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Słowo wstępne

Konstrukcja 32. numeru „Zeszytów Naukowych Politechniki Częstochowskiej Zarządzanie”, tok wywodów, argumentowania i rozważań, odwoływanie się do źródeł w literaturze krajowej i zagranicznej dowodzą dokonania rozległych i dogłębnych studiów, których wynikami Autorzy podzielili się w poszczególnych 30 artykułach, tematycznie zróżnicowanych oraz przedstawiających różne perspektywy i podejścia badawcze charakterystyczne dla poszczególnych dziedzin wiedzy, zarządzania, ekonomii i społeczeństwa. Warstwa merytoryczna każdego z zamieszczonych tekstów stanowi wartościowe ujęcie zarówno teoretyczne, jak i poznawczo-empiryczne, co jest efektem pogłębionej analizy zróżnicowanych abstraktów myślowych oraz związków między nimi, a także ich wykorzystania w badaniach empirycznych. Wnioski, jakie sformułowane zostały w konkluzji poszczególnych artykułów, są niezwykle cenne i inspirujące poznawczo, metodycznie i badawczo.

Numer 32. „Zeszytów Naukowych Politechniki Częstochowskiej. Zarządzanie” wpisuje się bardzo dobrze w katalog literatury poświęconej trzem wymiarom ludzkiego życia i działalności. Wszystkie te wymiary mają na celu dostosowanie społeczeństwa, aby mogło rozwijać gospodarkę, generować wiedzę, podejmować decyzje biznesowe i tworzyć nowe technologie. Dlatego potrzebna jest dyskusja na temat takich kierunków rozwoju i wykorzystania technologii, wiedzy, struktur zarządczych i zasobów finansowych, które będą chronić i wspierać przestrzeń społeczną w sposób pośredni czy bezpośredni. Treści zawarte w tym czasopiśmie stanowią idealne powiązanie teorii i praktyki – kiedy jedna służy drugiej, korzystając zarazem z wzajemnego dorobku. Można nawet uznać, że niniejszy „Zeszyt Naukowy” tworzy podwaliny dla systemowego myślenia o każdej dyscyplinie naukowej. Wyrażamy przekonanie, iż numer 32. „Zeszytów Naukowych Politechniki Częstochowskiej. Zarządzanie” spotka się z zainteresowaniem szerokiego grona odbiorców.

Redakcja

Preface

The structure of the 32nd issue of "The Scientific Journal of Czestochowa University of Technology. Management", the line of reasoning, arguments and considerations, as well as references to sources in domestic and foreign literature prove the achievements of extensive and in-depth studies, the results of which the authors divided into individual 30 articles, thematically diverse and presenting various perspectives and research approaches characteristic of individual fields of knowledge, management, economics and society. The substantive layer of each of the included texts is both a theoretically as well as cognitively-empirically valuable approach, which is the effect of an in-depth analysis of diverse abstracts of thought and relationships between them, as well as their use in empirical research. The conclusions which were formulated in particular articles are extremely valuable as well as cognitively, methodically and scientifically inspiring.

The 32nd issue of "The Scientific Journal of Czestochowa University of Technology. Management" fits very well in the catalogue of literature devoted to the three dimensions of human life and activity. All these dimensions are aimed at adapting society so that it can develop the economy, generate knowledge, make business decisions and create new technologies. Therefore, there is a need for discussion on such directions of development and the use of technology, knowledge, management structures and financial resources that will protect and support the social space in a direct or indirect way. The content of this journal is an ideal link between theory and practice – when one serves the other, while enjoying mutual achievements. It can even be acknowledged that this "Scientific Journal" forms the foundations for systemic thinking about every scientific discipline. We believe that the 32nd issue of "The Scientific Journal of Czestochowa University of Technology. Management" will meet the interest of a wide audience.

Editorial board

PARADIGMS OF MANAGEMENT OF INNOVATIVENESS IN CONCEPTS OF MARIA ROMANOWSKA, DOCTOR HONORIS CAUSA OF THE CZĘSTOCHOWA UNIVERSITY OF TECHNOLOGY

Maria Nowicka-Skowron

Czestochowa University of Technology
Faculty of Management



Professor Maria Romanowska is standing in the foreground holding the certificate

Abstract: The aim of the herein paper is to present the problems of innovativeness in the management of an enterprise in terms of the concept of Professor Maria Romanowska - Doctor Honoris Causa of the Czestochowa University of Technology. In this paper, the conditioning of the implementation of innovations has been presented. In particular, the author at hand has displayed innovativeness with reference to the sectors of high and low technologies. Innovativeness has also been viewed in an international context. Furthermore, the concepts of other authors in the field of innovativeness have been indicated.

Keywords: Management of innovations, innovativeness of enterprises

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Organizational procedures

Innovativeness in management should be acknowledged as a very significant problem of economic theory and practice. The theoretical concepts however, indicate substantial differentiation. In order to illustrate this problem in the herein paper, the views of a multitude of authors have been presented by first and foremost displaying the scientific output of Prof. dr hab. Maria Romanowska Doctor Honoris Causa of the Czestochowa University of Technology. Professor Maria Romanowska was issued with the title of Doctor Honoris Causa on 27 June 2018. The process of issuing the title of Doctor Honoris Causa was participated in by the following:

Supervisor:

Prof. dr hab. Maria Nowicka-Skowron Czestochowa University of Technology

Reviewers:

Prof. dr hab. Ewa Bojar, Lublin University of Technology

Prof. dr hab. Andrzej Kaleta, Wrocław University of Economics.

Management of innovations in context of lecture of Professor Maria Romanowska

The starting point for deliberations on the problematic issue of innovativeness in the management of the economy and enterprises was the approval of the application formulated by Professor Maria Romanowska, which was worded as follows: "Poland belongs to the group of lowly innovative countries, while the innovativeness of Polish enterprises (excluding small enterprises) is average and differentiated, yet particularly in the group of larger enterprises there is a multitude of companies which are deserving of the name of innovators" (Romanowska 2015, p. 5). By continuing the notion of innovativeness, it is claimed that the requirements of competitiveness have led to the fact that activities of a pro-innovative nature are essential in enterprises. The substantive account is associated with the lecture for the ceremony of the Doctor Honoris Causa, during the course of which Professor Maria Romanowska put forward the following question: Do enterprises of the sectors of high technologies apply different strategies than the enterprises from the remaining sectors?

In providing the answer to this question, she presented the structure of the share of innovatively active enterprises in sectors of high and low technologies (*Table 1*).

Table 1. Share of enterprises that are active in an innovative sense in sectors of high and low level technologies

	Percentage share of innovatively active enterprises in the group of "industrial processing"
High technologies	47.5
Medium-high technologies	36.8
Medium-low technologies	20.0
Low technologies	14.3

Source: Działahol d innowacyjno produkcyjnych w latach 2014-2016, „Analizy Statystyczne”, GUS, Warszawa 2017, p. 22.

Strategies of enterprises in sectors of high technologies 5

Lecture of Professor Maria Romanowska on 27 June 2018.

The table above indicates that almost half of the analysed enterprises are enumerated among the sector of high technologies, while approximately 37% are enterprises representing medium-high technologies. The group of medium-low and low technologies represented only 34.3% of enterprises. Likewise, the structure of enterprises investing in R&D in the sectors of high and low technologies is interesting (*Table 2*).

Table 2. Share of enterprises investing in R&D activities in sectors of high and low technologies

Sector	Percentage share of enterprises that incurred internal outlays on R&D work in the group of "industrial processing"
High technologies	24.4
Medium-high technologies	15.5
Medium-low technologies	5.8
Low technologies	2.0

Source: Nauka i technika w 2015 r., „Informacje i Opracowania Statystyczne”, GUS, Warszawa 2016, p. 119.

Strategies of enterprises in sectors of high technologies 6

Lecture of Professor Maria Romanowska on 27 June 2018.

On the basis of the afore-mentioned data, it is possible to state that the level of interest of enterprises in investing in research and development activities is at a medium level as only 50% of business entities invested in this form. In this context, the ranking of the innovativeness of the EU countries is significant (*Figure 1*).

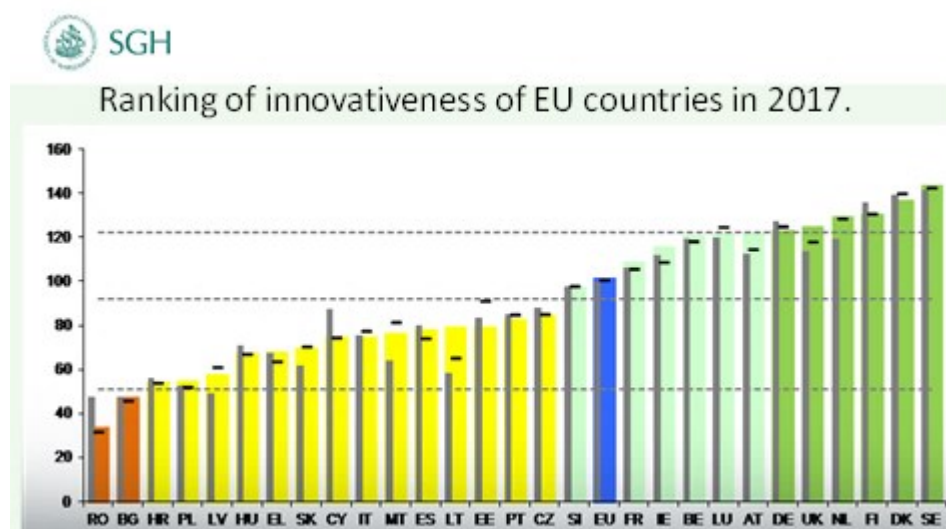


Figure 1. Ranking of innovativeness of EU countries in 2017

Lecture of Professor Maria Romanowska on 27 June 2018.

The ranking indicates that in terms of innovativeness, Poland occupies a distant 25th position among the EU countries. On the basis of data, it is thus necessary to state that the strategies of innovativeness are largely ineffective in Polish innovative enterprises.

On the basis of the results of research conducted by Professor M. Romanowska, the following conclusion was formulated:

Enterprises from sectors of high technologies implement related diversification more frequently than those of other sectors. Furthermore, these enterprises are characterized by a higher level of internationalization, as well as a quality advantage that is based on innovations. Likewise, the greater tendency of enterprises from sectors of high technologies to cooperate with other organizations is visible.

