an harm I understand objective treatment of second man, which undermines values being protected in west culture by a Kant's categorical imperative. However, »manipulation techniques« are nothing more than practical ways of manipulating people, i.e. manipulator's workshop tool (Witkowski 2000). The social impact does not always have to be negative, as it also helps to motivate employees to work and achieve better results: Follett's opposition to domination did not make her a precursor of today's human relations camp, with its manipulative emphasis on recognition and praise aimed at making employees feel big enough to take on the company's problems (Hoopes, 2003 p.156) or dea of the manager as therapist with the accompanying temptation of psychological manipulation, his hyper fear of conflict, and his Utopian claim that the interests of employer and employee can be merged in a workplace where the principal reward is not money but organic community (Hoopes, 2003 p.191). Organizational culture is one of the most important aspects, as it covers the main issues that concern: symbolic and interpretative aspects of management, social game and interactions between organisational actors, organisation seen as the construction of social reality

(Sulkowski, 2014 p.63), which provide the foundations for building proper interpersonal relations. Psychological manipulation is to some extent a contradiction of the literature's social impact, because the victim of manipulator does not fully act consciously when performing certain actions or making certain decisions: There are certain cases, it is argued, where agents are the victims of manipulation and are thereby intuitively not responsible for what they do, despite meeting compatibilist conditions on moral responsibility (King, 2013 p.65). What distinguishes psychomanipulation from other manifestations of social impact is the fact that it is a phenomenon strongly associated with negative evaluation. In the publishing market, especially when it comes to non-scientific literature, there are many textbooks or guides of manipulation, the content of which usually comes down to a description of how to effectively influence others. I think that in case of modern sales training, it can also be seen in this way. The subject discussed in this article is, of course, one of the wider topics of HRM in banking. However, the number of studies related to this issue, especially those which can be used as a background for the analysis of psychomanipulation techniques, is so far little. In this article I address detailed issue of the use of manipulation techniques by managers of sale institutions and direct sales directors to client advisors. Such a clarification of the subject was created due to my professional experience and the review of subject literature. On the one hand, during my five-year career in banking (2011-2016), I intuitively registered a number of behaviors of managers with characteristics of psychomanipulation. Especially the training I underwent was based on how to effectively sell a banking product to a client – very often it turned out that sales techniques had an impact on the behavior in relations between employee and employer. As managers also took part in these trainings, one of examples can be the technique of authority, i.e. building in the eyes of others an impression of competent and therefore trustworthy person. It is aimed in case of client's advisor to build trust according to the client's needs (completion of sales transaction) and in case of supervisor – to build a position in the team, which will enable to efficiently manage the group. On the other hand, this topic has proved to be largely absent from the scientific publication charters. Generally speaking, interpersonal relations between »supervisor and employee« at the bank as the workplace, has so far been rather poorly developed in terms of research. Exceptions include the work of Alvesson Mats and Robertson Maxine (2012). The article discusses identity issues in relation to older employees of the UK investment banking sector. The authors relied on collected materials and the survey showed doubts regarding the issue of identity or involvement in what is usually perceived as identity work. Instead, they confronted with an orientation towards minimalism of identity and potential challenges to their identity, i.e. to what had been conceptualized as teflonic identity manoeuvring. Respondents used material resources, in particular money, to rationalize their needs, including social needs (dress codes) and discursive resources (around professionalism), in order to strengthen and maintain their image. Relations of six people from professional life were presented. Sensitivity, emotions and personal investment in the values of work were not important in their professional history. It was not noticed that the surveyed persons identified themselves with institution in which they worked. The issue of manipulation also has an impact on identification with the workplace, how the work atmosphere is created, and the relation between employee and employer is also important. The use of manipulation in the relations between a client advisor and manager prevents full involvement in work that has any basis that is deeper than a material benefit. Mentioned studies by Mats Alvesson from Business Administration at Lund University and Maxine Robertson from Queen Mary University in London were conducted with unstructured method and were exploratory. My search, narrowed down to the issue of psychomanipulation in relations between supervisor and subordinate in the bank, follows this pattern. Responses to the research problem are used: What psychomanipulation methods do supervisors (sales manager, direct sales director) apply to their employees (client advisors) in the bank sector? Selection of the above positions of supervisors

and subordinates resulted from the fact that according to the banking hierarchy, directly above the client's advisor was the manager of sales institution and the director of direct sales, who accounted his subordinates on the basis of sales plans resulting from implementation of a specific bank policy. These were persons who, through their duties, had contact with the client, which in turn resulted in a further impact on the adopted banking strategy. I sought answers to the previously formulated research problem through qualitative research, which was a combination of elements of the ethnographic interview method and autobiographical narrative interview method. Qualitative research was modelled on research methods in humanities management (Kostera, 2015). The elements that were taken into account for the ethnographic interview were time – important for the expert to be immediately after the end of his work, place – the location was to be free for the expert, lack of third parties so as not to influence the course of research, language of the interview to be comprehensible for the expert. During the autobiographical narrative interview, important aspects were the ability to self-observe of own experiences, so that they could be written down as a form of personal narration. Creation of a personal essay helped to deepen the understanding of the process taking place in a specific social context through embedding of an individual biography confronting the conducted interviews. A very important element was the order in which methods were applied (1) the autobiographical narrative interview, (2) ethnographic interview, as this allowed avoiding suggestions made by experts. In order to carry out the interviews I used the technique of judges and experts, which allowed me to investigate a complex problem, the quantitative measurement of which is difficult and sometimes impossible. The task of experts is to answer the questions, thus important is selection based on professional practice and the ability to think independently (no influence on the opinion of others, respect of own opinion). An important element is the independence of expert opinions, anonymity of courts, multistage character of the survey, lack of aversion to expressed opinion, and results obtained from the survey are presented by specialists in a specific field.

## **2. RESEARCH**

### **2.1. Exploratory research on psychomanipulation techniques applied to subordinates by bank supervisors - methodology and conduct of tests**

#### *2.1.1. Operationalization of studied phenomenon*

I have considered the narratives concerning these techniques contained in the statements of judges and experts during the qualitative interview as indicators of psychomanipulation techniques in the relations between supervisor and subordinate in the banking sector. It contained ten questions read to experts in random order for each of them. Questions concerned the following psychomanipulation techniques identified on the basis of subject literature, which in my opinion are based on the most universal behaviors and beliefs of people, among them are: reciprocity technique (Cialdini 2013), i.e. something for something, e.g. the supervisor, through seemingly selfless help, expects to repay; technique of authority (Cialdini 2013), i.e. building in the eyes of others recognition and competence; technique of verbal manipulation (Witkowski 2000), i.e. speaking between the lines, hiding important content for the recipient's consciousness; technique of impressions management (Witkowski 2010), i.e. building own image, e.g., as hard-working person by presenting the recipient with a history of achieved so far results; a foot in the door (Witkowski 2000), the request can be fulfilled if we precede it with another smaller request; stressful situations and inducing a sense of guilt (Witkowski 2000), creating a tense atmosphere and shifting responsibility onto others. During the research, apart from techniques which seemed to me to be obvious, it turned out that there were also other techniques which were not taken into account at the beginning and which emerged when analyzing the interviews of judge-experts. In addition to questions directly related to manipulation techniques, neutral questions not related to psychomanipulation (e.g. how was the



day, how they feel) were used so that the conversation could run smoothly and the interviewed person did not feel uncomfortable. The expert statements were analyzed in terms of repetitive contents or similar meaning. In this way it was possible to obtain the common parts, which are characteristic for certain social impacts in the available literature. Techniques of psychomanipulation were analyzed and identified on the basis of dialogues between employee and immediate supervisor, as quoted by experts (examples in the further part of article).

#### *2.1.2. Characteristics of judges – experts*

Selection of judges – experts for this study was carried out according to the following criteria. They were employees of the banking sector on a position of sellers. People who work directly with clients are exposed to the influence of their managers, i.e. the management level. At the same time, direct contact with the client requires mental resilience. The work of seller with client is particularly complicated by the fact that sales plans are imposed from above and strictly enforced. These factors make the position of a seller conducive to the presence of psychomanipulation techniques on the part of supervisors, as they exert influence on the client in order to close the sales conversation, which will be the result of sale of a financial service and, consequently, development of sales plan. From the professional group – active sellers of banking products – I have chosen an expert group. It consisted of 8 people, aged 20-35, with relatively extensive experience working as a sales or in other positions in the bank. On average, the members of expert group had five years of professional experience in banking. Due to the socially sensitive subject matter of interviews, the fact that I asked about the characteristic behavior of both experts and their colleagues, the need to obtain the highest level of trust from the experts, I chose them in a deliberate way, among my friends. For the same reason, the experts will remain anonymous in this article. I will only reveal that the expert group has revealed common features which, in my opinion, are very important components in interpretation of results. Each of the experts started their professional careers during their studies, which may indicate early exposure to high stress from both the employer and university in terms of exams. The common element was the position taken (at the time of survey) as a client advisor with similar responsibilities and fulfilment of objectives set by the senior management in a form of sales plans.

#### *2.1.3. Research plan*

The research was based on meetings and individual interviews with each of judges – experts, so that none of them could duplicate information already provided by others. Respondents had to feel freely and be confident that their sensitive data would be kept confidential at work. The comfort of conversation is very important, as the interviewed group was able to honestly talk about the relations between them and their immediate supervisor. All interviews were recorded and then written down for a more convenient analysis of collected information.

#### *2.1.4. Conduct of tests*

Interviews were conducted over the months of October and December (2016<sup>1</sup>), on a ground most comfortable for the person, i.e. at their home, because they felt most comfortable there. The interview was conducted after the work of judge – expert, so that emotions that accompanied them during the day were fresh and most real.

### **2.2. Psychomanipulation techniques applied to subordinates by supervisors in a bank - Results of research**

The narrations of judges – experts, writing these words, compared with own professional experience, which was a kind of filter, both enriching and distorting the results in a way that

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<sup>1</sup> Due to the sensitivity of this subject matter, I publish it after two years.

was difficult to control unambiguously. This is something that I leave to readers to judge. The narrations of experts revealed common factors that all were subject to in terms of motivating their supervisors to work: sales bonuses, which were a form of reward for their results in sales, effects from work, very often this aspect was emphasized after management meetings at higher levels, which was also connected with promotions and praise, job satisfaction, i.e. work of a client advisor was so profitable that they could count on, for example, a bonus recognised by the employer. It was also possible to identify demotivating factors, such as high sales plans, often beyond the employee's reach (client advisors), threats of dismissal, unpleasant comments, which are detrimental to the employee's welfare (e.g. you're completely useless, you are a hopeless seller, how did you managed to persuade your wife to marry when you cannot sell credit), requirement to compete between employees, as evidenced e.g. by the following quote: I don't need people to help each other. I am looking for people who will take out loans and clients – (expert A.) The experts emphasized that they achieve sales results at any cost, because the basic rate of their remuneration is not satisfactory and they want to take care of their mental condition so that the manager can not accuse them of anything, but in the opinion of supervisor, their efforts put in the work are still too small. The Bank (i.e. the manager) wants each of its employees to be the most profitable and effective. Experts very often have sales training, which is encapsulated in top-down, imposed techniques. The employer tries to manipulate employees by putting pressure on them. Sales competitions enable experts to improve their qualifications and, as they say, to show up against the background of often thousands of people. Employees (experts) notice that they become victims of manipulation, but realizing this, they often turns out to be after the fact, that is after reaching the set goal by their supervisor. An additional point connecting the interviews was the character or rather the way of being a direct supervisor. Experts duplicated the statement that a manager always shows his superiority over his subordinates, e.g. I'm going to the HQ to meet managers, if someone calls please tell them that I will be tomorrow or don't discuss with me, because I'm in charge here trying to build their authority. Quite often, it turns out that an employer used threats in order to increase the effectiveness of employees, which further translates into the results of work. The expert group unanimously stated that although the employer is not the best, always takes responsibility when necessary, although there are exceptions. The manager strongly emphasized, I like to work here or since I'm here, the sales are getting better and better. The manager has also often tried to help, e.g. I'm also going to a photocopier, give me those papers I will be copied it for you or I can arrange everything for you, unless the President does not agree. Sometimes the direct supervisor had a short conversation with employee about a product rarely sold in order to confuse subordinate. These phenomena are illustrated by the following quotation from the relations between judges and experts: »Supervisor: it was you who managed to sell this bonus fund?; Adviser: yes; Supervisor: Oh... You're sure, Adviser: yes, what's the problem? Supervisor: Oh, well, but now it's up to you» (Expert B)

Experts stressed that e.g. they knew that situation was quite difficult due to financial penalties received by the bank – they thought that they might not receive the promised discretionary bonuses. Then their supervisor said: All others were strongly instructed. We kept our face. However, you should be aware that the bonus may be very small. The surveyed group quoted in interviews a moment when the new employee was recruited and witnessed the manager turning to "new" employee: If you have any questions, please let me know or my colleague M. will show you exactly how our banking system works and will tell you about the procedures we have in place. Attention was paid not to force the rules from above and to do it in a very delicate way we are always at work at 8:30 a.m. to be able to start work calmly. Manager is very willing to help when, for example, it is necessary to call the department to discuss the details of transaction with the client or to negotiate appropriate terms of cooperation for the

client. Persons from the expert group stated that very often their manager was trying not to use denials when asks for something or when wants to express own opinion. Additionally, they claim that in situations of increased sales they are more motivated by them, e.g. "K. try it really is not difficult and clients will like it very much, as you can be convincing" (expert C). Descriptions of the training provided by the supervisor clearly indicate that employees are to apply comparisons to products and offers of other banks. The sales effect will mainly depend on a way the offer is presented and how convincing they will be towards the customer. The statement has often been repeated: The client does not need to know that he needs it; we have to sell it in order for the Management Board to be satisfied, Me and you. Expert D. is a person who has been working in banking for 10 years. In his relation, my attention was drawn to what I experienced in my professional work, namely the direct supervisor during team meetings very often treated us impersonally, i.e. our sales met with great enthusiasm on the part of the Management Board – quoted words by the expert show how the manager wants to assign individual merits to the whole team, so as not to exalt or reward anyone with recognition. It is a daily reality to raise a sense of doubt, but it is only about not being confident about yourself in order to be able to give in to your manager. The employer uses his position, for example, to carry out specific duties. In interview with expert E. – a very experienced advisor to wealthy client, I heard how the manager made a request to his subordinate, which required him to stay after hours to work out a loan application. This is illustrated by the following quote »Supervisor: A. I have to discuss with you, it's life and death; Adviser A.: Director, what happened?; Supervisor: At the last minute I received a loan application for consideration, could you tell me what the situation is like with our sale of credit volume? Tomorrow is the last day of month, maybe it could be somehow pulled up?; Adviser A.: Director, we are short on two credit applications of PLN 100 thousand to develop a sales plan this month. Supervisor: A. could you take a quick look at this application? If everything agreed, could sign it and I would take it to HQ tomorrow morning. Adviser: I'll handle it." (Expert E)

Expert (E). admitted that only after making his verbal declaration he understands that would not finish working quickly and that he would have to stay after hours to keep his promise. On the next occasion, he learned to distinguish between requests from which only the Director had a profit and those sincere intentions, and once again he did not agree to sacrifice the family for the work. During interviews, I heard quite often how the experts copied my experience of the situation, the employees were asking for an increase. It can be said that all experts unanimously presented the same situations of negotiations with their supervisors. The conversation took place on the ground of supervisor, i.e. in his office, if something had already been won, it was not as much as they would have expected – expert D. stressed that such negotiations coincided with the words a little win-win for both of us – he got a small penny and the supervisor was happy that much less than he could give. Negative stress situations are a common occurrence in a banker's work. All the experts told me how they were treated by their manager. They have heard many times that if they do not start selling their deposits, they can say goodbye to their work, because the Management Board will not maintain an unprofitable institution. In addition, the words such as I'm in charge here or Remember who is in charge here were on the border with mobbing. The experts emphasized that the Branch Manager held meetings to present the sales results of the team and very often they proved to be very close to goal at that time, with greater will and motivation, they tried to meet the tasks assigned to them. There were also situations when at meetings the supervisor emphasized how he had been treated by his supervisors for non-execution of a sale – expert B. said that everyone felt guilty for not realizing the plans. In such a situation, the whole team knew that they would be "punished" by lack of bonus. Experts claim that some of teams in which they worked had their own bootlicker, which went to their supervisor with every matter.

Very often there were situations in which he was seen alone with the Director, as it turned out later that he benefited from it more in a form of higher discretionary bonuses. The supervisor always knew what was going on in the institution, and who with whom had certain relationships. Expert B. stated that in his professional career he always came across one type of manager, namely one who always said how it happened that became a manager, how his professional career was going and how much he did for his team. He often stressed that he was unable to check the deposit documentation due to more important duties. In addition, the frequent forcing of greater involvement in the work of experts was considered by their supervisors to be too small. Monday's meetings were aimed to discuss results, deliberate praise of people or humiliation of others introduced confusion and disorientation in the team and above all rivalry in the team.

### **2.3. Summary of results**

The narrative of experts-judges I asked leads to the following conclusions:

- The employer apply manipulative techniques to an employee that are used more or less skillfully,
- The employee is often unaware of used manipulation techniques,
- The employee who is aware of used manipulation is less susceptible to it, because is able to use innate defensive techniques against manipulation,
- Manipulation very often fades with threats and harassment on the part of employer, which is due to a lack of knowledge of the use of manipulation techniques by the direct supervisor.
- Pressure on sales, i.e. on results, puts more pressure on the employee, who is often stifled and intimidated.

My research shows – at the level of initial exploration – modern management personnel management of the lowest level in the banking hierarchy. Behavioral patterns duplicate and reflect actual work in the banking sector, of which the ordinary client will not be aware. The application of research techniques described above had both positive and negative sides. It enabled to get into the part of a banker, who in everyday professional life was doomed to chronic stress and sometimes mobbing. A limitation of research was the subjective evaluation of surveyed and their individual perception of certain behaviors and statements, which could have been presented in a completely different way by a third party. In the research there was no possibility of random selection, experts were colleges from work and universities, who were employees of the banking sector in very similar positions.

## **3. CONCLUSIONS**

### **3.1. Limitations to research work**

Conclusions for future research are to increase the research area and the expert group. As an extension of the issues studied by me, we should add individual relations between the client-employee-employer, due to the position hierarchy and personal connections that may create relationships, which in conducted studies could not been captured. In the future, the issues of work should be extended to the following research areas: the use of manipulation in relations between client and client advisor, the use of manipulation in relations between manager and sales director, the use of manipulation in relations between sales director and bank's management, comparison of relations in terms of the frequency of manipulation between different bank structures. The sales relation and willingness of each party to make a profit has an impact on the sequences of behavior. An increase in the number of surveyed people would enable to study human behavior more closely and to draw more precise conclusions on the situation in operational institutions. An additional advantage would be the possibility to study the area of relations in the entire hierarchy of human resources management in the banking

sector along with analysis of individual position connections, taking into account the emphasis on the lowest level, i.e. client advisors. To sum up, in the opinion of judges – experts, weaker units are unable to cope with the influence of third parties. People who are more self-confident and mentally resistant to manipulation usually become perpetrators, i.e. manipulators. Influencing techniques are extended to managerial training, but also to client advisors who are expected to influence clients in this way. Contrary to appearances, despite their knowledge, they cannot defend themselves against manipulation because of fear and fear of losing their job.

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## CASE STUDY METHOD AND ITS USEFULNESS IN BRANDING ACTIVITIES - RESULTS OF RESEARCH

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### **ABSTRACT**

*The aim of this article is to describe the case study method, its specificity, advantages, disadvantages, and possibilities of its application in branding activities of marketers as well as other interested parties. Starting from the essence of case study as a method of scientific research, the following subjects are discussed in the article: methodology of conducting the case study, areas of application, and usefulness in activities for the brand, as well as in teaching the effective brand building. Theoretical considerations have been supplemented by research results and selected examples of application of the discussed method. The methodology of research carried out included: literature studies, meta-analysis of available information resources, and own qualitative research using a case study method. In the article the recommendations have been formulated for theoreticians and practitioners interested in methodological usefulness of a case study method in branding activities.*

**Keywords:** *case study method, procedure of case study application, case study in brand building, branding, recommendations for marketers*

### **1. INTRODUCTION**

Brand building, as an important management tool of today's marketer, has constituted the object of keen interest for theoreticians and practitioners since the 1950s. Current trends in management activities, related among other to shaping of a personalised brand interacted with by the stakeholders, constituting market value and influencing consumer choices, stimulate for exploration of effective methods assisting in its building. One of these methods may be a case study, which is the subject of further considerations. The primary objective of this article is to present the options for application of the case study method in branding activities, both in theory, and in practice. The methodology of the research covered: literature studies, analysis of secondary source of information, including the Internet resources; meta-analysis of available resources oriented at the established objective, hypotheses, and detailed issues; and own qualitative research using the case study method. The performed considerations and research confirmed that systematic application of the analysed method contributes to the development of knowledge in the area of management science (and especially the branding), and produces measurable benefits to marketers who are in charge of brand building in the economic practice.

### **2. THE CASE STUDY METHOD – BASIC CHARACTERISTICS**

It is widely accepted that case study consists in a comprehensive description of the studied phenomenon (Yin, 2012, pp. 3–20; Yin, 2015, p. 35; Dondajewska, 2016, p. 43; Grzegorzczuk, 2016, p. 7; Kostera WWW), in which the attention is primarily focussed on enhanced analysis of the aspect of interest for the researcher, quite often a large number of variables and their interplay. It relies in its essence on the uniqueness of each case, therefore it has not been the purpose of the authors to present statistics and their generalisation, but to explore the specific features of the phenomenon and/or case and the observed mechanisms, in order to expand the knowledge base and produce benefits related to practical skills. The method which has been described is suitable for analysis of a variety of cases (Yin, 2015, pp. 66–67): persons, organisations, small teams and quite large communities, projects, decisions, but also relationships, partnerships, and many other.

Last but not least, for the purposes of research encompassing its application it is worth considering the following constituents (Yin, 2015, p. 61): 1) questions; 2) adopted assumptions; 3) units of analysis; 4) the logic of combining data with the assumptions, and 5) criteria for interpretation of the results. This article aims at proving the usefulness of the case study methodology in branding activities both in theory and in practice, therefore it is necessary to present the basic related concepts.

### 3. BRANDING ACTIVITIES AND THEIR ENHANCEMENT BY APPLICATION OF THE CASE STUDY METHODOLOGY

It is assumed that branding constitutes a complete set of intentional, planned and systematic activities related to brand building. The available literature resources quote supporters of the so called brand building process oriented at creating brand equity (Keller, 2013). According to A. Wheeler (2010, p. 12), activities performed for the brand aim at linking the organisation's vision with the client's experience. The manner of attaining this goal is described in Table 1.

*Table 1: Branding process according to A. Wheeler  
(developed on the basis of: Wheeler, 2010, pp. 90–91)*

Phases of the process	Recommended activities
Conducting research	define the vision, strategy, goals and values; research stakeholders' needs and perceptions; conduct marketing, competitive, technology, legal and language audits; interview key management; evaluate existing brands and brand architecture; present audit findings.
Developing strategy	synthesize all you have learned; define brand strategy; develop a positioning platform; with your partners, identify brand attributes; prepare a brand brief; achieve agreement; create a naming strategy; develop key messages; write a creative brief.
Designing identity	Visualise the future; brainstorm good idea; design brand identity; explore applications; finalise brand architecture, present visual strategy; achieve agreement.
Creating touchpoints	Finalise identity design as well as look and feel; initiate trademark protection; prioritize and design applications; design a complete program; implement brand architecture; take care of touchpoints (websites, newsletters, forms, graphic signs, packaging, expositions, offers, electronic and voice mail, publications, Internet banners, business letter headings, business cards, billboards, prints, leaflets, gadgets, vehicles, services, products, employees, speeches, presentations, contacts, telephone, whisper messages, presentations for sale, mailing campaigns, public relations, blogs, social media, sales promotions, advertisements, environment, experience).
Managing assets	Build synergy around the new brand; develop launch strategy and plan for new identity; start internally first; launch externally; develop standards and guidelines; nurture brand champions.

The methodology presented in Table 1 provides for effective activities for the brand. Adopting such an approach can boost the comprehensiveness and effectiveness of the applied efforts. In turn, the enhancement of branding activities using the case study methodology constitute specific type of effort/targeted activities related to educating those who are interested in branding. It may consist in observation of the conducted marketing activities for selected brands in economic practice, their analysis, and developing the scenarios for further actions. Quite often the marketers look for models which could be followed.

Yet another option is the preparation of a case description, providing the starting point for the brand, describing the current conditions, and formulating tasks for consideration. Educating by means of the case study has interdisciplinary traditions (Simons, 2009; Swanborn, 2010). It is particularly useful in medicine for exploring rare diseases, in justice for mastering the skills of administering judicial processes, in military sector for studying the descriptions of important battles, in management sciences for quite a considerable number of areas, including the functioning of market entities in a competitive environment. Quite a few publications are available on functionality (Flyvbjerg, 2004; Yin, 2012; Karaś, 2014) and application of the discussed methodology in: management sciences (Brycz, Dudycz, 2010; Czakon, 2015; Dondajewska, 2016; Matejun, 2011), educating entrepreneurship (Kostera, WWW), research (Creswell, 2013; Starman, 2013; Kuciński, 2014; Yin, 2015); strategic marketing projects (Kerin, Peterson, 2013; Feinberg, Kinnear, Taylor, 2013; Tarczydło, 2013); as well as selected areas of brand management (Rosenbaum-Elliott, Percy, Pervan, 2011; Franzen, Moriarty, 2015). Case studies in textual or filmed form deserve particular attention; they are based on the examples of enterprises functioning in real market conditions on the Polish market, such as Poczta Polska, belVita, BP, Brand24 and Milka, devised by Questus ([www.questus.pl/ls/case-studies](http://www.questus.pl/ls/case-studies)). They have high cognitive and educational values, tested both during the classes with students and in contacts with business practitioners, with, it is worth noting, very high acceptance on the part of the students. The formula of a case study adopted by Questus is perhaps labour intensive, but also effective, interesting, and adapted to present day teaching standards and business practice. In the process of analysis of available sources of information an research gap has been identified consisting in lack of comprehensive studies on the application of the case study methodology in branding activities. In this process the benchmarking strategy can be used, its essence being the identification of models and best practices in the market to adapt, and even to streamline them for own purposes. Conducting a case study for branding should therefore facilitate learning and acquisition of brand management skills. The outlined theoretical concepts have created the need for conducting own research. In general, a research project comprises a cycle of activities (e.g. identifying the problem and research questions, specifying important data and method of their collection, analysis and formulating conclusions) (more: Creswell, 2013, pp. 115–242; Mazurek-Łopacińska, 2016, pp. 17–40), and the specific way of its implementation has been described in the next section of the article.

#### **4. THE METHODOLOGY OF THE RESEARCH**

For the purposes of this article, the literature studies, analysis of secondary sources and own research have been conducted, as described in Table 2.

*Table following on the next page*



*Table 2: Description of the research  
(own elaboration)*

Elements of the research project	Description of specific elements
Title	Possibilities for application of the case study methodology in branding activities – theoretical and empirical perspective
Hypotheses	H1. In branding activities for contemporary brands, the case study methodology proves to be particularly useful. H2. Integrated branding campaigns provide valuable educational and application material both for theoreticians and practitioners.
Main goal and specific questions	Obtaining information on the possibilities for application of the case study methodology in branding activities for the selected brands.  <ul style="list-style-type: none"> <li>• What purposes is the case study methodology used for?</li> <li>• In what scope and degree?</li> <li>• What are the underlying reasons for that?</li> <li>• Who performs it?</li> <li>• In what ways can the case study methodology be used in branding activities?</li> <li>• What results can be expected?</li> <li>• What recommendations can be formulated for theoreticians and practitioners interested in the application of the case study methodology in branding activities?</li> </ul>
Subjects of research	The authors of available books, articles, publications and content, researchers, scientists, marketers, marketing experts, trainers, Internet users. Agencies supporting branding activities performed by clients and sector experts. Brand managers and persons involved in their marketing activities. Questus. Selected brands: Poczta Polska, belVita, BP, Brand24 and Milka. Students.
Research methodologies	Metaanalysis of literature sources and Internet resources thematically associated with the discussed issues. Qualitative research through case study methodology for the following selected brands: Poczta Polska, belVita, BP, Brand24 and Milka.

The performance of research described in Table 2 allowed for collecting of a solid research material related to various manners of application of the case study in branding activities for the selected brands. The quantitative and qualitative analysis of the obtained information, in view of the chosen research issues, hypotheses and objectives, has motivated the author to present the most important results.

## 5. RESULTS OF RESEARCH

Qualitative research with the use of case studies developed by the Questus company for the Poczta Polska, belVita, BP, Brand24, and Milka brands was carried out in the period between October 2017 and June 2018 in nine groups, including three groups of entrepreneurs, three groups of academics (during academic conferences), and three groups of students. While teaching branding skills in general, the above-mentioned cases were intentionally solved in groups, and then, their usefulness was discussed. The most important results were compiled in Table 3.

*Table 3: The case study method in the branding activities of selected brands and the resulting benefits in light of the research carried out (own elaboration based on the research carried out and the use of materials available online: [www.questus.pl/ls/case-studies](http://www.questus.pl/ls/case-studies))*

Brand	Key areas of branding activities included in the case study	The specificity of the analysed case study	An attempt at assessing the case studies used and their usefulness in improving branding activities – primary observations
Poczta Polska	Brand image, building and refreshing it (rebranding, repositioning), tools for building a brand with a proper image, persons responsible, strategy of related activities.	Elements influencing decisions concerning the repositioning and rebranding of the Poczta Polska brand presented in an interesting way, precisely defined determinants of the decisions made and action taken, entities involved, implemented undertakings and their results.	According to the trainees, all of the case studies were interesting tools/measures supporting the process of acquiring brand management skills in economic practice. The respondents emphasised the cognitive value and attractiveness of the video materials.
belVita	Use of the knowledge on consumer insights in creating the brand concept, introduction of a new name (previously Lu Go!), and as a result, building the market capital of the new brand. Elements of employer branding.	The analysed case includes actual expectations of potential consumers and the specificity of the snack market in Poland. Stress put on the behaviour and work executed by the employers involved in the undertaking. A perspective taking into consideration sociological, psychological, and marketing aspects.	Quality materials supporting lecturers, coaches, and business practitioners (case description, manual, and videos). The diversity of the video materials, usually two or three videos to choose from, but with the possibility of using all of them, depending on the objectives, time constraints, and the depth of the analysis.
BP	Brand social responsibility, long-term brand management strategy, and searching for attractive brand characteristics respecting market trends and the specificity of the industry, positioning strategy, skilled post-crisis recovery.	Building up a reputation of an international brand through socially responsible projects and undertakings. The role of the CSR strategy and celebrities in building a strong brand which stands out in the difficult fuel industry.	A highly rated standard of the Questus Learning Solutions Group is the support measures – for each study, text and video materials were developed, including a manual on how to use them, how to do the exercises, what problems to discuss, etc. High usefulness for brand owner, e.g. to justify the introduced changes to the employees.
Brand24	Building the brand on the Internet, in particular monitoring activities carried out through the social media. Creating personas for the purposes of creating the right brand image. Building the brand community.	Significance of the knowledge on Internet user behaviours in the process of effectively building the brand of a leading online research service provider. Significance of Internet user involvement in the world of the brand and the activities carried out in the social media under its umbrella with examples on how to research it, how to react, and how to constructively use it in branding.	Training materials received very well by the course participants. The option to play back the materials multiple times, to select important issues and fragments. In each case, a valuable example to follow. Various areas/aspects of methodical branding activities. Individual case studies work as tools promoting the services of the Questus company, which carried out the projects in economic practice and prepared the cases on their basis.
Milka	Building brand strategy with the use of emotional branding tools. Stakeholder experience management aimed at strengthening the relationship with the brand.	Milka consistently communicates its most important quality (tenderness) and on this basis, it creates a unique customer experience.	

All of the case studies described in Table 3 constitute a valuable example of professional preparation and application of the case study method in the branding activities of specific brands. They can no doubt also contribute to the improvement of the branding skills of those who analyse them. Moreover, it should be emphasised that they are available online at no charge. The value of the analysed case studies is increased by the specific knowledge bases in the video material about the branding issues discussed. The fact that they are market-realistic is particularly valuable – they all involve actual brands and each case is related to a different area of branding activities. The research carried out confirmed the higher value of the case study method in improving branding activities compared to traditional forms of teaching, e.g. with the use of lectures.

## 6. CONSLUSION

The results of the analyses and studies confirm the correctness of research hypotheses. It can be concluded that the case study is particularly useful in branding activities and their enhancement. The key aspects of intelligent application of the described method are: its correct design, consistency of performed work, patience, intellectual curiosity, and creativity. The conducted studies point out to a wide scope of applications of the case study method and a wealth of opportunities for its use in enhancement of branding activities, both in theory and in economic practice. The analysed cases strongly contribute to the development of knowledge on the discussed issues and have a high applicability. The case study approach facilitates inter alia the enhancement of the research tools, stimulates thinking, creativity, consistency, decision making, serves as an exercise for constructive criticism, strengthens the capacity for remembering the discussed issues due to experiencing the phenomenon, and expands the scientific knowledge and practical skills. The case studies by Questus with film materials actively involve the participants of training and, which is of primary importance, facilitate translating the theoretical problems (in the area of systematic branding activities related to brand building) into business practice of specific market entities representing different sectors. Using the videos and other supporting materials, so called tutor manuals, provides an opportunity for an interesting application of the mapping strategy in educating managers, employees, researchers, students, and all interested parties. It widens the scope of adaptation options for tools, methods and procedures linked to brand building for one's own needs. It can be concluded that the use of professional case studies for brands is much more effective than traditional education based on lectures with classes, and provides a much more facilitating stimulus for the thinking processes of the persons taught. Moreover, the use of the analysed method in branding activities ensures: learning by experiencing and imitating good practices, and maintaining a high level of involvement of enhancing skills. In the present market conditions (digitalisation, Internet accessibility, specific behaviour of brand stakeholders, progress in applied methods and methodologies for enhancement of branding skills, high complexity of determinants in management of market operators, but also the willingness of brand owners to share their good practices), the analysed method is simply indispensable. To sum up, case study is a qualitative research method with high scientific, application, educative, and creative value. In today's market conditions it provides a valuable manner of obtaining important information on brand building, a specific tool for acquisition of skills and improving competence of professionals in the analysed sector, by its attractive form it supports development and implementation of the brand strategy, ensures stakeholder engagement in the indicated scope of issues, and proves its usefulness both for researchers and practitioners.

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## BUSINESS PROCESS MATURITY MODELS RESEARCH – A SYSTEMATIC LITERATURE REVIEW

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### ABSTRACT

*Business Process Maturity can be defined as the „degree of explicit definition, management, measurement, control and effectiveness” of organisational processes (Humphrey, 1987, p. 1-13) or their ability to systematically provide better business results (McCormack, Johnson, 2001, p. 12). The practical implementation of the above concept is reflected through Business Process Maturity Models (BPMMs). They have been designed in order to enable companies to shift their business process management from „as-is” state, where process are undefined and underperforming to a desired „to-be” state, in which processes are being continuously improved. The available literature proves that many review papers on BPMMs, in particular those issued before 2010 lack an extensive set of systematic literature review or analysis criteria. For example, the authors didn't pay attention whether the analysed models focused on a single process, a specific group of processes or all organisational processes. Often, there was also no distinction between organisational and process maturity, which appeared in the analysed models as separate concepts, or different types of maturity (e.g. process, project, supply chain, etc.). Some systematic attempts for analysing BPMMs were undertaken by e.g. A. Van Looy (2010, p. 687-697), M. Rosemann and J. vom Brocke (2010, pp 105-122), as well as M. Röglinger, J. Pöppelbuß and J. Becker (2012, p. 328-346), however still significant limitation of these research can be enumerated. As a result of the identified research gap, this paper aims at performing a systematic literature review based on transparent and sound criteria. The paper is divided into three main parts. The first part (introduction) focuses on presenting briefly the „state-of-the-art” regarding the Business Process Maturity Models research. The second part provides insights into the methodology of performing the systematic literature review. Finally, the last part of the paper discusses the results of the performed study and resulting conclusions.*

**Keywords:** *Business Process Maturity, Business Process Maturity Model, Research, Systematic literature review*

### 1. INTRODUCTION

There have been many different attempts to define “maturity” over the years. The general discussion on maturity and organisational maturing was started by R. L. Nolan (Nolan, 1973, p. 399-405) and P. B. Crosby (Crosby, 1980, p. 65). In more recent works, M. Kohlegger, R. Maier and S. Thalmann (Kohlegger, Maier, Thalmann, 2009, p. 51-61) claim that maturity models are “models that reflect certain aspects of reality, often called capabilities, and define qualitative attributes which are used to classify a competence object into one of several clearly defined classes”. With the growing interest in the concept of maturity in general, the Business Process Maturity has appeared as one of its important types. It was defined by W. Humphrey in 1987 as the „degree of explicit definition, management, measurement, control and effectiveness” of organisational processes (Humphrey, 1987, p. 1-13). Other authors (e.g. K. P. McCormack and W. C. Johnson) emphasized that Business Process Maturity means the ability to systematically provide better business results as a consequence of mature processes (McCormack, Johnson, 2001, p. 12). Consequently the Business Process Maturity Models (BPMMs), have appeared as the practical examples of applying the Business Process Maturity within organisations.

BPMs can be characterized as models that aim at shifting the process management approach in companies from „as-is” state, where process are undefined and underperforming to a desired „to-be” state, in which processes are being continuously improved. It is worth noting that, although Business Process Maturity related papers became popular in management journals over the last 20 years, the literature reviews reveals, that there is no consensus about the definition of the both terms (Business Process Maturity and Business Process Maturity Models). The authors who made the first attempts to present a comprehensive collection and analysis of various BPMs were:

1. P. Harmon (Harmon, 2009, p. 1), who analysed 14 articles in the field of process maturity models published on the BPTrends.com website in the years 2003-2009
2. M. Rosemann and J. vom Brocke (Rosemann, vom Brocke, 2010, p 105-122), who analysed 9 different maturity models, however apart from BPMs, their study focused as well on models beyond Business Process Maturity such as: Strategic Alignment Maturity Model or SOA Maturity Model. The first covered the maturity of strategic planning processes and the second the maturity of service oriented architecture.

Nevertheless the available literature proofs that the review papers on BPMs, in particular those issued before 2010 (including the two aforementioned) lacks an extensive set of systematic literature review or analysis criteria. In many cases any reference to “Business Process Maturity” was sufficient criterion for including the paper in the scope of conducted analysis. For example, the authors didn't pay attention whether the analysed models focused on a single process, a specific group of processes or all organisational processes. Often, there was also no distinction between organisational and process maturity, which often appeared in the analysed models as separate concepts, or different types of maturity (e.g. the maturity of a process, a project, a supply chain, etc.). Some recent systematic attempts for analysing BPMs have been undertaken by A. Van Looy et al. (Van Looy, De Backer, Poels, Snoeck, 2010, p. 687-697), as well as M. Röglinger, J. Pöppelbuß, J. Becker (Röglinger, Pöppelbuß, Becker, 2012, p. 328-346). A. Van Looy et al. pointed out that in order to compare models, they should focus on generic business processes (such as BPM – Business Process Management or BPO – Business Process Orientation) and exclude solutions for specific types of processes (e.g. software development, product development or human resources). M. Röglinger, J. Pöppelbuß and J. Becker also emphasized the requirement for analysing models for generic business processes, while criticizing the existing approaches to compare models of maturity in various areas (e.g. business maturity model versus supply chain maturity model) or those that differ in scope and detail of processes being considered (organisational process maturity vs. single process maturity). The three authors were the first to draw attention to the need for a more systematic approach to performing literature analyses regarding Business Process Maturity as well as the need to identify the principles of developing BPMs (design criteria). They also argued that the studies on Business Process Maturity commonly adopted as cross-sectional and cited in the literature contained models that, although covered the aspect of maturity, could not be qualified as BPMs. As it can be observed in works of different authors, there is no consensus in approaching the BPMs related studies and still significant limitation of the conducted research can be identified. Therefore this papers aims at performing a systematic literature review based on transparent and sound criteria. The paper is divided into three main parts. This part have focused on presenting briefly the „state-of-the-art” regarding BPMs research. The second part provides insights into the methodology of performing the presented systematic literature review. Finally, the last part of the paper discusses the results of the performed study and resulting conclusions.

## 2. RESEARCH METHODOLOGY

The literature study presented in the paper, covered the contents of the leading databases containing scientific publications, including conference articles. In particular the following sources have been analysed (in alphabetical order): Emerald, ScienceDirect, Scopus, SpringerLink, Web of Science and Wiley. In order to improve the research process, the EBSCO Discovery Service tool was used, which enables searches within the above-mentioned databases with a common interface. The analysed period covered the years 2002-2017. The database fields for which the search queries have been applied included the title and keywords, and also wherever possible (the database allowed this type of search) the abstract.

The following search terms were used:

1. („process maturity” OR „process capability” OR „process management maturity” OR „process management capability” OR „process orientation maturity” OR „process orientation capability” OR „BPM maturity” OR „BPM capability” OR „BPO maturity” OR „BPO capability”)
2. („process management” OR „business process management” OR „BPM” OR „process orientation” OR „business process orientation” OR „BPO”) AND („maturity” OR „maturity model” OR „capability model”).

In total, 153 papers were identified in the first stage, however after eliminating duplicates and papers not matching the scope of the research, the number of papers was reduced to 60. However, as the number of the papers was still substantial, an in-depth analysis was introduced afterwards. In order to achieve a focused analysis, the following criteria were introduced:

1. The publication should focus on a large number of analysed BPMs (at least 5).
2. The study should primarily focus on organisational process maturity (BPM/BPO), excluding such approaches like: single processes (e.g. purchasing process maturity) or other than BPM/BPO approaches to maturity (e.g. supply chain maturity).
3. Conference papers that were developed into journal publications by their authors were excluded.

The applied procedure resulted in selection of 6 papers that were included in the presented study:

1. Rosemann, M., vom Brocke, J. (2010). The six core elements of business process management. In vom Brocke, J., Rosemann, M. (ed.), *Handbook on business process management* (p. 105-122). Berlin: Springer.
2. Röglinger, M., Pöppelbuß, J., Becker, J., (2012). Maturity models in business process management. *Business Process Management Journal* (p. 328-346).
3. Wendler, R. (2012). The maturity of maturity model research: A systematic mapping study. *Information and Software Technology* (p. 1317-1339).
4. Van Looy, A., De Backer, M., Poels, G., Snoeck, M. (2013). Choosing the right business process maturity model. *Information & Management* (p. 466-488).
5. Tarhan, A., Turetken, O., Reijers, H. A. (2016). Business process maturity models: A systematic literature review. *Information and Software Technology* (p. 122-134).
6. Van Looy, A., Poels, G., Snoeck, M. (2017). Evaluating business process maturity models. *Journal of the Association for Information Systems* (p. 461-500).

For a detailed analysis of the selected works, the following analysis criteria were adopted:

1. Characteristics of the publication:
  - a. Aim of the publication and/or presented research.
  - b. Research questions and/or hypotheses, which were stated in the publication/study.
  - c. Research methods, which were applied in the publication/study.