Paradigms in management of innovativeness in theories of science of management

The context of innovativeness justifies the reference to the concept of a multitude of authors in this area. The essence of innovativeness is first and foremost perceived from the viewpoint of technologies and the type of innovativeness.

G. Gierszewska in undertaking the issue of innovativeness relates to the aspects of contemporary technologies, while concentrating on the information systems within the framework of which the knowledge that is essential for strategic management is passed on. The essence of information systems should fulfil "...the function of the communication system of the organization, which combines the elements of the system of management as a whole." In referring to the information technologies, the author at hand emphasizes that their aim is to create new forms of work that determine challenges for strategic management (Gierszewska 2017, p. 236). In the problems of innovativeness of Polish industrial enterprises, K. Krzakiewicz and Sz. Cyfert indicate the fact that ... "a large proportion of the 'new' innovations are of an imitative nature" (Gierszewska 2017, p. 236). The authors in question also put forward the question relating to the reasons for leaving a large section of the Polish market with the aim of adapting imitative strategies. In answering the afore-mentioned question, the authors state that within the framework of the commercial potential in the possession of the Polish imitator, there are no enterprises on the market from countries of a high level of innovativeness. Furthermore, effective imitation ensures domestic goods are substitutes for imported products (Krzakiewicz, Cyfert 2017, p. 226). With reference to the previous research conducted on the basis of work by the Central Statistical Office entitled 'Innovative activity of enterprises' executed within the framework of the program of the Community Innovation Survey, it is possible to bring this down to the general conclusion formulated by Prof. M. Romanowska, which is as follows: "Poland belongs to the group of lowly innovative countries, albeit the level of innovativeness of Polish enterprises (excluding small enterprises) is average and differentiated, yet particularly in the group of larger enterprises there is a multitude of other companies that are deserving of the name of innovators" (Romanowska 2015, p. 5).

The evaluation of the level of innovativeness of Polish enterprises is the result of the fact that it is necessary to search for the methods/activities whose effect shall be the enhancement of innovative activity (Nowicka-Skowron, Krawczyk-Sokołowska, Mesjasz-Lech 2017, p. 270).

This area however, requires the undertaking of strategic challenges by Polish enterprises in terms of the social responsibility regarding the integration with organizations responsible for the innovativeness of the economy (Brzeziński 2016, p. 16, 17).

Innovativeness is also subject to analysis in the context of the resource theory according to which an enterprise is defined by a set of resources and skills. An approach of this type indicates the necessity of internal and external integration with the aim of ensuring the growth of efficiency and competitiveness. Competitiveness is the basis for the strategic analysis of an enterprise, in which the resources may be decisive in terms of the success of the particular organization. However, this success has its basis in the form of the resources and competences that first and foremost lead to innovations. Competences are perceived to be of key significance in terms of the competitiveness of an enterprise. By correctly identifying the key competences, the enterprise at hand is inspired to provide the

client with the greatest benefits. An enterprise should undertake activities that have the greatest impact and which shall in the future fulfil the needs and expectations of clients as effectively as possible. It is essential to emphasize the importance of this issue, particularly in terms of enterprises that are technologically sensitive, in which success is determined by innovativeness (Nowodziński 2013, pp. 98-99). The problem of success particularly emerges in the marketing aspects as “business design is thus a comprehensive design task, requiring several design disciplines to make a business successful. And in many cases business design is a collaborative act between stakeholders, a discursive enacting of business artefacts in a complex environment” (Junginger, Faust 2016).

The success of an enterprise is, in the vast majority of cases, the consequence of the innovativeness of employees and business entities, while also the indication of the paradigms of management.

The emphasis of the role of information systems in terms of management leads to the adoption of the concept, according to which the creation and implementation of innovations directly translates to the competitive advantage of the enterprise at hand (Diagram, p. 103).

Environment	Availing of MIS
<ul style="list-style-type: none"> - trends, fashion - strength of competition in sector - clients - suppliers and partners - competitors 	<ul style="list-style-type: none"> - systems of monitoring the environs of enterprise - BI systems - Big Data technologies - CRM - SCM - Web 2.0

Opportunities and risk

Innovative process					
Ideas	Conceptualization	Development work	Testing	Implementation	Innovations
<ul style="list-style-type: none"> Source of ideas - employees - R&D department - clients - e-clients - prosumenci 		<ul style="list-style-type: none"> Workplace: - R&D department - platforms of cooperation with e-clients - platforms of crowdfunding 	<ul style="list-style-type: none"> - experts - clients - prosumers 		<ul style="list-style-type: none"> - business models - products - services - processes - management - customer service

Possibilities and restrictions

Enterprise	Availing of MIS
<ul style="list-style-type: none"> - skills and resources - financial obligations - digital competences of managers and employees - priorities of firm 	<ul style="list-style-type: none"> - integrated IT systems of management - Web 2.0 technologies - mobile technologies - systems of supporting creativity

Figure 2. Availing of MIS in process of creating innovations

Source: (Jelonek 2018, pp. 102-104)

The innovative process is influenced by the environment and the potential to adapt innovations to the opportunities and risks at hand, while also the possibilities and restrictions. In the process of innovations, the significant position of e-clients and prosumers in terms of the strategies of enterprises was indicated (Jelonek 2018, pp. 102-104). Thus, it is possible to assume that the innovative nature of information systems is a significant paradigm of management in the theory and practice of the science of management.

The technological conditioning of innovative activities, particularly information activities is the result of the potential for the creation of profit for the enterprise at hand. In this situation, this first and foremost relates to IT enterprises such as the following: Intel, Apple, Microsoft (Kościelniak, Skowron-Grabowska, Grabara 2017, p. 31).

Innovations are also reflected in terms of network ties, which facilitate the creation of the models of coopetition that directly influence the theory and practice of management (Jelonek 2017, pp. 77-86).

A network of innovations is filled with organizations functioning without borders in a borderless global market. In the structure of an organization without borders, the borders are removed both from a vertical and horizontal viewpoint. These changes have led to the appearance and functioning of an enterprise in accordance with the non-hierarchical model, while their result has become the phenomenon known as the “technological tsunami” which is occurring all over the world. The source of change has also been the consequence of downsizing, which occurred during the crisis of the 1980s. In that period, enterprises that pursued the limitation of the number of levels of management conducted a policy of simplification of the organizational structures. Despite the ebbing of business collapses, no changes were implemented. Their survival was the result of the paradigm of management, which is identified with the fact that “[...] leaner and flatter constructions facilitate fact reactions to the business environment” (Hejduk 2016, p. 35).

The aspect of the paradigm is also undertaken in the context of downsizing, or in other words, the reduction of the scope of activities with relation to organizational units. In this area, the employment of workers is indicated as a consequence of changing the methods of working. The afore-mentioned changes are first and foremost the result of implementing modern IT technologies, while also new ways of interpersonal communication of an internet nature. Hence, it is justifiable to underline the role of innovation models in the process of downsizing, which determine the achievement of effects on the part of the enterprise at hand.

In empirical research, the normative theory created avails of the measurement of reality, which leads to generalizations as to the cause and effect nature. In accordance with the aforesaid dependencies, the theory of breakthrough innovations has been worked out, which repeatedly indicate worse parameters than the features of the hitherto products sold on the market, yet their dominance in terms of supplies is realistic due to the consumer demand (Czakon 2017, p. 145).

In the context of breakthrough technologies and innovations, it is necessary to indicate the strategic threats for enterprises – the competitors in their sectors.

Threats of this nature relate to both the entities availing of the hitherto technologies, as well as those that are the authors of the technological breakthrough. If the organizations, as the owners of the breakthrough technologies, have not adopted the appropriate strategies of implementation and sale of the new solutions, they are unable to achieve market success. Hence, it is also justifiable to put forward the viewpoint, according to which, ... “the key problem of all the participants of a sector in the conditions of a market breakthrough generated by a new technology is the mastery of the skills of predicting and following changes in the sector and the appropriate strategic reaction” (Romanowska 2017). In terms of innovative activities, the organizational conditioning is indicated, which includes the following:

- time factor,
- evaluation of the work of a manager according to single-stage criteria, while the clarity and stability of the principles of evaluation favours innovative behaviour,
- conducting the evaluation of a manager on the basis of the balance of his/her activities has an impact on the tendency to take risks, including risks in the area of innovations,
- creating the vibe of support for managers on the part of their superiors in situations of the occurrence of conflict as a result of the implementation of innovations,
- ensuring the appropriate pro-innovative conditions with the occurrence of variability and unpredictability.

The aforesaid conditioning was the subject matter of empirical research of the group of managerial staff in small and medium-sized industrial, trading and service providing enterprises. Furthermore, this also included the research conducted in healthcare entities, as well as judiciary administration. The research period ranges from 2012 to 2016.

Generally speaking, on the basis of the results of research the following conclusions were formulated in the sphere of the organizational conditioning of innovativeness (Rutka, Czerska 2017, p. 452):

- almost 60% of the managerial staff claim that they have sufficient time at their disposal for the optimal solution of problems,
- 66% indicate the conformance with the principles of unity among the management in enterprises, whereas 60% of managers in healthcare organizations and 71% of managers in judicial administration, in which the afore-mentioned conditioning has a positive impact on innovative activities,
- the balancing nature of the work of a manager results from the commonly applied principles in enterprises (78%), as well as those prevalent in healthcare entities (68%), in judicial administration (60%), in which the results indicate the pro-innovative attitudes of the managerial staff,
- 70% of those analysed indicated the process of supporting the manager in intricate situations, which favours the implementation of innovations,
- the occurrence of a high level of variability and unpredictability of the conditions in the area of managing encourages the staff to initiate innovative

undertakings, while the staff of the healthcare enterprises and organizations confirmed the occurrence of such conditions at the level of 50%, whereas in judicial administration such a response was indicated by merely 35% of respondents.

By referring to the afore-mentioned results of the research, it is necessary to emphasize that the business activities of enterprises indicates the highest level of risk, followed by the healthcare entities. Judicial administration is the area of the lowest risk, but also innovative potential (Rutka, Czerska 2017, pp. 456-458).

The scientific-didactic, as well as organizational activities of Professor Maria Romanowska should be acknowledged to be outstanding, full of creative passion, while also characterized by an enormous level of engagement and aid for academic employees and students. Each publication of Professor Maria Romanowska is a set of axioms and paradigms of management. Her attitude towards employees is extremely valuable and inspiring. It is necessary to emphasize her prevalent position in the sphere of rationalism and empiricism in terms of research and scientific effects. Professor Maria Romanowska is distinguishable by her scientific passion, very high level of propriety, while also the skill of building and developing research teams, openness to new scientific concepts, as well as the creation of new theories of organization, management and strategies (Nowicka-Skowron 2018).