2. Number of models/articles, which were analysed in the publication/study.
3. Results/conclusions of the conducted study, including, first of all, the results of the literature research.
4. Limitations formulated by the author/authors in the publication (or if they weren't specified, limitations that can be identified on the basis of the analysis of the conducted study).

### 3. RESEARCH RESULTS

The results of the conducted systematic literature review are presented in the table below.

M. Rosemann, and J. Vom Brocke (2010)	
Aim	Perform a review of BPMMs in order to identify key elements of their construction.
Research questions/hypotheses	Not specified
Research methods	Not specified
Number of analysed models/papers	9/not specified
Results/conclusions	Six key elements of the construction of BPMMs were defined and described, including: Strategic alignment, Governance, Methods, Information technology, People, and Culture. Each of the key elements was divided into 5 detailed sub-areas.
Limitations	Small number of models included in the study. Lack of information on the applied research methodology. Unclear criteria for the selection of the analysed models, apart from the models on Business Process Maturity other aspects of maturity have also appeared.
M. Röglinger, J. Pöppelbuß, J. Becker, (2012)	
Aim	Provide a systematic in-depth review of BPMMs.
Research questions/hypotheses	RQ1 What maturity models exist for BPM? RQ2 To what extent do these models meet the requirements of applicability and usefulness?
Research methods	Systematic literature review
Number of analysed models/papers	10/not specified
Results/conclusions	The analysed models describe Business Process Maturity in organisations, which is graded from immature/initial to developed. Models differ in scope because some of them focus on process practices (broadly understood activities associated with the implementation of the processes in the organisation, going beyond the management of the process), processes (narrowly understood activities concerning primarily the management of a single process) or both. Based on the analysis, the authors formulated the principles of designing BPMMs, that were divided into: 1. Basic, containing information about the content of the model. 2. Descriptive, containing information about the scale and method of assessing the level of process maturity. 3. Prescriptive, containing information and good practices on how to improve process maturity as a result of the performed evaluation. The analysis revealed that most models cover basic and descriptive level, but the presentation of the prescriptive level is very rare.
Limitations	Small number of models included, which was mainly limited to the selections presented in previously published articles - P. Harmon (2009) and M. Rosemann, J. vom Brocke (2010), which can be characterized by numerous limitations. The BPMMs design principles, didn't consider works of other authors in this area (e.g. Trkman, 2010, p. 125-134).
R. Wendler (2012)	
Aim	Structure and analyse the available literature in the field of maturity model research to identify the state-of-the-art research as well as research gaps.

Research questions/hypotheses	<p>RQ1 What is the main focus of maturity model research and what research topics are relevant besides developing and using maturity models?</p> <p>RQ2 How can the field of maturity model research be structured?</p> <p>RQ3 What are the most common research designs and methods applied?</p> <p>RQ4 How important are design-oriented vs. conceptual designs for the development of maturity models?</p> <p>RQ5 How are developed maturity models validated?</p> <p>RQ6 How important are qualitative vs. quantitative methods for validation?</p> <p>RQ7 What are the most common maturity models addressed in research? How important are maturity models developed by industrial consortia, practitioners, or standardization organisations for research?</p> <p>RQ8 In what domains are maturity model research applied?</p> <p>RQ9 How have publication amount, frequency, and research topics changed over time?</p> <p>RQ10 What are relevant search terms and what are the main publication forums?</p>
Research methods	Systematic literature review
Number of analysed models/papers	Not specified/237
Results/conclusions	Mapping of 237 articles showed that current research on maturity models refers to more than 20 areas of enterprise functioning, largely dominated by development and implementation of software. Four main groups of articles and potential future research areas on maturity models were identified, covering: development, application, validation and comparative analysis (46%, 35%, 14% and 6% of the analysed publications, respectively). Publications that review maturity models or analyse them are rare. Maturity in organisations has gained a growing interest over the analysed period (1993-2010). A research gap has been identified in relation to the evaluation and validation of the majority of developed models.
Limitations	The article focuses on different maturity models, treating Business Process Maturity as one of the domains of maturity, but it has been included in this study due to its comprehensiveness (number of analysed models) and relevance of the stated research questions.
A Van Looy, M De Backer, G Poels, M Snoeck (2013)	
Aim	Present the methodology of developing a tool that facilitates the selection of a BPMM, which is appropriate to the organisation's specificity.
Research questions/hypotheses	RQ1 Which criteria help users (e.g. organisations or academics) choose a BPMM?
Research methods	Systematic literature review
Number of analysed models/papers	69/80
Results/conclusions	As a result of the conducted research, an electronic tool (BPMM Smart - Selector) was developed in order to enable selection of the most appropriate model according to specified criteria. The tool is based on six areas of competences related to Business Process Maturity: Modelling, Deployment, Optimisation, Management, Culture, Structure and 17 specific areas of competence: Design, Analysis, Implementation and enactment, Measurement and control, Evaluation, Improvement, Strategy and key performance indicators, External relationships and service level agreements, Roles and responsibilities, Skills and training, Daily management, Values, Attitudes and behaviours, Appraisals and rewards, Top management commitment, Organisation chart, Governance bodies.
Limitations	Although the article in the title and content refers to BPMMs, the applied selection criteria resulted in considering a wide selection of models (beyond BPM and BPO).
A. Tarhan, O. Turetken, H.A. Reijers (2015)	
Aim	Better understand the state of the research on BPMMs and identify opportunities for future research.

Research questions/hypotheses	RH1 The BPM academic community has put more effort and emphasis on developing maturity models than empirically evaluating them. RH2 There is a lack of studies validating that an increased process maturity level of an organisation with respect to a BPMM leads to an improved business performance. RH3 Most BPMMs display descriptive rather than prescriptive characteristics. RH4 The distinction between a maturity model and an assessment model is not well defined in the BPMM research.
Research methods	Systematic literature review
Number of analysed models/papers	10/61
Results/conclusions	The paper, as the only review study, focused on BPM/BPO maturity models (covering the entire organisation and all processes). Despite many models developed in recent years (the paper covered works published between 1990 and 2014), the number of empirical evidence proving their usefulness is small. The research on Business Process Maturity is at an early stage of development, and it primarily lacks a description of the methodology of using BPMMs. Future research should be aimed at: supplementing existing models with application procedures; confirming the usefulness of existing models; introducing a clear distinction between the BPMM (understood as a reference model that can be used to perform the assessment of the maturity) and the model/method of Business Process Maturity assessment.
Limitations	With regard to the presented study – none.
A Van Looy, G Poels, M Snoeck (2017)	
Aim	Develop a comprehensive, ranked, and weighted set of selection criteria for BPMMs that are not specific to any organisation.
Research questions/hypotheses	RQ1 Which criteria are most relevant for BPMM selection, and what is their relative importance? RQ2 How can one evaluate current BPMMs against these selection criteria?
Research methods	Systematic literature review, content analysis
Number of analysed models/papers	69/not specified
Results/conclusions	As a result of the analysis, 14 criteria determining the selection of a specific model by potential users were determined. At the same time, they were also discussed as guidelines for the development of new BPMMs. Those criteria were: Capability areas, Functional role of respondents, Number of business processes, Type of business processes, Architecture details, Architecture type, Data collection technique, Purpose Rating scale, Validation, Assessment availability, Assessment duration, Costs, Number of assessment items.
Limitations	Although the paper does not specify this, it is expected that the same set of models was used for analyses as in the previous paper of the same authors (Van Looy, De Backer, Poels, Snoeck, 2013, p. 466-488), therefore similar limitations may be applied.

*Table 1: Results of the performed systematic literature review (Rosemann, vom Brocke, 2010, p. 105-122; Röglinger, Pöppelbuß, Becker, 2012, p. 328-346; Wendler, 2012, p. 1317-1339; Van Looy, De Backer, Poels, Snoeck, 2013, p. 466-488; Tarhan, Turetken, Reijers, 2016, p. 122-134; Van Looy, Poels, Snoeck, 2017, p. 461-500)*

#### 4. CONSLUSIONS

On the basis of the preformed analysis, the following conclusions can be drawn:

1. There is a large discrepancy in the methods used for the analysis of BPMMs over the analysed period and studies.
2. Among the cited authors (e.g. M. Röglinger, J. Pöppelbuß and J. Becker, as well as A. Tarhan, O. Turetken and H. A. Reijers), the dominant approach comprises in a claim, that

all analyses of BPMMs should only be conducted in relation to those that address the issue of Business Process Maturity at a possibly general level (referring to all processes and the entire organisation, thus employing the BPM or BPO view). Consequently, it can be concluded that models, that do not meet these criteria, and therefore relate to:

- a. a specific management areas such as supply chain management;
- b. a selected area of business management, such as knowledge management;
- c. Business Process Maturity indirectly, as is the case of some quality management models (e.g. EFQM - European Foundation for Quality Management Model);

should not be treated as BPMMs and included in comparative studies.

3. In the context of the previous point, it is worth emphasizing that some authors themselves were also inconsistent. For example, A. Van Looy et al. in the article from 2010, presented at the conference pointed out that in order to compare models with each other they should focus on Generic Business Processes (such as in BPM or BPO approach) and exclude models that present solutions for specific types of processes. However, the article from 2013, presented in this study, did not take this assumption fully into account.
4. The number of BPMMs described in the literature is very large, however, only few of them can be used by enterprises to actually assess Business Process Maturity. This is due to the fact that majority of the models provide a description of Business Process Maturity concept and sometimes the assessment methodology, however in most cases, the examples of their validation are scarce. The same applies to papers demonstrating the use of BPMMs for organisational improvement. In conclusion, it can be stated that there is no justification for the development of new BPMMs. On the contrary, it is necessary to describe the existing ones better, through fine-tuning application procedures and their use for improvement purposes. This, in turn, will allow to go beyond the current development phase of BPMMs, that can be described as conceptual and enrich the Business Process Maturity body of knowledge, as well as provide a useful tool for the business practice.

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## THE ANALYSIS OF THE CHOSEN METHODS OF THE EVALUATION OF START-UPS ON THE SPECIFIC CASE

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### ABSTRACT

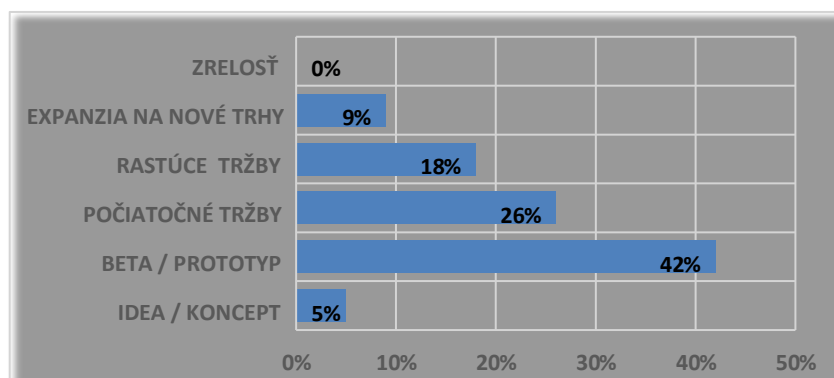
*There are long hours of the sophisticated development and improvement, knowledge, abilities, skills and commitment of founders hidden behind the innovative and perspective product or service of start-ups. We can state, in the context of ecosystem of start-ups that they originate in the environments that create for them the most convenient conditions in the form of various factors and specialized subjects. According to the last statistics there are approximately 645 start-ups in the Slovak Republic. The company Eset is certainly historically the most successful and most famous start-up, as well as the portal Pelican Travel, the road navigation Sygic, Sli.do, Staffino and others. Every start-up has to pass the particular steps of its development in its dynamic growth. The part of financing is the essential part thanks to which it is able to keep its characteristic dynamic growth and assessing. In this paper we have pointed at the particular possibilities of gaining the necessary capital and its connection to the particular phases of the lifetime of start-ups. The aim of this paper is to point at the possibilities, as well as drawbacks of the particular methods of evaluation on the basis of the analysis of the chosen methods of financing the specific start-up. By means of the methods of analysis, comparison, modelling and synthesis, there are results of analysis of the financial side of start-ups interpreted in this paper as well as the application of the knowledge gained on the example of the specific start-up. From the reasons of the protection of data, the particular subject is not named and there was used the coefficient not stated that keeps the development trend. The particular process of evaluation of company is bound to the period at the end of 2016 and the beginning of 2017.*

**Keywords:** *enterprise, valuation, social field, development, growth*

### 1. INTRODUCTION

Nowadays, there are many definitions of start-ups, however, if we could summarize the most used words appearing there, it would be: beginning, fast growth, innovations, dynamics and uncertainty. One of those present definitions of very popular way of entrepreneurship is: Start-ups are beginning companies or entrepreneurs that bring to the market innovative products and services and have the growth potential. Despite the fact that they always try to come with some innovation, this innovation is not able to secure their survival, therefore investing in them is very risky (1). Another definition says: Start-up is a young company that has just started to develop. Start-ups are usually small companies, initially financed and run by a handful of founders or by one person only. These companies offer product or service that is not at present offered at other place on the market (2). According to Ries, a start-up is: a human institution created for the purpose of bringing a new product or service in the conditions of extreme uncertainty (3). Generally, there exist more types of start-ups that can be divided from the various points of view. Depending on structure, we recognize start-ups whose aim is for instance: expansive strategy and break the worldwide market (Scalable startups), the effort to create profitable product followed up by selling company (Buyable startups) or work on innovative projects that large companies are interested in

afterwards (Large-Company startups). However, there are also start-ups whose aim is not only profit but they want to make the world better (Social startups) or have the charitable character. (Charitable startups). The next criterion for start-ups division is also the field where they act while the most considerable fields are information technologies, health and bio technologies, science, art and design, etc. (4). Ecosystem of start-ups in Slovakia belongs into those younger ones because it started to develop only in around 2010, by the initiative from the private sector. For instance, the company KPMG comes with the survey that by different statistics maps this dynamic field of industry. According to this company „nowadays there are 85% slovak start-ups in the beginning phases of its development, 41% in the beta phase, 50% generates revenues, but from those 83% generates less than 100 000 Eur. The main sources of financing start-ups are created mainly by personal savings (74%), or support from friends and family (22%). As many as 57% of companies considers relocation to a different country and from those 80% because of new markets and customers. Approximately 48% because of an approach to financing and 32% because of tax and legal environment.“ The demonstrative survey about the stage of development where the present start-ups in Slovakia is situated illustrated on the following picture.



Picture 1: The stage of the development of start-ups in Slovakia

Source: own processing, according to original in: *Startup Ecosystem Survey, Slovakia / 2016, p.26*

The main barriers in the development of the slovak ecosystem of start-ups are according to the analyses for instance the limited offer of financial and non-financial tools, insufficient connection of startup community to universities and scientific institutions, non-motivating regulative environment or insufficient entrepreneurial skills and low interest of entrepreneurship (5). On the other hand, the slovak government has summarized some measurements that wants to apply in the future. Within the frame of conception, Ministry of Finance promises also tax relieves for start-ups in the form of 3 years tax holidays from paying tax licenses. The legislative changes have been prepared for the covering of establishment of simple public limited companies with the aim to reach the optimal co-existence of investors and founders of start-ups in one company. Generally, the expression valuation can be explained as „the certain assessment of value of something, that has an economic or financial value.“ (6). According to other definition, valuation is „the process of determination of the present value of assets or company, while there are many techniques used for determination of this value. When analyzing the value of company, it is necessary to look at company management, composition of capital structure, perspective of future revenues and market value of assets. “ Valuation is not only the methodical determination of unambiguous price of certain asset for which, specialized experts have exact determined procedures.

Valuation of start-ups includes more complex problematics of evaluation of company assets that is not easily cashable. The value of start-ups is created mainly by intellectual property, that has a potential for the creation of the future revenues, above the average profit and the future company growth. The total value of company is therefore derived from 2 basic factors: the quality of idea and the level of its realization.

## 2. RESULTS

We have found out from the application of DCF method that its use requires many analyses and predictions that will gradually create to a reviewer an extensive picture about the internal value of the company analyzed. The principle of the method is the height of the future cash-flows, therefore it is very important to assess them exactly. However, in spite of this fact, the total reached result of DCF method is very variable depending on small changes in some critical variables. Nevertheless, we are talking about the height of discount rate and the level of the pace of cash-flows growth after the projected period. It is possible to express best in these parameters, the risk aversion of a reviewer but also to specify more closely the risk profile of the specific company. In the case of more risk averse reviewers, there is a tendency to use the higher discount rate. The reason can be for instance the rate of failures of start-ups that raises itself the necessity to count with higher risk. Except of this, it is possible to include also a discount of illiquidity, by which the risk is compensated for the sale of less liquid form of investment in the form of the company share. The opposite of raising the risk can be the prediction of more positive growth of cash-flows. This number will significantly influence the height of the terminal value after the projected period. In the case of the company Photoneo the higher growth would be justified by the present high pace of growth of all the robotics industry (17%). After 6 years, the market can be partially saturated but by keeping flexibility and active search for new opportunities, higher growth level is quite real, too, as well as originally chosen 5%.

(r)	The pace of growth of the future CF (g)					
	5%	6%	7%	8%	9%	10%
10%	16.268.978	19.939.494	26.057.020	38.292.073	74.997.231	-
11%	13.225.703	15.564.456	19.072.585	24.919.468	36.613.233	71.694.529
12%	11.063.160	12.660.440	14.896.633	18.250.921	23.841.402	35.022.364
13%	9.450.581	10.596.464	12.124.308	14.263.289	17.471.761	22.819.215
14%	8.204.229	9.057.062	10.153.561	11.615.559	13.662.357	16.732.555
15%	7.213.887	7.867.001	8.683.393	9.733.040	11.132.570	13.091.911
16%	6.409.435	6.921.161	7.546.605	8.328.409	9.333.586	10.673.822
17%	5.744.141	6.152.665	6.642.894	7.242.062	7.991.022	8.953.971
18%	5.185.668	5.516.941	5.908.445	6.378.251	6.952.457	7.670.215
19%	4.710.929	4.983.145	5.300.731	5.676.060	6.126.454	6.676.936
20%	4.303.004	4.529.257	4.790.318	5.094.890	5.454.839	5.886.777

Table 1 : Analysis of sensitiveness of the final valuation by the method DCF

In the table above we can observe how the total company value changes, if we move with the discount rate in the range from 10% to 20% and the pace of growth in the range from 5% to 10%. However, the values of all 66 combinations changed minimally by 5% with the change of at least one parameter by 1%. By this, we state these parameters sensitive. In some cases, these changes were even higher than 100%. The possibility of the choice of the



same value of both parameters will cause in Gordon's model dividing by zero, what is not possible. The convenient complement to the table would be also to notice some of its extreme and average values that are stated in the following table.

<b>The maximum value of valuation</b>	<b>74.997.230 €</b>
<b>The average value of valuation</b>	<b>13.528.269 €</b>
<b>The median value of valuation</b>	<b>9.057.061 €</b>
<b>The minimum value of valuation</b>	<b>4.303.003 €</b>

*Table 2: Extreme nad average values*

We can see in the table that in dependence on the character of reviewer, the final company value can move from 4,3 mil. Eur up to almost 75 mil. Eur. Even though DCF method is used very much in practice, it is criticised just so often for this variability. We summarized its negatives and positives for the creation of own opinion about this method in the following table no.11.

<b>DCF method</b>	
<b>Positives</b>	<b>Negatives</b>
Its result is justified by calculation	It is based on many predictions
It stems out from the internal company value and it does not perceive under/overvaluation of estimation of market	It works correctly only if it has correct inputs
Cash-flows are not as artificially affected as some other financial indicators	It is very sensitive to the change of some of its parameters

*Table 3: Positives and negatives of DCF method*

## 2.1. Relative methods

Equally, we have to draw the attention to some advantages and disadvantages from the experience with the application of relative methods. The important positive aspect is mainly the involvement of the market perception of value, however, on the other hand, its application was in our case quite restricted with the very difficult identification of key information. More aspects can be seen in the table below.

<b>Relative methods</b>	
<b>Positives</b>	<b>Negatives</b>
Simplicity and fastness regarding the application and understanding	It is very difficult to find the convenient comparable companies
It is not influenced by the volume of predictions	It is not possible to use some other multiples
It reflects the fact, how market acts and perceives value	Actual market value can be overvalued resp. undervalued

*Table 4: Positives and negatives of relative methods*

It is necessary to say that relative methods are the simple way of value determination. The fact is that it is not always the benefit. The expelling capacity of relative methods is quite low because of the lack of deeper knowledge and closer analysis. The more objective view would probably be brought by the use of more different multiples, what would indeed be impossible in our case. The most important step was the correct choice of comparable companies as these methods stem only from the gained statistical values. Therefore, according to our opinion, the terminal valuation reflects concrete conditions in which a company operates only very distortedly.

## 2.2. First Chicago Method

The last used method is in fact the improved version of those previous ones. The improvement does not consist in incorporating the market perception into the method, but mainly in the correction of the final result about the fact that not only one scenario of development can happen but at least three of them.

First Chicago Method	
Positives	Negatives
Incorporation of more alternative scenarios of the future development	All the mentioned disadvantages connected to the application of DCF method
Cooperation of the two different valuation methods	Some mentioned disadvantages in calculation of the terminal value (TV)
The mentioned advantages connected to the application of DCF method and relative methods	Relative methods (the choice of comparable companies, under/overvaluation of market)

*Table 5: Positives and negatives of First Chicago Method*

However, as we stated in the mentioned table, incorporation of the method analyzed above has brought also its negatives with itself. On the other hand, we perceive a method as the complex and quite objective tool for the calculation of valuation.

## 3. SUMMARY

The use of the three different valuation methods created a comprehensive picture about the value of the company Photoneo from the different points of view. The lowest valuation of the analyzed start-up was brought by relative methods, while its value was not even 3,9 million Eur. On the other hand, the highest valuation was gained by First Chicago Method, more than 19,8 million Eur. We gained a little lower valuation, almost 15,3 million Eur by DCF Method. We got to the level of less than 13,0 million Eur by the arithmetic average of the reached results with the valuation of the company Photoneo. Terminal results of the valuation gained by the particular methods and its averages can be observed illustratively on the picture.

*Figure following on the next page*

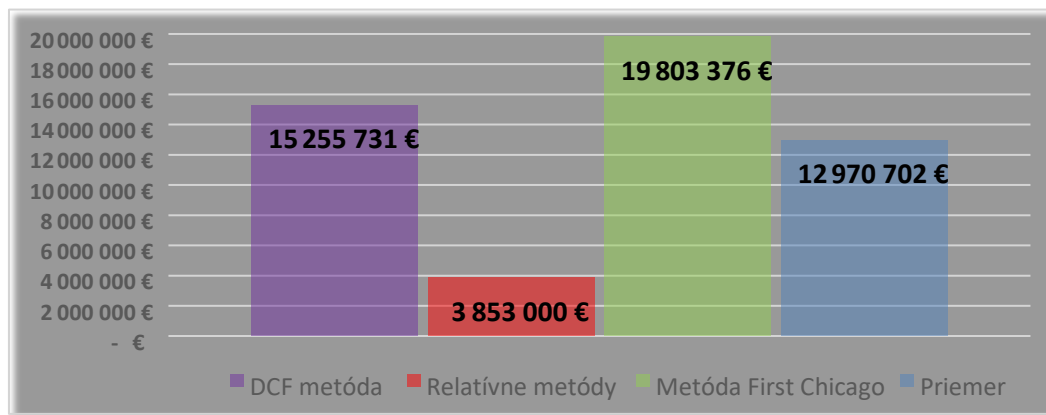


Figure 1: Terminal values of the applied valuation methods and its average

We have gradually come to an opinion by dealing with the valuation of start-ups, that this topic is influenced very much by other practical factors that are difficult to include objectively into calculations. In the practical determination of valuation, the most key information is the height of necessary investment and the amount of share that founders of a start-up are able to give up in favour of an investor. In fact, company negotiates about the height of financial investment in the value from 2,5 million Eur to 5 million Eur. At the same time, company is able to leave its share in the company to investors in the range from 10% to 20% for an investment.

#### 4. CONCLUSION

We used 3 different valuation methods to assess the value in this company. It can be seen in the created analysis of sensitiveness how can the level of risk aversion of a reviewer be manifested. The lowest gained value, only on the level of almost 3,9 million Eur, was reached by the application of relative methods. It was the market comparison on the basis of the multiple EV/Sales. This method showed to be quite problematic as we could not use more different multiples for more objective result in our case. Compared companies were created by two groups, competitive companies by products and others similar start-ups by size. The third applied method was First Chicago Method. It was some improvement of DCF method with the use of the element of relative methods. The improvement consisted of the fact that the height of the terminal value of start-up originated from the modelling of three different scenarios of the future development. By allocating probabilities to particular scenarios, we gained valuation on the level of more than 19,8 million Eur, that was at the same time the highest from all three methods. Every method from the used ones had its positives and negatives that we tried to analyse in the summary part of the paper. We have come to the valuation in the height of almost 13,0 million Eur by averaging of particular values reached.

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## THE ECONOMIC IMPACT ON DEVELOPMENT OF DEMOCRATIC PARTICIPATION IN VISEGRÁD GROUP COUNTRIES

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### ABSTRACT

*The article contains considerations on the economic impact on development of the level of democratic political participation. Described research concerns the situation in the Visegrád Group, in particular, the correlation between the level and dynamics of economic development and democratic participation, appearing in voter turnout. The Visegrád Group (Poland, the Czech Republic, Slovakia, Hungary) presents the fastest developing part of the European Union. Since joining the EU in 2002, they have gradually reduced the economic gap between them and the Western Europe. The countries of the Central Europe received relatively balanced settlement and industry structure from the period of the Soviet domination. Not until the political changes in the 90s and the subsequent period of economic growth the tendencies to polarize the socio-economic development have intensified in them. The paper analyses the dynamics of economic development in selected regions of the countries (NUTS-2) and its correlation with the level of electoral participation of the population from 2002 to 2018. The main hypothesis of the article is that there is a clear correlation between the economic growth of regions and electoral participation of their inhabitants. Further differentiation of the level of affluence between regions may lead to the stratification of civic democratic engagement. The significance of the problem stems from the fact that the low citizen involvement in the political life of the country, which manifests itself in, among other things, the low level of electoral participation, usually results in dangerous radicalization of social moods and favors populist political parties.*

**Keywords:** *electoral participation, democracy, regional development, Visegrád Group*

### 1. INTRODUCTION

Constant and sustainable development of modern society requires the connection of economic factors with the progress in political institutions. Economic growth, if is supposed to be durable, should go together with the development of modern institutions and political consciousness. The element of political culture is democratic participation of society and its fundamental determinant is electoral participation in democratic countries. Described research concerns the situation in the Visegrád Group (Poland, the Czech Republic, Slovakia, Hungary). The Visegrád Four or V4 Group presents the fastest developing part of the European Union. Since joining the EU in 2002, it has gradually reduced the economic gap between them and the Western Europe. The countries of the Central Europe received relatively balanced settlement and industry structure from the period of the Soviet domination. Not until the political changes in the 90s and the subsequent period of economic growth the tendencies to polarize the socio-economic development have intensified in them. The aim of this paper is analyses the dynamics of economic development in selected regions of the countries (NUTS-2) and its correlation with the level of electoral participation of the population from 2002 to 2018. The main hypothesis of the article is that there is a clear correlation between the economic growth of regions and electoral participation of their inhabitants. Though in many parts of the world the connection between democracy and economic development is not so obvious (there is rapid economic growth in some countries with authoritarian system), in European Union democratic values are treated as both objective and determinant of socioeconomic development.

## 2. ASSUMPTIONS, METHODOLOGY AND DATA SOURCES.

V4 countries belong to democratic postcommunist countries which gained political subjectivity and started building democratic political system after the breakup of the Eastern Blok at the turn of the 80's and 90's. They are classified as New Democracies or democratic postcommunist systems in view of the short time in which the reforms were (have been) started (Heywood, 2007, p. 34-36). In view of clearly defined direction of undertaken reforms they can be identified as liberal democrations *in status nascendi*. To distinguish from so called etymological democracy (Sartori, 1987, p. 21-23), modern western model of democracy is referred to as polyarchy (the term was introduced by Robert Dahl) which is a system based on the procedures providing freedom of election process that keeps a number of institutions supporting the principle of majority rule and the protection of individual and minority rights (Tilly, 2007, p. 21). Dahl includes in this catalog the principle of representative government, free and fair elections, inclusive suffrage, right to run for office, freedom of expression, right to alternative information, and associational autonomy (Dahl, 1989, p. 310). Two most important features of polyarchy (modern liberal democrations) are: universality of human rights and the opportunity to refute in the vote the most important government officials. According to Dahl, polyarchy can develop in any country when it meets certain conditions. First of all, there must exist modern, dynamic and pluralist society. The rise of such societies is a natural way of civilization development and it gives hope that its range of occurrence will get bigger. According to the concept of Fukuyama from *The Origins of Political Order* there is a interdependence between broadly understood elements (dimensions) of socio-economic development. To these elements he includes: economic growth, social mobilization, legitimacy (ideological), democracy (accountable government rule), rule of law, and state (efficient political institutions). The relationship between these phenomena presents Figure 1.

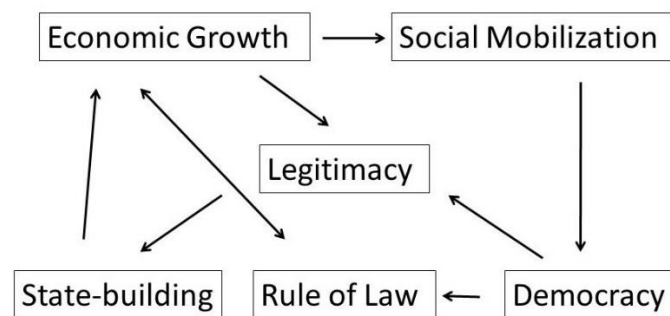


Figure 1: Dimensions of development (Fukuyama, 2011, p. 469)

The direction of cause and effect relationship between the economic growth and a good government (either democratic or efficient and well evaluated government of different type) is not certain but there are certainly several dependencies. The existence of the state is a basic precondition for economic growth. On the other hand, the breakdown of the state due to war or internal political crisis leads to economic crisis. Similarly, relations between economic growth and democratic social mobilization and changes in political awareness are formed but generally the growth in the wealth of the society increases its interest and commitment in the political life of the country (Fukuyama, 2011, p. 468-472). In the democratic society the level of economic growth should positively correlate with the electoral commitment of citizens. It consists of factors such as the increase in wealth, existence of democratic institutions enabling aggregation and formulation of public interests and inclusive political system (the lack of exclusion big social groups *ie.* from the party system). In practice, the commitment measured by the level of voter turnout is affected by many difficult and hard to measure factors.

This is due to the fact that electoral behavior (and political attitudes) belongs to elements of political culture. Under the condition of European countries with 'young' democratic systems such phenomena as petrified party system, general decrease of trust level to political elite or dissatisfaction with growing social inequalities can have a negative influence. Changes of political culture take place slowly and mainly concern whole political systems. For this reason, it is worth paying attention to relation between economic growth and political behavior on the level of regions. From the perspective of regional development policy, regions are the basic units in which it is planned and implemented. Regional development should be understood as positive, quantitative, qualitative and structural economic changes taking place in a given region. The most distinguish development factors are economic, social, technical and ecological. On the scale of the whole country (as well as the European Union), the development of regions is supported through the regional policy, which aims at reducing disparities at the level of development and spatial accessibility of underdeveloped regions (Proniewski 2012, p. 30-32). One of the most important issues of the theory of economic development is the spatial diversity of phenomena related to regional policy. In practice, the main problem is the effect of excessive disproportion in the development of particular regions. For many reasons, the richest regions and metropolises can develop faster than others, further deepening the development gap. Differences between regions can disappear with the growth. On the other hand, according to Myrdal and the post-Keynesian theory, economic growth results in increasing inequalities (Bradley, Petrakos, Traistaru, 2005; referenced by Kuttor, 2009, p. 26). In Williamson's inverted U-Curve hypothesis the degree of spatial inequalities depends on the level of development of the regions. At the lowest and highest level of development, the differences between the units show less extent, nevertheless during the transition period tend to increase. Therefore it can be characterized as a reversed U (Kuttor, 2009, p. 26). Further considerations will take into account the relationship between the dynamics of voter turnout and the level of economic development determined by means of the GDP *per capita* (index) and its dynamics. The voter turnout taken into consideration in the analysis refers to parliamentary elections to the lower chambers of parliament, the first round (in two-tier elections) in the period from accession to the European Union to today. Due to the fact that in individual countries of the Visegrad Group, elections are held every four years, but in different years, in practice the first taken into consideration are the years 2001 – 2002 (the last election before joining European Union) and last years 2015 – 2018. It is assumed that voter turnout is the percentage of eligible voters who cast a ballot in an election. For the purpose of the analysis, there were used Gross Domestic Product (GDP) *per capita* at purchasing power parity as the development indicator. The GDP *per capita* reflects the economic level better than its absolute value. In contrast to income of households, it reflects the economic performance of all entities in the region (Majerová, 2017, p. 5) Statistic data used in this paper come from few sources. The information about Gross Domestic Product in the V4 countries come from database of Eurostat. The information about the voter turnout at the level of NUTS-2 units come from the sources of services conducted by state institutions (Český statistický úřad, Nemzeti Valasztasi Iroda, Państwowa Komisja Wyborcza, Štatistický Urad Slovenskej Republiky) In some countries (Hungary, Slovakia) the basic units of electoral statistics do not coincide with the regions (i.e. in Hungary elections are conducted in single-member constituencies) so they were aggregated to the NUTS-2 level for maintaining adequacy.

### 3. RESEARCH AND RESULTS

The V4 countries form one of the Transitional Economies group, together with Baltic States, members of the former Yugoslavia states, Albania, Bulgaria and Romania (Svejnar, 2001, p. 212). These Central and Eastern European states show many similarities from historical, political, economic, and social aspects.



This similarities concern, in particular, the 1990s and early twentieth century. Central European countries have been affected by problems resulting from the transformation of the economic system. Consequently, in the period preceding the accession to the European Union, their macroeconomic indicators and actual level of earnings as well as the quality of life of the residents were well below the European average. Problems faced by New Democracies were lack of civic culture including low level of civic engagement and corruption and low quality of public institutions. Figure 2 presents location and names of each units, subjects of its analysis.

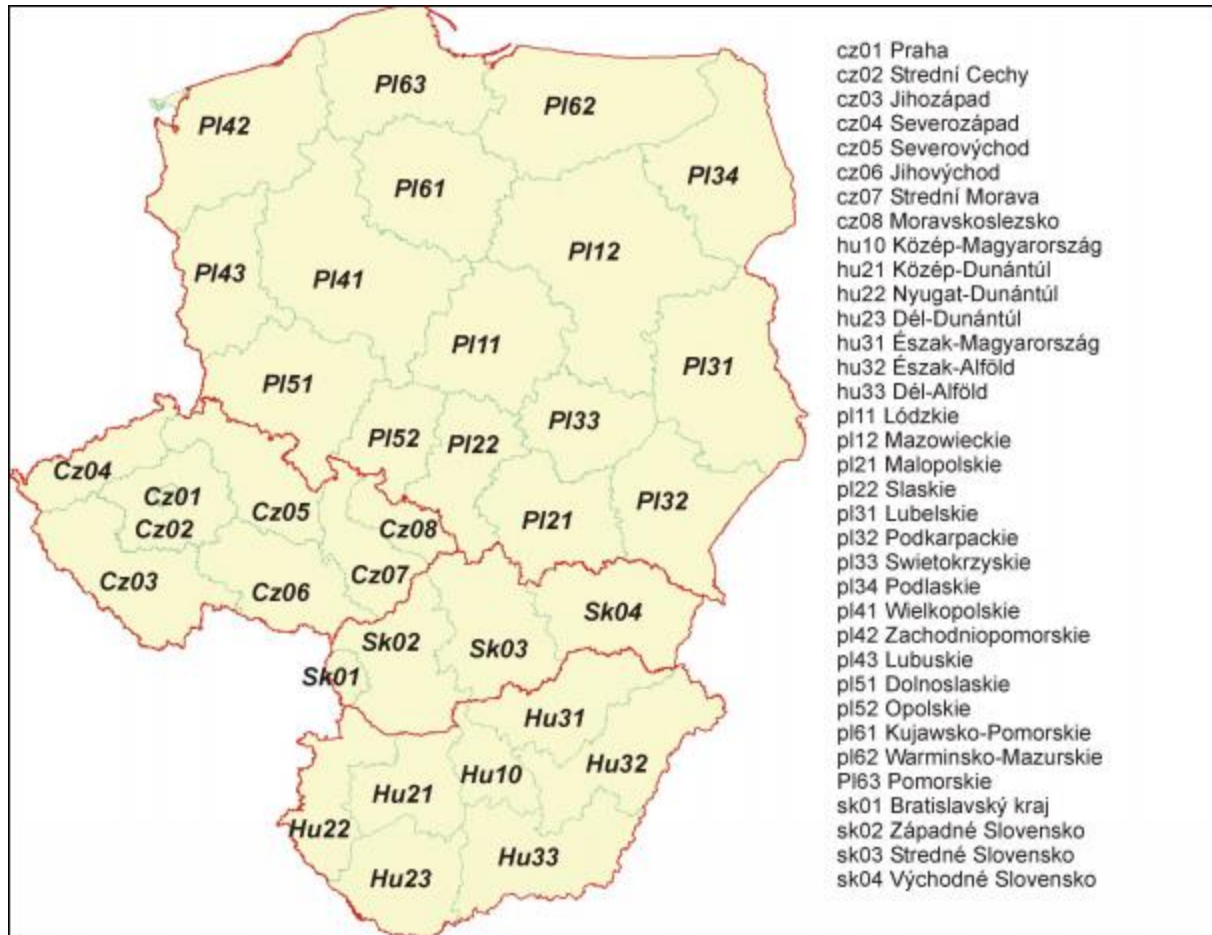


Figure 2: Location of V4 regions (Kuttor, 2009, p. 27)

Table 1 illustrates voter turnout on the level of whole countries in the next election. With the exception of the extraordinary situation with a fall in attendance in Slovakia after 2002, in certain countries V4 there is a relatively stable level of voter turnout. Importantly, this level differs significantly between countries, which should be explained by the different political cultures. In comparison with other countries, Poland (is the largest analyzed countries, 16 regions for 35 of all) of stands out with an exceptionally low turnover around 50%. From the point of view of these solutions, it is important that the dynamics of voter turnout should be considered taking into account the housing conditions, and therefore, above all, depending on the average results in the countries concerned (which also, importantly, raise the GDP index at different rates). According to the assumptions presented in the previous part of the work, it is assumed that the level of electoral involvement in particular countries may change under the influence of many factors, while within a given national political culture, the differences in the development of individual regions in the long term should be reflected in the level of attendance in regions compared to data for the whole country



*Table 1: Voter Turnout in Parliamentary Elections in V4 Countries since 2002 (own editing based on data by International Institute for Democracy and Electoral Assistance [www.idea.int](http://www.idea.int))*

Czech Rep.		Hungary		Poland		Slovakia	
2017	60.84 %	2018	69.67 %	2015	50.92 %	2016	59.82 %
2013	59.48 %	2014	61.84 %	2011	48.92 %	2012	59.11 %
2010	62.60 %	2010	64.38 %	2007	53.88 %	2010	58.84 %
2006	64.47 %	2006	67.57 %	2005	40.57 %	2006	54.67 %
2002	57.95 %	2002	70.52 %	2001	46.18 %	2002	70.07 %

Even in the 1990s, the economies of the Visegrad Group countries grew and the distance between them and the European Union slowly decreased. At the same time, disproportions between the best and least-developed regions grew. It is particularly significant in the situation of the capital regions, which have reached the level of per capita GDP much higher than the rest of the territories. Among them Mazowieckie was the most rapid, followed by Bratislavský kraj and Közép-Magyarország (Kuttor, 2009, p. 35). After the accession to the European Union, the disproportions between the richest and the poorest regions grew, with some non-capital regions joining the fastest-growing regions. These are regions with strong metropolises, such as Dolnośląskie, often located closer to the western borders of the country - closer to the old EU countries, such as Nyugat-Dunántúl. The next table presents changing of GDP index, together with analyzing changing in voter turnout level.

*Table following on the next page*

*Table 2: GDP per capita and voter turnout in parliamentary elections in V4 regions since 2002 (own editing based on data by Państwowa Komisja Wyborcza, 2001, 2015; Český statistický úřad, 2002, 2017; Nemzeti Valasztási Iroda, 2002, 2017; Štatistický úrad Slovenskej republiky, 2002, 2016)*

NUTS 2 Region	GDPpc 2005 (euro)	GDPpc 2016 (euro)	GDP growth	Turnout 2001-2002	Turnout 2015-2018	relative change of T.
CZ01	39 700	53 100	133,8%	60,0%	67,1%	1,067
CZ02	17 200	23 500	136,6%	58,8%	63,4%	1,029
CZ03	17 200	22 500	130,8%	58,1%	60,9%	1,000
CZ04	14 900	18 400	123,5%	50,5%	52,3%	0,987
CZ05	15 600	21 100	135,3%	59,5%	62,3%	0,997
CZ06	16 200	23 600	145,7%	60,8%	62,4%	0,979
CZ07	14 400	20 800	144,4%	59,4%	60,9%	0,977
CZ08	15 600	21 800	139,7%	55,2%	55,9%	0,964
HU10	23 600	29 800	126,3%	74,9%	73,2%	0,981
HU21	13 600	18 600	136,8%	71,0%	70,9%	1,002
HU22	14 400	21 500	149,3%	73,0%	72,9%	1,003
HU23	10 000	12 900	129,0%	69,7%	67,9%	0,979
HU31	9 600	13 000	135,4%	68,8%	67,3%	0,983
HU32	9 300	12 500	134,4%	66,1%	66,4%	1,009
HU33	10 000	14 000	140,0%	66,3%	68,4%	1,037
PL11	10 900	18 600	170,6%	46,6%	51,6%	1,007
PL12	18 200	31 700	174,2%	48,2%	58,7%	1,106
PL21	10 500	18 100	172,4%	48,7%	54,9%	1,026
PL22	12 700	20 700	163,0%	45,3%	52,3%	1,048
PL31	8 300	13 700	165,1%	47,4%	49,0%	0,939
PL32	8 500	14 000	164,7%	48,4%	50,4%	0,948
PL33	9 100	14 300	157,1%	44,2%	46,8%	0,963
PL34	8 700	14 100	162,1%	44,8%	47,1%	0,956
PL41	12 700	21 700	170,9%	49,9%	50,2%	0,914
PL42	10 700	16 700	156,1%	43,5%	45,9%	0,958
PL43	10 700	16 700	156,1%	42,6%	44,6%	0,953
PL51	12 200	22 100	181,1%	45,0%	49,4%	0,999
PL52	9 800	15 900	162,2%	39,8%	43,1%	0,984
PL61	10 200	16 300	159,8%	44,6%	46,4%	0,945
PL62	8 900	14 200	159,6%	41,0%	42,3%	0,938
PL63	11 700	19 300	165,0%	47,4%	51,9%	0,994
SK01	34 300	53 700	156,6%	70,8%	65,8%	1,088
SK02	13 300	20 900	157,1%	71,3%	59,9%	0,982
SK03	10 900	17 900	164,2%	71,2%	60,9%	1,001
SK04	10 100	15 600	154,5%	67,1%	54,7%	0,952

The indicator taken into account in the research was the relative change in the turnout rate that took place within the assumed period of time. To establish it for individual regions, the relation between the turnout in a given region and the turnout in the whole country was determined separately for regions from each of the V4 countries. Such a ratio allows to compare not only the increase or decrease in the voter turnout, but also whether the turnout in a given region grows or decreases compared to the national level.