The problematic issues of innovativeness in terms of managing an enterprise requires the management staff to become involved in research and development work. The stakeholders of enterprises should avail of the various forms of innovative support with the aim of improving the competitive position of business entities.

Conclusions

The scientific-didactic, as well as organizational activities of Professor Maria Romanowska should be acknowledged as outstanding, while also full of creative passion and characterized by a huge level of involvement and assistance displayed towards academic employees and students. Each publication of Professor Maria Romanowska is a set of axioms and paradigms of management. Her attitude towards employees is exceedingly worthy and inspiring. It is essential to emphasize the prevalent position in the sphere of rationalism and empiricism in terms of research and scientific effects. Professor Maria Romanowska is distinguishable for her scientific passion, a very high level of propriety, the skill of building and developing research teams, openness to new scientific concepts, while also creating new theories of organization, management and strategies (Nowicka-Skowron 2018).

In the opinion of Prof. dr. hab. Ewa Bojar – the reviewer of the proceedings of granting the title of Doctor Honoris Causa, Professor Maria Romanowska is “an outstanding scholar – a wise person who is noble and friendly towards people of science and those practicing science at the highest level. By demanding so much from herself, she sets an example that success is attained by the talent possessed,

individual and team work, while also enormous creative engagement” (Bojar 2018). The second reviewer – Prof. dr. hab. Andrzej Kaleta states that “Prof. dr. hab. Maria Romanowska is without doubt one of the greatest and unquestionable authorities in the Polish environment of the science of management. Her achievements are exceptionally significant. They create the authority and widespread acknowledgement of Professor Maria Romanowska in the environment of Polish science. The particular position of Professor Maria Romanowska, apart from substantive aspects, is aided and abetted by her personality traits. Professor Maria Romanowska is a person who is widely respected and appreciated, while also liked in the academic environment, which is not without significance in terms of the evaluation of the position of a scientist (Kaleta 2018). In summing up the creative-scientific, as well as didactic and organizational engagement of Professor Maria Romanowska, it is important to appreciate her huge scientific output in each of its areas. The outstanding achievement has become the basis for granting the title of Doctor Honoris Causa of the Czestochowa University of Technology to Professor Maria Romanowska.

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PARADYMATY ZARZĄDZANIA INNOWACYJNOŚCIĄ W KONCEPCJACH MARII ROMANOWSKIEJ – DOKTORA HONORIS CAUSA POLITECHNIKI CZĘSTOCHOWSKIEJ

Streszczenie: Celem artykułu jest zaprezentowanie problemów innowacyjności w zarządzaniu przedsiębiorstwem w aspekcie koncepcji Profesor Marii Romanowskiej - Doktora Honoris Causa Politechniki Częstochowskiej. W opracowaniu przedstawiono uwarunkowania wdrażania innowacji. Szczególnie Autorka wyeksponowała innowacyjność w odniesieniu do sektorów wysokiej i niskiej techniki. Innowacyjność rozpatrywano także w kontekście międzynarodowym. Wskazano ponadto na koncepcje innych autorów w zakresie innowacyjności.

Słowa kluczowe: zarządzanie innowacjami, innowacyjność przedsiębiorstw

Paper translation: Patrick Curran



APPLICATION OF LCA ENVIRONMENTAL MANAGEMENT TECHNIQUE IN DESIGN OF TECHNOLOGICAL INNOVATIONS

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Abstract: In the sustainable development model, environmental protection is closely related to economics and politics. The changes in economics are much faster than the changes in legislation. Economic, political and environmental protection elements should constitute one cohesive, efficient system to effectively respect sustainable principles. Compliance with the requirements of environmental quality and sustainable development can be achieved by maintaining the highest quality of the environment, while minimizing the use of natural resources and environmental threats by eco-designing new technological solutions. The attitude to the natural environment resulting from the concept of sustainable development is very diverse, but usually there are two views. The first view is related to sophisticated scientific theories and tries to show the consequences of our modern industrial activity. The second view refers to moral values such as responsibility for the earth, future generations or nature. LCA (Ecological Life Cycle Assessment) is particularly important in shaping the environmental policy used in the evaluation of innovative solutions such as the re-use of polymer waste for the production of flocculants and superplasticizers. The aim of the research is to evaluate the production technology of a new generation of polymers. The LCA environmental management technique was used to evaluate the new products, which allowed choice of the right solution that could reduce the negative environmental impact of new products obtained from polymer waste.

Keywords: sustainable development, environmental management, LCA, polymer waste, newly synthesized polymers

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Introduction

The progress of science and technology raises the quality of life, but through new technologies also leads excessive exploitation and depletion of natural resources, disasters, as well as ecological and social catastrophes. Economic growth and the development of civilization is limited to the future needs of the growing world population through the idea of sustainable development and it is a conscious attempt to avoid self-destruction and maintain the natural environment in a proper state with consciously controlled progress of civilization.

Sustainable development ensures harmony on three levels: social, economic and ecological (Pabian 2012, p. 7). When considering the economic aspect, we mean an entrepreneur running a business that uses natural resources and emits pollution to the environment. The activity of entrepreneurs is primarily focused on financial

profits, while they do not take into account the negative effects of their operations. This is a typical model of the economist and social attitude of the 20th century. The next century is aimed at implementing the principles of sustainable development and drawing the public's attention to the ecological aspects (Pabian 2017, p. 125). First and foremost, local communities are looking for development that is compatible with nature, which will have a minimal impact on our planet and its natural resources. Current social attitudes should change towards eco-development. The development of civilization has meant that humanity needed and still needs increasingly more resources from the natural environment, moreover, it largely uses non-renewable resources such as lignite, bituminous coal or crude oil. The progress of science and technology has led to the development of various industries causing noise, emissions of harmful compounds to the atmosphere, contributing to depletion of the ozone layer or the increase in temperature on the globe. Visible climatic changes have highlighted problems related to environmental protection and the use of renewable sources, e.g. solar energy or wind. The increasing climate changes have prompted many people to study, analyze and develop a global action plan (Brown, Flavin 2000, s. 5).

The breakthrough event was the announcement in 1969 of the UN Secretary General's report - Sith U Thant, entitled "Man and his environment". The report covers issues related to: the destruction of arable land, reduction of open areas, unplanned development of urban areas, irreversible extinction of many forms of plant and animal life, environmental pollution as well as propagation of the protection of environmental elements, e.g. water, soil, air. From that event, awareness about the major threats to civilization began to grow. Sithu U Thant referred to many countries due to their large scale environmental problems and called on countries to rationally use the Earth's resources, and above all, to protect ecosystems. The UN Secretary did not only convince us that the joint action of all states can improve the conditions on our planet, but also for the first time raised the global problem of environmental protection in the international arena and initiated the creation of an ecological movement.

In the years 1984-1987 Gro Harlem Brundtland was the chairman of the UN commission, who in one of his reports presented the idea of sustainable development. The Commission developed the concept of a social program and sustainable development, and the posed thesis was: "Stable development means development that meets the current needs without depriving future generations of the ability to meet their needs". Sustainable development ensures harmony on three levels: social, economic, ecological, and none of which should negatively affect the other. Sustainable development ensures such activities that enable the satisfaction of basic human needs, through the rational use of existing natural resources. The exploitation of natural assets must take place in such a way that future generations can also use them. The challenges of sustainable development can be achieved by integrating environmental, economic and social policies (Seroka-Stolka et al. 2017, p. 116; Seroka-Stolka 2012, p. 125).

The ideas and assumptions of sustainable development were adopted by international society, at the "Earth Summit" in Rio de Janeiro, which took place in

1992 (Rio declaration, 1992). The "27 Principles of Sustainable Development" constituting a whole and complementing each other and covering the issue of the right of living beings to a healthy and creative life in harmony with nature, reduction and elimination of unsustainable systems of production or consumption and peace, development and environmental protection.

At the "Earth Summit", a second document entitled "Global Action Program - Agenda 21" was also adopted, which presents the method of developing and implementing sustainable development programs in the perspective of the 21st century (Agenda 21). The document contains 40 chapters dedicated to saving the environment on our planet. The main issues are social and economic, strengthening the role of social groups and organizations, and in order to ensure sustainable development, protection as well as management of natural resources. The development of Agenda 21s and conferences resulted in the establishment of government committees for sustainable development and the establishment of local Agenda 21s, which are a very beneficial element of development, providing accurate and well-considered activities leading to local development in accordance with the established norms and principles of sustainable development. Currently, many solutions are co-financed by the European Union, which supports activities carried out paying special attention to sustainable and deliberate development.

In 1997, a conference was held in Kyoto, Japan, aimed at signing a treaty to reduce the emissions of six greenhouse gases, including: carbon dioxide CO₂, methane CH₄, nitrous oxide N₂O, SF₆ sulfur hexafluoride and industrial gases, greenhouse HFCs - hydrofluorocarbons and PFC – perfluorocarbons. The protocol established "flexibility mechanisms" that enable: international trade in greenhouse gas emission permits, which allows industrialized countries to buy or sell quotas for emissions, the principle of joint action, the Clean Development mechanism and the possibility of obtaining credits for activities related to emission reduction. The Kyoto Protocol was not ratified until February 16, 2005 (Dz.U. 2005 nr 203 poz. 1684). The main condition for its entry into force was the "2 times 55" rule, which stipulated that the protocol could come into force if it was recognized by at least 55 countries producing a minimum of 55% of global carbon dioxide emissions compared to 1990. As a result, the protocol was signed by 141 countries producing a total of 61% of global greenhouse gas emissions. The delay in implementing the legal act was mainly caused by Russia's reluctance to ratify the provisions of the protocol.

The next event was the European Union summit in 2001 in Gothenburg called: "A Sustainable Europe for a Better World: A Strategy for Sustainable Development for the European Union". The issues raised at the summit concerned global warming caused by excessive greenhouse gas emissions, health risks, population aging, increasing poverty, loss of biodiversity, excessive increase in transport density. In 2006, the Gothenburg strategy was revised and plays an important role in the countries of the European Union.

The United Nations organized another meeting of representatives of states, this time in South Africa in Johannesburg (South Africa). The assembly was held in 2002 under the name "World Summit on Sustainable Development", referred to as

Rio + 10. The global changes that had been carried out over the last ten years were summarized, and the topic of problems in the modern world were debated on. Actions were proposed to improve the living conditions of people and the protection of natural resources on our planet. The focus was on assessing the implementation of Agenda 21 programs by local governments, which motivate individual entities to act for environmental protection and sustainable development (Papuziński 2005). The European strategy for sustainable development is a challenge for the countries belonging to the community. Poland was obliged to implement this policy by joining the EU in 2004. One of the key requirements is ongoing assessment of environmental performance. To assess the potential industrial activity, application of the Life Cycle Assessment technique is proposed, which is used to identify potential environmental impacts of products or technology. According to the requirements of the ISO 14000 standards environmental protection can mean above all the sustainable use of resources, protection of biodiversity and the ecosystem. All of these tasks involve a life cycle assessment that can be used to quantify natural resources and assess the quality of the ecosystem and impact on human health. The article uses the LCA technique to evaluate the designed technology for the production of a new generation of polymers (Bajdur 2011).

Importance of LCA in design of technological innovations

In designing innovations, ecology is one of the most important issues at present. The term that is widely used in the field of technological innovation is eco-innovation, closely related to the way in which we use natural resources and how we produce and consume. An approach in accordance with the principles of sustainable development, that is taking care of a climate that is conducive to people and caring for the natural environment, is important in creating innovation. Climate and environmental protection are recognized worldwide as common challenges. In December 2015, representatives of 195 countries and the European Union signed the Paris Agreement.

The basic agreements are:

- global warming should be reduced well below two degrees Celsius. To do this, efforts must be made to stop the temperature increase by 1.5 degrees Celsius,
- from the middle of the 21st century, greenhouse gas emissions should be reduced to zero,
- developing countries should be financially assisted in climate action and adaptation to the consequences of climate change,
- national climate protection plans should be established and implemented.

Therefore, tools to study the environmental impact of technologies are necessary. LCA is a method that allows the environmental load caused by a given product, production process or activity to be estimated by determining the consumption of energy and materials as well as pollutants discharged into the environment; assessment of the environmental effects related to energy consumption, materials and emissions; and finally, assessing the possibilities of

improving the environmental impact. Life cycle analysis is therefore a diagnostic tool useful in environmental management. As a result of using LCA, the company's managers identify areas that are a source of special burdens for the environment or human health. LCA analysis, in contrast to traditional methods of environmental management, allows:

- comparison of alternative products and production technologies,
- identification of places generating the greatest impact on the environment throughout the whole life cycle,
- establishing criteria for eco-labels in order to identify the best eco-friendly products,
- comparison of alternative methods of waste disposal.

The possibility of evaluating the product from cradle to grave means that no stage of the product's existence is omitted, which makes it possible to make full comparisons describing environmental threats created by it. This new approach, which focuses on the product, allows the causes of environmental pollution to be eliminated and not the "repair" of their effects (Kowalski, Kulczycka, Góralczyk 2004, p. 164). This is of particular importance in the design of technological innovations (Bajdur 2008, p. 196; Bajdur 2009, p. 118).

Research methodology and results analysis

Research methodology

On the basis of technological tests conducted on a quarter-technical scale concerning the use of the produced polymers using polystyrene and novolak waste, a life cycle assessment (LCA) was carried out. This technique allowed identification, quantification and assessment of the potential impact of the polymers selected for the study (floculants) on the quality of the environment. The analysis was carried out using the SimaPro program, selecting the research method: *Eco-indicator 99*. In this method, an assessment-oriented approach was applied at intermediate (impact categories) or final points (injury categories). The impact of potential damage to the environment is related to damage:

1. to human health expressed as the number of deaths and years of life in disability (the unit is DALY - disability-adjusted life year). The damage model is based on impact categories: carcinogenic factors, the influence of organic and inorganic compounds on the respiratory system, climate change, ionizing radiation and depletion of the ozone layer;
2. deteriorating the ecosystem quality, expressed as disappearance of specific species in a given area and at a specific time (the unit is PDF.m².year - Potentially Disappeared Fraction of species over a certain area over a certain time). The model includes impact categories such as: ecotoxicity, acidification/eutrophication, land development (including land takeover as well as its transformation);
3. related to the consumption of raw materials, expressed as the additional amount of energy necessary for the future extraction of mineral resources and solid

fuels (the unit is the excess energy expressed in MJ), and the model is based on the consumption of mineral resources and fossil fuels.

These impact and damage categories relate to different reference items, therefore in order to use dimensionless degrees of validity, the result should be deprived of the dimension. Standardization serves this purpose. Damage categories are standardized at the European level (damage caused by one European per year). The data has been updated for the most important types of emissions. The last stage of assessing the impact of the life cycle on the environment is the weighing process, in which the results of standardization are multiplied by appropriate subjective validity coefficients. Calculations in the employed *Eco-indicator 99* version are based on the average time perspective.

The assessment of the impact on the environment was carried out using the LCA technique including four stages in accordance with the guidelines:

Stage I included the definition of:

- the purpose of the analysis, i.e. to determine the environmental impact of the production process of a new type of flocculants obtained using polymer waste,
- the scope of research including the chemical modification process of the new generation of flocculants.

In Stage II, a balance analysis of the system, and data inventory based on the technological assumptions of production of polymeric flocculants were carried out. In Stage III, the environmental impact assessment of the life cycle of new flocculants was performed, and the results of the research were interpreted in the fourth stage (Bajdur 2011, p. 50).

Analysis of research results

Environmental life cycle assessment (LCA) in the evaluation of the impact of potential products on the environment is a technique that primarily allows the possibility of conducting a full life-cycle analysis, and thus the production processes, as well as credible and reliable identification of the environmental risks and environmental impact of new products. The new generation of waste-based polymers are water-soluble and have the properties of flocculants reducing the pollution parameters in mine waters (Bajdur et al. 2016, p. 1058). The results of the analysis of research carried out using the LCA technique to assess the impact of modified polymeric waste (polystyren and novolaks) on the environment confirmed that LCA is an appropriate method to assess the environmental impact of new products (flocculants) used in the process of industrial wastewater treatment. The weighted histograms present the environmental impact of the potential flocculant (PSP polymer - waste polystyrene, PS-N-T, PA-N-SE polymer - waste nowolaks) production processes (*Figure 1*).

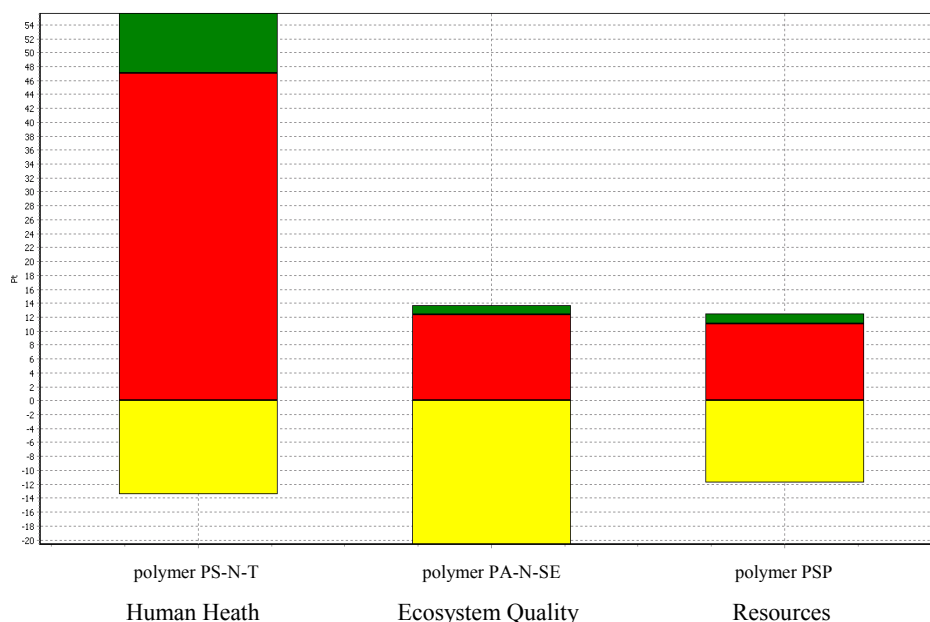


Figure 1. Comparative histogram of weighing for production processes of PSP, PS-N-T, PA-N-SE

Source: Author's own elaboration using SimaPro program (Instytut Gospodarki Surowcami Mineralnymi i Energią, Polska Akademia Nauk, Kraków)

The weighted histogram for the polymer production process (*Figure 1*) show that in all of the damage categories: human health, ecosystem quality and resource consumption, sulfuric acid, which is used for the production of polymeric flocculants, has the greatest negative impact. Calcium carbonate, soda and electricity have much smaller shares.

The weighted histogram of the polymer production process presented above shows that tin chloride and nitric acid in the human health category have the greatest negative effect. The life cycle assessment of new flocculants has shown that the acquiring flocculants from novolak waste is very beneficial for the environment due to the high toxicity of waste phenol-producing resins under the influence of physical factors, e.g. on landfills. The LCA analysis showed that the reuse of selected polymer waste is the right direction to obtain substrates in order to obtain polymeric flocculants whose synthesis reduces the negative impact on the environment.

Conclusions

The use of LCA in the design of technological innovations is in line with the principles of sustainable development (Kulczycka, Henlik 2006, p. 43). The article presents the influence of the process of the potential production of a new

generation of polymers on human health, ecosystem quality and resource consumption. LCA analysis does not replace the need to carry out environmental impact assessments, but it is a good method that allows credible and reliable compilation of the results of research in the areas shown in the histograms. Activities aimed at disseminating application of the LCA method allow a high ecological level to be achieved in the designed technologies. The LCA analysis is aimed at eliminating environmentally unfriendly technologies and allows one to select the best technical solutions in the aspect of environmental protection (Bajdur et al. 2018, p. 2561). It is important to estimate the health risk which is a multi-step procedure that allows, among others, one to determine the effect of chemicals found in the environment on human health. LCA not only has so-called "internal" applications, but above all, the field of "external" applications is of particular importance in creating and implementing the country's environmental policy.