The indicator is determined by the formula:

$$rel\Delta T_i = \frac{T_{2i}}{CT_{2i}} - \frac{T_{1i}}{CT_{1i}},$$

when:  $rel\Delta T_i$  is relative change of voter turnout in region  $i$ ;  $T_{1i}$  is voter turnout in region  $i$  in prior considered election;  $T_{2i}$  is voter turnout in region  $i$  in later considered election;  $CT_{2i}$  is voter turnout in region  $i$  in parliamentary election;  $CT_{1i}$  is turnout in region  $i$  in parliamentary election ( $i=1, 2, \dots, n$ ;  $n=35$ ).

The indicator allows to refer to the changing relations between regions in particular countries. Thanks to this, it is independent of such factors as temporary fluctuations of the so-called temperature of political disputes. It also allows to compare regions from countries with different (in spite of many similarities) political culture. This applies above all to the phenomenon of permanently lower voter turnout in Poland. The relative change in the turnout rate indicator can then be compared to variables using a correlation coefficient. The Pearson correlation coefficient is a measure of the strength of the linear correlation between two quantitative variables. It shows how close the observation line is to the regression line. It is the quotient of the covariance and the product of the standard deviations of both variables. The correlation coefficient is an independent scale, because its size does not depend on the measurement scale of any of the variables. Its value does not depend on which variable we consider to be dependent and which is independent. It accepts values in the range:  $<-1; 1>$  (Johnson, Reynolds, Mycoff, 2008, p. 490-491).

*Table 2: Correlation matrix: relative change of voting turnout correlation coefficients (own editing)*

	rel Turnuot change	GDPpc 2005	relGDP 2005	dGDP	rel GDP change
rel Turnuot change	x				
GDPpc 2005	0,592	x			
relGDP 2005	0,615	0,913	x		
GDP growth	-0,064	-0,310	0,000	x	
rel GDP change	0,260	0,016	0,003	0,277	x

As shown in the above table, the main indicator is related to the GDP level in a given region. This applies to the relationship between it and GDP listed in the table at the beginning of the period under review, as well as similar data for 2016. Relative GDP 2005 indicator means the ratio of the region's GDP to the country's GDP at the year, as well as relative GDP change means the ratio of later to earlier level of this (it is a change of relative GDP pec capita) Correlation with the GDP growth rate is close to zero. However, there is a small but visible positive correlation with the relative increase in GDP. This means that, statistically, regions that have increased their share of the country's general GDP have also increased the electoral involvement of their inhabitants compared to other regions of the same country.

#### 4. CONSLUSION

The conducted research allows to better understand the phenomena occurring in the Central Europe countries at the interface between the spheres of economy and political life. According to the assumed hypothesis, the relationship between the economic development of the regions and the electoral behavior of citizens can be observed. This is all the more important because the observation of the dynamics of attendance at the level of entire countries does not show significant changes.

Although there has been a significant and economic development (and still progressing) in the Central European countries, illustrated by macroeconomic indicators such as GDP, the voter turnout is stable and - in comparison to other European countries - quite low. However, significant differences can be seen at the level of regions. Fast economic growth positively correlates with the increase in voter turnout, but it is not a strong correlation. The relative level of attendance, established as the ratio of voter turnout in a given region to the average attendance in the whole country, grows fastest in those regions that were already characterized by the highest level of development. In connection with this, it can also be said that voter turnout is growing the fastest where it was already high. For this reason, in the developing regions (according to the GDP per capita index) the fastest, such Regions as Střední Morava, Nyugat-Dunántúl, Stredné Slovensko and Dolnośląskie, the turnout is not growing faster than the average. The fastest growth, however, is in the capital regions, such as Praha, Közép-Magyarország, Mazowieckie and Bratislavský kraj. Today, just as at the moment of joining the European Union, the capital regions are the strongest economically (both nominally and per capita). This is not, of course, surprising. Their strength lies at the dominant economic position of the major national metropolises. According to the assumptions resulting from the discussed theory, regions of this type are also characterized by a greater involvement of citizens in democratic processes. It turns out that even in the case of overcoming the development gap, the differences in electoral behavior increase the regional policy of European countries. The significance of the problem stems from the fact that the low citizen involvement in the political life of the country, which manifests itself in, among other things, the low level of electoral participation, usually results in dangerous radicalization of social moods and favors populist political parties. Still the differences are not large, and the changes themselves are slowly taking place, especially as they relate to the dimension of political culture. However, the tendency is negative and therefore requires awareness and attention.

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## PERIPHERAL ANTECEDENTS OF THE PROSUMER CULTURE AS A SOURCE OF INSPIRATION FOR HUMANISTIC MANAGEMENT

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### ABSTRACT

*The article is a discussion of the possibility of using the nineteenth-century idea of city-gardens (Ebenezer Howard) and its peripheral realizations as a cognitive contribution to humanistic management. Humanistic management - a relatively new trend in organizational studies was initiated, among others by Polish-British scholar Monika Kostera, at the beginning of this century. This trend postulates the use, both in theory and practice of management, of the paradigm of the humanities, including historical ones. It also advocates reaching for local organizing traditions. According to this approach, this text presents the possibilities of using organizational history to enrich contemporary management thinking based on good practices from the past. The authors of the text formulate the thesis that the idea of city-gardens, and especially the management practices resulting from it, were the antecedents of the prosumer movement ideology of our time. The article justifies this thesis by critically analyzing the implementation of the idea of city-gardens on examples from the areas of Warsaw and the surrounding area from the first half of the twentieth century. It shows the specificity of urban investments using the idea of Ebenezer Howard, implemented in peripheral areas in relation to the center of globalization. An example of such areas in this article are central Poland. This approach shows the possibilities of developing prosumer culture also based on local traditions. According to the authors, a reminder of good practices related to the implementation of the idea of city-gardens may be an "intellectual bridge" between humanistic management and the prosumer movement today.*

**Keywords:** *city-gardens, humanistic management, organizational history, prosumer culture*

### 1. INTRODUCTION

This article constitutes a contribution to „organizational historiography”, a subdiscipline of organizational studies, associated with the so-called “historical turn” (Millis, 2016, et al.), which is based on critical readings of various historical narrations for management purposes (Ochowski, 2016b). Understanding history, which, as an epistemological space, constitutes the framework for this text, was borrowed from Nicola Chiaromonte (1905–1972), the 20th century Italian culture critic. This inspiration immediately defines the background for further analyses - the extrapolation of humanities into the field of management. “People - as a collective - are always motivated by both rightful and business incentives, and their actions are never coherent.”<sup>1</sup> The quoted fragment of Chiaromonte’s letter (2018, p. 233) to Melanie von Nagel Mussayassul, dated May 15, 1969, is part of the Italian humanist’s broader polemic with the Hegelian concept of understanding history. It is worth recalling that the author quoted for his interpretations of novels by Tolstoy and Pasternak, consequently admitted, „that history as we actually experience it, is not a rational concatenation of an event or outcome of decisions in

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<sup>1</sup> Translated from Polish version of the Chiaromonte’ letters (2018) to Melanie von Nagel Mussayassul.

high places, but a mass of infinitesimal accidents and unexpected incidents" (Chiaromonte, 1970, p. 119). However, the Italian thinker was not a supporter of the thesis on the ontological senselessness of history or its non-causality<sup>2</sup>. He is only warning against too naive interpretations of history. The sense of historical events lay, in his opinion, in that these events "appear (one – T.O. and E.R-W) to strike the individual from outside but actually burst forth from the innermost recesses of society, and hence from man's own nature" (Chiaromonte, 1970, p. 118).

## **2. HUMANISTIC MANAGEMENT, HISTORY AND NOSTALGIA AS A PERSPECTIVE ON PROSUMERISM**

The approach to history outlined following Chiaromonte, clearly corresponds with „A humanistic manifesto for sustainable management”, which was formulated many years after Chiaromonte's death by Polish-British scholar Monika Kostera (2012). It was a call to reorient the management sciences in the direction of placing anthropological point of view in their center, i.e. looking at organizational issues consistently from a human perspective. Like Chiaromonte's thought, Kostera's proposals are also far from naive optimism. At the same time, however, they invite both theoreticians and practitioners of management to take on the issues they address through the prism of hope. This hope is created by placing human affairs in an organizational context, which seems to exceed the concern of Chiaromonte for the fate of a lonely individual facing an often cruel history. On the other hand, the axiological complexity of the human being gives hope for building a balanced organizational life. If we can only see individual threads, we cannot comprehend the whole and appreciate the beauty and the harmony; also, we are unable to solve problems which transcend the level of the narrow and fragmented. Organizations as part of human experience make more sense if regarded in their context and wholeness. Being human means not only being greedy, egoistic and aggressive, but also empathic, understanding and compassionate. Today, practitioners as well as theoreticians call for open concern for the meaning of organizations in our lives and within the ecosystem of the planet (Kostera, 2012, p. 10). Representatives of humanistic management - a relatively new stream in organizational studies, which was initiated, and still is promoted among others, also by Kostera- are trying to implement the postulates formulated by the Polish-British researcher. The aforementioned trend develops the research tradition, initiated by the works of Karl E. Weick, treating organizations primarily as a place, where people are seeking and creating meaning. The attitude towards the sometimes heroic search for meaning is another important link connecting humanistic management to Chiaromonte's history. At the same time, these meanings, in the case of history, can only be identified *ex post*, according to the Italian humanist, when participants in particular episodes compare them with other stages of their entanglement in history (Chiaromonte, 1990). It is difficult not to mention in this context the findings of Viktor Emil Frankl (1905-1997), the classic of psychology of the sense, who emphasized that the human individual (and the collective combined with common experiences) has a special ability to discover the meaning of past events. At the same time, meanings discovered this way can help both in present life and in constructing the future, (e.g. Frankl, 2012 and Pattakos, 2010 - who applied Frankl's concept to the level of organizational issues). Retrospective discovering of meanings of past events is therefore a psychological and broader cultural tool for "conquering" the inconsistencies of human activities, in which Chiaromonte saw the basic difficulty in the analysis of history, which we quoted at the beginning of this subchapter<sup>3</sup>.

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<sup>2</sup> By the same author: „it would be blasphemy to consider human history absurd, and to consider the force that rules it evil. At the base of everything lies some "cause of causes", let us call it that." (Chiaromonte, 2018, p. 103, translated from Polish). It would be difficult, nonetheless, to find a more precise elaboration of this intuition from the quoted author.

<sup>3</sup> Both Frankl and Chiaromonte write directly about discovering the meanings of history in the personal reflection of its participants. However, we do not see any rational obstacles to extending this type of analysis to the actions of other people,

Perennial studies of Yiannis Gabriel, continuing to this day, beginning with the canonical *Storytelling in Organizations* (2000), showed conclusively that nostalgia is sometimes an important method of organizational work with the past. For the quoted scholar creatively interpreting the intellectual heritage of Zygmunt Freud, the phenomenon of nostalgia is contemplation of the "golden age", filled with "melancholy resulting from the long absence from home indicated" (Gabriel, 2000, p. 175). Important elements of organizational nostalgia include idealized memories of buildings, leaders, colleagues from individual departments, as well as other characters. Its basic functions are to build a strong, often compulsive identity of the organization; this primary process is also sometimes also affected by another - creating narcissism. Akin to relations of various other elements of Freud's and Frankl's ideas, the Frankl's perspective, without denying Gabriela's findings (2000, et al.), it allows us to perceive and use also the positive (in the developmental sense) potentials of organizational nostalgia. It allows, following Kostera (2012), to take into account both aspects of the human being also when considering this issue. As such, nostalgia can show the participants of the organization that - and how - it is possible to learn from the past, although it is not possible to live in the past. It can help to reduce excessive focus on the organizational present, which significantly hinders creating visions and planning the future. When the organization focuses too much on current moment, the future of the organization "may become a nightmare" (Dale, 2004, p. 110). Last, but not least, nostalgia is the source of a stable sense of historical continuity of the company, continuity that helps take risks when the present conditions turn out to be highly variable. In summary, the potential for nostalgia lies in the fact that it provides "continuity in our lives" (also in organizational ones – T.O. and E.R-W) and the courage to go forward" (Dale, 2004, p. 110). One should only use it consciously, remembering about the dangers described by Gabriel (2000, et al.). From an epistemological perspective, humanistic management postulates the use of, both in theory and practice of management, the paradigm of the humanities, including historical ones. It also advocates reaching for local organizing traditions. Kostera, developing, in this aspect, the thought of Heather Höpfl (1948-2014), situates organizational historiography close to poetics<sup>4</sup> (Kostera and Średnicka 2016). This is in line with the another of Chiaromonte's concepts (1970, p. 117), confirming Roger Caillois's thesis that "poetry at its origin was everything one wanted to preserve intact in the memory"<sup>5</sup>. The rest is nothing but interchangeable words". Of course, the subject of (the) poetry in the quoted meaning is not only poetry as a literary genre, but all texts that fulfill the function mentioned by Chiaromonte. Our article uses, in this sense, essays on peripheral realizations of the idea of "garden-cities". We treat these essays as remembrance of traces the utopia by Ebenezer Howard (1850-1928) formulated in 1902 in the Garden Cities of Tomorrow left on urban landscapes, away from global city centers (on the bases Warsaw and its surrounding areas). Such features of the aforementioned concept of building suburban settlements, for an est. 30 thousand residents of varied wealth, self-sufficient in terms of administration, culture and recreation, self-governing (assumed joint ownership of land), surrounded by greenery, but not too far from places of work (Skrok, 1999, p. 113), bringing it closer to - maintaining all historical conditions - to the contemporary prosumer movement<sup>6</sup>.

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including those with which the contemporary researcher has the opportunity to contact only through archival sources or historical publications.

<sup>4</sup> A detailed analysis of the relationship between historiography and poetics in management exceeds the scope of this article.

<sup>5</sup> The problem of relations between history and memory, with extensive literature on the subject, exceeds the scope of this article. Generally speaking, we treat organizational historiography as a tool for critical analysis of various manifestations of organizational memory.

<sup>6</sup>Without going into details, we assume that the prosumer movement is a wide collection of social attitudes and behaviors assuming the participation of an individual or whole groups in both consumption and the overall production process. According to us, it also includes the participation of residents in the design and implementation of the place of residence. The term "prosumption" itself was popularized by *The Third Wave* by Alvin Toffler, published in 1980.



This is especially true in the cultural aspect of this movement. And to be more precise, in the context of the cultural challenges currently faced by prosumerism, especially in the EU. On the one hand, in view of the growing awareness of climate threats, the ideas of prosumerism are at the center of the EU's postulates and practices regarding sustainable development. We believe there is even an emerging prosumer organizational culture. On the other hand, the capital-intensive nature of prosumer solutions means that they lose - along with the entire RES sector – the legislative support of the authorities of some so-called new EU countries. This is the case, for example, in Poland (Nowak, Szałański and Zborowska, 2016). The idea of sustainable financing is to be the latest tool for comprehensive support in the EU of pro-ecological solutions, and thus also prosumerism. It assumes a radical diversion of financial sector activities towards so-called clean investments. EU bodies are currently discussing the creation of legislation that is favorable to this approach. This discussion is strongly influenced by the above-mentioned cultural controversy "center-periphery", otherwise known as "old-new EU members", according to the journalistic statement based on the belief that "wealthy countries have achieved prosperity without looking at the environment, and now they are denying the same to others" (Chądryński and Kapiszewski, 2018, p. A11). As an intellectual, if only introductive, aid, that we believe can increase the cultural sensitivity of both sides of the quoted controversy, we propose taking a critical look at the narrative about antecedents of prosumer culture developed in the past in peripheral areas subject to acute historical turbulence. We believe the concept of implementing garden cities by residents of early 20th century Poland fits this description. These efforts became particularly intense in Warsaw and surrounding areas. We will limit the analysis to this microregion – Mazovia<sup>7</sup>. This area, and especially the close vicinity of Warsaw, were areas of Polish lands, where quite early, at the beginning of the second decade of the twentieth century, attempts were made to implement Howard's concept<sup>8</sup>, but with a significant limitation of the "common ownership of land"<sup>9</sup> and the fact that Polish residents of the garden cities were recruited from layers of society with at least medium capital<sup>10</sup> (Mika, 2018, p. 31). Most importantly, these Polish initiatives remained unfinished due to external, even historical circumstances. This additionally gives them a deep nostalgic feature. This feature we propose to use in the sense, which is coming from the works of Frankl (2012) and Dala (2004), but still remembering Gabriel's findings (2000, et al.). A starting point for this article was a suggestion by the Polish essay writer Henryk Waniek (2010, p. 131) regarding the period of the emergence of the idea of garden cities that "these were the times when the industrialists were looking for inspiration in humanism" (highlighted by T.O. i E.R-W.) Further studies will show how far it is a reminder, and how much the literary creation of the past. In any case, it indicates the source of inspiration, in our opinion, the use of today's supporters of humanistic management, taking into account nostalgic narratives about peripheral efforts to implement the Howard utopia. In turn, the framing offered by humanistic management<sup>11</sup> clearly facilitates the coherent inclusion of the provincial experience of "garden cities" from the past to contemporary discussions about the possibilities and limitations of prosumerism as a tool for sustainable development. Consequently, it can help enrich this discussion with aspects of organizational memory and culture.

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<sup>7</sup> The mentioned microregion is Mazovia, the central part of Poland - a short explanation for the foreign reader.

<sup>8</sup> It is also worth pointing out an anecdote quoted by Skorek (1999, p. 113) that Howard invited to the Esperantists Congress to another region of Poland, to Krakow spontaneously recognized this city as a "city-garden of natural development".

<sup>9</sup> Common ownership was apparently limited to sections of residential areas that were naturally accessible to all residents.

<sup>10</sup> What makes Polish realizations of "garden cities" closer to the situation of contemporary prosumers - who need initial capital for their actions, that classical, eg British Howard initiatives are also directed at the poor.

<sup>11</sup> See the facts, that humanistic management appreciates the historical perspective, understands sustainability also as appreciation of experiences from outside the centers of globalizations, is interested in ecological aspects of management and treats all these problems as a cultural issues (see also other features of humanistic management, which we discussed in this article).

### 3. UNFINISHED PROJECTS FROM THE FIRST HALF OF THE XXTH CENTURY IN MAZOWSZE AS LOCAL ANTECEDENTS OF PROSUMER CULTURE

Detailed descriptions of attempts to implement the "city-gardens" in the vicinity of Warsaw have been preserved for the local collective memory in essays by such authors as Jerzy Kasprzycki, Jerzy S. Majewski, Zdzisław Krok and Bogdan Wróblewski<sup>12</sup>. It seems Żąbki, currently a district of the city of Warsaw, were the first in this field, still an outer city suburb at the time. "In the summer of 1913, the Share Society "The Garden City Żąbki House" (Polish name: Towarzystwo Akcyjne "Dom Miasto-Ogród Żąbki") advertised in the press, encouraging people to buy plots of land with a house and a garden." (Majewski, 2004a, p. 191). Potential buyers were offered a loan on favorable terms. The installments were set so as not to exceed the monthly rent for a flat in Warsaw. The originator of the mentioned project was Adam Feliks Ronikier (1881-1952), count, social and political activist, then property owner in Żąbki, architect by profession. In 1911, the urbanistic contest he organized for land parcelling was won by Tadeusz Tołwiński (1887-1951), a leading Polish supporter of the Howard idea. At that time, Tołwiński published an article in "The Technical Review" (Przegląd Techniczny) entitled A Treaty on Garden Cities in England (Rzecz o miastach ogrodach w Anglii). This text, dating from 1912, has the status of initiating the aforementioned problems for Polish recipients. Władysław Dobrzyński (1855-1931) played an important role among the Polish propagators of the idea of the city-gardens. A medical doctor from Płock<sup>13</sup>, a hygienist, he was a friend of Howard and a member of the Board and Executive Committee of the Society for International City Gardens and City Planning [Zarząd i Komitet Wykonawczy Towarzystwa Międzynarodowego Miast-Ogrodów i Planowania Miast]. In 1909, thanks to Dobrzyński's initiative a Delegation Garden Cities was established under the Warsaw Society of Hygiene, which supported the majority, if not all the initiatives quoted in this article (Prosińska, s.a., Dobrzyński, 1917). The first practical expression of Tołwiński's fascination was the award-winning Plan of the garden-city 'Żąbki' (near Warsaw) (Niemojewski, 1951, p. 164). "It was not intended as a commuter town suburb, but as a self-sustaining residential district (highlighted by T.O. and E.R-W.) A town with a complete hierarchy of roads, squares and small palaces, public buildings, commercial buildings and sports facilities, places for walking and playing with children"<sup>14</sup> (Majewski, 2004a, p. 194). Ronikier and Tołwiński took care of functional transportation solutions. The first initiated the construction of the "electric tram" line, which was to connect Żąbki with the toll gates of Warsaw. Tołwiński planned the main shopping street of the residential area as the axis between the church, the market square and the St. Petersburg railway station (Majewski, 2004a). It is hard to find a better metaphor for prosumer culture; harmonious combination of conscious subjugation (here symbolized by the church<sup>15</sup>), caring for the local commercial outlet and effective communication with the wider environment. World War I and Ronikier's subsequent involvements meant that the described Warsaw suburb initiative remained "an unfinished masterpiece" (see Majewski, 2004a). For the same reasons a similar fate met another attempt to create a garden city on the other side of the Polish capital, that is in Młociny. Another example, the garden city of Sadyba (southern part of Warsaw) established in the 1920s deserves a separate analysis exceeding the scope of this article, its character and degree of implementation are still under dispute among researchers of the local past (Ochinowski, 2015). New perspectives for the development of Warsaw-related implementations of Howard's idea were created after Poland regained its independence by the development of the Electric Access Railway [Polish name: Elektryczna Kolej Dojazdowa, in

<sup>12</sup> To this date these essays are only available in Polish.

<sup>13</sup> Płock – a city in the region of Mazowsze, over 100 km North-West of Warsaw.

<sup>14</sup> Kasprzycki (2004, p. 200) adds that at the invitation of Tołwiński Żąbki, also other architects were considered to represent the group of "Warsaw tigers of construction" of the time, which also included Romuald Gutt (1888-1974) and Aleksander Bojemski (1885-1944).

<sup>15</sup> Reference to the cultural significance of religious values.

abbreviation EKD] from 1925. It was the work of one of the largest corporations of interwar Poland, "Strength and Light" [Polish name: "Światło i Siła"] with mixed Polish-Belgian capital. The first section of the EKD (Warsaw-Grodzisk) line was commissioned on December 11, 1927. A year later, the investment of the city garden of Włochy [Italy<sup>16</sup>] began in the area just along this route. They were designed by Franciszek Krzywda-Polkowski (1881-1949), one of the leading Polish garden architects of the time. He was assisted by Henryk Korotyński, a professor of metrology. The emerging settlement, apart from other essential features of the garden city, was characterized by a very effective connection with the capital, provided by the aforementioned EKD, as well as by the existing Warsaw-Vienna railway line. Włochy too, were one of the only Warsaw suburb projects of the type discussed to implement an important element of Howard's ideas, that is, proximity to industrial workplaces. The district even created its own industrial area, effectively encouraging several production companies to set up production facilities between the aforementioned railway lines and on the other side of the tracks. The Great Depression of the 1930s was the chief factor that led to leaving the Włochy settlement unfinished. The return of good economic conditions before World War II did not change the fact that further expansion had a rather random character (Majewski, 2004b). Podkowa Leśna ["Forest Horseshoe" in Polish] takes first place in implementing Howard's concept in local Warsaw mythology. Zdzisław Skrok (1999, p. 114) formed an opinion, clearly exaggerated, if one is to consider the aforementioned examples, in which he describes Podkowa Leśna as the only consciously planned and executed garden city "not only in Mazovia, but in all of Poland as well". He goes on to reflect: "In the interwar period, many such settlements were established (in Poland - T.O. and E.R-W), but none of them tried to incorporate the idea of Howard with such consistency as Podkowa Leśna. Therefore, the other examples are only settlements composed of collections of detached houses surrounded by gardens, whereas in Podkowa we have an attempt to implement an idealistic urbanistic utopia." (Skrok, 1999, p. 114). Majewski (2004b) repeats the verdict by referring to the findings of Bogdan Wróblewski. He believes that the plans for Podkowa Leśna were largely successful. At the same time, he points to the major obstacles that prevented final achievement of this goal, that is, the Great Depression of the 1930s of the last century and the beginning of World War II. At the same time, unlike in the aforementioned Włochy district, most of the buildings in Podkowa that were in line with Howard's concept were created more or less between 1935 and 1939, at a time when a good economic situation returned to Poland. The designs for the garden city Podkowa Leśna were created in 1925 by Antoni Jawornicki (1886-1950), who similarly to the previous heroes of this paper were among leading architects of the inter-war Poland. Therefore, it seems justified to conclude that the Mazovian followers of Howard, not only to return once more to Waniek's observation quoted at the beginning of this article (2010, p. 13), "they were looking for inspiration in humanism", but they worked closely with its significant representatives, that is for example, the leading Polish architects of their time. This is a kind of challenge that the organizational past puts before the "copywriters" of the present era. The plots for the "garden settlement" of Podkowa Leśna were acquired from Stanisław Lilpop (1863-1930), a shareholder of the "Siła i Światło" company that built the EKD line. His father, also Stanisław (1817-1866) gradually took over the Evans brothers' company from 1854 with Wilhelm Elli Rau (widely known as The Lilpop, Rau&Loewenstein Stock Company Industrial Association of Mechanical Plants; Polish name: Akcyjne Towarzystwo Przemysłowe Zakładów Mechanicznych Lilpop, S.A.) and, most importantly, co-created its dynamic development. The antecedents of prosumer thinking begin to meet in Mazovia with history Polish business history, of which the "Lilpop" factory was a significant element. It is worth noting that the aforementioned company was advised by Karol Adamiecki, co-creator of global management, and after 1926 also Wallace

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<sup>16</sup> The name of the the village near Warsaw, which sounds as European country's name from historical reasons. Włochy (in Polish it is plural) are a part of Warsaw now.

Clark, one of the main promoters of "exporting" the productivity movement to Europe (Wren, 2015). "Lilpop" gained the position of a significant proponent of modern management before the Second World War. He was among only a few European companies of that time, whose case studies were researched as model examples by the The International Management Institute (Haan, 1933 and Ochowski, 2016a). And it was during the prosperity of Warsaw's inter-war years that the "factory gardening" plant was located in the areas where the company grew then due to the purchase of "adjacent undeveloped squares" (Komorowski, 1999, p. 239). This event is, of course, worth further analysis in the context of the local roots of prosumer issues. In turn, the previous history of the company contains information, kept in the collective memory of Warsaw residents about "Raua gardens". The name is connected with the will of the previously mentioned co-owner (together with Stanisław Lilpop the senior) of the discussed plants. Wilhelm Ellis Rau (1825-1899) left a huge sum of three hundred thousand rubles as a resource for playgrounds and recreational areas for children. The first of Rau's Playgrounds [Polish name: Ogród Gier Ruchowych] functioned from 1908 in Warsaw's Praga district. In the end, various areas of Poland saw about twelve projects of this type. Rau made The Hygienic Society of Warsaw the executor of his will, the main organization that at that time was dealt with the "export" of the idea of city gardens to our country (Elsztein, 2002).

#### 4. CONCLUSION

The associations of ideological antecedents of prosumer activities:

- with humanities (personalized by architects) presented in this article,
- with efficient organization at the local level, without neglecting sources of financing,
- and even with the peripheral history of "mainstream" business (represented by "Lilpop's" plants), seem so not only be mythological in a nostalgic sense, although with the current state of research, they remain mythological in a more literal sense.

However, in the sense of pro-entrepreneurial mythology, which also gives inspiration to the present as a source of good practices. In our opinion, on the one hand, they show the possibilities of developing prosumer culture also based on local tradition, on the other hand presenting the role of recalling good practices related to the implementation of the idea of garden cities as an "intellectual bridge" between humanistic management and the prosumer movement today.

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## ANALYSIS OF THE VALUATION ACTIVITY ON VEGETABLES AND FRUITS CHAINS FOR THEIR IMPROVEMENT

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### ABSTRACT

*The cultivation of vegetables and fruit trees was the main activity of the Romanian farms, a country badly affected both by the process of nationalization / collectivization during the communist period and by the defective retrocession of the post-communist period. But since 2007, investments in agriculture, including those in the fruit and vegetables sector, have played an essential role, both by setting up new agricultural holdings and by upgrading the existing ones. During the programming period 2007-2013 and 2014-2020, farmers could access measures that can be plunged into the fruit and vegetable sector. Starting from the main advantages of the fruit and vegetables sector, such as the large assortment of fruit and vegetable species and varieties, the large number of farms, the pedo-climatic conditions favorable to the cultivation of a significant number of varieties, the growing of the areas cultivated with vegetables in protected areas Modernization of the processing units, improving the fruit and vegetable harvesting activity play a particularly important role in the revitalization of this sector. The market for vegetables and fruits is influenced by a number of factors such as: the demand and supply atomicity, product homogeneity, the seasonality of vegetable and fruit products, the high degree of perishability, the demand for vegetables and fruits has a continuous character, the production of vegetables and fruits has different destinations. Modern analysis of the global value chain focuses on actors' relationships as a way to reduce uncertainty, improve access to key resources and increase chain efficiency. For the proper functioning of the vegetable and fruit chain, the producer groups and producer organizations are extremely important.*

**Keywords:** chain, fruits, improvement, vegetables

### 1. INTRODUCTION

Over the last 20 years, the Common Agricultural Policy (CAP) has reduced the regulation of agricultural markets, allowing market forces to guide the production. This general approach was specifically applied to the fruit and vegetable sector, whereby instruments such as export refunds or minimum prices that the operators of the processing sector were forced to pay to farmers for certain products (Buda D., 2018). The European Union has associated this liberalization process with a policy of strengthening producer organizations to give farmers the opportunity to act to protect their interests, for example by collectively selling their products or by increasing their value added by their processing at the farm. The CAP therefore provides financial support to producer organizations, which they use to implement "operational programs". Producer organizations use these programs to meet a variety of objectives tailored to their specific situation, such as investing in market campaigns or training activities. The 2007 reform of the fruit and vegetable regime has confirmed and expanded the policy to strengthen the role of producer organizations and associations of producer organizations. In recent years, the EU has increased its funding for operational programs (Nuno M., 2015). Producer organizations are the main actors in the common organization of the market in fruit and vegetables, whose role is to concentrate supply and adapt it to market demand, acting in the name and the interests of members. On the other hand, medical and nutritional research has for many years highlighted the health benefits of fruit and vegetable consumption, including the

reduction of the occurrence of diseases such as certain cancers, cardiovascular diseases, obesity but also type II diabetes. These foods are low in calories, but rich in nutrients and fiber. According to a study by the World Health Organization in 2013, there were 1.7 million worldwide deaths annually, which were also due to the low consumption of fruits and vegetables that underlie a balanced and healthy diet. Therefore, fruit and vegetable consumption is the main focus of global food interventions by governments as well as by non-governmental organizations (W.H.O., 2018). Studies conducted by Reiss, Johnston, Tucker, Desesso and Keen (2012) show that if at the US level half of the population would consume fruits and vegetables daily, the occurrence of about 20,000 cancer cases could be avoided annually (Reiss R., 2012). In the group analysis sessions led by Uetrecht et. Al in 1999, with parents, employees, health center customers and community members, examined the factors that influence the consumption of fruit and vegetables. They are grouped into three broad categories, namely: related production, distribution channels, and related consumers. Production covers aspects such as price, seasonality, perishability, nutritional content, origin and quality of the product. Seasonality also has a significant influence on availability, variety, taste, quality, freshness, price and the form in which it is purchased, namely, fresh, frozen or preserved (Rekhy R., 2014).

## **2. MATERIALS AND METHODS**

In this study, is presented a documentary synthesis, analysis and interpretation of statistical data collected from the Romanian National Institute of Statistics and also of the official data provided by the Ministry of Agriculture and Rural Development of Romania. Information come also from sources with agricultural statistics and from allowed authors, in order to create a detailed image for the fruit and vegetable sector. The fruit areas and the vegetables areas which are under cultivation are expressed in hectares and the harvested quantity is expressed in thousands tonnes. The data have been processed using the well-known index, share and comparison methods (Popescu A., 2013).

## **3. RESULTS AND DISCUSSIONS**

In Romania there has been, for centuries, a strong tradition of family farms. The continuity of this tradition has been interrupted by the process of nationalization and collectivization during the communist era. During this period, traditional farms have been replaced in most areas by government-controlled administrative structures, and the rural population has gradually transformed into state employees, being paid in cash or in cash and in agricultural products. After the fall of communism, the return of nationalized land to former owners began, through a succession of laws whose repercussions felt profoundly on systems of production, post-harvest recovery, infrastructure, research and agricultural consultancy. This has led to dramatic drops in indigenous production levels, but favorable conditions in Romania such as fertile soils, hydrographic network, temperate continental climate have led to the intensive cultivation of vegetables and fruit, developing a whole sector activity in this field (MADR, 2008). In 2008, the Agriculture Ministers of the Member States of the European Union decided to implement a reform for the common organization of the market in the fruit and vegetable sector, starting from the fact that this sector was affected by the existence of a large number of small-scale farms that do not use in modern technical means, the fact that the areas cultivated with trees, fruit trees and vegetables have decreased and that there is a high degree of fragmentation of the areas on which vegetables and fruits are grown, as well as the lack of a coherent land consolidation strategy, the low degree of rejuvenation of the fruit plantations leading to the decline of large areas of fruit plantations but not last but not least the increase in the frequency of extreme climatic phenomena that directly affect production. Taking into account the extremely high potential of this sector in Romania, namely the large number of farms where a vast variety of species and varieties of vegetables and fruits are grown, the increase of the areas

on which varieties are grown competitive capacity of fruit trees and vegetables, production capacity in the climatic areas of mushrooms, as well as the areas cultivated with vegetables in modern protected areas, but also the possibility of modernizing the processing units, the national strategy for the operational programs in the sector fruit and vegetables for the period 2009-2013, where a series of common performance indicators have been established to help this sector grow by implementing several types of actions such as (AREFLH, 2016):

- actions aimed at planning production;
- actions to improve or maintain product quality;
- actions aimed at improving marketing;
- actions on research and experimental production;
- training actions (other than those related to crisis prevention and management) and promoting access to advice;
- crisis prevention and management actions and others.

According to the National Statistics Institute of Romania, for the period 2007-2016, the vegetal production in the main crops, the evolution of the surface of vegetables and fruits was decreasing, during the analyzed period, the area cultivated with vegetables decreased by 10%, which represents a decrease with 25 thousand ha, and in the case of the area cultivated with fruit, the decrease was even more pronounced, of 33% representing 68 thousand hectares. However, total production has grown for both sectors, so vegetable production has increased by around 8% and production for the fruit sector has increased by just over 14% (Table 1).

*Table 1. The evolution of the surface and of the production of fruit and vegetable*

	UM	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 / 2007
<b>Surface fruits</b>	'000 ha	206	207	205	199	140	142	144	141	139	138	67%
<b>Production fruits</b>	'000 to	1086	1179	1323	1420	1480	1129	1300	1115	1225	1242	114%
<b>Surface vegetables</b>	'000 ha	253	269	267	263	263	259	259	239	239	228	90%
<b>Production vegetables</b>	'000 to	3117	3820	3902	3864	4176	3535	3961	3803	3674	3358	108%

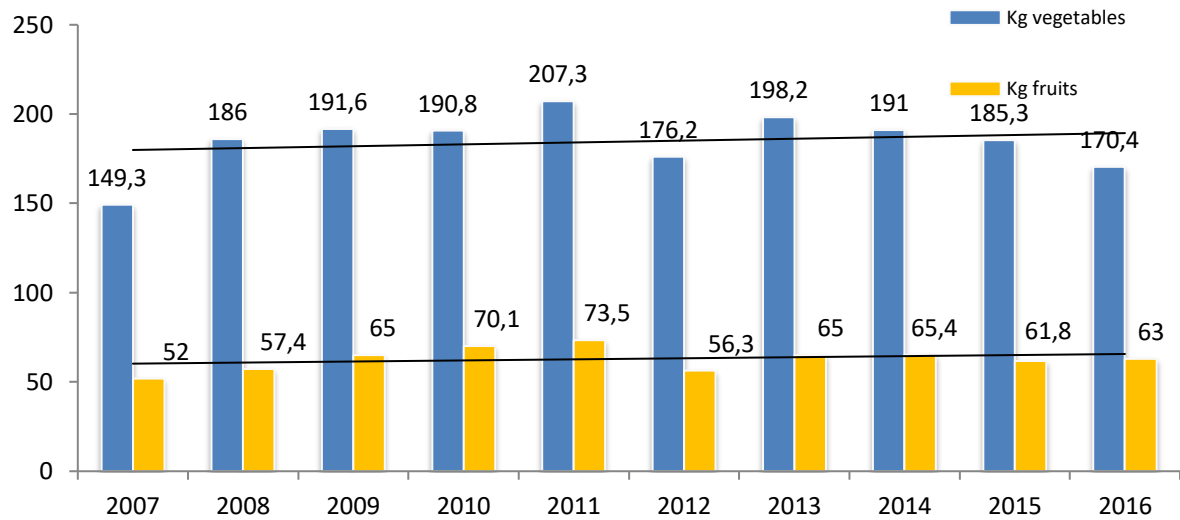
*Source: Processed after MADR, <http://www.madr.ro/horticultura/fructe-si-legume.html>.*

Another important indicator in the fruit and vegetables sector is the production of vegetables and fruits per capita, and here are the conclusions from the analysis of the data provided by the National Institute of Statistics of Romania:

- In the period 2008-2013, during the appliance of the mentioned strategy, there was an increase of 6,55% in the production of vegetables per capita and 13,24% in the fruit production per capita.
- When the period of the application strategy is finished, more exactly in the period 2013-2016, it is noticed that the trend of vegetable production per capita is downward, decreasing by 14.03%, as in the case of of fruit production per capita which decreased by 3.08% (Chart 1, Table 2).



*Chart 1. The evolution of production of fruits and vegetables per capita*



*Table 2. The evolution of production of fruits and vegetables per capita*

		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016/2007
<b>Vegetables</b>	<b>kg</b>	149	186	192	191	207	176	198	191	185	170	114%
<b>Fruits</b>		52	57	65	70	74	56	65	65	62	63	121%

Source: Processed after INS,  
<http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=AGR200A>.

However, with all the efforts of the Ministry of Agriculture and Rural Development to support fruit and vegetable producers, there is a decline in both the total area planted with vegetables and fruits and the total production in this sector (DeCicco, 2016):

- There is a decline in the area planted with vegetables in 2018, which is 268.6 thousand hectares, and at the end of the strategic operational program in the fruit and vegetable sector decreasing by about 3.5% (in 2013) and also a much more significant decrease in the area under fruit, decreasing by over 30% in 2013 compared to 2008.
- With regard to total production of vegetables and fruits, we can see that in the case of vegetable production, it increased by 3,69% from 2008 in 2013, despite the fact that the cultivated area has decreased. The same upward trend is also true for total fruit production, with an increase of 10.23% from 2008 in 2013.

Here, while the area cultivated with both fruits and vegetables decreased during the period of application of the national strategy for the operational programs in the fruit and vegetables sector, their total production increased, most probably due to the support given to the small producers in order to modernize the processes production and harvesting. However, efforts by local authorities have not been sufficient since between 2013 and 2016, the area planted with vegetables continued its downward trend, decreasing by almost 12% and the fruit area by just over 4%. Along with the common fruit and vegetable market, it was implemented as mentioned above and the European reform of the fruit and vegetables sector (European Commission, 2018). At present, 24 producer organizations are recognized on the territory of Romania in accordance with EU legislation, and three of them are developing an operational program. The main activity of producer organizations refers to both the concentration of supply and the marketing of the products of the members for which they are recognized.

These associative forms sell larger quantities of quality vegetables and fruits, according to current standards, which are currently in the agro-food markets, canteens, wholesale markets and supermarket networks. Although the supply of vegetables and fruit on the territory of Romania is extremely varied, the lack of specialized knowledge in the field of marketing, respectively the methods of preparation of the products resulting from their marketing and the presentation methods leading to attractiveness and safety of the product in the eyes of the consumer, lack of production technology for the purpose of washing, sorting, packaging, labeling, preservation and transport of production to the market, the lack of a production planning system and its articulation according to market requirements and the fact that the added value of the products is extremely small, which leads to instability and notable differences in the producers' incomes lead to increased imports of vegetables and fruits. Chaotic production and inconsistent with market requirements, climatic differences, the occurrence of various diseases and pests, massive imports, poor promotion of the importance of consumption of vegetables and fruit to the health of the population and of vegetables and fruits among consumers, as well as the incomplete and incorrect information submitted by to the media in terms of the fruit and vegetable sector is a part of the factors that generate the crisis of the fruit and vegetable market in Romania. Due to these inconsistencies and the fact that the fruit vegetable sector is declining according to the figures presented by the National Institute of Statistics of Romania, the authorities in the field, namely the Ministry of Agriculture and Rural Development, support the producers of vegetables and fruits with a new national strategy for the operational programs in the fruit and vegetables sector for the period 2018-2020. The objectives of this new strategy are:

- production planning, including production estimation and monitoring, and a consumption;
- improving the quality of products, whether they are fresh or processed;
- increasing the commercial value of products;
- promotion of fresh or processed products;
- promoting and providing technical assistance for the use of production, improving product quality;
- environmental protection measures, especially in the field of water and production methods respecting the environment, including organic farming;
- management of by-products and waste, especially for quality protection water, soil and landscape and biodiversity conservation or enhancement;
- crisis prevention and management;
- crop insurance;
- ensuring the scheduling and adaptation of production on demand, in particular with regard to quality and quantity;
- concentrating the offer and placing on the market the products obtained by their members, including through direct marketing;
- developing initiatives in the field of promotion and marketing;
- provision of the necessary technical assistance for the use of futures markets;
- optimizing production costs and return on investment in response to environmental standards and stabilization of production prices;
- promoting and providing technical assistance for the use of cultivation and production techniques that protect the environment.
- taking these objectives into account, the activities of the operational programs must be oriented towards the following priorities:
  - increasing the competitiveness of products;
  - optimizing production costs, stabilizing production prices, production and supply planning;
  - promotion;

- crisis prevention and management;
- increasing the production potential (MADR, 2018).

#### 4. CONCLUSIONS

Romania has a high potential for the production of fruit and vegetables in the field, due mainly to the high natural fertility of soils and the diversity of the climate. The climate and soil of Romania provide favorable conditions for the cultivation of trees and bushes, species spread according to their biological requirements, throughout the country, from the plain to altitudes over 800-1000 m. It is expected that in the next period, the production of vegetables and fruit will increase, but the growth of the sector will be achieved taking into account the pedo-climatic conditions and the needs of the soil, and a sustainable agriculture type. If in the period 2007-2013 the total fruit and vegetable production increased despite the downward trend of the fruit and vegetable growing area in the period 2013-2016, this descendant is not valid only for the cultivated area but also for the total production of fruit and vegetables vegetables and fruits, with a decline of 15.22% for vegetables and 4.5% for fruit.

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## THE ROLE OF ICT IN THE ZADAR CITY MUSEUMS AS A CHALLENGE FOR CULTURAL TOURISM

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### ABSTRACT

*ICTs have changed the way people communicate today, especially in tourism. Furthermore, as ICT development enters into all segments of tourism, it also needs to be implemented in the practice of cultural tourism. Cultural tourism is currently in the process of systematization of information, communication and multimedia to become part of a competitive tourist offer in Croatia. Museum visitors as well as other tourists are on online vacation, and this mode becomes a common way of visiting museums and other cultural institutions. By implementing ICT, museums in the city of Zadar will be more efficient in attracting the attention of the audience looking for its offer. This paper shows the importance of using ICT in museums as cultural institutions. The aim of the paper is to determine what type of ICT service is used by museums in the city of Zadar.*

**Keywords:** *cultural tourism, ICT, museums, the city of Zadar*

### 1. INTRODUCTION

According to estimates by ICOM, there are around 55,000 museums in 202 countries (Richani et al., 2016). There is a growing interest in exploring the ways in which new technologies can improve participation in museums and galleries (vom Lehn & Heath, 2005). Despite the fact that according to Finnis, et al. (2011, p.6) online presence has become almost necessary, Downes (2011, p.11) emphasizes that the ideological transformation of cultural institutions has been empirically observed over the past decade. New technologies can make an important contribution to the development of tourism. Cultural heritage tourism is increasingly dependent on ICT for promotion, distribution and delivery of products and services. It also provides a communication tool between suppliers of tourism, intermediaries and consumers. Web surfing is becoming a common practice because the tourism industry accepts networked interactive multimedia technologies. Adopting web technologies affects the way tourists become aware of destinations, how they choose and experience destinations (Davis & Prentice, 1995, reference to Valčić & Domčić, 2012, p. 132). Tourism is one of the first service sectors to adapt and use information and communication technology (ICT) to promote its services. Today, ICT has profoundly influenced the way businesses conduct and organizations compete (Porter, 2001, reference to Mavri and Angelis, 2009, p. 113). ICT and the Internet can favor reconciliation of heritage and tourism, supporting the process of empowering local stakeholders and creative meetings between hosts and guests of the community. This progress should support creativity, cooperation and respect for national and global heritage, taking into account the cultural and social capital which is necessary for sustainable economic development of the community

(Valčić & Domčić, 2012, p. 131.). This paper will present the role of ICT in the four main museums of the city of Zadar. To explore this question, we need to ask the research question: What type and level of ICT service do museums in the Croatian city of Zadar use in their business?

## **2. THE IMPORTANCE OF ICT IN CULTURAL TOURISM**

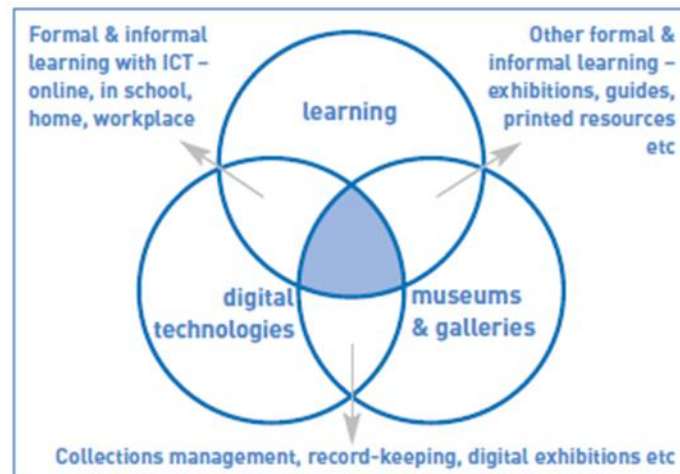
Tourism is an important source of income for many countries, especially those that combine culture and relaxation (Kamilaris & Pitsillides, 2013). We can say that cultural tourism is a very complex segment of the "tourist industry", and its offer is diverse and versatile. Its future position will probably be strengthened both directly and indirectly as well as by changing recreational needs, with the aim of getting familiar with cultural values. Mass tourism, of course, will never lose its position, but tourists participating in the 4S supply will become visitors with diverse needs relating to cultural interests (Csapó, 2012, 201). According to Silberberg (1995) cultural tourism represents an area of significant economic benefit to museums and heritage. In a more globalized and competitive market, characterized by standardization, cultural crisis and pollution, the development of tourism as a socio-economic development strategy can become not only counterproductive but self-defeating. However, cultural tourism provides both resources for interaction with human geography and learning about host communities. (Go, Lee & Ruso, 2003, p. 66). Multimedia becomes one of the key areas of development that affects tourism. Tourism information requires great representation of photos and graphics to provide tangible image or experience to planners. The use of animation or video clips can enhance the wealth of information and interaction (Buhalis, 2003). While, according to Davis & Prentice (1995), new technologies can make an important contribution to tourism development, Buhalis (2003) emphasizes that multimedia is becoming one of the key development areas that affects tourism. Buhalis (2003) also argues that tourism data need a large representation of photos and graphics to provide a tangible image or experience to planners. The use of animations or video clips can enhance the wealth of information and interaction. Buhalis (1998) argues that the rapid development of ICT challenges tourism and the travel industry at many levels. Csapó (2012, p. 228) states that the cultural tourism product and cultural tourism are in themselves a complex segment of the tourism industry, and its demand and supply are diverse and variable. Its future positions will most likely be strengthened directly and indirectly because with the change of recreational needs of tourists and visitors the demand for cultural travel will accelerate rapidly. Of course, classic mass tourism will never lose its market position significantly, but new tourists will have ever larger and more diverse needs to get familiar with different cultures and customs of distant places (Csapó, 2012, p. 228). By the end of the 20th century and the beginning of the 21st century new trends have emerged in heritage tourism. There have been significant changes in the area of cultural attractions, the need for complex tourism products has also grown on demand, so traditional cultural attractions (such as museums) had to re-evaluate their original role. (Richards, 2001, reference in Csapó, 2012, pp. 211-212.)

## **3. MUSEUMS AS DIGITAL CULTURAL INSTITUTIONS OF THE 21ST CENTURY**

In the last decades, museums have transformed their role from limited high-class mausoleums to popular attractions, along with other leisure activities for both local and tourist routes (Barbosa, 2013). A modern museum can not be imagined without many technical and technological achievements. The use of information and communication technologies at the beginning of the second decade of the 21st century became necessary not only for large museums, but for very small, even municipal ones. Information technologies make it easy to solve many, if not all, issues that are traditional for museums. Digital databases allow museum registration and storage, help systematize and "approach" to each museum object the history of

its acquisition, its use and its circulation within and outside the museum, for exhibitions, all object publications and all restoration works which are being performed. Such concentration of information, on the other hand, facilitates research in museum collections, compilation of various lists, selection and preparation of catalogs and curatorial and restoration documents. The main question here is a need of input of these data, as well as digitalization of collections, since they are the most wanted and efficient database containing images. Information technologies can also help museums in presenting their collections. Forms of exposure can be very different and can encompass production of high-quality digital copies of fragile works (e.g. documents or graphic works) that can be displayed as part of permanent exhibitions, creation of virtual exhibitions displayed on the network, provision of access to museum collections for remote users, and solving problems of broadening of museum audience by attracting Internet users. Today, museum exhibitions can not be imagined without integrated multimedial elements that have many functions such as explanation or substitution to essential objects inaccessible in the museum, bringing the visitor to a certain emotional state, and his/her engagement in the interaction with the museum object. Currently, almost all museums have or they want to have their own websites, and many of them intensively use social networks for promotion and provide information about their activities to a wider audience. Some museums, especially those which enjoy a government support, try to connect with their digital resources on portals; this is of particular importance to small regional museums which, thanks to a common list of museum guides of their region, gain valuable experience and can solve the problems of information system development by means of larger institutions (UNESCO and the Russian National Committee of the International Museum Council, 2014, p.5 ). The role of the museum in terms of education and responsiveness to digital technologies for learning is, therefore, one that needs to be understood as appearing within a complex set of sometimes competitive goals (Hawkey, 2004). The following figure demonstrates learning aspects that a museum and a gallery provide through the use of digital technologies. Thus museums have gradually begun to use more social media platforms such as Facebook, Twitter and YouTube to communicate their activities and exhibitions and increase public engagement. This significant transformation uses the key features and ideas of Web 2.0 technology, which arise from educational and communication models (Lazzeretti, et al., 2013, page 4). Another problem related to institutions using social media as a new platform for reaching a broader audience or audience expansion is that many practitioners consider it a long and expensive process (Whitney, 2011, 291). According to UNESCO and the Russian National Committee of the International Museum Council (UNESCO and the Russian National Committee of the International Museum Council, 2014, page 7) one of the major problems is the staff, so in some museums a list of workplaces has been applied from the time when no one had any idea of using information technology in museums.

*Figure following on the next page*



*Figure 1: The learning aspects that a museum and a gallery provide by means of digital technologies (Hawkey, 2004)*

There are certainly many benefits of applying new technologies in museums. (Tsichritzis & Gibbs, 1991). At the beginning the museum websites were mostly used as brochures to invite the public to visit exhibitions, promote new exhibitions and inform the public about collections and activities. Later, photographs of museum artifacts were put on the museum websites together with some information. Global communication across the World Wide Web enabled museums to contact each other quickly and economically, using new contact methods, such as a computer mediated communication (CMC), email lists, discussions, bulletin boards and chat rooms that served to support many types of discursive or collaborative activities. Today social networking is used to provide and exchange information as well as to create network communities (Walker, 2008, reference in Richani et al., 2016). The current rise in the popularity of mobile technologies such as smartphones and tablet devices forces cultural organizations, especially museums, to think strategically and creatively about how to best use these networked communication tools to be more effectively connected with the audience (Senxton, 2014, p. 15). Today, museums have to accept Web 2.0's claim that if you are not present on the Internet, you do not even exist. As regards museums, this implies digitization in every function. It does not only call for investment in new technologies, but also requires more comprehensive and expansive ways of working and thinking (Levay, 2014, p. 27). The museums are currently at a historic turning point. They are faced with a great challenge of expanding their structure and scope from long-term conservation and organization of exhibitions to online cultural content gatherers and service providers. Today, it is expected that museums provide services from digitization and aggregation of digital cultural content to interactive navigation, culture experiences, lifelong learning, social media and increased real-world application. In addition, museums work tirelessly to adapt their capacities and strengthen their professional knowledge and competence for these new challenges while struggling with budget constraints, fragmented knowledge, and distrustful government structures (Tsolis, 2014, p. 20).

#### 4. METHODOLOGY

The research was conducted in the period from 3-5 November 2017. It was conducted on a sample of four major museums in the city of Zadar in Croatia. The network research analysis includes some basic ICT elements such as having an official website and email, social media presence, Google Maps location, basic information about the institution and photos on Google Maps, a website, Facebook or TripAdvisor reviews. Finally, the application of online ticket and product sales as well as a virtual walk inside the museum and a specialized mobile application have been analyzed.



This research has been carried out in order to understand the importance and the level of an ICT implementation in the museums of the city of Zadar and to assess its positive and negative impact as a challenge for the development of cultural tourism.

## **5. AN ONLINE ANALYSIS OF BASIC ICT SERVICES IN THE ZADAR CITY MUSEUMS**

In recent 15 years, according to Carreras (2009) in Pujol-Tost (Pujol-Tost, 2011, p. 63), European museums have widely adopted information and communication technology (ICT) as a communication tool because, beyond political and social pressures, it fits in several aspects of postmodern museum trends. Carreras (2009) in Pujol-Tost (Pujol-Tost, 2011, p. 63) also argues that museums show an increasing interest in verifying their effectiveness by means of communication tools of new technologies. Today, people from any part of the world can have a virtual approach to museum collections, discuss and learn in informal and entertaining mode, and contribute to conversations that the museum cherishes itself and act as brand advocates. As a result, museums should encourage and follow practices based on networking habits and audience preferences. In addition, the search for new ways of connecting online with cultural participation at the local level can have a positive impact on museum engagements (Spiliopoulou et al., 2014, p. 299). The use of digital technologies is not new to cultural institutions. Most applications are in the area of digitization of collections or creation of their digital repositories available to the public. These applications are usually independent of educational activities of these institutions. In addition, a wide range of digital information and educational tools and services has been found. Examples of such tools and services range from digital audio guides, iPods, mobile phones and multimedia terminals in showrooms via CD-ROMs and educational computer games to websites on the Internet, virtual museums or virtual archives and online courses (Gruber, 2009). Many authors argue that ICT is well-established in museums, and ICT application can be expected in artistic and cultural heritage because of the importance of educational activities in these institutions (Gruber, Walter & Zeindl 2006, Keene, Royan & Anderson 1999, Hawkey 2004). Cultural institutions such as museums, galleries, exhibition halls and archives represent the main context in which access to a diverse and vibrant artistic and cultural heritage is given, and can be used for communication and learning (Gruber, 2009). The results of the online analysis of ICT services in the museums of the city of Zadar are presented in the following table.

*Table following on the next page*

ICT service /Name of Museum	National Museum of Zadar	Archaeological Museum of Zadar	Museum of Ancient Glass Zadar	Museum of Illusion
Official web page	Yes	Yes	Yes	Yes
Official e-mail	Yes	Yes	Yes	Yes
Social media presence	Facebook Instagram YouTube	Facebook YouTube	Facebook	Facebook Instagram
TripAdvisor review	Yes	Yes	Yes	Yes
Google review	Yes	Yes	Yes	Yes
Facebook review	Yes	Yes	Yes	Yes
Location on Google Maps	Yes	Yes	Yes	Yes
Basic information about the museum on Google Maps	Yes	Yes	Yes	Yes
Photos of the museum on Google Maps	Yes	Yes	Yes	Yes
Online ticket/product sales	No/No	Only product sales via a special e-mail	Only online product sales on the official website	No/No
Specialized mobile application <sup>1</sup>	No	No	No	No
Virtual walk inside the museum	No	Yes (Only on the Facebook profile)	No	No
Live web streaming inside the museum	No	No	No	No

*Table 1: The analysis of basic ICT services in the Zadar city museums (Source: Author's research)*

The results show that all museums have an official website and emails as expected, and Poole (2014, p. 13) notes that for more than two decades the Internet has been part of everyday life in the developed world. Also, all museums have an option of being viewed on TripAdvisor, Google and Facebook with a location, photos and basic information about an institution on Google Maps, as it provides to users (Orehovački et al., 2009, p. 116) a possibility of personalization and customization based on their needs and interests, while Spiliopoulou et al. (2014, pp. 299) emphasize that social media could play a critical and effective role in accessing more visitors to museums. Only one museum sells its products via special e-mail on demand, and the other sells its products online on the official website.

<sup>1</sup> Although in this research, authors have not found a special mobile application for museums in the city of Zadar, as a replacement visitors / tourists can download the „Zadar Walkingguide“ application to their mobile devices, which is a virtual guide through 16 different attractive locations in the old center of Zadar where they have to find all locations to get 50% discount in museums. (<http://nmz.hr/other/primopredaja-malog-arsenala-10-05-2017>, accessed January 11, 2018)

As far as social media is concerned, all museums are present on Facebook, two of them are present on Instagram and Youtube, and only one museum is present on Facebook, and the authors of this research consider it a lack of an online presence. A virtual walk inside the museum displayed on the official Facebook profile has been only recognized by the management of one museum and is considered a priority if it is to be implemented on an official website. No museums have a live webcam or a special mobile application for potential visitors, which can be useful, especially for tourists visiting Zadar, to see which is the best time to visit the museum or other useful information. In order to increase the efficiency of visiting and linking museums with tourists, it is necessary to create a special application covering and displaying all museums in Zadar for an easier experience, such as the "ZadarCityMuseums" application for iPhone, iPad and Android system, because according to Filippini-Fantoni & Bowen (2008) the use of mobile devices increases dramatically in the cultural and museum sector, so Boiano et al. (2012) believe there will be an increasing number of cultural applications and they will become more interactive outdoor, enabling users to create content as well as a professionally written content.

## 6. CONCLUSION

In the last few years, there has been a huge increase in the use of digital technologies for learning in museums, scientific centers and galleries - both on-the-spot in the form of digital interactive activities and on-line through the creation of more and more popular websites. Since 2002, the number of virtual visitors to many museum websites has already exceeded the number of physical visitors on the spot (Hawkey, 2004). Purcell (1997) (Pujol-Tost, 2011, p.66) argues that ICT is also useful from an economic perspective as it facilitates and reduces the management of collections. In the case of a museum, new technologies can improve and change operational and conceptual aspects of an institution. ICTs can serve as tools to improve the ways in which institutions use internal operating systems, generate revenue, create objects, communicate with the public and market, disseminate knowledge, preserve and research (Barbosa, 2013). Therefore, cultural institutions should focus their activities on communication forms of high efficiency, avoiding the risk of losing the benefits. They need to create precise plans for their communication campaigns, including building and maintaining relations with media people and respecting the procedures and deadlines introduced by media institutions (Grzegorzczuk, 2017, p. 64). Today, for tourists / visitors in tourist destinations, there is a large number of new information and communication technologies (ICTs) that provide an easy way for online and mobile support, easier and faster access to all information they need during their visit, so it is important that the Zadar city museums use all possible ICT services to access their audience and build close and daily relations with them. Visitors / tourists have different expectations and behaviors, so it is important to explore them, to be well represented on important social networks, to strengthen communication with them via social networks, to create a special application for all museums in Zadar, to make simple online souvenir and ticket sales along with virtual walks inside the museums and live broadcasting via the Internet. Limitations of this study can be seen through a brief online analysis of ICT services in the museums of the city of Zadar where only some of the services were analyzed without a field research and estimation of the level of the use by tourists / visitors. Future studies can include detailed Google Analytics and a survey questionnaire on improvements and disadvantages of implementation of other ICTs in the Zadar city museums.

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## THE IMPORTANCE OF QUALITY ASSESSMENT CRITERIA OF BANKING APPLICATION IN POLAND

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### ABSTRACT

*The main objective of this article is to analyse the findings of a research on the quality of mobile banking applications offered by commercial banks in Poland. The study concerned the importance of the evaluation criteria adopted in the studies into the quality of mobile applications for individual users. The findings discussed in the article focus on mobile banking applications offered by banks in Poland which are available for mobile devices. The structure of the article consists of presenting the general assumptions of the study, describing the methodology and the research sample, analysing the obtained findings as well as relevant discussions and interpretations. The paper is of a quantitative nature and has been conducted on a selected sample of respondents using banking services and products. The presented study and its analysis will empirically verify how individual clients assess the quality of banking applications and which criteria of this evaluation are most important to them. Concludes, the distribution of the relevance of the criteria as qualitative attributes points to the elements which designers need to focus on when designing a banking application. The key aspects include the necessity to maintain high quality of the application in terms of security, user-friendliness, i.e. the clarity and comprehensibility of the texts and a greater focus on navigating the application. The features included in the last criterion are related to the speed and ease of finding the information in the application. From the point of view of the users, these aspects are more important than the functionalities which are available in the application. Thus, taking all the above into consideration, it is important to note that focusing on improving the visual aspects and elements of the menu alone will have little impact on the perception of the overall quality of the mobile banking application.*

**Keywords:** *importance of quality criteria, mobile banking services and products, mobile banking websites quality, website quality assessment*

### 1. INTRODUCTION

The most frequently used and the most intuitive classification of electronic banking is the division according to the communication channels used by the clients to contact their bank (Chmielarz, 2005). The most important and the most dynamically developing type of banking at present is mobile banking, which owing to the technological capabilities which emerged in recent years has gained a new and unprecedented dimension. An important element of this development is a commercial success and greater popularity of smartphones. Producers of these devices forecast that in 2019 in Europe the number of smartphones will reach nearly 760 million, and these devices will account for over 80% of all mobile phones globally (Eurostat, 2017; Majchrzyk, 2018). As a consequence of the mass scale popularity of these devices in the last few years, there emerged a large market for mobile applications which virtually replaced the technologies such as WAP, SMS or USSD which were previously functioning in this channel. Thus, mobile banking is developing extremely fast, and clients are eager to use the opportunity to contact their banks via a smartphone.



Using the knowledge resulting from innovation and drawing on the psychological determinants in consumer behaviour form the basis for building a closer relation between the banks and their clients using the software running on mobile phones or tablets. The applications designed for clients' personal devices constitute the next milestone in the development of banking systems creating virtually unlimited possibilities of personalising the offer and establishing a closer relation and more direct contact with individual clients. The research and the above estimates indicate that using mobile devices, including also a direct relation between the consumer and his or her bank, impacts everyday life of a modern man. It is important to note that this phenomenon is considered to be one of the most important sociological phenomena in recent years (King, 2013). A mobile phone is perceived as a personal and personalised device, and therefore all forms of information conveyed using this device constitute the most private kind of communication. The analysis and assessment of mobile applications, as a tool used to exchange information between the client and the bank, is a very interesting field of research in a broad cognitive context. The authors hope that the presented study and its analysis will empirically verify how individual clients assess the quality of banking applications and which criteria of this evaluation are most important to them.

## **2. ASSUMPTIONS OF THE RESEARCH AND METHODOLOGY OF THE SURVEY QUESTIONNAIRE**

The main objective of the survey was to assess the quality of mobile applications offered by retail banks in Poland and to indicate the relevance of particular assessment criteria from the users' point of view. The study into the quality of mobile applications requires selecting an appropriate set of quality assessment criteria (Nielsen, 2002). The set may be established based on the analyses of other groups of factors applied in the evaluations of similar IT solutions in different sectors (Wang, Bovik Sheikh, Simincelli, 2004). The selection of the group of relevant factors should be preceded with the analysis of relevant scientific literature on the quality of IT systems, which helps to establish many common features indicated in the rankings carried out in different IT fields (Moustakis, Litos, Dalivigas, Tsironis; 2011. Regarding IT systems, including computer software, the definition of the quality according to an international ISO 9126 norm relates to all the features and properties of software which affect the programs' and applications' ability to satisfy various specific or implied needs (ISO/IEC IS 9126, 1991). In line with this definition, the features which impact the quality of software may be divided into two areas: the interface and the functioning of the application. The former aspect is responsible for a broadly defined comfort of users' use of the software, the latter for an equally widely understood proper functioning of the software (Iwaarden, Wiele, Ball, Millen, 2004). The multitude of definitions and views concerning the quality of computer software points to the diversity of opinions we encounter when experts, designers and users discuss this particular phenomenon. This article examines the quality from the perspective of an application regarded as an important element of the bank's IT system (Chmielarz, Szumski, Zborowski, 2011; Beck, 2003). Thus, its quality will be understood as the ability of the application to satisfy clients' expectations and needs while meeting specific requirements resulting from the regulatory framework of the financial market and the specificity of the mobile channel (Virpi, Kaikkonen, 2003; Athanassopoulus, 2000). In this paper, the authors will not analyse the question of the quality related to the banks' operations or marketing activities and related costs of devising and making the applications available in the market. In order to assess the quality of banking applications, the presented study applied the criteria which have been discussed in detail by the authors in their earlier publications (Zborowski, Łuczak, 2016). The examined criteria include 24 features classified in 7 groups referred to as the main criteria, see below:

- Perception of a mobile application - determines the user's approach and his/her attitude towards the use of the application and is closely related to technology acceptance model

(TAM) and the TTF theory describing the technology and the compliance with the purpose of using it. The perception is also associated with the assumptions of creating application interfaces in accordance with the UCD user-oriented design principles as well as the design based on UXD user experience (User-friendliness - using the application is easy, the user does not feel irritated or tired while using it; Intuitiveness - using the application is intuitive, consistent with the user's expectations and experience. It is relatively easy for the client to learn how to use it; Stability - the application works quickly and in a stable way, it does not crash),

- Navigation - it results from the concept of logical design and the design based on the user experience (UX). It refers to the user's impressions without indicating a specific element of the design or the functionality of the application (Navigating the application - navigating the application is easy, and the navigation bar and the bar with command icons help to manage the content of the application; Navigation scheme - the structure of the application, the way of presenting subsequent levels, e.g. sequential scheme (subsequent screens are arranged in order) or a hierarchical scheme (in the form of a tree); Layout of elements - the number and the arrangement of elements on the application screen is clear and readable; Gestures - the application uses the functionalities of a touch screen, e.g. to turn pages (backward and forward), "pinch", "touch and hold" to select an item; System (physical and virtual) buttons - application uses the telephone button systems, e.g. Back, Home, Recently used applications).
- Menu layout - the features and hierarchy of products and services for the information and transactional application, i.e. providing the user with information and enabling him or her to carry out banking operations, constitute separate criterion (The order of the menu items - the order of the items (e.g. products, information) in the menu is correct and intuitive; the items are logically grouped; Layout (block system) - presentation of the content: linear (moved down or sideways) or tiled (dividing content into several screens); Correctness of indications - the names of items in the menu are unambiguous and precise. They indicate the next steps, according to the user's expectations),
- Functionalities - they result from the assumptions of logical design as well as the theory of adequacy of tasks for TTF technology. The components of this criterion are the application element that allows you to find the proper information and carry out specific tasks (Search - the search field (e.g. of a product or information) is accessible, and the search is accurate and precise; Personalisation - the ability to customise the appearance of the application to meet the user's needs (e.g. background, layout, the arrangement of items) and forms of presenting information and reports; Exporting - the possibility to generate files containing e.g. transaction history and sending it to the designated email address; Recommending to a friend - the possibility to recommend an application or a banking product via the application in social media (e.g. Facebook); Help - aids, additional materials and terms of use are easily accessible and understandable. The application offers tutorials, and the user is redirected to a presentation, tutorial or text mode),
- Visualisation - an element of logical application and design oriented towards user's experience UXD. This element concerns the sense of aesthetics which is a subjective view of each user. The feeling has to be positive and consistent with the rules of visualisation adopted by the bank (Graphic elements -visual elements (logo, graphics, and animation) are in line with the character of the application; Colour scheme - the selection of colours used matches the users' expectations and the bank's image),
- Text - an element the corresponding to the clarity of the information which is crucial for the quality of customer service. The information and operational nature of the application requires users' focusing on the presented content as well as on the interactivity when entering the data (Text clarity - texts in the application are concise, precise and

understandable; Text style - font selection (size, colour), punctuation which makes it easier for the client to use the application; Entering text - typing on a virtual keyboard in the application. The size of buttons is right and the appropriate alpha- and numeric keyboard is used),

- Security - the criterion of a special character, when the access terminal to bank systems uses a personal client's device which is connected to the Internet (Authentication and authorisation - the uniqueness of user ID, the length of the password and PIN ensure secure banking operations. Only an authorised person can use the resources of the application; Data integrity - the application ensures that the data and information in the account have not been changed or deleted by unauthorised persons; Confidentiality - the confidentiality of data and information concerning the user of the application, including the protection of his/her personal data is guaranteed.

The study has been carried out with the application of the CAWI (Computer Associated Web Interview) method in the period of 27 February – 18 March 2015 among the members of the epanel.pl research panel. The research tool which was applied in the present research was a standardised, electronic survey questionnaire which was circulated online. The selection of the respondents was a case of a random-purposive sampling. The respondents were individuals meeting the following criteria: they held a bank account and owned a mobile device. 15,933 respondents were invited to participate in the study. The authors collected 1,525 fully completed surveys. A closer analysis of the data for the selected sample pointed to some deviations concerning 54 respondents who did not use m-banking applications for mobile devices during the research. Therefore, to conduct further analyses required for the evaluation, the authors carried out specific adjustments regarding the data, which ensured the reliability of the assessment of the considered mobile banking applications. As a result, the final research sample obtained in this way included 1,471 questionnaires.

### **3. DESCRIPTION OF THE SAMPLE AND ANALYSIS OF THE OBTAINED FINDINGS**

#### **3.1. Socio-demographic characteristics and user profiles**

Among the respondents, there were 53% of women and 47% of men, and the sample included mainly young individuals – more than half, i.e. 56% were aged 25-34. Every fifth adult was under 24, and the respondents aged 35-44 accounted for 17% of the sample. 6% share were individuals over 45. Among the respondents, the majority of individuals declared having completed higher (48%) or secondary (29%) level education institutions. Every fifth respondent declared holding a Bachelor's degree or indicated incomplete higher education. The responses related to primary level education and vocational schools were selected by 2% and 1% respectively. Over half of the respondents (51%) lived in large cities with more than 200,000 inhabitants, one third lived in medium-sized cities with 21,000-200,000, and every tenth survey participant lived in a village. The majority were employed on the basis of employment contracts (64%) or were students (14%). 8% of the respondents worked on the basis of the contract of mandate, and 6% were self-employed. The number of unemployed individuals was the same as those taking care of their households or raising children, i.e. 3% each. Pensioners and retirees accounted for less than 2% of the sample.

#### **3.2. Analysis of the findings regarding the evaluation of the application quality**

The research covered 16 mobile applications offered by the following banks: Alior Bank, Bank BPH, Bank Zachodni WBK, BNP Paribas, Citi Handlowy, Eurobank, Getin Noble Bank, ING Bank Śląski, Inteligo, mBank, Meritum Bank, Millennium Bank, Orange Finance, Pekao S.A., PKO BP, Raiffeisen Polbank and T-Mobile Usługi Bankowe.

The evaluation of the quality of applications did not include Bank Spółdzielczy PBS Bank and Plus Bank because the authors received only one survey questionnaire concerning the evaluation of the respective applications. As a result of the conducted quantitative study, the authors obtained the results which are presented below. The respondents were asked to provide the responses to the following questions: „What is your assessment of the bank application [variable: name of the bank the respondent uses] in terms of the features such as [variable: name of the feature within a given criterion with a brief description]?” The respondent evaluated each feature using a scale from 1 – Very bad to 5 – Very good. The basic characteristics of the application evaluations made by the respondents were as follows. The average value of the application quality assessments for all features in the examined sample amounted to 3,966, and the value of the dominant for the entire sample was 4. The average deviation from the average was 0.804, which resulted in the value of the coefficient of variation reaching the level of 20%. Although the overall score of the quality assessment was positive, it still leaves much to be desired. The overall assessment of the quality of banking applications proposed by the authors consists in the measurement of quality criteria classified in the main criteria sets. The Alfa Cronbach coefficient for the selected measurement scale, where the 1st position was the lowest score, and 5 was the highest score for 24 features, amounted to 0.958. This points to the high degree of reliability of the research, its repeatability as well as the independence from the researcher or other study-related circumstances. The basic statistical characteristics obtained for particular features, i.e. average, deviation, the correlation of the feature with the overall assessment of the quality of the application are presented in Table 4. It is important to point to the high variability of assessments, which is indicated by the high value of the coefficient of variation falling in the range of 17,5%-24,8%. A markedly greater variation is observed in the case of criteria and features which receive the lowest scores, e.g. Functionality and Navigation. This tendency is characteristic for the assessments below the average, where there occurs the so-called dispersed dissatisfaction stemming from the diversity of needs and requirements of the users occurring together with the low level of personalisation of the application functionality.

This, in turn, results from different weights attached to particular quality criteria. In the case of the features and criteria ranked above the average, the consistency of assessments is relatively higher, because the values of the coefficient of variation are lower. These ratings are less dispersed than in the case of the average quality assessment, for which the average coefficient of variation amounts to 20,3%. For all 24 features considered in the study, the authors have carried out an analysis of the correlation which describes the relation between the variables. All indicators related to Pearson correlation between the overall quality assessment and the scores assigned for individual features are statistically significant ( $\alpha < 0.05$ ). They confirm a strong positive correlation between the examined features and the assessment of application quality. The weakest relation with the general assessment of the application quality was indicated in the case of a feature which obtains the lowest scores, i.e. recommending to a friend ( $r=0.616$ ). Comparing the averages for the features with the correlation coefficient, one may observe that the assessments are in line with the overall assessment of the quality of the application. The group of features which received the scores ranging above the average, where we observe a weak relation with an overall assessment of the quality, included the features such as: personalization ( $r=0.642$ ), exporting ( $r=0.65$ ), or gestures ( $r=0.656$ ). The features such as search and help received scores below the average and they have an average impact on the overall quality assessment. The features which have a strong influence on the overall assessment of the application quality, and simultaneously were rated below the average are the navigating scheme ( $\bar{x}=3.96$ ,  $r=0.78$ ) and system buttons ( $\bar{x}=3.93$ ,  $r=0.749$ ). Improving these particular aspects will significantly affect the overall assessment of the quality of the application.

The analysis of the data with the application of a simple scoring method indicated that the respondents assigned relatively good scores for particular features of the examined applications. However, there were also those which received average scores. The best average scores were obtained in the case of the Visualisation criterion, followed by the criteria pertaining to Text and Perception of the application. The lowest average value in the study was assigned in the case of the Functionality criterion, slightly worse than the Navigation criterion. Interesting conclusions can also be drawn on the basis of a similar analysis carried out for particular applications analysed in the study. In the case of two applications most commonly used in the examined study sample, i.e. mBank and ING Bank Śląski, the average quality assessments are the highest in the group of clients who use the application for more than half a year and for a period shorter than two years. Subsequently, the ratings drop to increase once again in the group of regular clients using the application for over four years. In the case of the application of Bank Zachodni WBK, the average assessments fell rapidly when moving from a group of new clients (up to 6 months) to a group of medium-term clients (up to 2 years), to rise rapidly and decrease once again within the group of individuals using the application for the longest period of time. In the case of two of the biggest retail banks, i.e. PKO BP and Pekao the average scores of the quality of the application are very high in a group of new clients, then they are rapidly falling and rising again in the group of relatively new clients (up to 2 years). At the same time, the scores of Pekao application reached the highest average in the group of medium-term clients using the application from 2 to 4 years ( $\bar{x}=4.10$ ). The assessments of the PKO BP application are increasing in the group of clients using the application for more than 4 years to reach the average of  $\bar{x}=4.03$ . There are significant differences in the average scores received for the quality in different segments of users which may point to the discrepancies in the clients' expectations at different stages of the cooperation with the bank. Interestingly, nearly half of the respondents participating in the study were categorised in two groups, i.e. from 7 to 12 months and from 1 year to 2 years where the disruption of the increasing tendency of quality assessments is visible. Taking into account the frequency of using the application where 90% of the survey participants used mobile banking at least a few times a month, and where 20% use it at least once per month, it may be concluded that experienced users are willing to use new and more advanced financial services via mobile applications.

Therefore, their opinions are particularly important from the point of view of devising a model of the application and ensuring proper communication of the clients and the bank. The evaluation of the application quality according to individual features was carried out with the assumption that a respondent assesses every considered element on a scale from 1 – Very bad to 5 – Very good. Additionally, there was a rotation of the sets of criteria, and within each criterion the features were also rotated. The analysis of specific data in particular main criteria sets shows that, when evaluating the Functionality criterion, the respondents assigned worst scores for the features such as: exporting and recommending to a friend. These attributes were the only ones in the study that had the predominant number of average scores (3 – neither good nor bad). The feature of recommending to a friend was assessed as average or bad in as many as 11 applications out of the 16 options analysed in the study and exporting - in 7. The structure of the quality assessment of particular features in the Functionality criterion indicates that over 10% of the respondents expressed the opinions: Rather bad or Very bad with regard to exporting and personalisation of the application. This was the worst result recorded in the study. The second criterion which recorded the lowest scores was Navigation and the features which received the least points were gestures and system buttons. Even though in the case of these evaluations the average assessment was less than good, still the responses: Rather good were dominating for all the banks included in the research. The best scores in the Navigation criterion were assigned for the feature of navigating the application, where the percentage of good and

very good scores reached over 83%. The respondents assigned good scores for the Menu construction and Security. The average value of the assessments of particular features for these criteria was always above good, and the most frequently selected response was Rather good. In the case of Menu construction criterion, the highest score was obtained for the feature of the correctness of indications, and the lowest score for the order of menu items. However, in each case, the features obtained over 80% of good and very good scores. The features such as authentication, authorisation and confidentiality received high scores within the Security criterion. Slightly lower scores were assigned for data integrity where the structure of the evaluation is still at a very high level. Among the highest rated main criteria, the best scores were recorded in the case of text clarity in Text criterion. Simultaneously, it is the highest score in the study among all the assessments of the features. In the case of this feature, less than 10% of the survey participants assigned the scores which were lower than good. Even though in the case of this criterion, the lowest scores were assigned for entering the text, still the score was better than the average value calculated for all features. High scores were assigned to user-friendliness in the Perception criterion, and subsequently, with equally high scores: intuitiveness and stability of the application. Only 3-4% of the sample assessed these features as Bad or Very bad. Also, high scores were recorded in the case of Visualisation. The feature which obtained the highest scores was the colour scheme. The colour scheme was the feature which obtained the greatest number of very good scores in the study. It is important to note that graphics received equally high scores. The research findings constitute the basis for detailed considerations concerning the assessment of the quality of m-banking applications. These analyses should be carried out following the verification of several measurement models. One of them consists in lack of differentiation between the relevance of particular criteria and features in assessing the quality of the application based on the scoring criterion presented above. The analysis conducted with the application of a scoring method is frequently criticised for its subjectivity, as it does not consider particular measurements which are characteristic for multidimensional analysis methods. However, in this case, the size of the research sample  $N = 1\,471$  allows the results to be considered as representative in the case of users of the m-banking application.

### **3.3. The declared relevance of the criteria used for the assessment of the application quality**

An important element of the presented quantitative research was users' establishing of the hierarchy of the relevance of the criteria indicated by the author. The respondents taking part in the quantitative study were to evaluate how important particular criteria are in the context of the application which they use. The question was as follows: "How important, in your view, are the particular criteria of the bank's [variable: bank name] mobile application?" The scope of possible responses ranged from 1 – Definitely irrelevant to 5 – Definitely relevant. According to the respondents, the most important criterion in terms of the quality of the m-banking application is Security which includes the features such as authentication and authorisation, data integrity and confidentiality. In this case, we record nearly twice as many Definitely relevant responses than in the case of the subsequently presented research criteria. The relevance of the Security criterion is in line with the findings of other studies focusing on the electronic channels of the distribution of banking products and services, e.g. the Internet, where the issue of guaranteed sufficient security is listed as the most relevant aspect among the factors stimulating the development of banking (Polasik, 2012). Therefore, one of the most important activities should be to provide users with relevant security measures through applying technological solutions, e.g. tokens used to authorise transactions, to educate clients on how to engage in secure transactions and overcome the fear, anxiety or lack of trust in modern technologies. The subsequent places were occupied by a group of criteria such as Navigating,

Perception of the application, Text and Menu construction which obtained largely the same scores (83-85%) regarding the relevance of these criteria in the quality evaluation. Proper implementation of the features grouped in these criteria points to the fact that in the case of the information and transactional applications, the aspect of general attractiveness of the design and ease of navigating the screens appear to be just as important as the clarity of the displayed content. The expanded service and product range available in the application focuses on the importance of a clear menu and an efficient navigating system. However, it appears that the Functionality of the application is nearly just as important. For many respondents, this category was assessed as Definitely relevant and has obtained a similar score (i.e. 33%) as in the above-mentioned group of categories. However, in the evaluations there was also a marked number of responses indicating its irrelevance or indifference to it, amounting to over 20%. Most likely, the latter may be related to the reluctance with regard to using these elements, no skills or bad experience when using the application. The functionalities corresponding to the most common reasons for using the application include: a well-designed login area, the ability to personalise the interface to facilitate the use of the application, the search engine which is efficient and helps to find answers to the queries, the assistance provided by employees or available in the form of electronic tutorials and demo versions. An even greater percentage of the responses indicating the irrelevance of specific factors was indicated in the case of Visualisation criterion. Every third respondent gave such an answer, hence this feature was ranked last in the research into the relevance of the criteria applied in the quality evaluation of the application. In practice, although the graphics provide users with a clear and readable layout, consisting in the application of large icons and navigation buttons, the users are aware that in most cases, they cannot adapt the interface to suit their individual needs. The presentation is determined by the bank's branding policy which, apart from some exceptions, does not allow for changing the colours of the background of the application. No possibility to personalise or arrange the elements on the screen to e.g. distinguish the cards and scrolls with instructions may also result in the low assessment of this criterion.

#### 4. CONCLUSION

Table 1 presents the comparison of the values of the arithmetic mean of the assessments of criteria relevance weights in the examined applications. Drawing the lines of the matrix into quadrants with the variance divided in half, the authors obtained four subsets of criteria. The first subset consists of the following criteria: Security, Perception of the application and Text. These measurements turned out to be relatively important for the respondents, and they ranked above 4.129 (their assessments exceed the average of all evaluations which is 3.968). The application designers should focus on these criteria to ensure and sustain a high level of fulfilment of these criteria. The second subset contains the Menu and Visualisation criteria. These aspects are not very important for the users even though they received relatively good scores. In the case of designing m-banking applications, these aspects may be seen as potential savings for the service providers. For example, the respondents assigned good scores for the applications' colour schemes. However, they have no influence on this aspect since this particular element depends on the complex branding policy of the bank, which concerns all channels of communication with the client, not only those related to mobile banking. The third area is the Functionality criterion, which is seen as one of limited relevance and the aspect which received relatively low scores. When designing an application, it is worthwhile to examine this particular factor which received the lowest scores,  $\bar{x}=3.624$ . The average importance of this feature means that designers could improve the overall assessment of the application's quality focusing on this particular issue. The analysis of the model used for the assessment of banks examined in the study indicated that the users evaluating this particular feature attach more importance to this criterion than to the Visualisation of the application.

*Table 1: Comparison of the arithmetic mean value of the relevance weighs of the main criteria*

No.	Criterion	Assessment of the criterion	Surveyed relevance
1.	Security	4.044	4.54
2.	Navigation	3.666	4.16
3.	Perception	4.112	4.15
4.	Text	4.127	4.13
5.	Menu structure	4.061	4.10
6.	Functionality	3.624	4.06
7.	Visualisation	4.146	3.76
8.	Average	3.968	4.129

The fourth, last subset includes the Navigation criterion which is evaluated below the average, but its relevance for the survey participants is higher than the average. When designing an application, it is important to pay attention to the elements which influence this criterion since their improvement may bring the greatest change in the overall perception of the application's quality. In terms of relevance, this criterion gives way only to Security, which clearly shows that the elements related to the navigation of the application are crucial for the evaluation of the quality of a mobile application. Summing up, the distribution of the relevance of the criteria as qualitative attributes points to the elements which designers need to focus on when designing a banking application. The key aspects include the necessity to maintain high quality of the application in terms of security, user-friendliness, i.e. the clarity and comprehensibility of the texts and a greater focus on navigating the application. The features included in the last criterion are related to the speed and ease of finding the information in the application. From the point of view of the users, these aspects are more important than the functionalities which are available in the application. Thus, taking all the above into consideration, it is important to note that focusing on improving the visual aspects and elements of the menu alone will have little impact on the perception of the overall quality of the mobile banking application.