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ZASTOSOWANIE TECHNIKI ZARZĄDZANIA ŚRODOWISKOWEGO LCA W PROJEKTOWANIU INNOWACJI TECHNOLOGICZNYCH

Streszczenie: W modelu zrównoważonego rozwoju ochrona środowiska jest ściśle związana z ekonomią i polityką. Zmiany w ekonomii przebiegają znacznie szybciej niż zmiany w prawodawstwie. Elementy ekonomiczne, polityczne i ochrona środowiska naturalnego powinny stanowić jeden spójny, sprawnie działający system, aby efektywnie respektować zasady zrównoważonego rozwoju. Zgodności wymogów jakości środowiska i zrównoważonego rozwoju można osiągnąć, utrzymując na maksymalnym poziomie jakość środowiska, minimalizując zarazem stopień wykorzystania zasobów naturalnych i zagrożeń środowiskowych poprzez ekoprojektowanie nowych rozwiązań technologicznych. Wynikający z pojęcia zrównoważonego rozwoju stosunek do środowiska naturalnego jest mocno zróżnicowany, zwykle jednak występują dwa poglądy. Pierwszy pogląd związany jest z sofistycznymi teoriami naukowymi i próbuje pokazać konsekwencje naszej współczesnej aktywności przemysłowej. Drugi pogląd odwołuje się do wartości moralnych, takich jak odpowiedzialność za Ziemię, przyszłe generacje czy naturę. Szczególne znaczenie w kształtowaniu polityki ekologicznej ma LCA (*Life Cycle Assessment* – ekologiczna ocena cyklu życia) wykorzystywana w ocenie innowacyjnych rozwiązań, jak na przykład ponowne wykorzystanie odpadów polimerowych do produkcji flokulantów i superplastyfikatorów. Celem badań jest ocena technologii produkcji nowej generacji polimerów. Zastosowano technikę zarządzania środowiskowego LCA do oceny nowych produktów, co pozwoliło na wybór odpowiedniego rozwiązania, które mogłoby zredukować negatywny wpływ na środowisko nowych produktów pozyskiwanych z odpadów polimerowych.

Słowa kluczowe: zrównoważony rozwój, zarządzanie środowiskowe, LCA, odpady polimerowe, nowosyntezowane polimery



CROWDSOURCING FROM KNOWLEDGE MANAGEMENT PERSPECTIVE

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Abstract: Nowadays, there is a growing interest in crowdsourcing, which enables organizations to acquire knowledge located in communities. The purpose of this article is to characterize crowdsourcing from a knowledge management perspective and to indicate some solutions which can be adopted in organizations. The article uses the method of literature review.

Keywords: crowdsourcing, knowledge, knowledge management

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Introduction

The concept of crowdsourcing is implemented in an increasing number of enterprises operating in Poland, expecting continuous improvement and use of knowledge in business practice. Creators are required to be creative, which should result from knowledge of contemporary management principles and the possibilities of using information technology tools in business and management (Jelonek, Turek 2015, p. 4). The purpose of the chapter is to characterize crowdsourcing from the point of view of knowledge management and implementation of solutions in organizations.

The role and importance of crowdsourcing

The concept of crowdsourcing is implemented in an increasing number of enterprises operating in Poland. Crowdsourcing means a venture in which an enterprise obtains a commodity or valuable data from a large group of people or companies whose identity is not important in the whole process. Crowdsourcing draws from global resources, most of which have never been used effectively, and individuals are rewarded for the quality of their ideas, regardless of origin, status, employment or education (Kowalska 2015, p. 163). Selected definitions of crowdsourcing are presented in *Table 1*.

Table 1. Selected definitions of crowdsourcing

Author/ authors	Definition
Kleeman et al.	A Form of integration of users or consumer in internal processes of value creation. The essence of crowdsourcing is an intended mobilization with allocation of commercial exploration of creative ideas and other forms of work performed by the consumer.
DiPalantino, Vojnovic	Methods using an open call to encourage communities to solve problems.
Burger-Helmchen, Penin	A way in which an organization gains access to external knowledge.
Brabham	A way of solving problems, as well as a model of production, in which, in order to achieve goals characteristic of an organization, collective intelligence of Internet communities is used.

Source: (Lenart-Gansiniec 2017a, pp. 25-34; Lenart-Gansiniec 2017b, pp. 43-60)

After the analysis of various definitions presented by many authors, the following definition of crowdsourcing is proposed: crowdsourcing is a way for an organization to engage, a non-specified, dispersed group of people to perform various tasks through an online platform (Lenart-Gansiniec 2017b, p. 43).

Crowdsourcing¹ is a venture in which an enterprise obtains a product or value from a large group of people or enterprises. Crowdsourcing uses global resources, and individuals reward them for the quality of their ideas, regardless of origin, status, employment or education (Kasprzycki-Rosikoń, Piątkowski 2013, p. 25). D.A. Grier, who emphasizes that although, in practice, cooperation with users takes place via the Internet, reaching people who will perform a specific task can also take place via other communication channels (Kowalska 2015, p. 163; Bubel, Łęgowik-Świącik, Kowalska 2017, p. 53).

Three basic streams of crowdsourcing can be distinguished (Erickson, Petrick, Trauth 2012, p. 25):

1. Simple crowdsourcing – focused on small tasks (simple, task-oriented crowdsourcing). It is a source of remote work for routine activities that do not require high qualifications: data entry, file segregation. From a business perspective, it means achieving economies of scale, reducing costs.
2. Complex crowdsourcing – based on experience (complex, experience-based crowdsourcing). It includes complex tasks requiring unique skills and competences.
3. Flexible crowdsourcing – generating ideas (open-ended, idea generating crowdsourcing). It focuses on creating ideas and product innovations.

The various types of crowdsourcing are presented in *Table 2*.

¹ The idea of crowdsourcing appeared in the literature for the first time in 2006 in a book by J. Howe. *The Rise of Crowdsourcing*, Journal “Wired”.

Table 2. Types of crowdsourcing

Crowdsourcing	Crowd intelligence
	Open innovation
	Citizensourcing
	Mass collaboration
	Crowd tasks&creativity
	Customer co-creation
	Crowd causes
	Sharing economy
	Crowdcurrencies
	Crowdfunding
	Mass collaboration
	Online Communities
	Crowd Currencies
	Peer-to-Peer Lending

Source: (Kosinski et al. 2012; Erickson, Petrick, Trauth 2012)

Crowdsourcing categories include (Kasprzycki-Rosikoń 2015, p. 8-9):

1. Citizen Engagement – involving citizens or citizens to change, manage a city or a state.
2. Crowd Intelligence – collective community intelligence is based on cooperation, co-creation and involvement of users.
3. Open Innovation – using resources from outside the immediate environment of the company or organization to create innovative solutions (Krawczyk-Sokołowska, Łukomska-Szarek 2017, p. 56).
4. Mass Collaboration – independent cooperation of a large number of users on one project, often consisting of modules that can be combined.
5. Online Communities – online communities characterized by a high interaction rate. They share common ideas, beliefs, brands or interests.
6. Crowd Tasks & Creativity – projects aimed at performing tasks, providing services by the usual large and dispersed internet community.
7. Crowd Causes – individuals or charities supporting projects aimed at social welfare oriented at helping to address global or local problems, whose solution will significantly improve the existence of people.
8. Social Business – companies focused on authentic listening, sharing and engagement through open social channels.
9. Customer Co-creation – cooperation between the company and a group of consumers focused on developing a joint solution.
10. Sharing economy (with shared economy) – a concept based on the idea of shared economy, among others, Uber.
11. Non-Equity Based Crowdfunding – members of the community financially support a project or project in exchange for the possibility to use a service or a product.
12. Equity-Based Crowdfunding (community investing) – members of the community become shareholders of the they support financially.

13. Peer-to-Peer Lending / Commerce – social lending of money without the participation of a financial institution.

14. Crowd Currencies – alternative currency systems created by online communities.

The propagators of this phenomenon are convinced of its economic and social benefits, both for entities initiating crowdsourcing projects, members of the community participating in them, as well as operators of electronic platforms and suppliers of other services (Nowakowska-Grunt, Piersiala 2014, p. 145). The largest beneficiaries of crowdsourcing are clients of such ventures. From their point of view, crowdsourcing is underlined in terms of (Hossain, Kauranen 2015, p. 25):

- access to resources of human knowledge, competence and creativity outside the company/organization,
- acquiring new ideas, content, data and ways of solving problems with lower financial outlays and in a shorter time,
- creating access to global labor markets and cheap labor,
- better adaptation of the offer to the needs of consumers/users, which will increase productivity, sales, and the amount of revenue generated, as well as the competitiveness and innovativeness of the company/organization,
- extending the current activity and offer with proposals coming directly from interested recipients,
- creating a positive image of the company/institution as a modern, innovative entity open to the votes of its clients,
- refreshing and renewing the brand,
- creating and maintaining the community around the brand (social capital) and selecting from the crowd particularly active individuals who may act as brand ambassadors,
- acquiring additional financial resources (crowdsourcing),
- activation of internal employees,
- improving communication with the environment (marketing, advertising, public relations),
- conducting market research and predicting future trends and customer needs and their verification,
- reducing the limits resulting from intellectual property rights.

The evaluation of crowdsourcing seems to be of importance to organizations, especially public organizations (Frączkiewicz-Wronka 2013, p. 28).

Advantages and disadvantages of crowdsourcing and knowledge management

For many organizations, crowdsourcing offers some benefits and is an opportunity to achieve or increase the competitive advantage (Rouse 2010, p. 15). The benefits of crowdsourcing for community members participating in it include mostly its non-material aspects, such as: expressing one's creative potential, expanding knowledge and skills, meeting needs and internal motivations, shaping one's reputation and social status, and spending free time constructively.

It was only at a further point that the possibility of obtaining financial and material gratuities and the collection of funds was mentioned. Crowdsourcing

platforms, providers of electronic payment services, advertisers and technology solution providers, for whom crowdsourcing is primarily intended as a target because it involves the collection of subscription and commission fees set out in the regulations, are also among the crowdsourcing groups that benefit from crowdsourcing (Zhao, Zhu 2012, p. 417).

The basic advantages of crowdsourcing include (Grela 2014, p. 208; Mazurek 2015, p. 60):

- the possibility of obtaining a positive result cheaper than using other solutions,
- the opportunity to get a different perspective on the problem and use the creativity of a large group of people,
- no need for continuous supervision of the group performing the task,
- a very good marketing tool,
- the possibility of finding talented employees,
- the opportunity to strengthen the relationship between the organization and clients, and thus increase brand loyalty,
- the possibility of reducing the costs of the R & D department.