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## THE SUSTAINABILITY ASSESSMENT – THE CASE OF A RUSSIAN PETROCHEMICAL COMPANY

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### ABSTRACT

*The concept of sustainable development is a relatively new management paradigm, especially for Russian companies. Implementation of this concept brings sustainable development principles - including economic, ecological, social, and institutional dimensions - in business strategy that leads to long-term sustainability and the ability to cope with complexity. Despite the spread of the sustainable development concept over the last two decades, some challenges still remain - including how to measure sustainability; the applicability of sustainability indicators; the application of sustainable development principles in management processes and their adaptation to the needs of the company. Our study is focused on the sustainability assessment of a Russian petrochemical company located in the Omsk region of Russia. The research questions are as follows:*

- What indicators allow one to assess comprehensively the sustainability of the organization?*
- How to reach a balance between the economic, ecological, social, and institutional principles of sustainable development?*
- What factors lead to the successful implementation of the sustainable development principles in the business strategy and management processes of an organization?*

*To conduct our study we used a method of an in-depth face-to-face interview with a company top-manager. Our data-frame includes a case in the petrochemical sector of the economy.*

**Keywords:** *Green Project Management, Sustainability Assessment, Sustainable Development Principles, Sustainable Development*

### 1. INTRODUCTION

This study is focused on the concept of sustainability, its main principles including economic, ecological, social, and institutional, and sustainability assessment of a Russian petrochemical company located in the Omsk region of Russia. The Omsk region is located in Siberia and specializes in petrochemical refining in urban areas, exporting oil products to other Russian regions and abroad. Sustainability management is a relatively new concept for Russian companies, but it's getting more popular nowadays. Sustainability management may help Russian companies to cope with the increasing complexity of society, the economy and the environment. The concept of sustainability brings many challenges to the management of an organization, including the measurement of sustainability; the applicability of sustainability indicators; the application of sustainable development principles in management processes and their adaptation to the needs of the company; the balancing of the economic, social, ecological, and institutional principles of sustainable development. These challenges led us to ask the following research questions: What indicators allow one to assess comprehensively the sustainability of an organization? How to reach a balance between the economic, ecological, social, and institutional principles of sustainable development? What factors lead to the successful implementation of sustainable development principles in the business strategy and

management processes of an organization? We followed a qualitative approach to address our research questions regarding sustainability assessment. To conduct our study, we used a method of an in-depth face-to-face interview with a company top-manager. Our data-frame includes a case in the petrochemical sector of the economy.

## **2. THEORETICAL BACKGROUND**

Sustainability is a key idea that lies in the basis of the concepts of sustainability management and sustainable development. Sustainability may be considered as the capacity of the system or process to maintain itself for a long time (Moldan and Dahl, 2007). The most known definition of “sustainable development” was made in the 1987 Brundtland report “Our Common Future” as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p.43). Sustainable development may be defined as development that accepts the rights of all people and nations to grow and flourish today as well as in the future (Robertson, 2017). The ideas of sustainability and sustainable development are associated more and more with green economy and green management. The definition of a green economy was given in the framework of the United Nations Environment Programme (UNEP) as “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities” (UNEP, 2014). The concept of sustainable development is considered as one of the most challenging concepts that has ever been elaborated on, despite its simple idea. Its main challenge is to provide the development of social and economic systems in harmony with the ecological systems of the planet. The sustainable development concept aims to provide everybody with the opportunity to lead a dignified life and protect the planet from damage (Moldan and Dahl, 2007, p.2). Sustainability management may be defined as “the organizational practices that result in sustainable development” (Cohen, 2011, p.4). There are narrow and broad definitions of the sustainability management, that is also called green management. In the narrow sense, sustainability management (or green management) is a type of management that pursues ecological aims (Cohen et al., 2015; Maltzman and Shirley, 2010). Such a definition is often used in ecological projects. In this case the concept of sustainability management includes “the prescriptive strategies that minimize environmental impact and maximize resource conservation” (Cohen et al., 2015, p.3-4). In Maltzman and Shirley’s work, Green Project Management, they observed that: “A perfect cycle of sustainability utilizes everything it produces and in effect has zero emissions, zero waste” (Maltzman and Shirley, 2010, p.21). In the broad sense, sustainability management aims to provide the economic efficiency of the organization/project in the long run, simultaneously ensuring a high level of ecological and social responsibility. “By slightly altering the way we view the delivery of projects, we can realize a global system that preserves its natural resources, positively impacts society, and strengthens the global economy” (Carboni et al., 2013, p.7). In this study, we will use the terms of sustainability management and green management as synonyms and adhere to the broad definition of sustainable management. According to GPM Global, sustainability-based projects are developed “to manage the balance between finite resources, social responsibility, and delivering “green” project outcomes”, “to achieve business objectives while decreasing negative environmental impact” (Carboni et al., 2013, p.8). To summarize, the concept of sustainability in project management aims to harmonize the economic, social and ecological interests in the short and the long run as well (Silviu et al., 2012).

### **2.1. Four principles of sustainable development and sustainability management**

The concept of sustainable development that was elaborated as “Agenda 21” at the Earth Summit (UN Conference on Environment and Development) in 1992, included three main principles: social, economic, and environmental.

These three principles are known as the “three E’s” (environment, economic, and equity) or the “three P’s” (people, planet, and profit) and are also called “the triple bottom line” (TBL), the term introduced by John Elkington (Elkington, 1999). In other words, sustainable development includes the three following dimensions: ecological sustainability, economic opportunity, and social inclusion (Robertson, 2017, p.3). According to GPM Global, the triple bottom line concept “aims to measure the financial, social and environmental performance of the corporation over a period of time. Only a company that produces a TBL is taking account of the full cost involved in doing business” (Carboni et al., 2013, p.29). The Project Management Institute (PMI) defines sustainable development as a new management paradigm, which aids in coping with the complexity and dynamics of an organization, its projects and programs. According to PMI the principles of sustainable development - including economic, ecological and social – shall be used in all project management processes that allow to improve the quality of the project results (Gareis et al., 2013, p.1). The fourth principle of sustainable development is institutional. This principle was included in the system of sustainability indicators by the UN Commission on Sustainable Development. The fourth principle of sustainability is not so well spread as the three main principles, moreover there is a need for the development of sustainability indicators for the institutional component (Moldan and Dahl, 2007). The institutional component of sustainability shall be separated from the social component, which may be a difficult task because both components in the broad sense include access to information and knowledge, information exchange, human rights, access to justice and transparency in decision making (Moldan and Dahl, 2007). In this study we will consider the institutional component of sustainability in the narrow sense – as acceptance of sustainability management institutions by an organization, as its intention to sustainable development and the balance of economic, social and environmental objectives. Thus, to assess the sustainability management of the organization we will use four principles (components) of sustainable development – economic, ecological, social and institutional, applying them to the management processes and deliverables. This approach represents an adaptation and development of the project management methodology of GPM Global for sustainability assessment (Carboni et al., 2013, p.30). To formulate the research questions more precisely, let us proceed to the challenges and research gaps in the area of sustainability management (including project management) and sustainability assessment that face science and practice today.

## **2.2. Research gaps**

The concept of sustainability brings many challenges if we want to implement it in practice. One of the main challenges consists in the measurement of sustainability and the development of sustainability indicators that are universally applicable (Karlsson, Dahl, et al., 2007, p.27). The development of sustainability assessment applications is a complex objective because of the complexity of organizations and their environment, the complexity of the local, regional and even global issues they address, and moreover the dynamic processes they involve (Gibson, 2016, p.2). To choose the proper sustainability indicators T. Bauler, I. Douglas et al. (2007, pp. 56-57) suggest the following metacriteria: purpose; measurability; representativeness; reliability and feasibility; communicability. There are still many ways to measure sustainability and to choose sustainability indicators (Cohen et al., 2015, p.16) that lead us to a common practice when the sustainability assessment application and its indicators are designed for only one project, case or organization (Gareis et al., 2013). Development of the universal methods of sustainability assessment would make sustainability measurement and reporting for organizations easier (Cohen et al., 2015, p.16). Another challenge that faces science and practice nowadays is the balancing of the economic, social, ecological, and institutional principles of sustainable development in the management of organization and project management.

To achieve the balance between these principles the organization always meets the trade-offs between the different dimensions of sustainability (Gareis et al., 2013, p.41). The balancing of the sustainability principles in a particular period of time is also related to balancing the short-term, middle-term and long-term objectives of the sustainable development of the organization (Carboni et al., 2013). If the organization values the short-term gains higher than the distant costs caused by social and environmental degradation, it leads to the exaggeration of the short-term objectives to increase the short-term profits while sustainable development requires priority of the long-term objectives (Gareis et al., 2013, p.41). These challenges led us to stating our research questions.

### **3. RESEARCH QUESTIONS AND METHODS**

Our research questions are as follows:

- What indicators allow one to assess comprehensively the sustainability of an organization?
- How to reach a balance between the economic, ecological, social, and institutional principles of sustainable development?
- What factors lead to the successful implementation of the sustainable development principles in the business strategy and management processes of an organization?

We followed a qualitative approach (Patton, 2002) to address our research questions regarding sustainability assessment. Phenomenological methodology was practiced by different researchers in their qualitative studies in sustainability assessment (Gibson, 2016; Gareis et al., 2013; Robertson, 2017). To conduct our study, we used a method of an in-depth face-to-face interview with top-manager of company.

#### **3.1. The assessment technique of sustainability management (in project management)**

The structure of the interview was divided into two modules. Module 1 – general, or institutional questions in sustainability management, including project management; and Module 2 – special questions in the three dimensions of sustainability – economic, social, and ecological (Carboni et al., 2013; Cohen et al., 2015; Gareis et al., 2013; Maltzman and Shirley, 2010; Moldan and Dahl, 2007; Silvius et al., 2017). The analysis of the institutional dimension in the module of general questions is the innovation of our study. The aim of the first module (the module of general and institutional questions) was to assess the general level of sustainability that would show the strength or weakness of the institutions of sustainability management of the company. Thus, the first module included the questions that would allow us to assess the following aspects of sustainability management: existence of the long-term strategy of sustainable development (Gareis et al., 2013); inclusion of ecological and social objectives along with economic objectives in the strategy of the organization (Gareis et al., 2013); use of principles of sustainable development and sustainable management in the different phases of the project management cycle (Maltzman and Shirley, 2010; Gareis et al., 2013); statement of the project objectives as sustainable objectives; priority of economic, social and ecological objectives in the projects of the organization; balancing of the principles of sustainable development in projects (Carboni et al., 2013; Gareis et al., 2013); influence of sustainability management on the project success, project risks, value of the project outcomes, and quality of the project management (Carboni et al., 2013; Maltzman and Shirley, 2010; Gareis et al., 2013; Silvius et al., 2017); influence of government and other external factors on the implementation of sustainability practices in the project management (Cohen et al., 2015). The aim of the second module (module of special questions) was to assess the local levels of sustainability in the three main dimensions of sustainability management: economic, social, and ecological. To assess social sustainability management we developed questions about such aspects of management as use of social indicators in project management; corporate social

responsibility; access to information and knowledge; non-discrimination, human rights and labor safety (Carboni et al., 2013; Moldan and Dahl, 2007). To assess the ecologic sustainability management we elaborated with questions about the program or policy of the organization in the field of environment protection (Carboni et al., 2013); use of ecological indicators in project management (Carboni et al., 2013; Moldan and Dahl, 2007); estimation of toxic wastes and emissions including carbon dioxide (Moldan and Dahl, 2007; Maltzman and Shirley, 2010); use of recycled materials, products from local producers, renewable energy sources, waste sorting and recycling (Carboni et al., 2013; Cohen et al., 2015). To assess the economic sustainability management questions were used concerning the influence of the sustainability management on the economic indicators of the organization; and the economic sustainability of the projects (Carboni et al., 2013).

#### **4. FINDINGS**

The interview was conducted with a top-manager of a large petrochemical company. This company implements its projects at the national level of the Russian economy, and most of the company's projects are commercial. The interview was done in July 2018.

##### **4.1. Module of institutional and general questions**

The first question was about the strategy of sustainable development. The company has a strategy of sustainable development that includes strategic goals for the next one-three years. Three years is a relatively short time period for strategic planning, but it's quite common for Russian companies that face an unstable economic and political environment. Thus, the strategy of sustainable development of the company is a short-term oriented strategy. The strategy includes all three principles of sustainability: economic, social and ecological, declaring that all three principles are equal for the company. The next question was related to the project management processes of the company. The company applies the principles of sustainability to such phases of project management as the planning, implementation and closing of the project, but doesn't use them in the initiation phase – that means doesn't include them in the project charter. In other words, the company uses the principles of sustainability when the idea of the project is approved, not in the discussion of project ideas. Between economic, social and ecological objectives, the economic objectives have a priority in the projects of the company. The project planning includes the planning of outcomes for one-two years more after closing a project that shows the short-term orientation (the same as the strategy of sustainable development). Nevertheless, more than 60% of the company's projects have objectives in all the dimensions of sustainability – they state simultaneously the economic, social and ecological objectives. We asked our interviewee about the influence of balancing the economic, social and ecological principles in project management on the different indicators. He told us that balancing the principles of sustainable development in the projects leads to an increase in the value of the project's results, quality of project management processes and the ability of the company to satisfy investors and partners, but doesn't have much influence on the project's success, project risks and image of the organization. The most important factors that would lead to the implementation of sustainability management in the organization were the need to work with foreign partners and the increase in prices of energy and materials, as well as in landfill waste. Another important factor that has an influence on the implementation of sustainable practices in the management of the organization was government policy, including the tax system; fines and penalties for unsustainable practices; development of a generally recognized system of sustainability indicators. To conclude, the company has the average level of acceptance of sustainability institutions. Its strategy and goals are short-term oriented, while sustainable development requires long-term orientation. The company declares the equality of all three principles of sustainability, but on practice the main principle is still economic.

The company will continue to implement the sustainability practices influenced by partners, markets and government.

## **4.2. Module of special questions**

### *4.2.1. Social dimension*

The company doesn't have a plan or strategy in corporate social responsibility (CSR), but the social objectives are included in the general strategy of the company. The company has objectives and uses the key performance indicators (KPI) in the field of labor safety, education of the labor force and equal opportunities for all workers, and the prevention of corruption. All the project team members have an opportunity to study regularly. The company aims for equal gender rights and non-discrimination in the recruitment process, but among the project managers 70% are men, while 30% are women, which is the same distribution among project team members. To summarize, the company has an average level of social sustainability.

### *4.2.2. Ecological dimension*

The same as with the social dimension, the company doesn't have a plan or strategy in ecological responsibility, while the general strategy includes some ecological objectives. In the project management the following objectives and KPI are included: carbon footprint, consumption of water, energy, and materials, and use of transport. They do not assess the influence of the project on the environment before the project implementation. The company uses recycled materials in production; and the final products of the company may be recycled as well. The company uses materials from local producers that allow the reduction of the use of transport and influence on the environment. Renewable energy is not used at all, while most of the waste is sorted and recycled. We may conclude that the studied company has an above-average level of ecological sustainability.

### *4.2.3. Economic dimension*

Economic objectives are also included in the general strategy of the company. The company uses the following KPI: return on investment (ROI); net present value (NPV); profitability; market share; employment growth. Such indicators as cash flow, liquidity of assets, and agility of business are not used. The project management processes and outcomes of the company have a positive influence on the ROI, market share and the regional economy. We may conclude that the company has an above-average level of economic sustainability. Integral assessment of the sustainability that includes institutional, social, ecological and economic indicators shows that the studied company has an average level of sustainability. To increase the level of sustainability the company needs to pay more attention to corporate social responsibility and the social dimension of sustainability, and to the institutions of sustainable development, to support the creation and implementation of the internal institutions of sustainability.

## **5. CONCLUSIONS**

This study analyses the assessment of sustainability in the management of an organization. The case of a large petrochemical company located in the Omsk region of Russia was considered. The innovation of our study is that it uses for assessment four dimensions of sustainability including the common three dimensions (economic, ecological and social) plus the institutional dimension. On the basis of the theoretical research we may conclude that the comprehensive assessment of sustainability shall utilize all four principles of sustainability. If the organization knows the level of sustainability in all four dimensions – social, economic, ecological and institutional - it may reach the balance between them, thus increasing attention to those indicators that are comparatively lower than others. Our case shows that the studied company has an average level of sustainability, including the average level of institutional and social

sustainability and above-average level of ecological and economic sustainability. We would add that the institutional dimension of sustainability shouldn't be ignored because it brings sustainability institutions in the genes of the company. If an organization disregards the internal sustainability institutions, the three main principles of sustainability cannot be in balance. In the case of our company, the institutions and practices of sustainability are implemented mostly under the influence of external factors (such as government regulations, foreign partners or market influence); the company pays more attention to the short-term than to the long-term goals and objectives; and the social principle of sustainability is less developed than the economic and ecological principles. And finally, we wanted to find out what factors lead to the successful implementation of the sustainable development principles in the management of an organization. The case of this Russian petrochemical company shows that these factors are external incentives: government policy in the field of sustainability; generally recognized system of sustainability indicators; increase in prices in energy, materials, and landfill waste; good practices of the partners. This case has its limitations and may be considered as a first step to develop a comprehensive system of sustainability assessment.

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# SOFT LAW ACTS AND THE PRINCIPLE OF LEGAL CERTAINTY ON THE EXAMPLE OF THE ACTIVITIES OF THE POLISH FINANCIAL SUPERVISION AUTHORITY AND THE PRESIDENT OF THE OFFICE OF ELECTRONIC COMMUNICATIONS

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## ABSTRACT

*One of the forms of regulating the telecommunications market by the President the Office of Electronic Communications (the President of UKE) is issuing soft law acts, referred to as a announcements or position. These documents present the official position of UKE on regulatory issues. Sometimes they are also incorporated into the decision of this body, but in themselves they are not binding, so, in principle, cannot be appealed against neither in the administrative nor in the civil procedure. It arouses controversy among entrepreneurs who appeal against the provisions of these acts, using the procedure of appeal against the decision of the President of UKE, what is manifested by the cassation complaints that have been recently examined by the Polish Supreme Court. In this context arises a question, whether the possibility of appealing only against the decision of the President of UKE with the ever-increasing use of soft law acts by this body, provides the entrepreneur with a sufficient level of protection of their rights, in the context of the principle of legal certainty? A similar situation takes place in the activities of financial supervision institutions, especially Polish Financial Supervision Authority (KNF). It should be stated that the supervisory actions constitute very strong interference in the nature and in the system of capital companies, as in fact they are quasi provisions of the law and not instruments of the soft law. As a consequence of such supervisory actions the norms of the civil law are adjusted and corrected. The key instrument of influencing third parties are the indications and recommendations used by the financial supervision institutions. Those recommendations are addressed to the supervised entities, but many of them refer to the rights and obligations of other entities (by regulating, i.a. the process of establishing and paying the compensation for damages by insurers or the principles of remunerating employees). A question to be answered in article, whether the regulations discussed here do not build an alternative legal system?*

**Keywords:** *intervention in the market, Polish Financial Supervision Authority, President of the Office of Electronic Communications, principle of legal certainty, soft law*

## 1. INTRODUCTION

The principle of legal certainty is a principle that has not been explicitly specified neither in doctrine nor in judicature (Raitio, 2003, p. 125). Due to its sources and ways of interpretation in various legal systems (EU, national etc.), its understanding may be varied (Tridimas, 2007, p. 6). The principle of legal certainty is one of the general principles of the European Union, and has been derived from the constitutional traditions common to the Member States by the Court of Justice of the European Union (Kowalik-Bańczyk, 2014, p. 106). This principle is therefore the source of the primary EU law. Through its prism, all acts of EU law, policy of EU institutions and member states are analyzed. In the Polish legal order, the principle of legal certainty is interpreted from the principle of a democratic legal state and the principle of

sufficient specificity of repressive law (Doniec, 2016, p. 79). The practical significance of the principle of legal certainty for individuals is expressed in the permanence of law and predictability of decisions of state authorities. Individuals must be aware of the content of their law in order to be able to plan their actions in accordance with it (Tridimas, 2007, p. 242). In the context of the principle of legal certainty understood in this way, the question arises whether the use of soft law acts by the market regulatory authorities (President of UKE and KNF) does not violate this principle and provides individuals with a proper level of protection of their rights, which will be the subject of further considerations.

## **2. PRACTICE OF THE PRESIDENT OF THE OFFICE OF ELECTRONIC COMMUNICATION**

The implementation of the regulatory policy and the exercise of statutory competences by the President of the Office of Electronic Communications (President of UKE) is carried out using various means. The basic mode of operation of the President of UKE as a public administration body is regulation with the use of administration decisions. However, the use of the soft law by the President of UKE is becoming more and more frequent. An analysis of the President of UKE practice has shown that we can distinguish two basic forms of soft law acts used by this body. The examples of these acts are guidelines and recommendations issued by the European Commission, used in regulatory decisions and announcements and positions issued by the President of UKE, and concerning regulatory policy, often incorporated into the decision content. The use of each of these forms has different effects, what will be discussed in detail in the further part of the study.

### **2.1. Administrative decisions**

The basic form of market regulation by the President of UKE, as it has already been mentioned, is issuing administrative decisions that determine the rights and obligations of the parties to the proceedings. The administrative decision is a unilateral and authoritative statement of the will of the authority issued based on the provisions of administrative law. It resolves on the legal situation of the unambiguously indicated party to the proceedings in an individual case. The decision is issued in relation to the entity which is not related to the body with a node of an organizational or business nature (Hauser, 2014, p. 413). Formal requirements of the administrative decision are specified in art. 107 § 1 k.p.a. (Ustawa z dnia 14 czerwca 1960 r. – Kodeks postępowania administracyjnego: Polish OJ 2017, position 1257 hereinafter as k.p.a.). However, it does not mean, that if the adjustment does not meet the above requirements, it can not be considered as an administrative decision. It is crucial to determine whether the resolution is a decision within the meaning of art. 104 k.p.a., that is to say, whether it resolves the administrative matter, which belongs to the body's jurisdiction as to its substance. If so, regardless of the name of the document and its construction, it is an administrative decision of the largo sense. The above premises are applicable to decisions issued by the President of UKE, because the term "decision" used in art. 206 par. 2 of the Telecommunications Law (Ustawa z dnia 16 lipca 2004 r. – Prawo telekomunikacyjne: Polish OJ 2017, position 1907, hereinafter Telecommunication Law) is not an autonomous concept, therefore it should be given the meaning adopted in the k.p.a. Decisions issued by the President of UKE determine the rights and obligations of the parties to the proceedings. To the extent specified in art. 206 par. 2 of the Telecommunications Law, the parties are entitled to appeal against the decision to the District Court in Warsaw - the Court of Competition and Consumer Protection (hereinafter as the Court). The Court recognizes the appeal with the use of a special procedure, provided for regulatory matters. In these proceedings, the entities have the same scope of protection as in the proceedings pending before the criminal court. This ensures that the parties have an adequate level of protection of their rights due to the adoption of the principle of substantive review of

the appeal by the court, without limiting itself to examining only the legality of the contested decision (decision of the Polish Supreme Court of 14 December 2012, III SK 27/12, LEX 1238123).

## **2.2. European Commission guidelines and recommendation**

In the conduct of regulatory policy, the President of UKE often uses the guidelines and recommendations of the European Commission. Both the guidelines and recommendations of the European Commission are legal acts that are not binding (article 288 of the Treaty on the Functioning of the European Union OJ EU 2012 C 326, p. 47). This means that they do not impose any obligations or grant any rights to individuals. These acts must be considered by the National Regulatory Authority (NRA) pursuant to art. 15 and 16 directive 2002/21 (directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, OJ EU 2002 L 108, p. 33). In national law, the obligation to consider the recommendations and guidelines of the European Commission is contained in art. 19 para. 3 of the Telecommunications Law. The Commission's recommendations and guidelines aim to ensure a consistent application of the EU regulatory framework and by aiming to promote an effective internal market in telecoms sector, in order to bring even greater benefits to consumers and businesses alike. Therefore, these acts may not only be included in national regulatory policy, but their non-application may mean that the decision issued by NRA is faulty. However, the application of the Commission's recommendations and guidelines is not unlimited. Frequently possible derogation from their application are contained in their content, but their application can also be refused if the model of settlement is not adapted to the circumstances of the case, in particular of the specific characteristics of the relevant market in a Member State (judgement of the Court of Justice of the European Union of 15 September 2016, C-28/15, ECLI:EU:C:2016:692). The guidelines and recommendations, although they are not binding, may be used by NRAs also if they have not been published in the EU Official Journal in the language of the Member State, even if the language is an official language of the European Union (see judgment of the Court of Justice of the European Union of 12 May 2011, C-410/09, ECLI: EU: C: 2011: 294). The use of guidelines and recommendations in national regulatory policy does not in any way affect the rights of individuals, because they are incorporated into decisions issued by the President of UKE, which are subject to appeal. If, however, they were not included in the NRAs decision, the entity in the appeal may rely on this fact. In this case, the court considers whether the omission of the guidelines and recommendations was justified or whether the rights of the individual have been violated.

## **2.3. Announcements and positions of the President of UKE**

Regardless of the recommendations and guidelines of the European Commission being used in regulatory policy, the President of UKE is also increasingly publishing announcement and positions. The nature of these acts and the effects they produce is not regulated by law, as opposed to an administrative decision. This means that they can not decide imperatively about the rights and obligations of parties to the proceedings. Announcements and positions of the President of UKE are unilateral declarations of will of the public administration body, issued in relation to current market problems. Actions taken by the President of UKE when issuing the above-mentioned acts do not bear the marks of procedural activities that make up the administrative proceedings and aim at resolving an individual case in the form of an administrative decision (judgment of the Supreme Administrative Court of 12 April 2017, II GSK 1505/15, LEX 2305499). The announcements and positions of the President of UKE do not have any of the components of the administrative decision, which were specified in art. 107 § 1 k.p.a.

First of all, they do not decide about the rights and obligations of specific entities, and very often they do not clearly indicate the addressee (judgment of the Supreme Administrative Court of 23 October 2014., II GSK 1339/13, LEX 1591995). As a result, the judiciary accepts that the above-mentioned acts are not administrative decisions (judgment of Polish Supreme Court of 22 March 2017, III SK 74/15, LEX 2307118; decision of the Polish Supreme Court of 23 May 2017, III SK 19/16, unpublished; of 23 May 2017, III SK 11/16, LEX 2321920; judgments of the Supreme Administrative Court of 23 October 2014, II GSK 1339/13, LEX 1591995; of 16 September 2015, II GSK 1792/14, LEX 1986700; of 10 December 2014, II GSK 2149/13, LEX 2008803; of 15 July 2015 r., II GSK 1480/14, LEX 1795836). The administrative judiciary even accepts that the above acts issued by the President of UKE are material and technical activities (judgment of the Supreme Administrative Court of 23 October 2014, II GSK 1339/13, LEX 1591995). The consequence of adopting such a position is the inability to appeal against the above-mentioned acts. The lack of a clear legal determination of announcement and position, as well as the appeal procedure causes a state of legal uncertainty. This is signaled by parties and participants in proceedings pending before the President of UKE, because they believe that these acts determine their rights and obligations. Announcement and positions often contain a specific addressee and are issued in connection with proceedings pending before the President of UKE (see Announcement of the President of UKE of 12 June 2012 "Stanowisko w zakresie rozpoczęcia procesu TTM dla usługi hurtowej SLA dla WLR". In the text of the announcement published on the UKE website, the President of UKE pointed out that the framework conditions for the provision of WLR service by TP, already included in the framework offer, approved by the decision of this authority, are adequate to ensure a satisfactory level of quality of this service.). Determining the effects of the above-mentioned acts would ensure, according to critics, due implementation of the principle of legal certainty. Establishing a appeal procedure would contribute to the exercise of the right to a fair trial. It seems, however, that it is unnecessary to establish an additional appeal procedure, because even if the announcement or position is issued in connection with a specific case pending before the President of UKE, the result of the ongoing proceeding is always the imperious decision of the authority, i.e. the administrative decision, deciding on the rights and obligations of the parties. The decision either directly incorporates the provisions of the announcement/position or is based on a certain model solution presented in the announcement/position. The decision may, however, be appealed against under the terms set out in the Telecommunications Law. This means that in fact the right to court is implemented, and the principle of legal certainty is not detrimental, because the announcement and positions of the President of UKE constitute information about the principles of regulatory policy, without being individual solutions in specific cases. Moreover, issuing such acts may contribute to a more effective implementation of regulatory policy, because the legal entities obtain information based on what model or assumptions it is run and how the regulatory regulation interprets the statutory solutions adopted in the Telecommunications Law. Adaptation to the solutions contained in these files may therefore have positive effects such as avoiding potential penalties for violations of the Telecommunications Law.

### **3. PRACTICE OF THE POLISH FINANCIAL SUPERVISION AUTHORITY**

The Polish Financial Supervision Authority (KNF) is a public administration body competent in matters of supervision over the Polish financial market. At the same time, it is part of the network of European Union bodies and Member States that make up the European financial supervisory structure. It is a divided system, cooperating, administrative network. It is a structure characteristic of the constitutional federal system, which is the European Union (Grzeszczak, 2011, p. 312). The KNF supervises financial market institutions, including insurance companies, banks, pension and investment funds, and listed companies.

Within its scope of competence, it adopts resolutions, including administrative decisions and resolutions. However, there are also categories of acts that are not subject to verification under the administrative procedure, which are recommendations and guidelines. A question arises about the legal basis for issuing them, actual significance and influence on supervised entities and, as a consequence, on the legal nature of these instruments.

### **3.1. The Polish Financial Supervisory Authority forms of action**

The Polish Financial Supervision Authority performs its tasks by means of the competences granted by the Act of 21 July 2006 on supervision of the financial market (Polish OJ 2018, position 621 as amended, hereinafter the Act on Supervision) and by other acts. KNF activities can be divided into the following forms of activities: registration activities, keeping records activities, control activities, issuing individual administrative acts, issuing general acts (Lichosik, 2017, p. 191). Due to the collegiality of the supervisory body, individual and general administrative acts are issued in the form of resolutions. Individual acts are classified as decisions or provisions. Based on Article. 11 para. 5 of the Act on supervision, the Act on the Code of Administrative Procedure (k.p.a.) applies to them. It provides guarantees for the entities to which they relate, including in the form of a 2-instance control of administrative acts and the opportunity to challenge them to court. Therefore, they do not raise much controversy. The situation is different in the case of general acts - guidelines and recommendations. They do not fall within the enumerated catalog of universally binding law sources contained in art. 87 of the Constitution of the Republic of Poland. Guidelines in EU law constitute a category of soft derivative law. The third part of the Treaty on the Functioning of the European Union (article 26, paragraph 3) indicates that they constitute an instrument conducive to establishing or ensuring the functioning of the internal market. They adopted their more precise form with regard to financial supervision in Regulation (EU) No 1094/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC (OJ EU L 331, 15.12.2010, pp. 12–47) In art. 16 were indicated to be issued to establish consistent, efficient and effective supervisory practices under the ESFS and to ensure the common, uniform and consistent application of Union law. They can be directed to financial authorities or institutions. They should adapt to them on the principle: comply or explain. The above-mentioned acts of EU law does not require the use of similar instruments at the national level. What's more, they do not give to this legal basis. Nevertheless, the reference to the competence to issue such acts at the EU level is used as the argument for the legitimacy of issuing such acts by the KNF in the author's opinion. In the case of recommendations, the KNF has gained a statutory basis for their issuing in sectoral laws, including Act on insurance and reinsurance activity (article 365, paragraph 1), banking law (article 167). It does not change the fact that due to their practical significance, they may pose a threat to the principle of legal certainty.

### **3.2. Underestimated soft law and its practical importance**

In the case of the insurance market, the KNF from 2013 issues a number of recommendations and guidelines for the construction, distribution of insurance products and the implementation of the insurance contract. For example, adopted by the Polish Financial Supervision Authority under the 246th meeting with resolution no. 414/2014 guidelines (Resolution No. 414/2014 of the Polish Financial Supervision Authority of 16 December 2014 on issuing guidelines on claims handling from motor insurances, OJ KNF 2015.11 from 2015.04.16), constitute a surveillance tool precisely describing how the liquidation of property damage from the third party liability insurance of motor vehicle owners should look like. The guidelines in this case affect the fact and amount of benefits paid.

Formally, the guidelines do not have binding force, being soft law. What is more, when issuing, the body has the freedom to shape their content (only consultations are organized). The nature of the soft law acts of the KNF is, however, illusory. The degree of implementation of guidelines and recommendations by insurance companies is subject to annual review of the supervisory body within the so-called BION assessment (assessment of the supervisory risk of the insurance company's operations), which is taken into account when determining the supervisory body's recommendation regarding the dividend payout by insurers. A negative assessment of the implementation of soft law may thus have a real impact on the possibility of dividend payment, thus disciplining insurance companies in the scope of applying to soft supervision acts. What's more, the KNF's guidelines clearly indicate that it expects to implement them on specific dates. In the KNF's opinion, recommendations and guidelines are interpretations intended to ensure permanent adjustment of the standard resulting from the provisions of law commonly applicable to the changing environment and to new phenomena occurring within the financial market (Pabian, Wajda, 2015, p. 115). However, it is the acts of universally binding law that should be precise enough so that they do not have to be interpreted. Other solution - the executive regulation issued on the basis of the acts may be a tool to ensure adaptation to the changing reality. An example of dysfunctionality of current solutions is the IDD directive (Directive (EU) 2016/97 of the European Parliament and of the Council of 20 January 2016 on insurance distribution, OJ EU L 26, 2.2.2016, pp. 19–59), applied from October 1, 2018. It provides for the introduction of an analysis of the insurance client's requirements and needs. It is important that in the scope of art. 30 IDD, the European Commission was obliged to issue a delegated regulation, which should contain guidelines on the practical assessment of the suitability and appropriateness of insurance investment products (which should be considered a good and recommended solution). Unfortunately, the Commission does not have such an obligation in the case of art. 20 IDD. It is unlikely that the Regulation will also include guidance on the practical conduct of testing the requirements and needs of clients in accordance with Article 20 IDD. The vast majority of the regulation will be based on the European Insurance and Occupational Pensions Authority (EIOPA) guidelines contained in the "Technical Advice on possible delegation on the Insurance Distribution Directive" published in February 2017 (EIOPA 17/048). In this document, EIOPA responds to the suggestions coming from the market, including regarding the need to adopt guidelines indicating whether the adequacy assessment of art. 30 IDD absorbs the evaluation of art. 20 IDD, considered that this issue would not be subject to the guidelines, because the delegation to adopt the regulation applies only to Art. 30 IDD. The absence of an obligation on the part of the Commission to develop detailed guidelines can be seen as leaving the Member States free to do so. Appeal belongs to the general principle resulting from art. 288 TFEU, according to which EU directives bind Member States in relation to the result to be achieved, leave the national authorities the freedom to choose their form and means. However, the Polish Act on Insurance Distribution (Polish OJ 2017 position 2486 as amended, hereinafter UDU) does not provide for an executive regulation supplementing art. 8 UDU. On the one hand, it can be assumed that this issue is not so problematic or controversial for the legislator to regulate it more precisely, and on the other - it is possible that guidelines as to the practical side of examining customer requirements and needs will become the subject of KNF guidelines or recommendations at the stage of application of the Act after its entry into force. In the light of the above regulations, it is problematic that neither IDD nor UDU, as well as currently available EIOPA guidelines, specify in what form and how the distributor should obtain from the client information necessary to determine his needs and requirements. There is also no guidance as to how far such an analysis should reach and how detailed the distributor should get from the client to select the most appropriate insurance product.

This clearly indicates that it is necessary to clarify the content of normative acts, however, it can and should be done through implementing acts and not through guidelines or recommendations.

### **3.3. The legal character of guidelines and recommendations and the principle of legal certainty**

One of the reasons for introducing a closed catalog of sources of law is the fear of disinformation of entities applying the law, which in turn affects the principle of legal certainty. Among the functions performed by the KNF, the regulatory function is underlined. It means determining the expected standards for conducting insurance and reinsurance activities, including by issuing recommendations addressed to insurance and reinsurance companies. Does the public administration body (which does not constitute legislative authority) have a basis for implementing the regulatory function? Guidelines and recommendations are not an element of the set of sources of universally binding law, referred to in art. 87 of the Constitution of the Republic of Poland. They are also not acts of internal law, because these only apply to organizational units subordinated to the body issuing these acts and can not constitute a legal basis for issuing decisions of state bodies towards citizens and legal persons and other entities. However, they constitute such a basis as part of supervisory activities of the KNF. In addition, the KNF is not a body provided for in the Constitution of the Republic of Poland, and its tasks are not specified at the constitutional level. If these are only interpretations, how should explanations or interpretations of KNF recommendations be understood - interpretations of interpretations (Maśniak, 2017, p. 148)? What's more, in the legal doctrine, there is no way to challenge such acts, despite their ultimate practice, as indicated above. The only means is a complaint addressed to the Prime Minister for violation of the rule of law or interests of the applicants (article 227 in conjunction with article 221 of the k.p.a.), the procedure only ends with informing the applicant about how to settle the matter and is one-off.

## **4. CONCLUSION**

The above analysis proved that the soft law acts are very important. They constitute a control tool, affect the issued decisions and have a significant impact on the rights and obligations of supervised entities and their clients. At the same time, the way they are issued is not transparent, they are not subject to control in accordance with the principles of administrative law. Being abstract and general acts - they do not fall within the catalog of universally binding legal acts. The way of using soft law acts by regulators is important. However, there is a situation where the provisions contained in these acts are incorporated into administrative decisions that decide on a specific case. Then they can be appealed, then there is no violation of the principle of legal certainty. There is also a different situation when the provisions of soft law acts affect the rights and obligations of individuals even though they have not been used in imperious decisions, and therefore independently of them. Then it is necessary to postulate the abandonment of the practice of their application in favor of specifying legal acts (which they allegedly interpret) or the use of delegated law acts (ordinances). As a result, it will be possible to ensure an appropriate level of implementation of the principle of legal certainty.

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## QUALITY MANAGEMENT TOOLS USED IN THE FUNCTION FAILURE DESIGN METHOD

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### ABSTRACT

*Today's market requires from products to be competitive not only with price but quality most of all. Therefore, process of quality improvement never ends and have to be carried out in a systematic and consistent way with the use of available quality management tools. These tools allows to identify potential defects of product and to indicates preventing actions aimed at defects elimination or minimization risk linked with defects or failures. One of such tools is function-failure-design-method (FFDM) which may be used at the stage of preparing and conducting analyzes of potential failures using selected quality management tools.*

**Keywords:** FFDM method, Quality management tools

### 1. INTRODUCTION

Process of continuous improvement of products and services has become an important issue of quality management. Therefore, the methods of quality improvement are still developing. A matrix analysis of FMEA called "Function - Failure Design Method" (FFDM) is one among them wich may be used during creating new or improving existing products/services. Application of this method at design stage allows to obtain information on potential defects that may occur during operation. At the stage of preparing and conducting analyzes, the FFDM method is often supported by quality improvement tools what allows to determine potential product defects in systematic and consistent way.

### 2. FUNCTION – FAILURE DESIGN METHOD

The failure detection method based on the product function was developed by Y. Tumer - working at NASA and R. Stone - Professor at the University of Missouri - Rolla (1) (Mulej, 1995; referenced by Likar, Križaj, Fatur, 2006, p. 155). This method allows to identify failures which may appear in the product. It enables to gather information on failures history and compare with the created functionality of the product. These relationships can be used to create knowledge bases for designers, a source of data about failures that may appear in the future projects. The first knowledge base was developed based on the analysis of defect reports which contributed to crash of Bell 206 helicopter. The failures detection method use standardized knowledge base and fuctional base.

The representation of functions and flows is used to compare individual components. The FFDM method also uses matrix transformations which allow to determine similarities between analyzed systems based on functional features and user requirements. The analysis of potential defects using the FFDM method is carried out in three stages. The first one is the stage of preparation, in which information about the investigated object is collected. This can be realized by decomposing the system into individual components or using the data contained in the knowledge base for a similar product. Next, a list of components which will be further investigated due to the probability of defects is created. In the next step of analysis defects and functions implemented in the system are determined for each selected components. All identified defects should be presented in the form of a list informing about actual or potential defects that may occur in the analyzed system. Based on the identified functions, the functional model of the system is created. The second stage of FFDM analysis defines relations between defects ( $f_i$ ), analyzed components ( $c_j$ ) and identified functions ( $e_n$ ) by using the list of components and defects and the functional model of the system. In this way, two relations are created, marked with the symbols **CF** - "component - failure" and **EC** - "function - element". The existing relations may be described by binary valuation system. Value 0 - means no relation while value 1 - means that the relation exists [1] (Mulej, 1995; referenced by Likar, Križaj, Fatur, 2006, p. 155). In the next step of the analysis relation **EC** (function-failure) is obtained by matrix multiplication in accordance with the equation shown in Figure 1.

$$EC \times CF = EF$$

*Figure 1: Matrixes multiplication (1)*

The relation EC describes probability of failure for given function which is realized by specified component and is used (stage III of the analysis) for determination of appropriate improvement actions which should be taken to eliminate or minimize the risk associated with potential failure for the product/service.

### 3. QUALITY MANAGEMENT TOOLS SUPPORTING FFDM ANALYSES

Analyzes of potential defects in the FFDM method may be supported by analytical and decision-making quality management tools [2] (Mulej, 1995, referenced by Likar, Križaj, Fatur, 2006, p. 155) known as an old and a new quality improvement tools. These tools can be used at all three stages of analysis:

- brainstorming and affinity diagram are tools that can be used at the stage of analysis preparation,
- the relation diagram is a decision-making tool that can be used at the analysis,
- Ishikawa diagram and tree diagram can be used at the stage of defining improvement actions.

Fig. 2 presents the algorithm of the FFDM method with the quality management tools.

*Figure following on the next page*

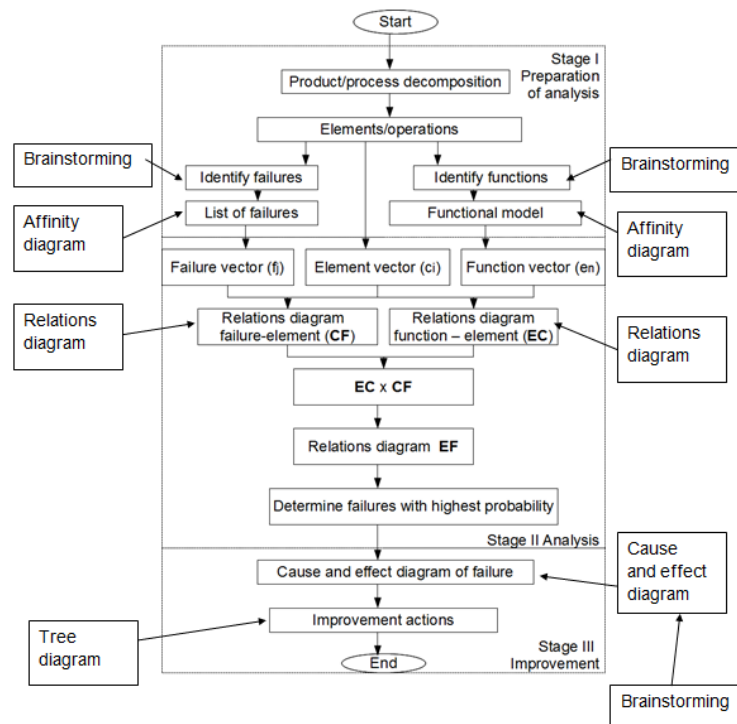


Figure 2: Algorithm of FFDM analysis

### 3.1. Brainstorming

Brainstorming is an auxiliary technique used in the processes of improving the quality of products, services or processes. It involves creative thinking during the team's work to:

- developing a list of new ideas,
- to-do list,
- or to explain the causes of the problems [2] (Mulej, 1995; referenced by Likar, Križaj, Fatur, 2006, p. 155).

In the FFDM method, brainstorming is used to determine the greatest number of possible defects in the analyzed components due to the functions which they perform. Four basic principles of this technique can be distinguished: suggestion of all ideas, proposals of ideas, following others ideas and no rejections of any ideas. Brainstorming in FFDM analysis is realized in three stages:

- the first stage is presenting and determining the purpose of brainstorming, for example identification of possible failures caused by functions performed by individual components of the hydraulic cylinder during its operation;
- the second stage is generation of ideas regarding possible defects and its specifications: for example, the defect “wear” may be more specific: abrasion or abrasive wear;
- the third stage is the application and control of developed ideas, for example the assignment of specific defects to individual components of hydraulic cylinder and the final verification of the probability of its occurrence: defect wear is related to the piston and piston rod of the hydraulic cylinder, which perform the processing function (conversion of the working fluid pressure into mechanical energy).

Brainstorming can also be used during the development of a cause-effect diagram in order to determine the maximal number of possible particular causes for the considered main causes.

### 3.2. Affinity diagram

The affinity diagram is one of the seven decision tools. It allows to group a large amount of qualitative data in order to find a solution of a problem or to determine the main cause of an event/effect. The diagram is often used to organize ideas created during brainstorming. In the FFDM analysis, the affinity diagram can be used at the stage of analysis preparation to group the identified defects/functions into specific thematic categories. It allows to simplify the analysis and to indicate defects with the highest probability of occurrence. Table 1 presents an example of defects while in Table 2 functions into specific thematic categories for a hydraulic cylinder.

*Table 1: The affinity diagram for failures*

Failure	Thematic categories of failures
abrasive wear	wear
adhesive wear	
oxidation wear	
pitting	
crevice corrosion	corosion
fretting corrosion	
fatigue friction	fatigue
thermal fatigue	

*Table 2: The affinity diagram for functions*

Function	Thematic categories of functions
preventing oil leakage	protecting
seal cylinder	
piston and piston rod guided in the cylinder	
the lateral loads and vibration resistance	
prevents against of dust, dirt, grains of sand	preventing
removes impurities	
converting fluid pressure energy into mechanical motion straight-back	converting

The grouping of failures and functions significantly narrows the scope of the analyzes which have to be performed and allows to identify defects with the highest probability of occurrence depending on the functions performed by the given component.

### 3.3. Relations diagram

The relations diagram belongs to the new category of quality improvement tools - a decision tools. It is an analytic-graphical diagram which allows for the methodical identification of priority problems by analysis of cause-effect relations [2] (Mulej, 1995, referenced by Likar, Križaj, Fatur, 2006, p. 155). This diagram has a similar application to the cause-effect diagram, with the difference that in addition to the cause-effect relations it also determines the cause-cause relations. However, the diagram does not organize factors into categories. Apart from that all components of the diagram are called causes, can occur both as causes and their effects [3] (Mulej, 1995; referenced by Likar, Križaj, Fatur, 2006, p. 155). In the FFDM method, the relations diagram can be used at the stage of analysis to visualize the relations occurring between individual components of the analyzed object in order to determine the pairs of cooperating components. These components were distinguished and selected for further analysis during the decomposition of the product at the stage of analysis preparation. Fig. 3 presents a graph of relations between components (c) of a hydraulic cylinder.

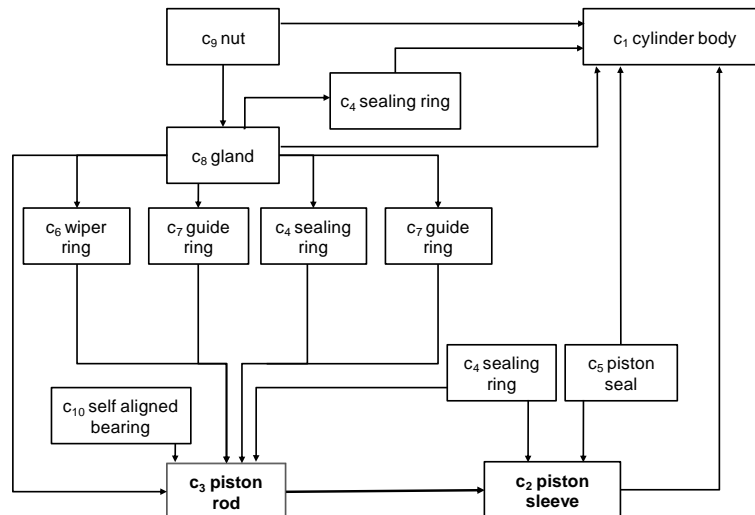


Figure 3: Graph of relation between component and component

The graph allows to determine pairs of cooperating components (p) to form a relation diagram presented in table 3. Letter “p” denotes occurrence of relation, sign (-)denotes no relation and (x) denotes relation between the same components.

Table 3: Relations diagram between component and component

	c <sub>1</sub>	c <sub>2</sub>	c <sub>3</sub>	c <sub>4</sub>	c <sub>5</sub>	c <sub>6</sub>	c <sub>7</sub>	c <sub>8</sub>	c <sub>9</sub>	c <sub>10</sub>
c <sub>1</sub>	x	p <sub>1</sub>	-	p <sub>2</sub>	p <sub>3</sub>	-	-	p <sub>4</sub>	p <sub>5</sub>	-
c <sub>2</sub>	p <sub>1</sub>	x	p <sub>6</sub>	p <sub>7</sub>	p <sub>8</sub>	-	-	-	-	-
c <sub>3</sub>	-	p <sub>6</sub>	x	p <sub>9</sub>	-	p <sub>10</sub>	p <sub>11</sub>	p <sub>12</sub>	-	p <sub>13</sub>
c <sub>4</sub>	p <sub>2</sub>	p <sub>7</sub>	p <sub>9</sub>	x	-	-	-	p <sub>14</sub>	-	-
c <sub>5</sub>	p <sub>3</sub>	p <sub>8</sub>	-	-	x	-	-	-	-	-
c <sub>6</sub>	-	-	p <sub>10</sub>	-	-	x	-	p <sub>15</sub>	-	-
c <sub>7</sub>	-	-	p <sub>11</sub>	-	-	-	x	p <sub>16</sub>	-	-
c <sub>8</sub>	p <sub>4</sub>	-	p <sub>12</sub>	p <sub>14</sub>	-	p <sub>15</sub>	p <sub>16</sub>	x	p <sub>17</sub>	-
c <sub>9</sub>	p <sub>5</sub>	-	-	-	-	-	-	p <sub>17</sub>	x	-
c <sub>10</sub>	-	-	p <sub>13</sub>	-	-	-	-	-	-	x

The relation diagram can also be used to determine the relations between identified potential defects, implemented functions and individual pairs of cooperating components. Table 4 shows an example of the relation of potential failure (f<sub>i</sub>) - pairs (p<sub>m</sub>) for a hydraulic cylinder. The arguments of individual relations were marked using a binary valuation system. Value 0 is assigned when the failure does not occur for a given pair. Value 1 when the defect occurs.

Table 4: Relations diagram between failure – pair of elements

	f <sub>1</sub>	f <sub>2</sub>	f <sub>3</sub>	f <sub>4</sub>	f <sub>5</sub>	f <sub>6</sub>	f <sub>7</sub>	f <sub>8</sub>	f <sub>9</sub>	f <sub>10</sub>
p <sub>1</sub>	1	0	1	1	0	1	1	1	1	0
p <sub>2</sub>	1	0	0	1	0	0	0	0	0	0
p <sub>3</sub>	1	0	0	0	0	0	0	0	0	0
p <sub>4</sub>	1	0	0	1	1	0	0	0	0	0
p <sub>5</sub>	1	1	0	0	0	0	0	0	0	0
p <sub>6</sub>	1	1	0	0	1	1	0	0	0	0
p <sub>7</sub>	1	0	0	1	0	0	0	1	1	0
p <sub>8</sub>	1	0	0	0	0	0	0	0	0	0
p <sub>9</sub>	1	0	0	1	0	0	0	0	0	0
p <sub>10</sub>	1	1	0	0	0	0	0	0	0	0

### 3.4. Cause and effect diagram

The cause and effect diagram called also as the fish bone diagram or the Ishikawa diagram is also one of seven analytical quality improvement tools. Its purpose is to present the relations that occur between effects and cause of these effects in a graphical way [4] (Mulej, 1995; referenced by Likar, Križaj, Fatur, 2006, p. 155). The procedure for solving the problem (effect) is based on its identification and determination of possible categories of causes. Then, within each category, possible causes have to be identified and select the main (critical) one which has the greatest impact on the existing effect. In the FFDM method, the Ishikawa diagram is often used at the end of analyzes (improvement stage) in order to determine the reasons of a given failures (critical for a given product/service or process according to the EF relation). It allows to determine improvement measures which will be undertaken. Fig. 4 shows an example of an Ishikawa diagram for a gear pump and an identified defect (effect) of "damaged wheel gears".

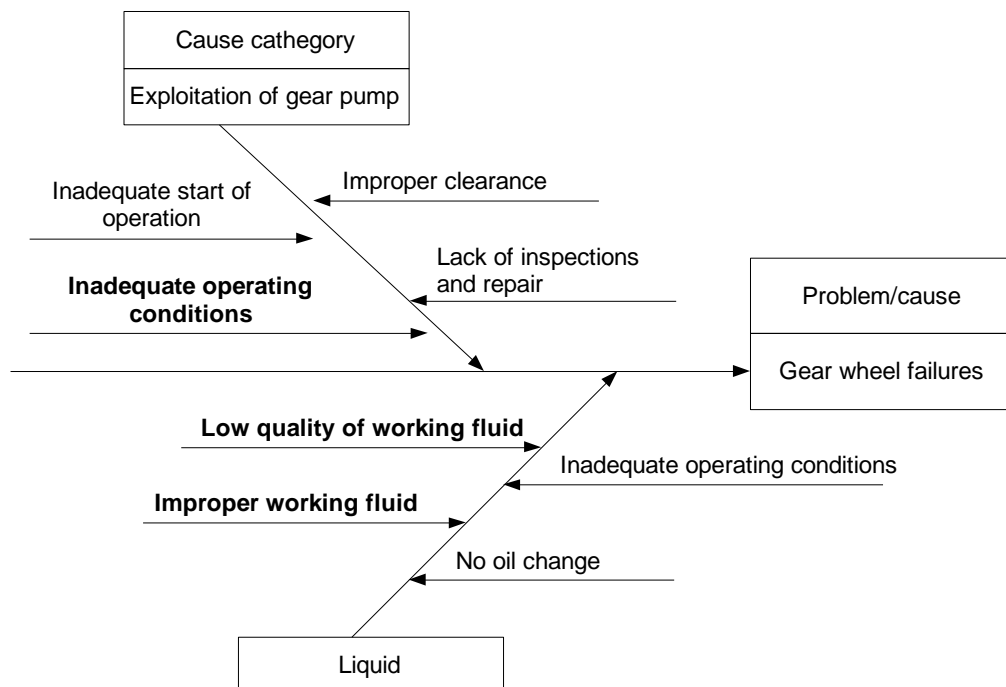


Figure 4: Cause and effect diagram for a gear pump

The Ishikawa diagram is a relatively simple tool, however, its preparation may be time consuming and often may require brainstorming, which involves large number of people of various fields. Proposals about the reasons of the cause/effect developed during a team work have a greater chance of implementation in the process, because usually the problem is complex.

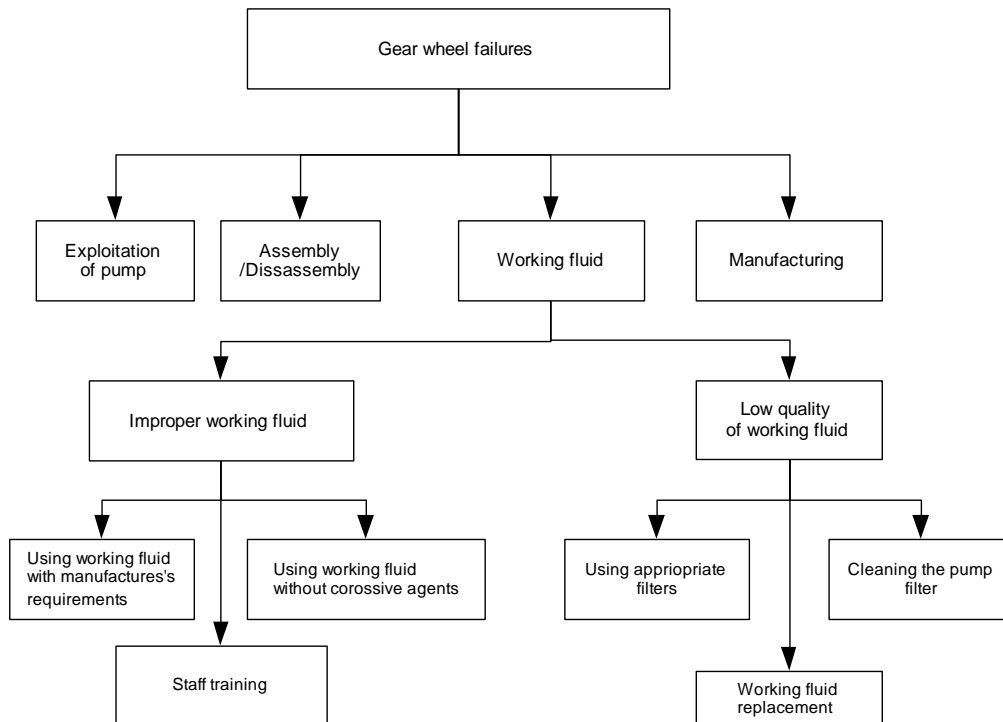
### 3.5. Tree diagram

A tree diagram is one of the newest quality improvement tools, also known as a tree diagram or a decision tree. It is mostly used for:

- presenting relations between the considered issues and theirs elements, and;
- for assigning specific tasks for appropriate persons [2] (Mulej, 1995; referenced by Likar, Križaj, Fatur, 2006, p. 155).

This diagram can also be used at design process of new products to identify possible defects or during identification of improvement actions for already identified problems. It organizes in a logical way the identified causes of problems or tasks which have to be performed according to the principle "from general to detail".

This allows to group components that are at the same level of detail and decompose them into more and more details. The diagram looks like a tree, hence the name: the tree diagram. In the FFDM analysis, a tree diagram can be used at the improvement stage to determine corrective/preventive actions for identified defects and main causes (resulting from the Ishikawa diagram). Fig. 5 presents a tree diagram of improvement actions for pump wheel gears failures in the scope of the working fluid.



*Figure 5: Tree diagram of pump gear failure*

The improvement actions included in the tree diagram allows to define priority of actions which should be implemented. Therefore, the improvement plan for the wrong type and poor quality of working fluid looks as follows:

- action 1 - employee training,
- operation 2 - compliance with the manufacturer recommendations,
- operation 2 - use of filters and fluids without corrosive agents,
- operation 3 - cleaning of filters,
- operation 4 - fluid change.

#### 4. CONSLUSIONS

In the process of improvement of products, services or processes implementation of appropriate tools and techniques have a great importance for the quality of conducted analyzes. Depending on the case in which the FFDM analysis is carried out, the use of the proper tools allows to narrow or expand the scope of research and undertake appropriate improvement actions aimed at eliminating or minimizing the risk associated with the occurrence of defect or failure. Quality improvement tools, both analytical and decision-making, allow to visualize and present in an easy and clear way the relations between the analyzed defects, components and their functions, and in the consequences take the decisions at the right time and deliver a product/service that meets customer expectations and requirements. Quantitative approach, however, will requires more sophisticated methods related to methods of the multivariate statistical analysis [7] and non-parametric methods of the uncertainty estimation [8].



They have been already successfully used in the biotechnology research [9-11] as well as in the terotechnology [12-14] and materials science [15-21].

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## REDEFINING THE ROLE OF THE CONSUMER IN THE PROCESS OF CREATING MARKETING INNOVATIONS

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### ABSTRACT

*The research objective of this study is to diagnose the importance of knowledge acquired from buyers in creating market innovations by enterprises representing the FMCG sector. For the purposes of the implementation of the research objective, made a review of national and foreign literature and also applied thought mapping. Cognitive methods were supported by our own research. This study aims to diagnose the importance of knowledge gained from buyers in the process of creating market innovations by enterprises from the FMCG sector. Representatives of management staff of companies operating in Poland's FMCG sector were invited to participate in a study carried out in the period from January 2016 to February 2017. The selection of the sample was deliberate. Altogether 165 observations were taken into account. In view of the above considerations, the implications of this study indicate a fairly strong dependence among the number of knowledge sources used and between the level of their exploitation and the implementation of the marketing innovation objectives.*

**Keywords:** *Marketing innovations, innovation, FMCG sector*

### 1. INTRODUCTION

In today's turbulent economy, in the face of intensively and dynamically changing consumer trends and preferences, companies must compete effectively to gain or maintain their market share. Due to the increased competition and shortened product life cycles, the strong ability to generate innovation may be more important than ever, enabling companies to improve their performance and maintain their competitive advantages (Artz et al., 2010; Rubera, Kirca, 2012). Innovation is widely regarded as a key success factor. Both market practitioners and theoreticians recognize that the introduction of innovations is a necessary condition for development (Cho, Pucik, 2005; Zastempowski, 2014, pp. 27-28; Rajapathirana, Hui, 2017). Customers' increasing requirements and competitive pressure are changing the strategies of enterprises (Kovács, Kot, 2016) and arouse a particular interest in those mechanisms that help achieve innovations at a high level of novelty and their role in successes gains the attention of scientists (Simpson, Siguaw, Enz, 2006; Heiskanen, Kasanen, 2007; Srinivasan et al., 2009; Rubera, Kirca, 2012; Lee, Lee, Garrett, 2017; Mahmud, Aryanto, Hasyim, 2017). From the consumer's perspective, the purpose of purchasing decisions is to strive to meet one's own needs and ensure the expected benefits and maximum satisfaction (Wiśniewska, 2014, pp. 40-41). Research conducted in recent years proves the strategic importance of the clients themselves in increasing innovation and benefits for buyers (Bagozzi, Dholakia, 2002; Mohmud, Aryanto, Hasyim, 2017, Liczmańska-Kopcewicz et al., 2018). Many previous studies have concerned the results related to innovative activities, such as the number and type of innovation, additionally there are analyses of positive and negative effects resulting from the orientation towards innovation (Olson, Slater, Hult, 2005; Simpson, Siguaw, Enz, 2006). Some of the authors analysed the impact of cooperation with customers during the development of new products (Prahalad, Ramaswamy, 2004, Camarinha-Matos et al., 2009, Komulainen, 2014, Hsu, 2017; Liczmańska-Kopcewicz et al., 2018) and the determinants of the success of a new product were examined (Cooper, Kleinschmidt, 1993). These studies have consistently demonstrated the positive impact of synergy between the company and the customer in the creation of new

products that were better matched to the specific needs and expectations indicated by buyers and thus achieved greater market success. However, there remains a gap in the existing literature on the role of buyers in creating marketing innovations, which requires further exploration of the innovative capacity of the company shaped by a relationship built through cooperation with buyers, which should ultimately affect its business results. The work presents a review of the subject literature and presents the results of empirical research relating to the innovation of businesses in the FMCG sector, and in particular, diagnosing the use and importance of buyer knowledge in the creation of marketing innovations by companies.

## **2. MARKETING INNOVATIONS – THEORETICAL BACKGROUND**

Innovation is one of the basic instruments of a growth strategy that provides a competitive edge (Hogan et al., 2011; Zastempowski et al., 2018; Tellis et al., 2009; Rubera, Kirca, 2012). It leads to improvements in products and processes, allows faster development, makes continuous advances to help companies survive, be more efficient, and ultimately be more profitable than non-innovators. Thus, innovation is widely recognized as one of the most important sources of sustainable competitive advantage in an ever-changing environment (Atalay, Anafarta, Sarvan, 2013, p. 226; Zastempowski, 2014, pp. 27-28). In today's intense competitive environment, where continuous innovation activity is a key source of long-term success (Rosenbush et al., 2011, p. 444), it is not surprising that innovations have become a key goal for all companies (Lipit, 2006). The innovative potential leads the organization to the continuous development of innovations that, in response to the changing market environment, are embedded in all the company's strategies, systems and structures (Gloet, Samson, 2016; Pyplacz, Liczmańska-Kopcewicz 2018, Slater, Hult, Olson, 2010). Peter Drucker (1992) notices that enterprises operating in the contemporary economy must pay attention to the dynamically changing trends and consumer preferences. He admits that the necessary condition for development is the implementation of innovations and treats that as a special tool for entrepreneurs, by means of which the change makes opportunities for a new business or new services. Drucker also adds that it is a specific entrepreneurial tool - an activity that provides resources a new way to wealth creation. Innovation is also defined as a learning process that takes place between members of different communities in the process of solving problems (Barbaroux, 2012, p. 233). According to the Oslo methodology (OECD, 2005), four types of innovations can be distinguished:

1. Product - marketing of a product or service that is new or significantly improved in terms of its features or applications,
2. Process - implementation of a new or significantly improved production or delivery method,
3. Organizational - implementation of new methods of company management, which concerns changes in the organization of workplaces or in relations with the environment,
4. Marketing - implementation of a new marketing method involving significant changes in the product design/construction, packaging, distribution, promotion, or pricing strategy.

These four groups of innovations are further divided into technological and non-technological ones. Technological innovations include product and process innovations, while non-technological ones include marketing and organizational innovations. This study focuses on non-technological marketing innovations. The areas of marketing innovations have progressive development, including personal marketing, ambient marketing, environmental marketing, guerrilla marketing, ambush marketing, word of mouth marketing, viral marketing, product placement, neuromarketing, geomarketing, behavioural marketing and more (Ungerman et al., 2018, p. 133). The ability to anticipate consumer needs and respond faster than competitors should generate significant benefits for innovation-oriented companies (Simpson, Siguaw, Enz, 2006). A growing number of enterprises actively identify and anticipate customer needs, and then respond appropriately to them, creating greater value for buyers (Liczmańska-Kopcewicz

et al., 2018). Modern and innovative marketing has a beneficial effect on increasing sales and reducing costs, which improves competitiveness (Medrano, Olarte-Pascual, 2016). Marketing innovations are gaining importance both for the company itself and for customers. Currently, the location of innovative processes is largely shifted from within the enterprise to the inter-organizational space, and thus the process that can be observed is the transition from the closed innovation model to the open innovation model (Zakrzewska-Bielawska, 2016). Closely integrated relations between manufacturers and their surroundings enable companies to gain a lasting competitive advantage (Chang, 2017, pp. 131-134). Acquiring information from both customers and suppliers should provide suggestions and tips more quickly, and the more innovative the project is, the more important such relationships are. Scholars involved in the strategy of enterprise development increasingly focus on cooperation with clients undertaken to co-create value (Prahalad, Ramaswamy, 2004; Thomke, von Hippel, 2002).

### **2.1. The importance of buyers' knowledge in building marketing innovations**

Companies striving to achieve market success need not only effectively allocate their internal resources, but also pay attention to external stakeholders, in particular customers (Brashear et al., 2012). Cooperation with clients is increasingly seen as the key to business success (Prahalad, Ramaswamy, 2004, Inemek, Matthyssens, 2013, p. 580). Obtaining more market information from customers and even direct involvement of them in development teams leads to more effective creation and implementation of innovative ideas (Atuahene-Gima, 1995; Tether, 2002; Ungerman et al., 2018). Studies carried out by them indicate that these are frequently users, not producers, who are the initial generators of ideas that later become recognized products with a strong market position. Customers have become not only buyers of products, but also willingly and actively engage in co-creating value, playing an increasingly important role in creating innovation (Medrano, Olarte-Pascual, 2016). Fuller et al. (2004), examining innovations obtained from buyers by Internet communities, indicate that on average 80% of their participants express their willingness to support companies in creating innovations. And by examining in detail the degree and quality of ideas generated, it turns out that between 3% and 15% of suggestions are completely new ideas that have been evaluated by marketing departments as attractive. Amara and Landry (2005) note that the client as a source of information brings a number of benefits to companies, and in the case of innovation, ideas are characterized by a higher level of novelty and fit. In the face of increasingly stronger competition and growing consumer expectations, enterprises are forced to constantly implement innovations. Because internal research and development activities are too slow (Rossi, 2011), companies that want to keep up with innovations on the market must also open up to new ideas and creative contributions from outside (Sawhney, Verona, Prandelli, 2005). The relationship between marketing innovations and creativity and achieving a competitive advantage is indicated by Epetimehin (2011, pp. 18-21). Companies are increasingly willing to interact with customers, use the knowledge and skills of buyers (Heiskanen et al., 2005). Many researchers confirm that communication with consumers and treating the customer as a partner in the innovation process can result in the creation of the desired value through the process of learning, creating and providing the satisfaction of the buyer (Brashear et al., 2012; Sopińska, 2013; Nataraajan, Angur, 2014; Hsu, 2017). The results of many studies show that the customer's motivation to share knowledge and ideas and, the company's absorptive capacity, the willingness and the possibilities to use this knowledge are increasingly important in the process of striving to improve the market position by raising the level of innovation (Komulainen, 2014; Ramaswamy, Goullart, 2010). It follows from the above considerations that enterprises, in order to achieve the set goals related to innovations at the highest possible level, should also exploit the knowledge shared by buyers and use as many sources of this knowledge as possible.

Hence the suggested hypotheses are as follows:

- H 1. There is positive dependence between the number of used sources of buyers' knowledge and the degree of the achievement of the goals of implementing marketing innovations
- H 2. There is positive dependence between the number of used sources of buyers' knowledge and the assessment of the importance of buyers' knowledge in creating marketing innovations
- H 3. There is positive dependence between the number of implemented marketing innovations and the assessment of the importance of buyers' knowledge in creating marketing innovations

### 3. RESEARCH METHODOLOGY

For the purposes of the implementation of the research objective, made a review of national and foreign literature and also applied thought mapping. Cognitive methods were supported by own research. This study aims to diagnose the importance of knowledge gained from buyers in the process of creating marketing innovations by enterprises from the FMCG sector. Representatives of management staff of companies operating in Poland's FMCG sector were invited to participate in a study carried out in the period from January 2016 to February 2017. The selection of the sample was deliberate. The study covered those companies that were assessed by their management boards as innovative ones. Yet another criterion for eligibility for participation in the study was the launch of new products in the last three years. Taking into account the research objectives and the deliberateness of the sample, decided to choose the interview method implemented via the Internet (CAWI) as information collection method. In the case when contacting a respondent was problematic, the computer-aided telephone interview (CATI) method was applied. In each case, the same interview questionnaire was used. The survey was carried out using the questionnaire method. Although this article presents partial results of the empirical research conducted, they allowed to evaluate the sources and inspiration of marketing innovations in the FMCG sector. Altogether 165 observations were taken into account. Table 1 presents the characteristics of the test sample.

The questionnaire elements	Volume	Participation in %
<b>Enterprise size:</b>		
- small (10 - 49 employees)	69	41.82
- medium (50 - 249 employees)	61	36.97
- large (over 250 employees)	35	21.21
<b>Industry:</b>		
- groceries	80	48.48
- household chemicals	11	6.67
- personal hygiene articles	7	4.24
- cosmetics	18	10.91
- non-alcoholic beverages	22	13.34
- beer	12	7.27
- spirits	11	6.67
- pet food	4	2.42

*Table 1: Net staff salaries Characteristics of the enterprises surveyed (N = 165) (elaborated by the author based on the results of the study conducted)*

FMCG, i.e. Fast Moving Consumer Goods, is a sector of the economy that includes the so-called quickly tradable goods, also known as basic necessities.

This group includes various and broad categories of goods such as food products, beverages and spirits, tobacco products, cosmetics, personal hygiene articles, household chemicals, and over-the-counter drugs. These are products whose unit price is not high and are bought in mass quantities. Taking into account the dynamics of the FMCG market development, the global character of all social, political, and industrial changes, the brand gains importance as the main tool of competition and the key to the entrepreneurs' strategy. The things that change and how customers adapt their behaviour to new conditions are significant for companies and their brands. Abundant and accessible literature along with market examples prove the occurrence of a strong dependence between the creation of strong brands within the offer and the success achieved by the company (Liczmańska, 2016). Statistical analyses were carried out using the IBM SPSS Statistics version 24 software package. Altogether 165 observations derived from enterprises operating in the FMCG sector were taken into account. Table 2 presents descriptive statistics of the variables examined.

Variable	Range	Min.	Max.	Average	M	D	Standard deviation	Variance
The assessment of the degree of the achievement of marketing innovation objectives	8,00	2,00	10,00	7,95	8	9	1,594	2,540
Assessment of the importance of buyers' knowledge in creating marketing innovations	7,14	0,00	7,00	2,66	2	2	1,801	3,244
The number of marketing innovations introduced (total)	200,00	0,00	200,00	18,96	12	12	20,213	408,547
Social media activities	10,00	0,00	10,00	8,09	8	10	1,844	3,400
Customer expectations surveys	10,00	0,00	10,00	6,99	7	6	1,826	3,335
Customer satisfaction surveys	8,00	0,00	10,00	6,49	7	7	2,426	5,886
Co-creating new products	10,00	0,00	10,00	3,12	2	0	3,354	11,249
Co-creating marketing activities	10,00	0,00	10,00	4,06	5	0	3,217	10,350
The information exchange platform	10,00	0,00	10,00	3,96	5	0	3,500	12,248
Helpline	8,00	0,00	8,00	0,29	0	0	1,142	1,305
Online forums	10,00	0,00	10,00	6,78	7	9	2,651	7,025
Testing of new products	10,00	0,00	10,00	5,53	6	0	3,773	14,239

*Table 2: Descriptive statistics of the variables examined (N = 165) (elaborated by the author based on the results of the study conducted)*

#### **4. THE CONSUMER'S ROLE IN CREATING MARKETING INNOVATIONS – CONCLUSION FROM OWN RESEARCH**

The first variables examined were the factors determining cooperation with customers aimed at acquiring buyers' knowledge. They were assessed using a 11-point scale and the Cronbach's alpha coefficient of reliability for the entire group of factors was 0.832. This result indicates the internal coherence of the factors analysed. In order to determine whether in the enterprises examined there is a monotonic dependence between individual factors and the degree of implementation of marketing innovations, used the Spearman's rank correlation coefficient. The results obtained are contained in Table 3. They show that all factors are correlated with the assessment of the degree of the achievement of marketing innovation objectives with a positive and statistically significant relationship.

The positive nature of these correlations means that the increases in individual factors in the field of cooperation with clients is accompanied by an increase in the level of the implementation of marketing innovation objectives. When analysing the correlation strength for  $r$ , it should be noted that for all factors: social media, researching customer expectations, customer satisfaction surveys, co-creation of new products, shares co-creating marketing activities, information exchange platform, helpline, internet forums and creating new products - exists a moderate dependence (0.4 - 0.7) a moderate dependence (0.4 - 0.7). No factor was found with a very strong relationship.

rho Spearmana		The assessment of the degree of the achievement of marketing innovation objectives
Social media activities	Correlation coefficient	,686**
	Significance (two-sided)	,000
Customer expectations surveys	Correlation coefficient	,595**
	Significance (two-sided)	,000
Customer satisfaction surveys	Correlation coefficient	,671**
	Significance (two-sided)	,000
Co-creating new products	Correlation coefficient	,544**
	Significance (two-sided)	,000
Co-creating marketing activities	Correlation coefficient	,622**
	Significance (two-sided)	,000
The information exchange platform	Correlation coefficient	,457**
	Significance (two-sided)	,000
Helpline	Correlation coefficient	,315**
	Significance (two-sided)	,000
Online forums	Correlation coefficient	,402**
	Significance (two-sided)	,000
Testing of new products	Correlation coefficient	,446**
	Significance (two-sided)	,000

\*\* Correlation significant at 0.01 (two-sided).

Table 3: Correlations between individual sources of acquiring knowledge from buyers and the assessment of the degree of the achievement of marketing innovation objectives ( $N = 165$ ) (elaborated by the author based on the results of the study conducted)

The next step was to assess the dependence between the number of used sources of buyers' knowledge and the degree of the achievement of marketing innovation objectives, using the Spearman's rank correlation coefficient. The correlation coefficient between the factors is, 744 \*\*, which indicates the existence of a fairly strong dependence (Table 4).

rho Spearmana		The assessment of the degree of the achievement of marketing innovation objectives
The number of buyers' knowledge sources used	Correlation coefficient	,744**
	Significance (two-sided)	,000
	N	165

\*\* Correlation significant at 0.01 (two-sided).

Table 4: Correlation between the exploration extent of sources of buyers' knowledge and the assessment of the degree of the achievement of marketing innovation objectives ( $N = 165$ ) (elaborated by the author based on the results of the study conducted)

Moreover, in order to determine whether in the examined enterprises there is a dependence between the number of implemented marketing innovations and the number of buyers' knowledge sources used and the assessment of the importance of buyers' knowledge in creating marketing innovations, the Spearman's rank correlation coefficient was applied. The results obtained are presented in Table 5.



They show that in the case of the number of implemented marketing innovation and the assessment of the importance of buyers' knowledge in creating marketing innovations, the correlation coefficient is positive and the dependence was found to be strong ( $.747^{**}$ ). In the case of the number of buyers' knowledge sources used and the assessment of the importance of buyers' knowledge in creating marketing innovations, the correlation coefficient is also positive, however, and the dependence was found to be strong ( $.744^{**}$ ).

rho Spearmana		Assessment of the importance of buyers' knowledge in creating marketing innovations
The number of implemented marketing innovations - in total	Correlation coefficient	$.767^{**}$
	Significance (two-sided)	$.000$
	N	165
The number of buyers' knowledge sources used	Correlation coefficient	$.744^{**}$
	Significance (two-sided)	$.000$
	N	165

*\*\* Correlation significant at 0.01 (two-sided).*

*Table 5: Correlation between the number of implemented marketing innovations and the number of used knowledge sources of buyers and the assessment of the importance of buyers' knowledge in creating marketing innovations (N = 165) (elaborated by the author based on the results of the study conducted)*

## 5. CONSLUSION

The presented results do not give grounds for rejecting the accepted hypotheses H1, H2 and H3. The implications of this study indicate that there is positive dependence both between the degree of the achievement of the goals of implementing marketing innovations, as well as between the assessment of the importance of buyers' knowledge in creating marketing innovations and the number of knowledge sources used by buyers. In addition, positive dependence was found between the number of implemented marketing innovations and the assessment of the importance of buyers' knowledge in creating marketing innovations. Therefore, it is reasonable to assume that two-way communication and direct contact with clients at every stage of creating and implementing marketing strategy brings tangible results, especially in terms of the degree of achievement of marketing objectives. In the context of previous considerations, we should agree with the cited conclusions from the research carried out worldwide. Interaction with the customer has always been important not only for the development of new products, but also for the implementation of marketing activities. Marketing innovations can be considered attractive because they focus on product modifications, extensions and low-risk changes, thanks to which they quickly provide innovative solutions. Analysing the aforementioned fragment of the research performed, one can point to the positive connection of marketing innovations with the development of the company and their role in building and maintaining the competitive advantage of the enterprises surveyed. This is confirmed by the theories presented by many researchers, suggesting that marketing innovations directly affect a sustainable competitive advantage (Bagozzi, Dholakia, 2002; Amara, Landry, 2005; Brashear et al., 2012; Rubera, Kirca, 2012; Inemek, Matthyssens, 2013; Medrano, Olarte-Pascual, 2016; Liczmańska-Kopcewicz, et al., 2018; Ungerman et al., 2018). In summary, co-creating value with buyers is an important source of competitive advantage. In the contemporary economy, the consumer ceases to be treated only as a buyer of goods, and the consumer more and more often becomes a co-decision maker, actively participating in the creation or promotion of enterprises, products, building and implementing marketing strategies. Enterprises with potential for creating marketing innovations, using for this purpose many sources of information from clients, are better generators of information on the needs of customers and as such are more aware of the development of offers that meet these needs.

It should be noted, however, that the companies from the FMCG sector that took part in the research seem to be fully aware of the importance of buyers' knowledge in the success of marketing strategies and use the available sources of knowledge. The sector of fast moving consumer goods is characterized by high volatility and enterprises operating in it represent a high level of innovation. Moreover, a certain limitation may be the deliberate selection of the sample, assuming that the study will involve enterprises that assessed themselves as innovative, therefore an additional criterion is the introduction of new products during the period of the last three years. The article is an original study which, based on the original questionnaire, shows the importance of knowledge acquired from buyers in creating marketing innovations by companies from the FMCG sector. The identification of sources of knowledge about buyers and their importance in creating innovations can help companies formulate their directions of improvement. The diagnosed direction, scope and importance of cooperation with buyers of enterprises operating in the FMCG sector, justifies the need to undertake the research problem under investigation, and at the same time encourages its further recognition, especially in order to formulate valuable recommendations to be implemented in business practice.

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## DESIGN OF RESILIENT SUPPLY CHAINS

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### ABSTRACT

*Globalization increases an access to knowledge and resources. Companies seeking new solutions for their products identify the need for cooperation with suppliers of components and technologies from different parts of the world. This determines configuring international supply chains that are particularly vulnerable to the business uncertainty and environmental turbulence. The main aim of the paper is to evaluate the role of purchasing decisions in New Product Development (NPD) processes and Supplier Involvement for configuring resilient processes and the structure of a supply chain. The study is based on two methods. First, there was a systematic literature review on papers covering SCRES (supply chain resilience) to obtain the key SCRES attributes. In the second stage of the research, a case study of NPD in the cosmetics' packaging supply chain is presented. This concerns the cooperation between the company providing packaging solutions, its first-tier suppliers and the main customer (which is a manufacturer of cosmetics products). Further, the purchasing decisions and SI practice were linked with identified SCRES elements, which are: flexibility (the most common attribute), redundancy, transparency and visibility, agility, collaboration and information sharing. The importance and possibility of taking into account resilience as early as during the design of the supply chain of a new product was confirmed. However, its role can be affected by the type of demand, production environment, product variety as well as the production volume. Therefore, it is recommended that both the supply chains of different products as well as various sized companies are investigated in any further, quantitative research. This paper is an output of the science project „Flexibility in relationships with suppliers in terms of supplier-purchaser models of cooperation on product development in the B2B market”, no. 2016/21/B/HS4/00665, financed by the National Science Centre (NCN) in Poland.*

**Keywords:** Supplier Involvement, NPD, purchasing, resilience, SCRES

### 1. INTRODUCTION

In the XXI century, supply chain resilience (SCRES) has become a very common topic in the economic literature (Christopher & H. Peck, 2004, Bharna, Dani & Burnard, 2011, Roberta Pereira, Christopher & Lago Da Silva, 2014, Hohenstein et al., 2015, Tukamuhabwa et al., 2015, Kamalahmadi & Parast, 2016, Ali, Mahfouz and Arisha, 2017, Datta, 2017, Ribeiro & Barbosa-Povoa, 2018). It is important today in order to achieve supply chain sustainability and competitiveness and to anticipate and respond to the increasing turbulence of the business environment. Roberta Pereira, Christopher and Lago Da Silva (2014) demonstrated the significant role of procurement in achieving SCRES. Zsidisin and Smith (2005), in their qualitative research, confirmed the role of Early Supplier Involvement in reducing supply chain risks, whereas Golgeci & Ponomarov (2013) proved that firm innovativeness has a positive influence on SCRES. In the light of previous research results, the need to build supply chain resilience should be taken into account as early as during the configuration of the supply chains of new products. The main aim of this paper is to recognize how the purchasing decisions in the New Product Development process (NPD) and Supplier Involvement (SI) determine the design of a resilient supply chain. Supply chain design combines product design issues with the design of supply chain processes and structure (APICS, 2014). SI is understood as cooperation with a supplier in the NPD process (Wagner, 2012). The research was conducted threefold. First, an analysis of papers presenting a systematic literature review on SCRES allowed the identification of the main SCRES determinants (characteristics).

In the second stage of the research, a case study of NPD in the cosmetics' packaging supply chain is provided. Finally, purchasing decisions in NPD were linked to SCRES elements and the conclusions on the impact of SI on the design of a resilient supply chain.

## 2. METHODOLOGY

The research covered two research methods. The first part, based on desk research, used a literature review methodology, applied following Tranfield, Denyer and Smart (2003). The review process consisted of the following phases: question formulation, keyword search in databases, screening (closer inspection, removing duplicates, checking cited articles) and analysis of articles. First, the main research question - what are the main SCRES determinants? - was constructed. In the second phase, the author used the leading providers of research databases, which are EBSCOhost Online Research Databases, Emerald Insight, Scopus, Web of Science and Wiley Online Library. The three search terms and following restrictions were used in the phase of the databases search:

- Search term: LITERATURE REVIEW, restriction: occurrence in title AND
- Search term: SUPPLY CHAIN, restriction: occurrence in abstract AND
- Search term: RESILIEN\*, a restriction: occurrence in abstract.

There was no restriction on the date of publication and the type of paper, in order to identify as many articles presenting the results of a systematic literature review on SCRES as possible. The research was conducted at the end of June 2018. For the final analysis eight full papers were taken into account (Table 1). The detailed results of the desk research are presented in the third section of the article.

*Table 1: The desk research phases and their results (own elaboration)*

Phase description	Database	Output (number of papers)
Search for the papers in databases	EBSCOhost	6
	Emerald	4
	Scopus	10
	Web of Science	8
	Wiley Online Library	0
Screening 1: closer inspection (selecting articles that provide a literature review on supply chain resilience) and removing duplicates	EBSCOhost, Emerald, Scopus, Web of Science, Wiley Online Library	8
Screening 2: checking cited articles	EBSCOhost, Emerald, Scopus, Web of Science, Wiley Online Library	8

The second method was a case study where an in-depth interview was conducted at the end of July 2018, the main objective of which was to recognize the NPD process in the cosmetics' packaging supply chain. The interview took 4 hours and was complemented by several telephone consultations. The respondent was a product development engineer representing a the company providing packaging solutions. This company is responsible for the development of shelf ready (paper and cardboard) packaging (unit and collective) and packing processes for its customers, which was reasonably novel as publications on the involvement of company in the NPD process are still rare. The fourth section of the paper partially fills this gap. The results of the interview are presented in the form of a case study on the cooperation between three

supply chain links. Following on from this, consideration was given to the design of the resilient supply chain in the presented case study.