Despite numerous positive implications, it is worth remembering that this mechanism is not devoid of certain limitations, which can include (Grela 2014, p. 208-209):

- the ability to easily obtain information about the company from competitors,
- the possibility of some plagiarism by crowd members,
- the ability to discourage employees from operating efficiently,
- the possibility of achieving undesirable effects.

In connection with the above, companies planning to use crowdsourcing in the activities of their company should not make hasty decisions, but in a thoughtful manner plan the entire process carefully, while considering all key elements, including the risk incurred. The disadvantages of this solution include (Kowalska 2016, p. 169):

- difficulty in estimating project costs,
- lack of expected results due to mistakes made by the company (imprecise definition of the task, failure to disclose important information, errors in monitoring the community),
- insufficient competence of users (e.g. in the area of specialist knowledge, skills),
- the risk of losing internal know-how and control over the operation,
- low commitment resulting from the mismatch of incentives motivating the participants,
- discouraging company employees from operating effectively as a result of the involvement of the "crowd" as external specialists.

Creating a group of people ready to undertake specific activities is of key importance for the success of the crowdsourcing process. However, there are two main problems associated with this aspect. The first one concerns motivation – how to convince internet users to devote their time and share their resources. Crowdsourcing is also fostered by the increasing interest of people in social activities and undertaking activities that go beyond the private sphere.

The conditions of crowdsourcing

Crowdsourcing is currently one of the most popular strategies for acquiring original solutions and building relationships between organizations and their clients. The popularity of this formula offers many benefits for enterprises. It includes the possibility of getting quick and usually free or very cheap access to a variety of interests, inspiring ideas, building a community around the company/brand, gaining knowledge about the needs of consumers. Sharing knowledge multiplies solutions – the trick is how to get something out of this value of "surplus" ideas (Kowalska 2016, p. 35). The key ingredients of crowdsourcing are an organization that has a task to do, a community (crowd) that is ready to do this task voluntarily, an online environment that allows workplaces and communities to interact with the organization, mutual benefits for the organization and the community. Levels of crowdsourcing are presented in *Table 3*.

Table 3. Levels of crowdsourcing

Levels	Characteristic
Structural	– innovative strategy, consistency of vision and strategy with the aspirations of the crowd, properly shaped relations with external entities, organization's trust in virtual communities.
Social	– motivation of employees, – creativity proactive leadership, – openness of the organization to novelties and changes, – innovative culture, positive organizational climate.
Technological	– abilities to discover hidden knowledge using IT tools, – compatibility and functionality of the crowdsourcing platform.
Virtual community	– readiness to share knowledge, level of external and internal motivation, and inclination to trust.

Source: Based on (Buettner 2015)

The use of crowdsourcing includes the following processes (Slezkin 2015, p. 29):

- planning (identification of needs, selection of stakeholders, operation strategy),
- implementation (operation of persons, selection of a technological solution, defining legal issues, implementation of a communication plan),
- results analysis (data collection, reporting, qualitative and quantitative analysis, selection of the best solutions, transfer of copyright),
- maintenance (moderation, animation, copyright, identification of subsequent challenges).

Zhao and Zhu defined three perspectives of crowdsourcing measurement: the participant, the crowdsourcing platform, and the organization (Zhao, Zhu 2012, p. 418). The crowdsourcing communities have their dynamic development thanks

to the Internet technology and subsequent ideas of using universal access to the Internet. The ease of access to servers and the ability to easily create information systems that implement the functionality of crowdsourcing platforms are also of great importance. Contemporary IT tools allow reaching the right audience, for example, groups of Internet users (scientists, engineers, programmers, which in turn reduces the risk of project failure). In overcoming unfavorable aspects of crowdsourcing, it helps to identify well the community, but also to specify the problem to be solved correctly and legibly. The greatest certainty of obtaining the desired results of a crowdsourcing project is provided by defining exactly what is expected of the community.

The Deloitte report “Tech Trends 2014” presents examples of crowdsourcing platforms which can be used by organizations – from acquiring qualified project resources to companies, by creating market predictions, to designing products and services involving various communities (“Tech Trends 2014”, p. 28). The high specialization of crowdsourcing platforms means that organizations do not have to develop such programs internally, but can benefit from specialized people or communities. There is a growing share of crowdsourcing in the activities of the largest global companies and public administration.

Conclusions

Crowdsourcing is a concept that aims to increase the competitiveness and flexibility of the organization. Increasing interest in crowdsourcing is gained by skilfully engaging, motivating, and managing the community in crowdsourcing projects. The methodology defines the elements of skilful engaging, motivating and rewarding participants and moderating the submitted content. These are soft skills, but decisive for the success of the project.

In engaging the community in crowdsourcing projects, there is much uncertainty. Despite planning the process in the finest details, we are not able to predict the result and thus end the process. As project administrators, we are responsible for creating the framework and principles, but at some point, it is important to trust the "crowd" intuition.

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CROWDSOURCING Z PERSPEKTYWY ZARZĄDZANIA WIEDZĄ

Streszczenie: Obecnie rośnie zainteresowanie crowdsourcingiem, co umożliwia zdobywanie wiedzy zlokalizowanej w społecznościach. Celem artykułu jest scharakteryzowanie crowdsourcingu z perspektywy zarządzania wiedzą i wskazanie rozwiązań we współczesnych organizacjach. Zaprezentowano wybrane rodzaje i klasyfikacje oraz rodzaje crowdsourcingu. W artykule wykorzystano metodę przeglądu literatury przedmiotu.

Słowa kluczowe: crowdsourcing, wiedza, zarządzanie wiedzą



THE ASSESSMENT OF DIGITAL INTELLIGENCE OF RESIDENTS OF MUNICIPAL HOUSING RESOURCES IN CZESTOCHOWA

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Abstract: In the modern world, information and communication technologies (ICT) are tools for general use. The ability to navigate in the digital world is a development requirement in the 21st century. An insufficient level of digital skills entails serious social problems, including e-exclusion and exposes network users to a number of threats related to data security. The article presents the results of a survey conducted in February 2018 on a group of 300 tenants of the housing resources managed by ZGM TBS Sp. z o.o. in Czestochowa. The aim of the study was to diagnose the level of digital competences and the needs of the studied group in this field. The vast majority of respondents use the Internet and consider the network as a tool to make life easier. However, it is clearly visible that the level of digital skills is insufficient, particularly in the area of recognizing secure websites, proper security of web browsers, improving protection against phishing, increasing knowledge of consumer rights, knowledge of the principles of creating good internet passwords and understanding the essence of personal data protection as well as adequate security of the internet connection. The study indicated further steps that should be taken to increase the level of skills in safe use of the Internet. The conclusions formulate guidelines for the manager of the housing resources to plan activities related to improving digital competences.

Keywords: digital intelligence, digital competences, technologies, the Internet, skills, threats

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Introduction

We live in a society of dynamic changes affecting many areas of human activity. We can observe a wide range of changes occurring in economic, social and technological spheres, which are related to transformations towards an information society (Rozkrut, Rozkrut 2015, p. 76). These changes have a long-term nature and digital technologies, with an increasing force, are affecting the economic, social, political, and cultural spheres as well. In particular, it concerns phenomena such as: the universality of digitization, development of the Internet in version 2.0 (Web 2.0); the increased popularity of mobile and wireless technologies, big data, cloud computing, Internet of things and 3D printing (Gonciarski 2017, p. 38). Thus, the Internet is not just another technological gadget, but an innovation of significant social consequences (Drabowicz 2014, p. 208).

The ongoing digitization shapes development in three areas: society, economy and the state. In the area of society, digital technologies contribute to the development of intellectual and social capital by offering information and communication tools. In the economic dimension, it is possible to increase the effectiveness, innovativeness and competitiveness of companies, and thus the entire economy on the global market, as well as to facilitate communication and cooperation between companies through the use of information and communication technologies. On the other hand, in the state dimension digital technologies enable greater accessibility and efficiency of public administration services, through the use of information and communication technologies to rebuild internal administration processes and the manner of providing services (MAiC 2014, p. 7).

In this study, attention will be primarily focused on the social dimension of digital technologies development. For the needs of Zakład Gospodarki Mieszkaniowej "TBS" Sp. z o.o. in Czestochowa (i.e. Department of Housing Management, Social Housing Association in Czestochowa LLC), a study was carried out, the purpose of which was to determine the level of tenants' digital competence and to determine the needs in terms of their improvement. The reason for taking up this problem is to counteract digital exclusion and increase user security in the virtual world. The growing use of technologies and their expanding possibilities, and often also their necessity in everyday life - communication, learning, work, access to information and knowledge - means that people who do not use them are increasingly more socially excluded. The concept of digital exclusion concerns differences between people who have regular access to information and communication technologies and are able to use them effectively, and those who do not have this access. These differences are related to both physical access to technology as well as to the skills and resources needed to use them. The problem of digital exclusion does not concern the use of technology itself, but rather the differences in life chances, the situation on the labor market, as well as opportunities to participate in social and cultural life, which appear among people using modern technology and people who do not use them, also due to insufficient skills (Batorski, Płoszaj 2012, p. 8). According to Eurostat data, Poland has the third highest percentage of people that do not have any digital skills (42%) in the EU, while the EU average is fourteen percentage points lower. Poland has a similar position in the category of the lowest percentage of citizens with the most advanced level of computer skills (21%) (MAiC 2015, p. 16-17).

The lack of proper skills concerning the use of technology also increases the risk of cyber threats. According to the PwC report *In defense of digital borders*, published at the beginning of 2016, the number of detected incidents violating information security (cyber-attacks) increased in the world in 2015 by 38% (compared to 2014), and by 46% in Poland (PwC 2016). Issues related to cyber-security are gaining importance at all levels - public administration, financial institutions, international corporations, small and medium-sized enterprises as well as individual users (Pieriegud 2016, p. 26).

The study of the level of digital skills in the local community, which is the housing community, is therefore justified and the TBS initiative in order to support the development of digital skills of its tenants meets current social problems.