### **3. SUPPLY CHAIN RESILIENCE IN THE LITERATURE**

Bharma, Dani and Burnard (2011) analysed the literature published between 1976-2010 and presented their classification in terms of three criteria: used perspective, topic/concept and methodology. They identified that the term “resilience” appeared for the first time in a publication “Resilience and Stability of Ecological Systems” written by ecologist, C. S. Holling (1973). His work has become the starting point for most research on the concept of ecological resistance and, later, other forms of resistance. Bharma, Dani and Burnard (2011) identified the first paper on supply chain resilience, authored by M. Christopher and H. Peck (2004). Roberta Pereira, Christopher and Lago Da Silva (2014) identified 30 publications appearing between 2000-2013. They concluded that procurement significantly contributes to achieving supply chain resilience, as it has an impact on the following SCRES enablers: flexibility, redundancy, transparency, agility, collaboration, integration and information sharing. Hohenstein et al. (2015), based on a wide analysis of SCRES definitions (between 2003-2013), identified four main SCRES phases: readiness, response, recover and growth. The first phase concerns a proactive strategy, while the following three phases were included in a reactive strategy. For each phase, the authors identified the most frequently occurring elements. These elements are identical to the enablers recognised by Roberta Pereira, Christopher and Lago Da Silva (2014). Except that “capacity” is a new element assigned to each reactive phase and “visibility” occurs instead of “transparency”. Hohenstein et al. (2015) provided the practices involved for each element. For example, flexibility is achieved, among others, by backup suppliers, easy supplier switching and flexible production systems. The authors underlined the need to explore SCRES quantitative measures. Tukamuhabwa et al. (2015) identified various proactive and reactive SCRES strategies. These overlap the elements presented by Hohenstein et al. (2015). An example is the strategy of increasing flexibility defined as “the ability of a firm and supply chain to adapt to changing requirements with minimum time and effort” or the strategy of ensuring supply chain agility in the sense of “the ability to respond quickly to unpredictable changes in demand and/or supply”. For SCRES research, Tukamuhabwa et al. (2015) suggest the use of the theory of Complex Adaptive Systems. This recommendation is an output of the theories through the prism of which the analysed articles present the issues of SCRES. Kamalahmadi and Parast (2016) presented the results of another literature review. This time, the authors were interested not only in the literature on resistant supply chains, but also in publications about the resilience of an organization. The main result of the study was a supply chain resilience principles framework consisting of the four principles presented by Christopher and Peck (2004), with variables assigned to each of them: flexibility and redundancy (for the reengineering principle), trust and information sharing (for collaboration), visibility and velocity (for agility), leadership and innovation (for the supply chain risk management culture). Ali, Mahfouz and Arisha (2017), based on a literature analysis of the subject, proposed a SCRES concept mapping a framework in the form of a pyramid. There are three phases at the top of the framework: pre-disruption, during disruption and post disruption. Each of them requires an appropriate strategy: a proactive, concurrent or reactive one. The authors noted that Ponomarov and Holcomb (2009) extended the definition of SCRES by adding the aspect of preparing an organization for the occurrence of a disruption. The framework suggests building five capabilities (the ability to anticipate, to adapt, to respond, to recover, to learn) to perform all three strategies. In the pyramid, underneath the capabilities there are those elements which consist of specific practices. For example, the ability to adapt requires flexibility, while redundancy needs management and adaptability of resources. These elements and practices overlap the Hohenstein et al (2015) framework.

Ali, Mahfouz and Arisha (2017) suggest conducting qualitative research to identify the relations between the constructs that are developed in the framework. In the same year, Datta (2017) analysed articles that propose SCRES mechanisms or interventions. The author linked these with the uncertainty of events. It can be noted that the mechanisms and interventions overlap the elements and practices presented in the previous research. Datta provided the latest definition of SCRES, based on the previous one: "supply chain resilience is a dynamic process of steering the actions so that the organisation always stays out of danger zone, and if the disruptive/uncertain event occurs, resilience implies initiating a very rapid and efficient response to minimise the consequences and maintaining or regaining a dynamically stable state, which allows it to adapt operations to the requirements of the changed environment before the competitors and succeed in the long run." Ribeiro and Barbosa-Povoa (2018), analysing the literature on the subject, focused on the search for publications that present the results of quantitative research. This allowed them to identify the variables used by different authors in the presented models. These are mainly measures similar to previously described elements and practices or strategies; like trust, visibility, flexibility, purchasing strategies, information sharing, cooperation. The authors highlighted the need to examine the link between the risk management concept and the SCRES concept as they consider these to be very similar. However, it can be noticed that this concept is clearly linked to the Business Continuity Management concept too (ISO 22301:2012). In summary, the broadest SCRES framework was presented by Ali, Mahfouz and Arisha (2017) and the last definition was created by Datta (2017). In the analysed papers, the characteristics of SCRES are very similar, but they are variously named (strategies, enablers, elements, practices) and classified. The research allowed the identification of the key SCRES determinants which are: flexibility, redundancy, transparency and visibility, agility, collaboration and information sharing. These are usually named as elements in the inspected papers. Furthermore, flexibility is highlighted as the most common SCRES determinant.

#### **4. NPD IN THE COSMETICS' PACKAGING SUPPLY CHAIN**

This case study describes the NPD cooperation in the cosmetics' packaging supply chain. It refers to the following supply chain links: the company, its first-tier suppliers and the main customer, which is a manufacturer of cosmetics products. There is an equal balance of power for the company-customer relationship, both parties being large international organizations. They carry out a cooperation strategy and signed multi-year contracts for a specific volume. This gives the company the possibility of planning the appropriate production capabilities and flexibility effectively. The company is a trusted partner for the client, who demands perfect quality and timeliness and conducts regular audits and evaluations. The cooperation is based on the code of conduct defined by the customer. The company uses MRP system and Electronic Data Interchange, while the customer has implemented SAP system. Both partners follow Global System One standard to ensure a common language and traceability. The NPD process in the company consists of several stages, that (except for the final one) involve suppliers, the company and the customer:

1. Concept development.
2. Testing and development of packaging.
3. The creation of final technical drawing and graphics.
4. Technical specifications development and related documents e.g. drawings, Bill of Materials (BOM), suppliers' data, assembly and palletization instructions, acceptable quality deviations.
5. Ordering materials, final pricing.
6. Production preparedness.



The output of the NPD process is mainly a technical specification. The full responsibility for this is borne by the company, which is the key supplier for the customer.

The packaging development can involve:

- new packaging and new graphics design – the most time-consuming and complicated project, product specification is prepared from scratch;
- modification of the design and new graphics;
- modification in the layout (graphics and/or language) – the fastest and the simplest change, no need for testing, most documents are copied from existing ones.

New packaging is developed 3-4 times a year. The lead time of the development of the brand new packaging (both construction and graphics) is around 5 months, whereas modification in the graphics needs around 3 months. The reasons for developing new or changed packaging are primarily demand changes resulting from the client's marketing (e.g. promotion), fashion (e.g. "Movember"), various events (e.g. World football championship), holidays (e.g. Christmas Day, Women's Day) or complaints (e.g. the sticker peels off too easily). In recent years, there have been changes caused by the widespread interest in the triple bottom line concept. In this scenario, the packaging is made of recycled materials or the size of the packaging is reduced. Such changes also entail savings that the company is obliged to demonstrate during the contract. The company's involvement in the customer's NPD is at an early stage. The customer postulates the new concept requirements when a demand plan arises. During the 'kick off' meeting, the client provides general information such as: the name of the cosmetics, individual number of finished goods, type of expected packaging and leaflets, region and markets in which the cosmetics will be sold, preferred pallets, BOM acceptance date, production starting date, and expectations regarding the raw materials and packaging construction, e.g. quantity and configuration of cosmetics products in the packaging. The partner also presents their expectations regarding the delivery time. To avoid delays in the introduction of new products to the market, the customer uses safety lead time. The company's employees responsible for NPD are permanently employed in the customer's offices in Poland. This co-location ensures a proximity that results in responsiveness, rapid problem solving and shortened NPD time. The in-person meetings are of vital importance as they allow direct discussion of urgent issues, thereby reducing the risk of failures. The key success factors for supply chain cooperation are trust, reciprocity and willingness to solve problems together. From the client's side, the following participate in the NPD communication: a customization product manager (from the headquarters located abroad), an artwork planner as well as a quality manager and a product development manager (from the customer's plant in Poland), whereas product development engineers are involved from the company's side. However, during the NPD process, depending on its stage, other operations departments also take part, like the planning department (uses BOM), production department (handles assembly and palletizing instructions) or quality department (uses technical specification and standard deviation accepted by the client). The timing of the supplier's involvement in the NPD process of the company is very early - immediately upon receipt of the customer's requirements, at the stage of concept development. The following suppliers are engaged: the supplier of inner, the supplier of outer, the supplier of cardboard box and the supplier of blister. Communication with suppliers is performed by the purchasing department and product development managers. From the supplier's side, a sales representative and, if necessary, product builders take part in NPD. The company values its long-term relationships with suppliers. First, it consults over the possibilities of fulfilling the client's order with its current suppliers (two or three, depending on the situation), and if they do not have the appropriate capacity or technology, inquiries are sent the new, potential partners. They are informed of the critical parameters and get samples of the cosmetics and then the offers received are compared.

It sometimes happens that a particular supplier is imposed by the customer. The chosen supplier then prepares a mock-up of the packaging. When the customer accepts the preliminary construction and costs, the second NPD stage begins. Subsequently, the company orders a sample of the materials and prepares it for testing. Tests (e.g. temperature changes, shocks) are conducted by the company and then by the customer. The client's approval of the durability of the packaging, technical drawings and graphics is required. Then, all data are entered into the customer's system to which the company has an access. When the company's final offer is accepted by the customer, mass production can begin. The project is discussed at weekly teleconferences and monitored monthly using the KPIs related to the time and costs of the NPD process as well as the quality of the product and the client's satisfaction. The direct suppliers of the company are located in Poland, in close proximity to the factory, which ensures speedy deliveries. In addition, having the same culture and language makes for effective communication. Partners provide mainly cardboard boxes, blisters, labels, stickers, packaging films and glues. For small and medium projects (50-200 thousand units) the company relies on a single sourcing strategy. However, large projects require double sourcing, especially for components whose production lead time is the longest (e.g. cartons with graphics) and the size of demand would prevent quick turnaround from one supplier due to its limited manufacturing capabilities. This approach also makes it easier to switch orders between suppliers, thereby ensuring sourcing flexibility. The main reasons for these sourcing decisions are costs. Double sourcing means, among others, having to duplicate the tools used for the production. This can also explain why the company does not have back-up suppliers. Changing the supplier during the project happens very rarely as this situation would require the repetition of almost all NPD stages. This would be difficult and almost always cause a delay in production. Sometimes, a delay entails the need to speed up distribution, even by disregarding regular distribution centres. Another issue is that the company maintains inventory only for the production planned in the project. The reason for this is usually production for a specific project (Engineer to Order, ETO) and the uniqueness of orders. However, the company keeps some safety stock. Materials are ordered with 2 to 5% surplus. This additional inventory ensures production continuity in the case of quality problems. In emergency situations, certain qualified suppliers are asked to temporarily increase production in order to shorten LT. Due to the high level of complexity of packaging processes and the large variety of products and variable volumes, most of the production lines for the customer are manual with elements that facilitate the automation of repetitive activities. The implemented lean tools help to minimize production waste and ensure product quality.

## **5. DESIGN OF A RESILIENT SUPPLY CHAIN**

In the presented NPD cooperation, several important purchasing decisions can be distinguished that impact the processes and structure of the supply chain. These are presented in Table 2. These decisions are assigned to the particular SCRES elements identified in the third section of the paper. As the table shows, purchasing decisions clearly affect the design of a resilient supply chain.

*Table following on the next page*

*Table 2: The desk research phases and their results (own elaboration)*

SCRES element	Purchasing decisions in NPD determining the SCRES element
flexibility	decisions on: sourcing strategy (single/double), supplier location (distance, country), supplier selection criteria (e.g. flexibility, capability)
redundancy	decisions on: back-up suppliers, safety stock, safety lead time
transparency and visibility	decisions on: tools for mapping supply chain structure and flows, traceability, availability of information about supply chain structure
agility	decisions on: supply chain strategy, internal integration, IT tools
collaboration	decisions on: the length of contracts, frequency of communication, communication channels, co-location, experience and knowledge of cooperating employees, code of conduct
information sharing	decisions on: the type of shared information, communication tools, frequency of exchanging information

In the case of SI, several interesting findings can be pointed to. First, in the case of small and medium NPD projects, SI dictates single sourcing and cooperation with a partner of a high capacity and flexibility. This make it impossible to switch orders between suppliers, hindering sourcing flexibility. In the case of large projects, SI encourages double sourcing. The company does not plan any back-up suppliers due to the high costs of supplier's infrastructure development and long NPD time. This means that not all of the redundancy practices can be implemented in the case of each production environment. Furthermore, the supply chain requires an agile strategy, mainly because of uncertain demand and the variety of NPD projects as well as ETO. Moreover, B2B collaboration and information sharing are strongly present in the described case, which is especially due to the supply chain maturity resulting from cooperation strategy and integration. The long-term partnership enables the structure of the supply chain to become more visible.

## 6. CONSLUSION

The study has both theoretical and managerial implications. Firstly, it identifies the most common SCRES elements. Secondly, it highlights the relationship between purchasing decisions, SI and SCRES elements. What is more, this relationship can be determined by the type of demand, production environment, product variety as well as production volume. Therefore, it is recommended that comparing supply chains of different products and different size companies needs further investigation during quantitative research. The research shows managers the importance of purchases in the NPD process for the design of a resilient supply chain. The paper's limitations result from the number of analysed articles, lack of a comprehensive definition of SCRES elements' definitions as well as the fact that the qualitative study presents only one case.

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## REVITALIZATION OF DEGRADED PORT AREAS AS A CHANCE FOR LOCAL DEVELOPMENT ON THE EXAMPLE OF KOŁOBRZEG MUNICIPALITY

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### ABSTRACT

*Revitalization is a complex process involving many interconnected activities aimed at moving a degraded area out of a state of crisis. The success of a revitalization program depends on the correct selection of tools and methods designed to solve the problems of the local community. Concentration of crisis phenomena and the developmental potential of the port in Kołobrzeg were the reasons behind the decision to prepare a plan of revitalization of the port premises. The purpose of the article is to indicate a model of economic activity which would increase the impact of the port on the local economy. The authors of the article put forward a hypothesis that the current way of operating the business prevented the full use of the port's development potential. Both primary and secondary sources of information were used in the article. To this end, the literature on the subject and numerous publications and scientific studies were reviewed. Research was conducted in the form of in-depth interviews with selected representatives of the Kołobrzeg municipality and the seaport. The article proposes basing local development on the polarization-diffusion model and creating a tourism cluster. Using different concepts of local development results from the presence of endogenous resources. In the case of transshipment operations, the port's economic base includes peripheral areas incapable of self-development. Therefore, the most essential element of the polarization-diffusion model is a key enterprise which creates a network of mutual connections with local business operators. In the conceptual framework of a tourism cluster, endogenous resources of the city of Kołobrzeg are more important. The implementation of the revitalization program will require an intervention of public authorities in the direction of improving the investment climate and mobilizing the endogenous resources.*

**Keywords:** *managing local development, revitalization, seaports*

### 1. INTRODUCTION

Managing local development is the main obligation of local government units. A revitalization program is one of the tools for managing the development on a microregional scale. Owing to the process of revitalization it is not only possible to identify crisis regions. It allows to discover the reasons behind the occurrence of undesirable phenomena and to prepare projects aimed at overcoming (Malkowski, 2017). The key element of the process of revitalization of space in social, economic, environmental and functional terms is to find new attractive development directions for the degraded area. For almost three decades, crisis phenomena have been intensifying in the port of Kołobrzeg. Free market mechanisms were not able to solve the most important problems of the port, or solved them ineffectively (Nowaczyk, 2017). One of the most important problems was the limited scope and inadequate quality of tourist services provided. In the case of reloading activities, the port operator's inability to acquire cargo was a

limitation in development. Despite the occurring crisis phenomena, the port had a significant development potential that could be used in the activation of the local economy. The aforementioned circumstances were behind the premises for the city to start work on a plan to revitalize the port areas. The purpose of the article is to indicate a model of economic activity that increases the port's impact on the local economy. It will be discussed on the example of the most promising functions of the seaport, namely tourism and transshipment. In reference to the purpose of the article, a hypothesis was formulated stating that the current way of conducting business is ineffective. The authors of the article suggest it should be replaced by the polarization-diffusion model and in addition, a tourism cluster should be created. The literature on the subject that deals with the problems of seaports and the revitalization of degraded areas is quite extensive. On the other hand, the scientific body of work devoted to the use of seaports in local development is much more modest. This is particularly true for small seaports, which include Kołobrzeg. Due to the available research material, the study was narrowed down to the municipality and port of Kołobrzeg. However, crisis phenomena occur in the majority of local seaports. Therefore, the conclusions drawn can be most likely applied to all of them. Both primary and secondary sources of information were used in the article. To this end, the literature on the subject and numerous publications and scientific studies were reviewed. The research was conducted in the form of in-depth interviews with the representatives of the municipality and the seaport in Kołobrzeg.

## **2. MANAGING LOCAL DEVELOPMENT**

Political changes in Poland, apart from their economic dimension, also brought about a revolution in local development management (Malkowski, 2007). The creation of local self-government units and handing the actual power over the territory to the local community became a manifestation of building a responsible civil society (Klekotko, 2008). This responsibility concerned, among others, strategic management of socio-economic development at the microregion scale (Malkowski, 2013), building competitiveness on a local and regional scale (Malkowski 2015), improving the quality of life of residents. Local self-governments became entities that on behalf of the residents not only satisfied the current collective needs. The idea of rational management of local space also requires the undertaking of strategic activities. This serves to identify the future needs of residents, and above all, the directions in which a given community will develop. The twenty-first century is a period of intensified discussions about the inevitable changes in the functioning of local government and new functions attributed to it, in the context of meeting the collective needs of the community, especially in the local dimension (Jewtuchowicz 2006, Malkowski, Malkowska 2013, Słodowa-Helpa, 2013). A challenge for the governments is elaborating and indicating the directions of change in the area of new roles and functions of public spaces. It seems that one of the crucial challenges for the governments is finding the balance between the current, increasingly divergent interests of residents and entrepreneurs, and the creation of foundations for a sustainable and intelligent development in the future. The growing ecological awareness of societies and the implementation of a strategic approach to management on a local and regional scale are among the reasons for the renaissance of the concept of sustainable development (Counsel, Haughton, 2004, Rogall, 2010). The popularity of this concept is related to the prevention of the accumulation of many unfavorable processes and phenomena leading to degradation, not only of the economic sphere, but above all the social fabric. Experiences in local development management indicate that actions are necessary aimed at balancing the development of the economic, social, spatial-functional, and environmental spheres (Malkowska, Nowaczyk, 2016). There are many different projects implemented all over the world, all fitting into the idea of intelligent development (Glasmeier, Christopherson, 2015, Khansari, Mostashari, Mansouri, 2013).

Their most essential feature is that they introduce a number of improvements in the functioning of the local community, based on local conditions and resources (Kates, Parris, Leiserowitz, 2005, Joss 2015). A harmonious development in the social, economic, and environmental sphere is an element of intelligent development, giving opportunities to build the competitiveness of local government units on a global scale (Glasmeier and Christopherson 2015).

### **3. REVITALIZATION OF SPACE AS AN ELEMENT OF INTELLIGENT MANAGEMENT**

Managing local development requires undertaking actions aimed at eliminating the negative effects of intense economic and social processes (Thomas, Bromley, 2003, Malkowski, 2017). These goals coincide with the essence of revitalization. Revitalization is a process focused on reviving degraded spaces, the purpose of which is to find a new application for them and to bring about a state in which the areas change their function (Skrzypczak, Łukowski 2011). It is a paradigm of local development referring not only to spatial categories, but above all to socio-economic development. The main objective of the project is to lead the degraded area from the crisis state, by removing the phenomena that caused its degradation (Ziółkowski, Górniak, 2007, Malkowski, 2016). A degraded area is a space in crisis state due to the concentration of negative social phenomena, in particular unemployment, poverty, crime, low education or social capital, as well as insufficient participation in public and cultural life. Revitalization involves the transformation of degraded areas in three main aspects:

- economic development – creation of new workplaces, propagation of economic activity;
- social development – prevention of social pathologies (crime, marginalization, exclusion);
- infrastructural and spatial development – preservation of cultural heritage through renovation, modernization, and conservation of historic buildings and public spaces, and improvement of the natural environment (Battisti, 2017).

In order to lead degraded areas out of a crisis situation, it was necessary to create new tools that would make it possible to reverse the processes of marginalization of local communities. One of the examples of new solutions in the area of managing local space are revitalization programs (Espinosa, Hernandez, 2016).

### **4. REVITALIZATION OF URBAN SPACES ON THE EXAMPLE OF KOŁOBRZEG**

Kołobrzeg is a county seat in the West Pomeranian Voivodeship, located on the Białogard Plain, at the mouth of the Parsęta River on the south coast of the Baltic Sea. The city has a total area of 2,567 ha, has direct access to the sea at the length of 11 km and has more than 47 thousand permanent residents (in the summer this number increases to about 150,000). Its port character, developed tourist sphere, and its health resort status indicate that the city of Kołobrzeg requires a special approach to the essence of revitalization. The role that Kołobrzeg plays in the social and economic system of the region is also important. As a local growth center, Kołobrzeg has a significant pro-development function in relation to the neighboring local governments. Therefore, the revitalization activities in Kołobrzeg should be considered also in the context of their impact on the neighboring units. Restructuring and reindustrialization of port and post-military areas are examples of necessary actions aimed at improving the situation in Kołobrzeg, having a potential impact on the functioning of the entire region. This also applies to the creation of effective functional connections within the city itself as well as their networking within the region and country. This not only favors the improvement of the quality of life of the inhabitants of Kołobrzeg, but also restores the role of the city in the regional settlement system. Revitalization of space thus fits in with the concept of restoring the role of small and medium

urban centers as a counterweight to the polarization processes taking place around the strongest urban centers of voivodeship rank (Śleszyński, 2016). A particularly important element of revitalization of the urban space in Kołobrzeg is undoubtedly a change in the perception of the port and its functions. The seaport in Kołobrzeg is one of the smaller economic structures in which basic port functions have developed: fishing, tourist, and transshipment services. In the post-war period, the port was one of the largest Baltic fishing centers in the country. The transshipment and tourism activities were of much less importance. In the 1990s, the process of changing the port's business profile began (Zieziula, Nowaczyk, 2011, pp. 43-47). As a result of declining fish stocks, fishing has started to lose its importance and the regress of this branch of industry has not been stopped yet. The liberalization of international traffic and the increase in the wealth of the society have increased the demand for tourist services. However, the port was not able to fully discount the favorable trends on the tourist market. The scope of services provided was too narrow and did not correspond to the growing quality requirements of tourists. Despite the significant transshipment potential and the demand for transshipment, the port turnover has decreased over the last dozen or so years. One of the main reasons was the passivity of the existing port operator in acquiring cargo. In the Kołobrzeg seaport, over the past nearly three decades, many problems have accumulated which have affected the socio-economic situation of the municipality. The regress of fishery had a negative impact on the labor market. At the same time, the prospective spheres of the port's operation were not fully utilized. The configuration of economic problems and development opportunities was a prerequisite for the city of Kołobrzeg to make a decision to begin works on a plan for revitalizing the port areas. It foresees a change of purpose of the port areas that previously had a fishing function and dedicating them to maritime tourism purposes. In the case of reloading activities, revitalization activities are to lead to a better use of its potential.

## **5. CONCENTRATION OF ECONOMIC PROCESSES AND ITS SIGNIFICANCE IN THE REVITALIZATION PROCESS**

In the recent period, the global economy has been observing the intensification of the tendency to focus economic processes in the geographical space (Korenik, 2009). While the development disparities between the countries are diminishing, development divisions take place in smaller territorial systems. The main growth centers are urban agglomerations, but development processes may focus on less urbanized areas, such as, for example, special economic zones, industrial parks, or industrial regions. The concentration of economic processes can take various forms (Grzeszczak, 1999, pp. 63-77; Grosse, 2002). The first structure of polarized space was presented by A. Marshall at the end of the nineteenth century. Industrial region – this name was given by the scholar to a polarized space consisting of many small enterprises, creating a network of mutual relations as a supplier and recipient. These were entities of local capital mainly focused on servicing the local market. An important feature of Marshall's region was a strongly developed entrepreneurship inherent in local culture. However, in the center of the attention of the theory of polarized development, whose pioneers were three scholars, i.e. : F. Perroux, G. Myrdal, A. Hirschman (the 1950s), were large enterprises called key or dominant. Similarly to the concept of A. Marshall, they form a network of numerous connections with their recipients and suppliers. The theory of polarized development was often used to activate peripheral areas incapable of self-development due to the weakness of endogenous resources. In that situation, the role of a key enterprise was to "draw" local businesses into cooperation (Stackelberg and Hahne, 1999; Fujita, Krugman, 2004, p.140; Simmie, 2005). In the later period – the 1980s, polarized space began to take on more diversified forms. Moving away from mass production towards flexible specialization created favorable conditions for the operation of smaller enterprises. The importance of endogenous resources in local development increased.



However, unlike in A. Marshall's concept, new industrial regions were more oriented towards expansion into external markets, which is understandable due to the change in economic conditions, i.e. development of infrastructure, means of transportation, and communication. In addition to small entities, large enterprises were also part of the polarized space. They formed a varied network of connections with local and nonresident businesses. In an extreme case, large enterprises, often subsidiaries of international corporations, may not have cooperated with local companies at all, due to the lack of the said companies, or an inadequate production profile. In that case, the networks of both suppliers and recipients were not local. The profits transferred to parent companies deprived local entrepreneurship of development opportunities. In the literature on the subject, the above form of polarized space, or its absence, is referred to as "Cathedrals in the Desert" (Oppermann, 1993). Concentration of development processes, and thus geographical proximity of many enterprises, has an advantage over an isolated economic entity (Hermansen, 1974, Grosse, 2002). Corporate clusters create favorable conditions for the exchange of information on products, production processes, and markets. They favor the diffusion of technology and the dissemination of innovative solutions. They contribute to the reduction of costs: supply, training, modernization, and promotional activities. Groupings of enterprises have a greater negotiating power in contacts with recipients of products. The territorial proximity of enterprises, especially those operating on identical markets, intensifies competition, which is one of the most important factors improving the efficiency of management. Constant cooperation increases mutual trust between enterprises, which reduces the costs of hedging against economic risks. Caution in contacts is, however, a necessity for companies that are territorially dispersed, and therefore have less information to assess the credibility of their partner. Another benefit is a more efficient allocation of workforce. Bigger distances between enterprises can hinder the flow of labor due to transportation costs and limited access to information. Clusters of enterprises attract highly qualified specialists. They create incentives for education to train in accordance with the requirements of the labor market, i.e. in occupations reported by local companies. The problem of unemployment is the most frequently indicated socio-economic phenomenon occurring in degraded areas. Creating new workplaces or developing local entrepreneurship is a key direction for the necessary changes in crisis areas. A network of cooperating companies shows a greater tendency to specialize, and thus concentrate on the production of few products or production phases. The accumulation of development processes increases the involvement of public authorities, which translates, among others, into improvements in security, expansion of infrastructure, promotion of the region, support of the development of human capital, and creation of a network of links between enterprises, scientific institutions, and other institutions strengthening the potential of the local economy. This is extremely important for the success of the revitalization process. It allows to achieve additional synergy effects between cooperating entities. As a result of the above-mentioned activities, the companies are more strongly associated with the region, which is particularly important for key enterprises sensitive to changing economic conditions. This may prevent the relocation of production in the future, for example in the case of an increase in production costs. Clusters of enterprises attract new entities not directly related to the actual production, which additionally increases the impact of the whole arrangement on the local economy and allows achieving the revitalization goals.

## **6. MODELS OF ECONOMIC ACTIVITY IN THE PROCESS OF REVITALIZATION OF THE KOŁOBRZEG SEAPORT**

Seaports are often used in regional policies of EU states (Hozer, 2000, p. 14; Grzelakowski, Matczak 2012, pp. 91-95). Below, two different paths of the revitalization process of the seaport in Kołobrzeg will be presented. In the case of reloading activities, a polarization and diffusion model will be used, the most crucial element of which is the key enterprise. Local business

entities are more important for the development of tourism. A tourism cluster is the preferred form of activity. The nearby municipalities are a natural economic hinterland for the Kołobrzeg seaport (Hernik, Ściana, 2014). Most of them belong to the peripheral areas with high unemployment rate, which is a consequence of limited mobility of the workforce and low economic activity of the residents. Low quality of human capital combined with insufficient demand discourage external capital from investing (Sołtys, 2013). The production structure of the degraded area is dominated by agriculture and forestry. Commodity exchange is limited to the sale of raw materials and unprocessed products with a low unit value. The size of the processing sector is insufficient to manage surplus production (UMWZ, 2017). The weakness of endogenous resources is the main reason for the limited effectiveness of previous attempts to activate the degraded area. Hence the proposal to develop the discussed areas based on a key enterprise. According to the theory of polarized development, the key enterprise creates a dense network of connections with suppliers and recipients. A significant innovation potential allows the production of goods with high unit value. In the case of the seaport in Kołobrzeg, a key enterprise could produce highly processed food and furniture products that would be exported to foreign markets. Local entities would supply not only raw materials, but also more processed semi-finished products. The cooperation of existing and emerging entities with a key enterprise would allow the absorption of surplus workforce. Money from export activity introduced into the economic cycle would stimulate other sectors of the local economy. The increase in local demand would increase the attractiveness of the studied areas for external capital, which would be an additional benefit from the implementation of the proposed revitalization model. However, this implementation will require the engagement of public authorities. The task of the public factor should be to acquire a key enterprise and improve conditions for the spread and absorption of development. This will require improving the condition of transport infrastructure and raising the qualifications of the workforce. In the case of tourist activities, it is proposed to base revitalization activities on the capital of local business operators. Providing tourist services can be organized in the form of a tourism cluster, whose conceptual framework was formulated by M. E. Porter (Porter, 2000). Unlike in other classical polarization theories, the author assigns more importance to endogenous development factors. Therefore, a polarized area consists of smaller entities - usually local ones, without the need to engage key enterprises. As in the theory of polarized development, M.E. Porter emphasizes the importance of innovation in the development process. However, their sources are seen in the cooperation of companies forming a cluster with the science sector. This is understandable due to the lack of large enterprises with adequate research and development potential. Also a much greater scope of responsibility for the development of clusters is on the public apparatus. In classical theories of polarized development, many tasks of public administration are taken over by the key enterprise. The conceptual assumptions of cluster theory can be successfully used in the revitalization process to create a tourism cluster in the Kołobrzeg seaport. Although tourists come to the port of Kołobrzeg from all over the country, and even from abroad, the area of service provision is limited to the port, and then to the city. The endogenous resources of the city allow the provision of tourist services by local entrepreneurs. At the same time, they do not require such a large capital commitment as in the case of transshipment (transshipment equipment, warehouses, production halls, means of transportation). The use of endogenous resources in tourist activities has one more important advantage, which is a greater impact on the development of the local economy. Small family tourism enterprises to a greater extent buy products from local suppliers, use the local labor force, and introduce the generated income to the local economy. What structure would a tourism cluster have? Tourists pay special attention to the comprehensive nature of the offer and the quality of services offered. Therefore, the core of the cluster would comprise of entities offering services directly related to the operation of tourist traffic, i.e. repair and maintenance of tourist units, rental of nautical equipment, supply

of energy carriers, winterizing of units. The second link would be entities providing complementary services, i.e. catering, hotel services, and a number of other services indirectly related to tourism. A big problem of Baltic ports, such as Kołobrzeg, is the seasonality of tourist traffic. Thus, the third cluster link - consisting of entities offering additional tourist attractions not closely related to sea tourism - can significantly extend the tourist season. For example, those entities could be: houses on the water, spas, massage parlors, conference rooms. According to the theory of M. E. Porter, the success of the cluster depends on the cooperation of economic entities with public institutions and scientific and research institutions. The public sector can support the activities of tourism entities by, for example, promoting a tourism cluster, expanding the general infrastructure facilitating access to the tourist reception area, creating tax and administrative facilitations. In turn, research and development institutions can train specialist staff, provide information on the needs of potential clients, and on new trends in tourism.

## 7. CONCLUSION

Revitalization of degraded areas is a difficult process of necessary changes aimed at bringing the area out of crisis. Revitalization programs are a tool of managing local development in cooperation with local governments, local community, and entrepreneurs. More and more Polish local governments create revitalization programs. It not only allows to identify degraded areas. The essence of revitalization is the implementation of activities which, through their social and economic scope, will bring the degraded area out of crisis. The seaport in Kołobrzeg is an example of an area which changes the profile of its activity and is still looking for development directions which would allow it to use its potential. Over the last three decades, the profile of the seaport in Kołobrzeg has been changing. Regression of fishing activity was accompanied by conditions conducive to the development of tourist and transshipment functions of the port. However, the port was not able to take advantage of the opportunity for development. The combination of crisis phenomena with potential development opportunities constituted a premise for the city to initiate works on a plan for the revitalization of port areas. The main premise of the plan is to transform the port areas that previously had a fishing function for the purposes of maritime tourism, and to increase the scale of transshipments. One of the most important factors enabling the use of the development potential of the port is the proper organization of business operations. The authors of the article believe that an appropriate concentration of development processes can be an effective tool for the implementation of the revitalization plan and thus have a beneficial effect on the development of the local economy. A proposal worth considering is basing the reloading activity on the polarization-diffusion model and creating a tourism cluster. The polarization-diffusion model is often used in regional policies to activate peripheral areas incapable of self-development due to the weakness of endogenous resources. Such a situation occurs within the economic base of the seaport in Kołobrzeg. The main problems are: persistently high unemployment rate, low quality of human capital, limited mobility of the workforce, and low economic activity of the inhabitants. However, the studied areas are not completely devoid of assets. These are the effective but not sufficiently competitive sectors of agriculture and forestry. In the polarization-diffusion model, the greatest importance is attributed to the key enterprise, which creates a network of mutual links with local suppliers. In this way, the endogenous resources of peripheral areas are activated, gradually reducing the scale of crisis phenomena. Conceptual assumption of clusters, on the other hand, assign greater importance to endogenous resources rather than external intervention by a key enterprise. The development of entrepreneurship in Kołobrzeg allows the creation of a tourism cluster based on local capital. A tourism cluster must offer comprehensive tourist services with a high quality standard. The wide range of services offered can neutralize the problem of seasonality of tourist traffic.

Basing the tourist activity on local capital also exerts a greater influence on the development of the local economy. It increases the use of local resources and introduces more money to the local economic circulation. The implementation of the seaport revitalization plan based on the proposed development models requires the involvement of public authorities. Public bodies should make efforts to acquire a key enterprise, create conditions for diffusion (development of transport infrastructure) and absorption of development (improvement of the quality of human capital, support for entrepreneurship). It is extremely important to support the cooperation of economic sector entities with scientific and research institutions.

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## CHANGE AREAS IN BIG INDUSTRIAL COMPANIES AND THEIR EVALUATION

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### **ABSTRACT**

*Enterprises undergo continuous changes. In this respect turbulent environment and the need to adjust to such conditions play a decisive role. Often changes are triggered by internal factors. The purpose of changes is to obtain better results on a competitive market and increase operational effectiveness in the areas the change concerns. Irrespective of the main area it affects, each change sparks off internal relations. Consequently it impacts on interrelations among various areas and thus complicates the evaluation of the change management course and effectiveness. Difficulties are also observable in the selection and application of measures that are used to evaluate change management, thus change effectiveness is often evaluated intuitively. The aim of this paper is to identify main change areas in big enterprises and evaluate their effectiveness. In management practice managers in detail define change areas, while the evaluation of the progress and efficiency level of change management is relatively high. Conclusions drawn in this paper are based on the analysis of results of the research conducted in 2017 on a representative sample of 37 big industrial enterprises. In addition, in-depth interviews were conducted with company CEOs from eight of these enterprises.*

**Keywords:** CEO, change areas, change effectiveness, evaluation management

### **1. INTRODUCTION**

Enterprises undergo continuous changes. In this respect turbulent environment and the need to adjust to such conditions play a decisive role. Often changes are triggered by internal factors. The purpose of changes is to obtain better results on a competitive market and increase operational effectiveness in the areas the change concerns. Irrespective of the main area it affects, each change sparks off internal relations. This results from and impacts on interrelations among various areas of company's areas of operations and thus complicates the evaluation of the change management course and effectiveness. This process is accompanied by difficulties in the selection and application of measures that are used to evaluate change management, thus change effectiveness is often evaluated intuitively. The aim of this paper is to identify the main change areas in big enterprises and evaluate their effectiveness. The main thesis set forth in the paper: in the management practice managers in big industrial enterprises in detail define change areas, and the evaluation of the change management efficiency is high. Main research questions:

1. What are the main change areas in big enterprises?
2. To what degree of detail are these areas defined?
3. What is the managers' evaluation of the effectiveness of the introduced changes?
4. What main methods are used to evaluate change effectiveness?

Conclusions drawn in this paper are based on the analysis of results of the research conducted in 2017 on a sample of 37 big enterprises in the north-east Poland. These enterprises are top ones in their sector in Poland, each of them conducts business activity on European markets, some also on the world markets. A survey served as the main research tool. Research was carried out by trained interviewers. In eight of those enterprises, selected purposefully based on a large number of changes, the author conducted additional in-depth interviews with the presidents of the board.

General population of the research comprised large enterprises from the industrial processing sector, with 250 employees and more (section C of the Polish Classification of Activities 2007), located in the podlaskie voivodship. Based on data from the REGON Register of the Statistical Office in Białystok, as at 30th June 2017 there were 34 enterprises of such type. Research was conducted on 24 enterprises (over 70% of the population), the remaining ones either did not consent to the research or, despite their location specified in the base, were not identified. Given the situation, the base of enterprises got extended by industrial enterprises employing fewer than 250 people but with an annual turnover above PLN 30 million. Moreover, research was also conducted among big enterprises from the construction, transport and trade sector. As a result 37 enterprises were subject to research.

## **2. CHANGE AND ISSUES RELATED TO ITS EVALUATION AND MEASUREMENT**

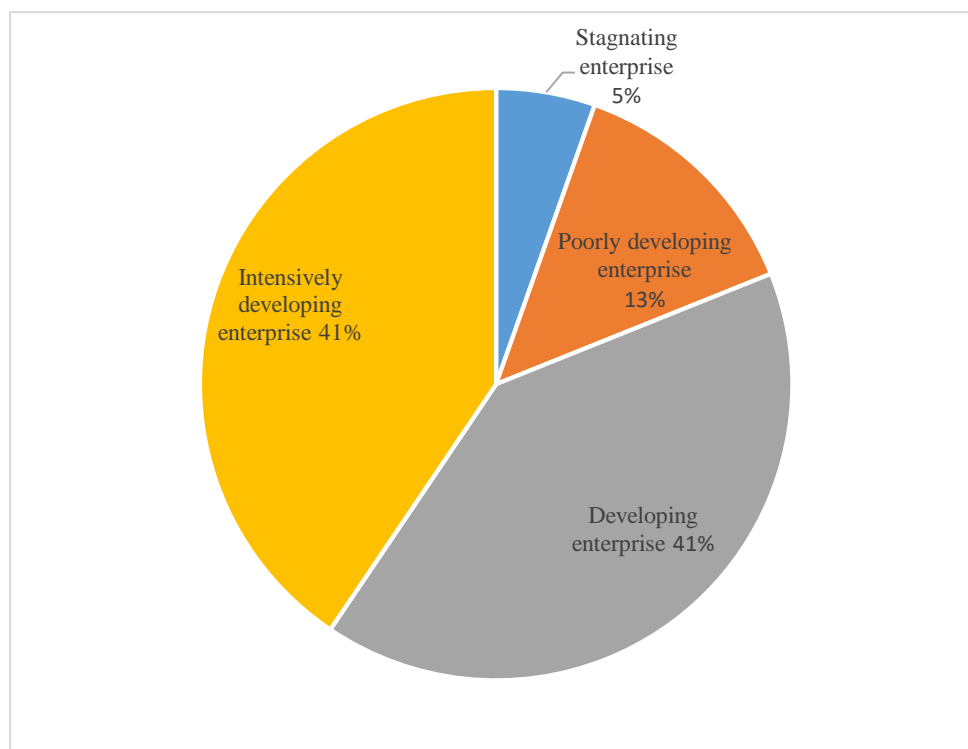
Being an inherent and natural element of the operations of contemporary enterprises, changes usually result from adapting to the changing environment. Albeit many organisations change their way of running the business due to internal reasons. On the one hand this may result from the need to react to changes in internal resources, on the other they may entail planned actions aimed at shifting the enterprise's direction in the one in line with the managerial objectives. Factors causing changes may be external or come from the inside of a company (Griffin, 2017, p. 397, Hitt, 2000, pp.7-15, Beer, Nohria, 2000, pp. 123-144, Gilbert 2003, pp.27-32). Often external and internal causes overlap and require action (Cutcher-Gersfenheld, Kossek, Sandling, 1997, pp. 21-38). The change process may be initiated by external stakeholders of an organisation such as customers, competitors, recipients, suppliers, or internal ones - employees and the management staff. Changes may stem from a general situation and changes in the economy, technologies, digital ones in particular, politics and law. Change-related factors are crucial as they impact on the methods, the ways of evaluating the course and effectiveness of change or measures applied. People managing a given change are aware who initiated it and who opposed its introduction, which significantly influences the evaluation of the change (Milling, Zimmermann, 2010, pp. 1452-1490). The most important assumption accompanying changes is the willingness to obtain results better than the current ones. This refers to every change area and emerging effects that accumulate as change areas overlap. Depending on classification criteria it is possible to single out a great deal of change areas. Among the most often mentioned ones are the organisational structure and scheme, technology, operations and people (Griffin, 2017, p. 404). Under other classification authors indicate similar areas, i.e.: human capital, management, technology (Imran, Bilal, Aslam, Rahman, 2017, pp. 335-351). Every area is composed of numerous aspects and components that as a rule are cross-related. Evaluation of these isolated change areas is connected with the application of analytical measures in a given area. It is more difficult to evaluate cumulative effects. Synthetic measures are not always adjusted to a complex change object (Paszkowski, 2015, pp. 121-140). Moreover, the impact of external factors on the change object may essentially distort evaluation. This may entail economic conditions, coincidence or other unusual factors (Nicholas, 1982, pp. 531-542). Evaluation of the change course and measurement of its effectiveness are insofar significant as it is necessary to use the existing and develop new methods and measures adjusted to the change object. It is possible to use the already available group of KPI measures (Parmenter, 2015, p.11, Brown, 1996, Grycuk, 2010, pp. 28-31) both in terms of effectiveness as well as result, remembering about limitations of analytical measures, especially in terms of change management where relations and overlapping changes may misinform about the change implementation. Managers should be ready to manage changes in organisation (Creg, Osmond, Osmond, 1996, pp. 23-35). "Reading" an organisation both with reference to environment as well as with regard to employees provides basis for change management success. Maximising effectiveness and increasing efficiency of operations require that managers adjust the pace of



changes and implementation methods to employees' sentiments, feelings, beliefs and resistance (Pasemore, 1992, p. 225). Various change implementation methodologies may be applied here, starting from K. Levin concept, through R. Beckhard, M. Beer, B. Burnes, M. Kanter, J. P. Kotter, R. W. Griffin, ending up with contemporary psychological approach (5C approach) or the ones developed by consulting companies (Prosci 3-Phase Change Management Process, Champs 2 and other). However at times, even in relatively simple situations, change may turn out as "hopelessly complicated" (Williams, 2007, pp. 32-50). Dynamic environment in which present-day organisations operate, the fact that changes often do not have a clear beginning, let alone the end, overlap and concern numerous aspects leads to a situation where managers often have difficulties in isolating changes and their phases, managing them, especially those changes related to measurement and evaluation (Imran, 2016, pp. 310-319). Therefore, evaluation of the change management effectiveness may be intuitive, sometimes based on comparisons or references to the past. Thus the statement that there is no one best way to manage change is true as various factors and circumstances may impact on the success or failure (Beer, Nohria, 2000, pp.133-144). In order to survive and develop every organisation has to learn and develop, and in this way increase the value of its intellectual capital (Lonnqvist, Kianto, Sillanpaa, 2009, pp. 559-572, Mcadam, Stevenson, Armstrong, 2000, pp. 138-149, Lefebvre, Lefebvre, 1993, pp. 297-306).

### 3. CHANGE AREAS AND EVALUATION IN PRACTICE

Areas and methods used to measure change effectiveness were subject to research in big enterprises in the north-east Poland. Over 80% of those enterprises are viewed by their management as developing (fig. 1).



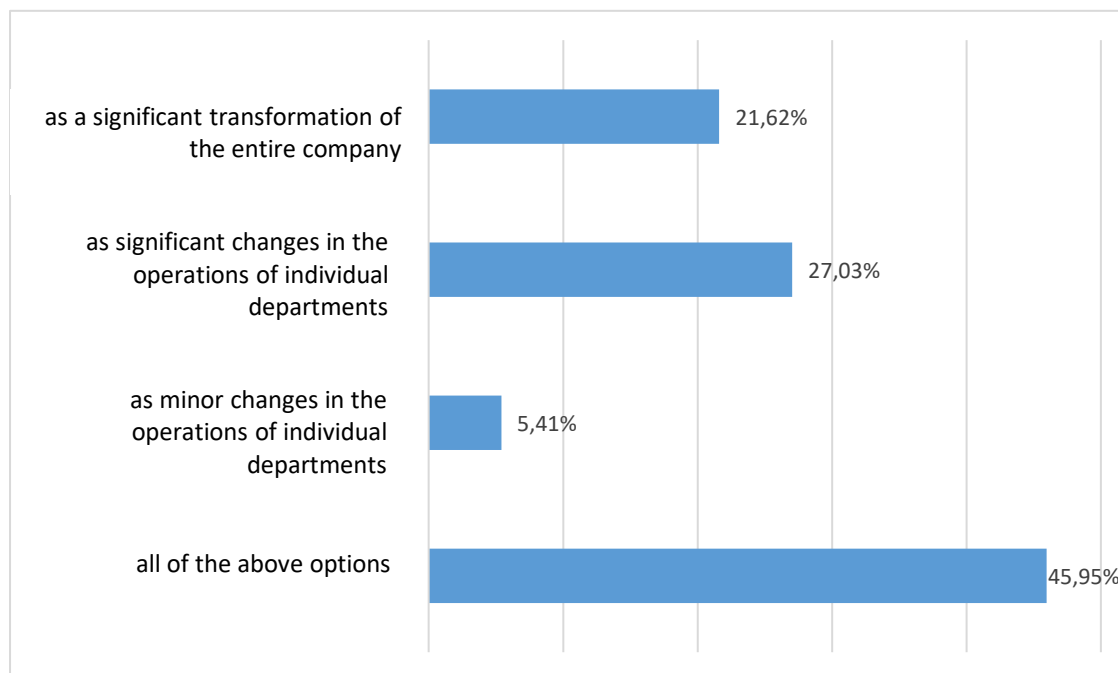
*Figure 1: Evaluation of enterprise's situation in view of development (own work based on conducted research)*

All of the companies subject to research underwent reorganisation in the past 3-5 years. In most cases (62%) reorganisation changes concerned selected company departments. Comprehensive reorganisation changes were conducted in 38% of enterprises.

Factors conditioning twice as many indicators to introduce changes in various areas of operations instead of changes reorganising the entire enterprise may include the following:

- in the opinion of the interviewed managers enterprises function efficiently so there is no need to either reorganise or restructure them but rather improve operations in various areas,
- departments and areas covered by reorganisation changes strongly influenced the functioning of the organisation as a whole,
- it is possible that inclination and willingness to make substantial changes, and consequently, take high risk is rather low among managers of big enterprises in the podlaskie voivodship,
- in many enterprises significant reorganisation changes, including restructuring processes, were conducted earlier and are viewed by the management as effective.

Table 1 presents that managers of big enterprises (45.95%) perceive changes from a broader perspective, i.e. as a transformation of the entire company and as changes in individual departments. In the opinion of 32.44% of respondents changes are perceived as a transformation of individual departments, while minor operational changes are not considered especially significant.



*Table 1: Change perceived by managers (own work based on conducted research)*

The above evaluation similarly as in the case of reasoning on the basis of figure 1 may result from the following premises:

- moderate inclination of senior managers to take risk,
- willingness to preserve the status quo,
- conviction that operations of the enterprise are correct and efficient in terms of the system of relations, mainly organisational ones.

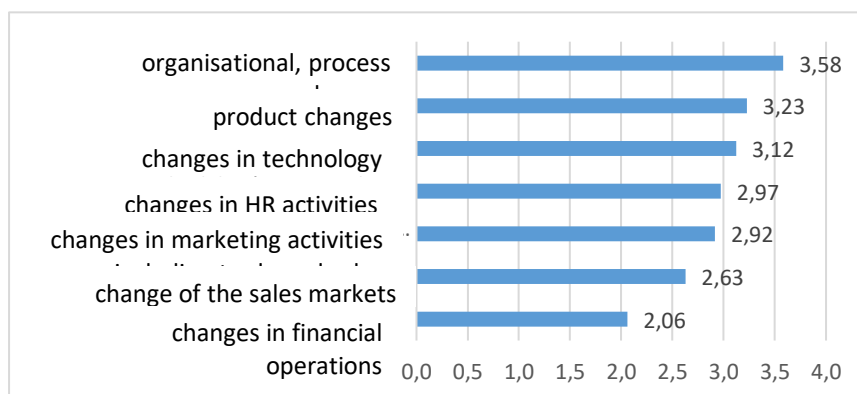
The structure of answers also indicates that managers of big enterprises located in podlaskie voivodship approach changes in a rather systemic way. This means that even a single change concerning a specific department in their opinion influences the entire enterprise. Such opinion confirms the level of complexity and interrelations of changes regardless of the main area. Main areas of change are presented in Table 2 with the progress level of changes defined on a scale

from 1 to 5, where 1 means low progress level, 5 very high progress level, 0 means lack of changes in a given area.

No.	Change area	0	1	2	3	4	5
1.	Product changes	16.22%	10.81%	16.22%	24.32%	8.11%	24.32%
2.	Changes in technology	10.81%	8.11%	18.92%	32.43%	13.51%	16.22%
3.	Organisational, process changes	2.70%	0.00%	24.32%	16.22%	32.43%	24.32%
4.	Change of the sales markets	5.41%	24.32%	18.92%	24.32%	21.62%	5.41%
5.	Changes in marketing activities including trade and sales	2.70%	10.81%	29.73%	18.92%	32.43%	5.41%
6.	Changes in financial operations	10.81%	37.84%	21.62%	18.92%	8.11%	2.70%
7.	Changes in HR activities	2.70%	10.81%	27.03%	27.03%	18.92%	13.51%

*Table 2: Change areas (own work based on conducted research)*

When referring to changes taking place in individual areas of operations, managers pointed out "the power of progress" of those changes throughout the past 3-5 years. Most changes were of an organisational and process character (medium progress of changes at the level of 3.58). Quite high level of progress was observable in product and technological changes (medium progress of changes at the level of 3.23 and 3.12 respectively) which results from the fact that substantial majority of big enterprises subject to research were production companies. Relatively low progress of change referred to marketing activity (2.92). This may stem from high efficiency of the current methods used to influence consumers, promotion and sales systems. Provided answers indicate that big enterprises under research did not make any substantial changes in their market structure (medium progress of changes at the level of 2.63). The main reason is a network of permanent recipients and a relatively high level of knowledge about the market, meaning close relations with target markets. On the other hand though this may be a sign of market conservatism and anxiety about exploring new markets. The poorest power of change concerned changes in financial operations. Interestingly enough around 16% of enterprises under research did not introduce any changes to their products. This may mean stable sales markets and high perception of products among recipients. On the other hand it is an alarming phenomenon and should make managers thoroughly analyse customers, competition, technological changes or the functioning of their own development departments, as lack of innovation in this respect usually leads to market difficulties. Medium progress of change is shown in Table 3. It is especially important in the organisational and process area. It seems very important as these areas often did not catch up with changes compared to technology or product and marketing changes. Moreover, they should be interconnected. Relatively low progress of change in the financial area mainly results from great stability of researched enterprises and relatively durable and efficient solutions applied in this area, so in consequence there is no need for changes.

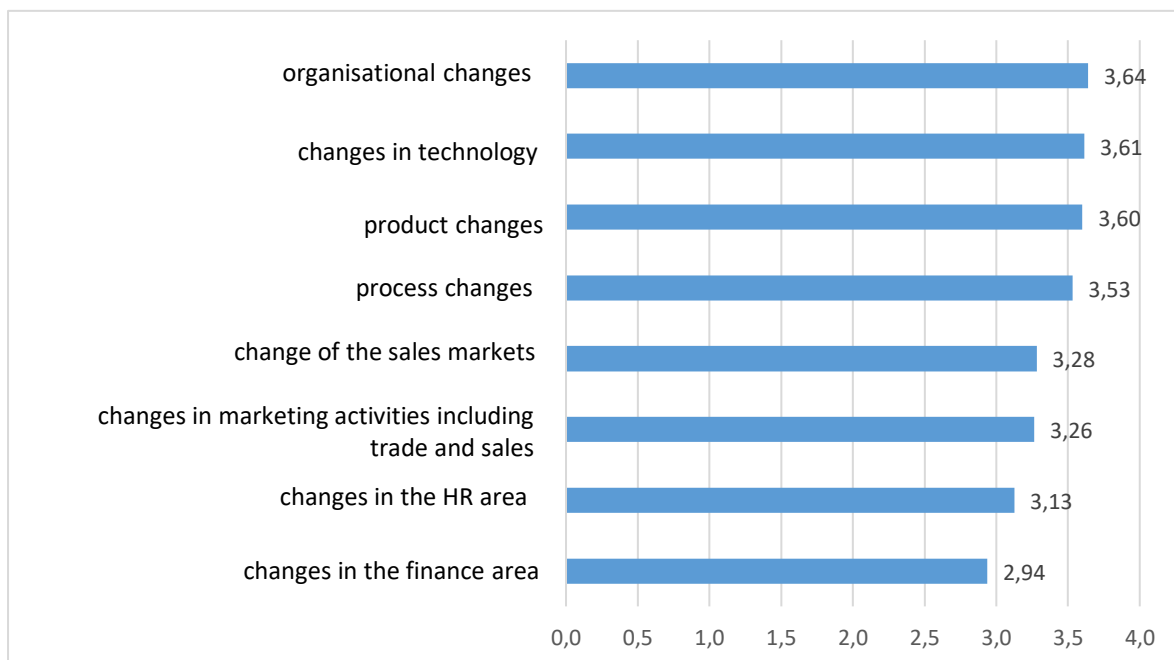


*Table 3: Medium progress of change in the researched areas (own work based on conducted research)*

Tables 4 and 5 include information on the evaluation of the effectiveness of changes in individual areas on the scale from 1 to 5 where 1 means low effectiveness, 5 very high effectiveness, 0 lack of actions in a given area. In entrepreneurs' opinion changes that are the most effective are changes of organisational character (change effectiveness evaluated at 3.64). Similarly, changes in the area of technology (3.61), products (3.60) and process changes (3.53) scored high. As the least effective managers point out changes in the area of marketing and HR (the respective scores being 3.26 and 3.13). It can be concluded that the last area of operations from the listed ones entails big expectations. Marketing activity must be streamlined systematically and usually the level of long-term effectiveness is not reached. This stems from the changeability of customers' expectations, innovative moves of the competition, technological progress and other factors. Often new and seemingly effective activities introduced in the marketing area do not impact on the sales levels, which change rather due to other factors. Currently in terms of the HR area one can observe an employee's not employer's market. The structure of answers clearly indicates that entrepreneurs aim to have better and better staff in the times of a limited availability of qualified employees. Meagre effectiveness of changes in the finance area, which scored 2.94, may be caused by a small number of conducted changes and relatively stable solutions in this area.

No.	Change type	0	1	2	3	4	5
1.	Product changes	18.92%	5.41%	5.41%	13.51%	48.65%	8.11%
2.	Changes in technology	16.22%	0.00%	8.11%	24.32%	43.24%	8.11%
3.	Organisational changes	2.70%	0.00%	8.11%	32.43%	43.24%	13.51%
4.	Process changes	13.51%	0.00%	10.81%	24.32%	45.95%	5.41%
5.	Change of the sales markets	13.51%	5.41%	21.62%	13.51%	35.14%	10.81%
6.	Changes in marketing activities including trade and sales	8.11%	10.81%	13.51%	16.22%	29.73%	18.92%
7.	Changes in the finance area	16.22%	10.81%	16.22%	21.62%	24.32%	8.11%
8.	Changes in the HR area	13.51%	13.51%	13.51%	13.51%	40.54%	5.41%

*Table 4: Evaluation of change effectiveness in individual areas (own work based on conducted research)*



*Table 5: Average evaluation of change effectiveness in individual areas (own work based on conducted research)*

Identification of the occurrence and way of measuring the introduced changes was one of essential areas of the research. Respondents were asked about the most frequent manner to measure change effectiveness in their enterprises. Results are presented in figure 2.

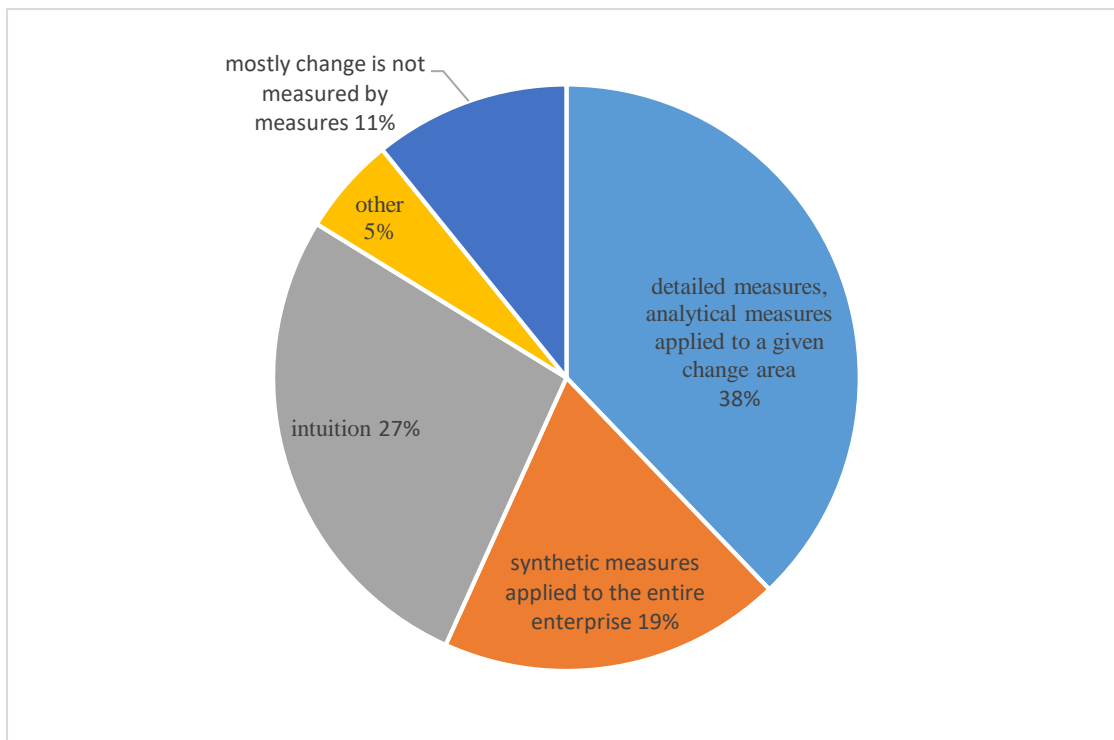


Figure 2: Change effectiveness evaluation methods (own work based on conducted research)

A little more than one third of respondents use detailed, analytical measures to measure changes in a given area. To be fair this is rather low as such indicators are the most reliable in terms of evaluating change results, especially when a comparison of indicators is made before and after the change. Less than 20% use synthetic measures applied to the entire enterprise. As already mentioned, both measures have their good and bad points. Eleven per cent of respondents admit that most often no measures are used to evaluate the change, while nearly one third trusts intuition when evaluating change. Altogether this makes 40%. This result should be considered as high. It indicates the necessity to look for methods and change effectiveness measures and adjust them to the needs of enterprises. In this respect scientific research and consulting play a significant role.

#### 4. CONCLUSION

Analyses carried out on the basis of research revealed main areas of changes introduced in big enterprises and indicated effectiveness evaluation methods from the perspective of managers. In all organisations change areas were identified in a similar manner. Usually they were classified under 7-8 areas clearly different from one another but of course interconnected. Therefore, this division is much more detailed than classification found in the literature. But there was no mention of changes in business strategies. This may result from a stable, strong position of the researched enterprises on their markets and most often great confidence in terms of plans for the coming years. Positive evaluation of effectiveness of conducted changes may also result from a very good economic situation and market position. Relatively smaller number of changes and lower evaluation of their progress and effectiveness in such areas as sales markets, marketing and finance may serve as a confirmation. Whereas a big number of changes and positively evaluated progress and effectiveness is observable in such areas as

organisational, process, technological and product changes. One may believe that the main change areas are properly selected and their dynamics and effectiveness give hope to strengthen and improve company's situation on a competitive market. Nevertheless, measurement of change effectiveness is still a very important issue. It is necessary to decidedly intensify actions and apply various reliable evaluation methods and techniques which should be adjusted to the change area and connections as well as internal and external consequences. If such measures are not taken, change management poses a huge risk.

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## CHANGES IN THE USE OF WEBSITES IN E-COMMERCE IN 2017 - 2018

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### **ABSTRACT**

*The main objective of this article is to identify changes with regard to factors which have a positive and negative influence on the possibilities of the use of e-commerce in Poland in 2017-2018. The findings contained in the study were based on the surveys conducted with the application of the CAWI method on a sample of individual, active Internet users. The structure of the work includes a presentation of the problem against the background of relevant literature output, methodological assumptions of the study, its findings, their interpretation and conclusions. The authors' contribution consists in the identification of factors affecting electronic business in recent years, specification and analysis of the changes, comparative analysis of the results of the study as well as the presentation of specific recommendations for web designers.*

**Keywords:** *determinants of the use of e-commerce, dynamics of e-commerce changes electronic commerce, mobile commerce, online shops*

### **1. INTRODUCTION**

The primary objective of this article is to analyse the dynamics of the use of websites by identifying the factors determining the possibilities of the development of e-commerce. It is a continuation of the studies carried out by the authors in previous years, the findings of which were published in their earlier work (Chmielarz, Parys, 2017a). The basic research questions which arise in this context are as follows: which groups of factors (components) and specific determinants in each group influence the shaping of relations between clients and electronic shops? to what extent, according to respondents, these elements impact the present state and future development of electronic commerce? what the dynamics of changes related to the factors affecting e-commerce have been in recent years? The Polish e-commerce market at present reaches the level of PLN 36-40 billion (Businessinsider, 2018). Nowadays electronic trade is a dynamically growing industry in the Polish economy. It is forecasted that by 2020 the value of this sector may further increase to 63 billion zlotys. According to the research carried out by PayU, 83% of Polish Internet users decide to buy goods on the Internet mainly due to lack of time constraints in terms of making purchases and no need to wait in a queue (Portalspożywczy, 2018). According to the data for 2017, more than half of Poles declare that they do shopping on the Internet. Gemius report shows that in 2017 as many as 54% of Polish customers made online purchases. This value constitutes 4 percentage points more than in 2016. In 2018, the situation was similar. The top positions in the ranking were taken by personalisation and the application of mobile technologies, and the application of artificial intelligence in the use of IT systems replaced the factor related to free deliveries. The scientific literature output concerning the subject-matter is quite extensive, and it presents the above-discussed problematics in detail. Due to the fact that the authors have carried out the relevant literature analysis in their earlier works, this paper will be of supplementary nature in relation to previous articles (Chmielarz Parys, 2017a).

The literature focusing on the determinants of the use and development of commerce also provides information that they can be divided into two groups, i.e. economic and technical factors. The economic determinants include the structure of the market, the presence of foreign capital, the role of international corporations and the activity of the state. The set of technical factors comprises Internet access, mobile commerce as well as payment services (Konopielko Ł., Wołoszyn M., Wytrębowski J., 2016). In the literature, one may also come across the approach where the examined determinants are included in the group described as “socio-economic factors”. They comprise factors such as: age, education, income, the size of the place of residence or gender (Szopiński, 2013). The factors determining the use of e-commerce may be divided into external and internal determinants. The most important external determinants, also referred to as exogenous, are those related to: psychological aspects (among others: motives, attitudes, perception, personality, habits, etc.), economic aspects (including price, income, products, advertising, etc.) as well as socio-cultural factors (including social group, family, etc.). There are also internal factors which are described as endogenous, i.e. connected directly with the consumers, such as their gender, education or age. In the publications on the subject, one may encounter a thesis that a large number of factors influencing consumers’ purchasing behaviour results from the fact that shopping behaviour cannot be fully predicted, and the decisions or responses are not in line with the majority principles. The same factor or a group of factors impacting the behaviour of one consumer may determine another person’s behaviour only to a limited degree (see: Raczynska, Wiśniewski, 2014). In the world literature, one can also find an approach consisting in examining success factors which determine the success of the company in the e-commerce market. The assumption in this context is that e-commerce, as a tool, is essentially a combination of a traditional model of sales and new technologies supporting the sale of material goods. Most frequently the studies include five determinants: the conversion rate – defined as a percentage of Internet users visiting an e-commerce website and engaging in transactions, the cost of purchase, the low average price of a product, costs of delivery and customer loyalty (Atkinson, 2018). The research problems are also considered from the perspective of critical risk factors and key success factors in e-commerce. The first group includes availability, efficiency, scalability and security. The latter comprises: a reliable presentation of the website’s elements, readability of the presented content, the usefulness of the website, its continuous improvement along with the service itself, namely, the delivery of the ordered products (E-Commerce, 2012). Another approach related to the issue of determinants in e-commerce use is associated with the attempt to define and establish e-consumer profile and his/her behaviour which determines the Internet use. The researchers have established a set of consumer characteristics, divided into groups, which are examined in the context of consumers’ propensity to specific activities on the Internet. The authors point to the reasons why consumers use the Internet, without a clear demarcation line as regards electronic commerce (Dąbrowski, 2015). The publications also point to the fact that in recent years, as a result of an increasing volume of products and services available on the Internet, there emerged a consumer of a new era, more and more frequently referred to as a digital consumer (Krzepicka, 2016). This type of consumer tends to use the most recent developments of technology, is independent, searches for information, emphasises his or her individuality, engages in market processes, collects, analyses and selects information. On the basis of ShoppingShow research examining the buying habits of Poles, several specific qualities have been identified which distinguish a digital consumer from a regular shopper. These particular characteristics include, among others, impatience and changeability, etc. (Gieracz, 2014). The qualities of the above described contemporary client may also be analysed as a determinant of the development of a specific market sector, e.g. consumer electronics (Szymański, 2016). More and more frequently, the modern client of electronics shops is a young person belonging to the so-called Generation Y.



Having free access to various sources of information, this new type of consumer is, on the one hand, resistant to information noise and more aware of the world in which he/she lives, on the other. This client belongs to the so-called network generation, the representatives of which could be identified based on a set of specific features (Frąckiewicz, 2011). The characteristics of these clients are determinants of their participation in e-commerce. The annual report presented by Gemius, in 2015 presents the determinants through the prism of factors, which firstly could persuade the non-buyers to make purchases on the Internet, and secondly, could motivate the existing online shoppers to make such purchases more frequently. Thus, in the first group, the most important factors are delivery, the cost of the transaction and the time needed to process and deliver the order. In the second group of clients who already buy goods on the Internet, more than half of the respondents declare that the factor which would motivate them to buy more and more frequently are lower costs of delivery. Thus, it appears that the same factor determines the decision to select a particular shop (Raport, 2015). The factors conditioning the development of e-commerce applications are also presented from the perspective of particular sectors. Even though the vast majority of studies concern the "traditional" e-commerce, i.e. the segment of the relations between the client and the company (B2C sector), there are also numerous studies analysing other sectors, e.g. the trade between companies (B2B) (Strzębicki, 2016).

## 2. METHODOLOGY

Based on the authors' own experience related to the findings of the survey questionnaire analysing electronic commerce with the use of the CAWI (Computer Associated Web Interview) method in March 2017 and in May 2018, an analysis was carried out in which applied their approach, consisting of the following stages: selection and justification of the test sample and the study sample; construction of a prototype of a survey concerning the factors influencing e-commerce available through internet browsers and mobile applications; substantive verification of the survey questions with the participation of a randomly selected test group of active users of e-commerce; construction of the final version of the survey questionnaire, placing and testing it on the servers; carrying out surveys among the potential users of e-commerce, the analysis and discussion of the findings and drawing conclusions based on the findings concerning the determinants of e-commerce and the perception of m-commerce in this context. The selection of the sample was not accidental, it belonged to the class of convenience samples, modified by the random selection of the groups of students. The test group consisted of students of the first year of MA studies of e-Business specialisation, following the completion of the project concerning the evaluation of the quality of websites. The surveys, both in its test and final form, were made available online, and the response rate did not exceed 90%, even though students are the social group which is particularly open to all kinds of innovations, and the representatives of the population which makes online purchases most frequently (Batorski 2015). A specific limitation of this choice, and simultaneously its greatest advantage was, among others, the expected high share of people having access to smartphones, laptops and desktop computers – not necessarily of the highest quality, but with a longer time of use. The distinction between the traditional, browser-based electronic commerce and mobile trade were not the devices which enabled making purchases in the shops, but the software running on them, i.e. access to websites via browsers or via applications for mobile devices. In the first study carried out in 2017, the survey was completed by 427 respondents. 381 study participants filled in the survey questionnaire in its full and correct form, which constitutes the share of 89.23% of respondents. In the second case, in 2018 – the survey was filled in by 496 individuals, out of which, by 373 participants completed it in its full form (75.20%). In 2018, among the respondents, there were 66.76% of women and 33.24% of men. The change in the gender structure (6.73% fewer women) was caused by the selection of a

larger number of groups studying management, where there are more male students in relation to the number of women. The average age of the respondent was 22-25 years, slightly higher than a year ago where the median was estimated at 22 years. This is the typical age of students of BA studies and first years of MA studies, who were asked to complete the survey. Nearly 95% of the respondents were in the age range of 18 - 25 years (two percentage points less than in 2017). Among the respondents, there were over 51% of non-working students, 48% of working students and few study participants were working professionals who were testing the subsequent versions of the survey along with the students. Over 52% of the survey participants stated that they come from cities with 500,000 residents (increase by 3%), over 26% from towns with fewer than 50,000 inhabitants (decrease by 1%), the remaining groups were similar as in the case of the results obtained last year. The simplicity of the survey did not cause many distortions during its completion, and many respondents (179 study participants) also filled in additional sections. Overall, the sample participating in the studies had a similar, but not identical, structure, due to the partial randomness of the study.

### 3. FINDINGS

The survey contained in total thirty-four substantive questions and demographical data concerning the respondents. It was divided into three parts: infrastructure of e-commerce, determinants influencing online shopping and comparison of e-commerce and m-commerce. The first group, including three questions, concerned the characteristics of the use of the Internet to make online purchases by a selected group of Internet users. This allowed assessing the reliability of their responses to the questions concerning determinants regarding the development of electronic commerce. When asked about the frequency of Internet use, 97.86% of the respondents replied that they use it a few times a day. The answers such as: at least once a day, at least once a week, a few times a month were marginal (in total 2.14%). As far as communication with the Internet is concerned, the share of people using mainly a smartphone has increased by 13.31%, and currently, it amounts to nearly 60% of users. On the other hand, the percentage of people using a combination of a laptop and a smartphone has decreased by over 5%, and at present, the share constitutes 26.01%. The percentage of people using only a laptop has dropped even further – 5.31%. Also, we may observe that the number of people using a desktop computer has been decreasing – in the last study, their share amounted to only 2.68%. Over half of the respondents (56.84%) are not only active Internet users, but they are also active clients of online shops. In this particular category, there has been an increase of 5.39%. Among them, 7.51% make purchases at least once a week, and 49.33% at least once a month. The share of clients who do online shopping very rarely amounts to 38.07%, which is a decrease of nearly 4%. The next group of questions concerned the underlying problem of the determinants, divided into a number of categories: economic, organisational, legal, security, socio-psychological, technical and technological groups. In the set of economic components, the first of the specified factors was the price of the device used to communicate with the Internet (smartphone, tablet, laptop, etc.). In the era of popularity and availability of smartphones, it turned out that the greatest number of responses related to the average 36.84% influence of the price of the device on the users' participation in electronic commerce. This latter tendency has not changed since last year. However, the number of views connected with the highest and high influence of the price of the device on electronic commerce has increased by 3.5%, which at present constitutes a nearly 29% share in all the opinions. The number of responses opting for no influence of the price of the device on participating in electronic trade has decreased slightly. A year before, in their comments, the surveyed students emphasised that the smartphone "is something you are supposed to have, regardless of the price". This year perhaps this has become less relevant. The costs related to using the Internet have been evaluated in a similar way. The only score which has increased significantly in relation to the previous year was the opinion pertaining to a small

influence of the price of the Internet on electronic commerce. The situation in the case of prices of goods and services available on the Internet was entirely different. Almost 70% of the respondents believe that the price of products has the highest or high influence on the popularity of online purchases. The share of these opinions fell within a year by about 7%. The next question, which was of complementary and verifying nature in relation to the previous one, was related to adding the cost of delivery to the price of a product or service. The greatest number of people – nearly 69% - still opted for its highest and high influence on the engagement in online purchases, even though the share has decreased by 6.69%. In the group of economic determinants, the aspects of reduced price of a product/service and the low cost of delivery, compared to a traditional shop, proved to be the most crucial factors from the clients' perspective. The respondents claim that the impact of the cost related to the Internet access on the electronic trade is the smallest. The next questions have been included in a group of organisational factors. It turned out that the highest and high influence has been indicated in the case of the evaluation of the fast and efficient delivery of online purchases. This opinion was expressed by nearly 85% of the study participants. Lack of influence of this factor is indicated by 14.48% of the respondents. A similar situation may be observed in the case of the developed payment system. The more payment options and the greater convenience and simplicity, the more willingly clients engage in online shopping. That is probably the reason why almost 84% of the survey participants believe that this factor influences the desire to buy online to the highest degree. The latter constitutes an increase of over 5% in relation to last year. Only 14% think that it impacts online trade to a medium degree. The remaining evaluations are of marginal importance. Interesting results have been obtained in the case of the evaluation of the influence of efficient and competent Internet service providers on the perception of electronic commerce. Despite the flow of time, a negative opinion concerning the quality of the services offered by Internet providers still prevails (Wielki, 2012). Perhaps this is the reason why the respondents assess the impact of lack of efficient and competent Internet services providers on the perception of e-commerce as high or very high (over 42%), and nearly one-third of survey participants estimate it as medium. The differences between the opinions from the studies carried out in 2017 and 2018 are small, and they do not exceed 2.20%. The impact of the poor quality of the internet service on the use of electronic commerce appears to be one of the crucial factors in this group of components. Nearly 65% of the respondents state that it has the highest influence, and only about 10% in total indicate a small or no effect of this determinant. There have been no significant changes in the abovementioned opinions in relation to the previous year. Generally, the study participants believe that the lack of efficient interaction with the clients (customer service) impacts the development of e-commerce. 54% of the students examined in the study think that it affects their participation in electronic trade to the highest or high degree. only over 15% think that it exerts small or no influence on the customers. The differences between the results of the research conducted in 2017 and 2018 are small, and they do not exceed 3%. Among the organisational factors, the most significant aspect was an efficient and fast delivery system (85% of indications). The lack of efficient and competent Internet services (only 43% of responses) appeared to be the least essential criterion in this set. The group of legal factors comprised only two questions. The first - was related to legal difficulties with regard to the delivery of some of the goods/services (e.g. customs, local regulations). The highest and high impact in this area was observed by over 38% of the respondents (2.5% fewer than last year). A large difference – nearly 12% appeared in the case of the opinions concerning a medium influence of this factor on the use of e-commerce. It took place at the expense of all other views; mainly (5.38%) of the responses related to the lack of such influence. The second question focused on the fact that legal regulations fall behind the pace of the development of new technologies. Over 65% of the respondents reckon that such influence is of small or medium importance, and only over 24% supported the response

connected with its high and highest impact. Thus, this is not a feature which is believed to be the most significant aspect in the case of using electronic trade, and relations between these views have not changed since last year. Within a group of legal factors, the most important aspects were legal difficulties in the delivery of some of the goods and services. The evaluation of the second factor – shortcomings with regard to the applied provisions regulating the sale of goods and services – was very different – from medium impact to none at all. Security-related factors influencing e-commerce were included in the next questions. The first one concerned the lack of transaction security on the Internet, with particular emphasis on the possibility of taking over or losing the data. The responses related to the highest and high influence of lack of security exceed 57% of the sample. In total, with the addition of the medium impact of this factor, the authors recorded 83% of the responses associated with the importance of this particular factor. The greatest increase, i.e. about 6% was noted in the case of the highest and high impact of this factor. The second research problem concerned the influence of the low level of protection of personal data during the use of e-commerce tools. The distribution of responses was almost identical: 56% of the respondents supported the response related to its highest and high impact and almost 20% indicated small or no influence of this factor. In total, the above-described findings appear to confirm the thesis related to the importance of the transaction security and personal data protection for the development of e-commerce. Over the last year, the rating related to the highest and high impact of this criterion on the electronic trade has increased by nearly 4%. The authors have also paid attention to the errors and shortcomings regarding the applied technological solutions enabling hacker attacks. Here, the security issue appears to be the most important and very important for nearly 50% of the respondents, similarly to last year. The indexes related to small or non-existent impact constituted half of the value – over 22%. Among the security issues, the most significant factor was lack of transaction security on the Internet. The aspects related to the poor level of personal data protection and technological shortcomings allowing hacker attacks seemed to be less important for the internet users. The influence of socio-psychological factors was analysed according to seven criteria. The first question concerned the inhibitions and barriers related to using new technologies. In this regard, nearly 40% of the survey participants supported the response related to their highest and high impact on electronic commerce. In relation to last year, there has been an increase of over 6%. It has taken place at the expense of the opinions connected with no impact of this factors on e-commerce. The share of such views has decreased by nearly 11% in the period of one year. Subsequently, the researchers have analysed the impact of the necessity to learn how to use the Internet and the devices used to access the Internet. The results are similar to the ones which were obtained last year. Over 38% of the opinions pointed to its highest and high influence on e-commerce, while nearly 30% informed about its small or no influence in this regard. In the last year, the opinion concerning lack of impact of this factors changed by nearly 14% to the benefit of the highest, high and medium influence, and has decreased by almost the same degree in the case of small and no influence. A different situation may be observed in the case of cultural barriers concerning the traditional ways of doing shopping, e.g. purchases of particular kinds of products via the Internet. Only nearly 27% of the sample claim that the impact may be the highest and high, and 42% of respondents perceive its effect as small or insignificant. Similarly to the earlier findings, these opinions are starting to change – last year, the share of the highest, high and medium influence have increased by 7%. The comparison of the results concerning the impact of lack of trust towards this form of shopping as well as no habit of online purchases produces interesting results. It is important to note that the impact of the first criterion is assessed as very high by over 50% of the sample, while the second one is seen as the aspect of crucial importance by nearly 34% of survey participants (a share which is 16% smaller). The issue of trust appears to be much more significant in this case than the fact of customers being used to this method of shopping.

This may result from the fact that in Poland in the 80s of the twentieth century there were no habits associated with the predecessor of online sales, i.e. telephone sales. Among the socio-psychological factors, the greatest role was played by the factors connected with the lack of trust and habits related to this form of sales. As far as the remaining criteria are concerned, the examination of cultural barriers associated with the tradition of sales brought about similar results. Other factors turned out to be rather insignificant. The verification of the test version of the survey has shown that the representatives of the population taking part in the research pay particular attention to technical and technological conditionings. This particular section of the survey comprised the greatest number of specific, detailed questions. Thus, 64.34% of the respondents believe that the poor quality and slow data transmission impacts the use of e-commerce in the highest and high degree. Only slightly more than 8% of survey participants do not perceive this as a problem. Last year, no significant changes with regard to the respondents' opinions (they did not exceed 3.2%) were indicated in the case of this question. In the case of shortcomings as regards technology causing problems in terms of internet services, the distribution of the opinions is rather equal. Nevertheless, the largest share of the opinions concerned the highest and high (46.38%) and medium (42.36%) impact of this factor on the use of e-commerce. This tendency to level the abovesaid opinion towards the average is based on many criteria – in this case, it is caused by a 3.5% increase of the number of responses related to the medium impact, and a nearly 3% drop of the share of the opinions concerning its highest and high influence on the use of electronic trade. The distribution of the opinions related to the highest and high (50.67%) and medium (33.78%) influence of the well-designed and user-friendly interface and convenience of online shopping on electronic commerce. The responses related to the highest and high impact of this factor are more and more prevalent: since last year the share has increased by 5.26%, mainly at the expense of opinions associated with the average influence of this factor. Along with the years of using e-commerce, the users' expectations with regard to the quality of the websites they browse and visit are increasing. The rising awareness among the Internet users and the clients of the impact of technical conditions on online shopping is also expressed with regard to the next factor. The influence of the "crowd" (congestion) and traffic on the Internet on the use of e-commerce is viewed as the highest and high (37.80%), medium (30.03%) or small (25.74%). The share of responses related to the highest and high influence of this factor has increased by over 11% in the course of last year. A similar situation has occurred in the case of the question concerning frequent changes of visualisation of websites, forcing the users to alter their habits associated with using it. A small influence was indicated by over 35% of the respondents, average by nearly 29%. Frequently, the users are accustomed to using a particular website, and they are not discouraged by the changes associated with its modernisation. The technological and technical determinants were very important for the respondents. Among them, the prevailing concern was related to the poor quality of Internet connection, slow data transmission as well as the crowd and traffic on the Internet. The remaining factors were of smaller importance as regards the use of e-commerce, according to the respondents. The last of the survey queries concerned the relations between traditional e-commerce and a m-commerce one based on mobile applications. The first question was related to the lack of mobile versions of the online shops dedicated to mobile devices. Nearly 39% of the study participants assessed this impact as the highest or high, nearly 32% as medium, and almost 24% as small. During the last year, there has been an almost 4.5% change in plus towards the opinions related to the highest and high impact of this factor, mainly at the expense of medium influence of the above-described phenomenon on e-commerce (6.42%). This is not equivalent to the share of mobile devices used to access the Internet. The changes related to the features such as a non-functional or too small screen of the smartphone used for m-commerce have taken a different direction. The largest number of people expressed opinions concerning its small or medium influence (about 31% each).

The highest and high impact has reached the level of 27% of the responses, and it has a downward tendency (a fall of over 2% within a year). The greatest increase in the share of responses has taken place in the group of the opinions concerning its small impact on the electronic trade, and it amounted to over 9.5%. It appears that the average screen size of 5.6 inches is sufficient for the majority of the users, and if not, it is balanced by the convenience connected with carrying a small device. The last question concerned a seemingly insignificant aspect, i.e. a short battery life of the smartphone. However, interestingly, this feature has been assessed by as many as 36% of the respondents as having the highest and high impact on the functioning of electronic commerce. Only 24% of survey participants have estimated the influence of this criterion to be small, and 19% perceived it as a factor having no impact on electronic trade. The opinions have not changed significantly (below 2.1%) over the course of last year.

#### 4. CONCLUSION

The findings presented above allow the authors to formulate the following conclusions: taking into consideration the maximum average values (out of all specific determinants) obtained in each criteria group, the first place among the average percentages of the responses in the categories of: the highest and high impact on electronic commerce was obtained by the group of organisational criteria – 65.95%, (10% more than last year, 20% more than the average last year) as well as technical and security criteria – 53.89% (nearly 8% more than the average value in this category); medium influence was indicated in the case of economic determinants – 49.15%, over 16% above the average, last year these were technical and technological factors – 32.84%; small impact – legal aspects – 22.79% (previously – 25.33%); no influence – socio-psychological factors – 11.06% (previously 12.71%). If we only considered these indicators, then the decisive role in terms of electronic commerce would have to be assigned to organizational and security factors, and immediately after to economic factors. Last year, the first position was taken by the security criteria, the second position was occupied by organizational determinants. Taking into account the minimum average values (out of all specific determinants) obtained in each group of criteria, the first place among average percentage responses would be indicated as follows: categories with the highest and high impact – legal factors – 31.23% (previously socio-psychological determinants – 24.56%); medium – organisational 23.63% (previously 22.84%); low – organisational 7.24% (previously 7.99%); no influence – security factors 3.84% (previously organisational aspects – 1.36%). If we considered only minimum average values for the groups of determinants, then the respondents would attach the smallest value to legal or organisational factors. The ranking of specific factors in particular groups points to other preferences. The results of the evaluation are as follows: efficient and fast delivery systems (no changes compared to previous year – 85.00%) – organisational determinants; low price (including also the cost of delivery) in online shops in comparison to the traditional, brick-and-mortar shops (currently 68.90%, 75.59% previous year) – economic determinants; no mobile or WiFi network coverage in selected areas (at present 68.10%, previous year – 68.77%) – technical and technological determinants; no transaction security (possibility of taking over/losing the data) on the Internet (currently 57.37%, previous year – 51.44%) – security determinants; resistance and barriers related to using new technologies – 56.03%, a decrease of 2% in relation to previous year – socio-psychological factors; legal difficulties in the delivery of some goods and services – 38.07, a decrease of 1.5% – legal determinants. The most significant responses are located within the set of organizational determinants, in the three remaining groups (economic, technical and technological as well as security aspects). There are no indications for the group of legal and socio-psychological factors. The research so far (Chmielarz W., Parys T., 2017b) has indicated the domination of the technical and technological factors as well as economic aspects in this

regard. The factor of electronic security appears to be less and less important for the clients of e-commerce, which can be observed in comparison with the results received last year. The set of this year's determinants may become an essential indication for analysts and software designers, making them aware of the factors they should take into consideration when constructing websites. However, for the purposes of such projects, it is recommended to take a more comprehensive view of particular website components. It is important to note that the study carried out by the authors also signals specific mentality changes occurring in the society, as compared to last year's findings. It emerges that the respondents attach less importance to the security aspects of trade, also in the case of mobile purchases (Chmielarz W., Parys T., 2017c). Further research should, therefore, help to use the obtained findings in the process of designing and creating online shops. Another research problem which is worth considering in this context is the issue related to the factors determining the use of electronic commerce for both the traditional and mobile application access, which is marginal in the current study. The third issue to examine are the differences between the determinants of traditional trade via online shops and online e-commerce platforms such as for example allegro or e-bay. The next cycle of this study should be conducted next year, and it should include the analyses of the changes taking place in the course of the last three years.

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