Digital intelligence – definition

The necessity to develop digital intelligence is being underlined by the World Economic Forum, indicating it as a critical factor for individual development and the well-being of societies (<https://www.weforum.org/>). The correct definition and understanding of this concept is crucial. Contrary to appearances, digital intelligence does not mean the ability to use a smartphone or computer. It is not just about balancing time spent with and without a digital device. According to the DQ Institute, digital intelligence is "the sum of social, emotional and cognitive skills that allow individuals to face challenges and adapt to the requirements of digital life" (DQ Institute: [https://www.dqinstitute.org/...](https://www.dqinstitute.org/)). The Institute distinguishes eight areas that create digital intelligence: digital rights, digital literacy, digital communication, digital emotional intelligence, digital security, digital safety, the use of digital devices and digital identity.

Within the digital rights term, the right to freedom of expression, the right to privacy or intellectual property, the ability to use digital technology without losing privacy or limiting freedom of speech should be understood. Digital literacy means computational and critical thinking and the ability to create content. This area of digital intelligence focuses on the ability to distinguish between real and untrue information and to classify sources in the network as reliable or unreliable. Digital communication, as the name suggests, is related to communication and networking. Nevertheless, it also includes the awareness of leaving traces in the network. Therefore, the main challenge in this area is to develop awareness that using the network involves leaving digital traces, which can be used in a variety of ways and for various purposes. Empathy, emotional awareness and the possibility of regulating them are digital emotional intelligence. Among the major problems in this respect, the DQ Institute points out the lack of the ability to be empathetic and to recognize emotions on the web. Digital security is an issue of mobile security, Internet security and password protection. A very important skill in this area is creating strong passwords, managing them and building barriers against cyber-attacks. In order to develop this skill, it is also necessary to make users aware of the need to protect passwords. Another area is digital safety, in which the main emphasis is put, among others, on the ability to recognize dangerous or risky behaviors in the network, e.g. persecution or harassment, and learning how to deal with them. The use of digital devices is associated with the ability to develop a healthy balance in the use of digital devices. The last area is associated with digital identity, i.e. mainly digital citizenship and digital creativity. The most important thing here is the ability to build and manage in a healthy way an identity in the network and beyond.

Digital skills are closely related to digital intelligence, through which the bundle of skills, knowledge and attitudes that allow effective use of digital technologies

are understood (Jasiewicz et al. 2015, p. 6). Digital competences are most often divided into three categories - IT, information and functional competences. Skills related to the proper use of computer hardware and software as well as use of the Internet constitute IT competences. Information competences are defined as the ability to find information, understand it, as well as assess its credibility and usefulness (Siadak 2016, p. 371). On the other hand, the ability to use digital technologies in various areas of everyday life, private and professional life comprise the last - the functional category of digital competences.

Characteristics of the research group

The purpose of the research was to determine the level of digital competences of municipal housing residents in Czestochowa. In order to fulfill this goal, a survey questionnaire was distributed among the all the residents of municipal housing.

The minimum sample size to estimate the probability of success p in a general population was calculated on the basis of the formula for a sample size with a very large population:

$$n = \frac{u_{\alpha}^2 pq}{d^2}$$

where:

n = minimum sample size,

$u_{2\alpha}$ = value acquired from the table of normal distribution for the adopted level of significance,

p = structure index,

$q = 1 - p$,

d = highest accepted level of error.

This formula allows one to obtain a predetermined accuracy of estimating the population structure ratio. After substituting the adopted values into the formula, the following equation was received:

$$n = \frac{1,96^2 * 0,25}{0,06^2} \approx 267$$

As is evident from the calculations, the minimum sample size, with the adopted confidence level $1-2 = 0.95$, and the accepted level of highest error $d = 6\%$, should be 267 questionnaires. Due to the fact that the study involved 300 questionnaires, it can be assumed that this condition was met. Thus, it can be also assumed that the selected sample size was legitimate and the obtained results were reliable.

The research was carried out in February 2018, among 300 tenants of the housing community, of which the majority were women (52%). Nearly 35% of the respondents were people aged between 31 and 45, another 30% between the ages of 46 and 60, while 19% are seniors (*Figure 1*). The research tool was a survey questionnaire consisting of 5 parts:

- age, gender, occupational and material situation,
- use of the Internet - frequency, purpose, length of use,

- use of available IT solutions,
- desire to broaden digital literacy,
- digital security issues.

All 300 questionnaires qualified for further research as not one was incorrectly completed or not returned.

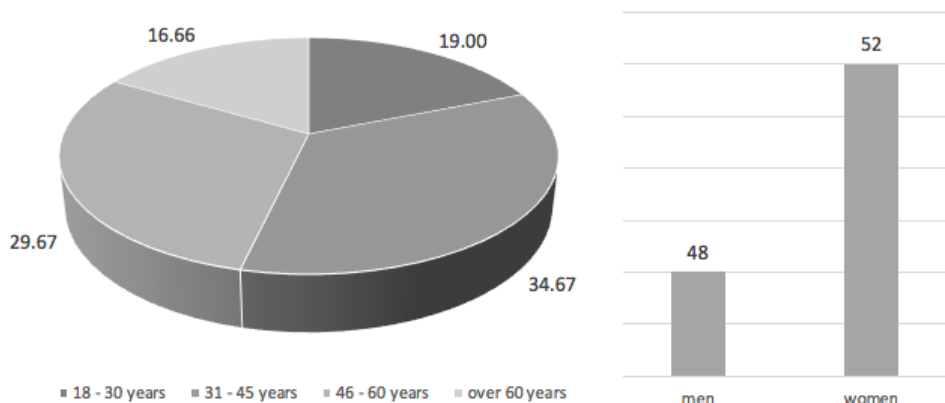


Figure 1. Gender and age of respondents (%)

Source: Authors' own compilation from study data

The vast majority of respondents - nearly 80% - consider the Internet as a tool to make life easier, of which 98% of people aged 18 to 30 have this opinion. The relationship between this opinion and age is not surprising - the older the respondents, the higher the percentage of negative answers. However, in the case of seniors, this opinion is divided, i.e. more than 52% consider the Internet as a tool to facilitate life and more than 47% think differently (*Figure 2*).

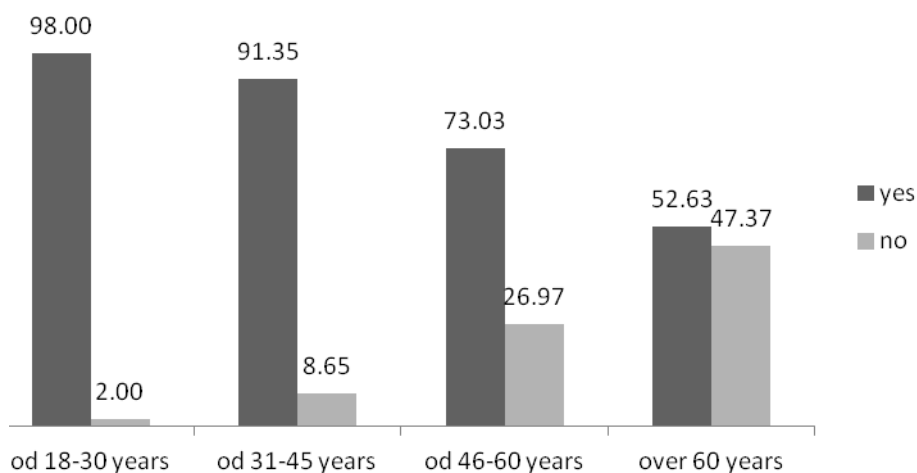


Figure 2. Internet as a tool to make life easier in respondents' opinion (%)

Source: Authors' own compilation from study data

46% of the surveyed group declare "regular" and 29% "daily" use of the Internet. "Once a week" was the answer selected by 7.67% respondents, "less than once a week" - 2.33% and "several times a month" - 2.67%. Only 12% of the respondents declared not using the Internet at all. The highest percentage in this group are people over 60 years of age. Interestingly, 35% of seniors declare daily use of the network. Of course, the youngest respondents, i.e. 18 to 30 years old, use the Internet regularly and on a daily basis (*Table 1*).

Table 1. Frequency of using the Internet (%)

Age	Regularly	Every day	Once a week	Less than once a week	Several times in month	Do not use
18-30	74.00	24.00	-	-	-	2.00
31-45	59.61	29.81	3.85	1.92	0.96	3.85
46-60	37.10	28.11	14.61	2.25	4.45	13.48
More than 60	10.53	35.09	10.53	5.26	5.26	33.33

Source: Authors' own compilation from study data

The Internet is primarily used for entertainment and for the purpose of obtaining information. It is used to the smallest extent to download computer software, publish one's own works and create or modify websites. This would indicate a low level of digital competence among the respondents (*Table 2*).

Table 2. Purpose of using the Internet (%)

	Very often	Often	Rarely	Very rarely
Browsing websites for entertainment	30.67	28.33	11.00	5.00
Organizing and collecting information	23.00	31.67	8.33	4.00
Checking weather or traffic conditions	22.00	27.00	8.67	6.00
Internet shopping	18.67	21.33	10.67	10.00
Selling goods and services	17.00	19.33	12.33	13.00
Dealing with official matters	14.43	15.00	13.67	13.67
Seeking a job	12.33	8.67	9.00	19.00
Making phone calls	11.67	12.33	6.67	17.67
Listening to Internet radio	10.67	15.67	10.00	17.67
Downloading music	10.67	10.67	10.67	20.33
Reading books/newspapers	9.33	16.67	11.33	17.66
Downloading movies	9.33	9.67	11.67	20.00
Downloading computer software	8.33	6.33	11.00	24.33
Publishing one's own work	8.00	10.67	7.67	25.67
Creating/modifying websites	5.67	5.33	5.67	27.00

Source: Authors' own compilation from study data

In the next step, the respondents were asked if they would be interested in the possibility of enhancing their competences in the field of using the Internet. In this case, the distribution of responses may be astonishing, as almost half of them (41%) chose the negative answer, but the remaining 59% indicated the affirmative answer. Among the respondents who chose the negative answer were people from the age group 18 to over 60, characterized by various states of professional activity, most of them also stated that the Internet is treated as a tool to make life easier. However, almost all these people use the basic tools of the Internet - sending e-mails and browsing websites. They do not use any additional tools in the form of an Electronic Inbox or e-government. Therefore, the next step in the conducted research should be research on the lack of respondents' interest in connection with expanding their range of digital skills.

Due to the wide variety of digital competences that an Internet user can improve, they have been grouped as follows:

- **Information skills** in the form of copying or moving files, use of disk space on the Internet, searching for information on public administration websites, searching for information about goods, services and health-related information;
- **Communication skills** in the form of sending, receiving e-mails, using social networking sites, telephoning and video calls over the Internet;
- **Safety related skills** in the form of using anti-virus programs, safe shopping and financial transactions, protection of passwords and personal data;
- **The ability to use public services** in the form of e-government services;
- **The ability to "Parent on the Internet"** in the form of recognizing harmful and dangerous content, safe use of the Internet by children, supervising the child's activity on the web, submitting a Family 500+ application or obtaining a Large Family Card;
- **Skills related to financial and monetary transactions** in the network in the form of assessing the credibility of a contractor, purchasing and selling via the Internet, managing a bank account, electronic payments and safe management of privacy on the network;
- **Skills related to "Culture on the Web"** in the form of information retrieval, placing one's own creations on the web, using digital cultural resources, watching, listening, downloading digital movies, music, literature, radio broadcasts, images, press, games or comics from legal sources of culture.

The respondents showed the greatest interest in acquiring communication skills, as indicated by 32% of them. Information skills (26%) were on the second place, followed by skills related to security (23%) and related to searching for or publishing content classified as broadly understood culture (22%) (*Figure 3*).

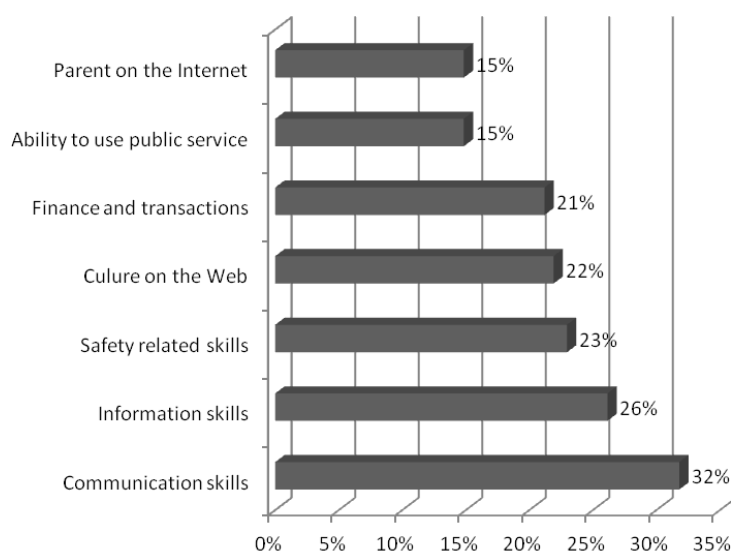


Figure 3. Willingness of respondents to enhance particular competences (%)

Source: Authors' own compilation from study data

On the other hand, the smallest interest was shown by the respondents in the case of broadening competences increasing their skills in using public services (15%) and those related to parental control (15%). Such a low percentage of interest in using digital public services may be caused by ignorance, resulting from insufficient information about the availability of such services, as well as the benefits resulting from them - time savings or the quickness of dealing with official issues. On the other hand, in the case of parental control, this may be due to the lack of children or the fact that their children are adults. Nonetheless, the respondents also believe that their parenting skills in this area are sufficient and do not need to be expanded. Additional issues from the conducted research directly concerned safety and protection of the computer against external attacks. A computer with access to the Internet, on the one hand, is a useful tool to facilitate life, but on the other hand it is very often exposed to external attacks that may result in the deletion of information stored on the computer, disclosure of private or sensitive information, physical damage to the computer or stealing money from bank accounts. Therefore, it was reasonable to carry out research in this area because it will allow further directions of activities to be set to raise awareness of security on the Internet as well as acquire practical skills to protect against external attacks.

The necessity to increase safety related skills is signaled by the structure of the answers to the question regarding installed anti-virus programs - only half of respondents confirmed the installation of such programs (51%), among the remaining half, 17% said they did not install antivirus software and 32% indicated "I do not know". However, already 74% of respondents chose the answer admitting that their computer had been infected by a virus. 14% of respondents chose the negative answer and 12% indicated the answer "I do not know". As the structure of

the received answers shows, among the group of people who confirmed infection of the computer by a virus, it can be assumed that there are people who do not have an antivirus program or do not know anything about it. Notwithstanding, the obtained results indicate that despite having an anti-virus program installed, computers still fall victim to viruses. This may be due to insufficient protection in the form of a too-old anti-virus program which is not able to identify new viruses and effectively get rid of them, or its inappropriate configuration, also due to insufficient skills in this area. In another issue, the respondents were asked about the desire to broaden their safety-related skills in relation to the type of Internet activity (*Table 3*).

Table 3. Willingness to acquire Internet skills (%)

Browsing websites for entertainment			
Skill to recognize secure pages		Skill to secure Internet browser	
Yes	24%	Yes	19%
No	76%	No	81%
Organization and collecting information			
Skill to protect against phishing			
Yes	32%		
No	68%		
Internet shopping			
Skill to use the price comparison engine		Consumer rights knowledge	
Yes	67%	Yes	24%
No	33%	No	76%
Dealing with official matters			
Knowledge of principles of creating good passwords		Personal data protection	
Yes	12%	Yes	47%
No	88%	No	53%
Making phone calls			
Correct Internet security			
Yes	48%		
No	52%		

Source: Authors' own compilation from study data

With regard to web browsing, only 24% of respondents indicated that they had the ability to recognize secure websites, while the remaining 74% indicated a negative answer. A similar distribution of responses can be observed in the case of the ability to adequately secure an Internet browser - this skill was indicated by only 19% of respondents and the remaining 81% do not have this ability. A little better results were obtained in the case of phishing protection skills, as indicated by

32% of respondents, but still almost $\frac{3}{4}$ of them (68%) indicated that they do not have this skill. In the aspect of online shopping, almost $\frac{3}{4}$ of respondents (67%) indicated the ability to use price comparison websites that not only provide information on the prices of given products, but also direct to proven and trusted online stores. The reverse answers can be observed in the case of knowledge of consumer rights because more than $\frac{3}{4}$ of respondents (76%) declared that they know these rights. When dealing with official matters, they were asked about the ability to create good internet passwords and protect personal data. In this case, there are visible deficiencies among the respondents regarding safe use of the Internet - 88% of them indicated a lack of the ability to create good passwords and more than half (53%) do not understand the issues related to the protection of personal data. In addition, the currently binding GDPR¹ has introduced even more confusion for the moment. On the one hand, it consists in conscious consent to the processing of personal data and is intended to protect the rights of Internet users, on the other hand, most users do not have sufficient knowledge about the GDPR. Again, the results in terms of the ability to secure internet connections are a bit better - 48% said yes, but it still means that more than half of the respondents cannot adequately secure their internet connections, which may result in an unauthorized user connection and crime by means of this connection.

In the last issue, the respondents were asked what their greatest concerns are regarding the risks associated with using the Internet (*Figure 4*).

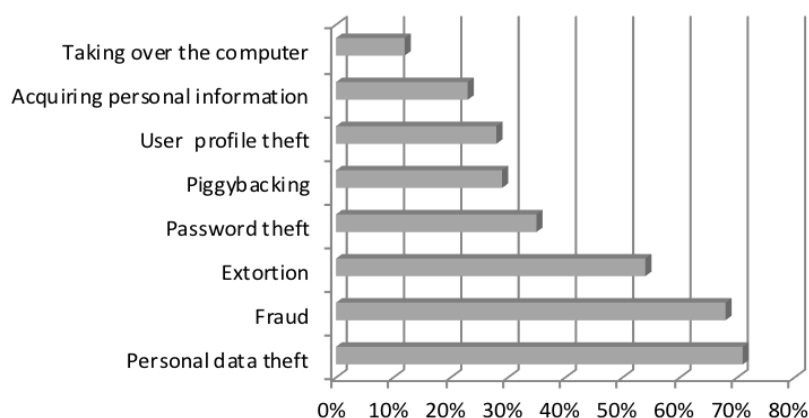


Figure 4. Main threats connected with Internet use (%)

Source: Authors' own compilation from study data

As the figure shows, the respondents are most concerned about the theft of personal data (71%), which can be used to steal money or make purchases on credit. Fraud was on the second place, as indicated by 68% of respondents. In the next place was extortion, indicated by 54% of respondents. The respondents are also afraid of

¹GDPR – The General Data Protection Regulation (GDPR), agreed upon by the European Parliament and Council in April 2016, replaced the Data Protection Directive 95/46/ec in Spring 2018 as the primary law regulating how companies protect EU citizens' personal data (source: ec.europa.com).

the theft of access passwords (35%), piggybacking (29%), theft of a user profile (28%) or the acquisition of personal information (23%). On the other hand, the slightest concern was raised by the risk of a hacker taking over the computer (12%).

Conclusions

The purpose of the research conducted among the tenants of the ZBS TBS housing community was to determine the level of digital competences they possessed and to determine the needs in the area of increasing safety related skills on the Internet. The reason for this study was the fact that the digital world has a stronger presence in our reality. The computer, together with the Internet, has been an inseparable element of almost every household for some time and the use of the Internet is part of people's everyday activities. Unfortunately, most users still do not have sufficient skills to ensure safe use of the Internet. Although nearly 80% of respondents consider the Internet as a tool to help their lives, at the same time a large percentage of them is characterized by a lack of basic skills related to safe use of the Internet. This fact can be supported by conclusions drawn from analysis of the obtained research data:

- only a little more than half of the respondents confirmed the installation of an antivirus program, but almost $\frac{3}{4}$ indicated that their computer had been at least once infected by a virus,
- over $\frac{3}{4}$ of the respondents is unable to recognize secure websites or to properly protect the web browser they use on a daily basis, is not familiar with their consumer rights and cannot set a password that is difficult to break,
- fewer than $\frac{3}{4}$ of respondents cannot provide sufficient protection against phishing, cannot protect their personal data and has no knowledge about proper security of the Internet connection they use on a daily basis.

It is clearly visible that the respondents should increase their safety by improving their skills in: recognizing secure websites, properly protecting the web browser, improving protection against phishing, increasing consumer awareness, knowing how to create good internet passwords as well as understanding the essence of protecting personal data and adequate security of the Internet connection. However, they are the most afraid of threats in the form of theft of personal data, online fraud and extortion.

To sum up, it can be concluded that the digital competences of the community tenants are insufficient to move freely in the digital world and therefore one of the recommendations from the study is to organize training in the field of Internet security. This in the future will translate not only into better protection but will also allow users to increase their freedom of movement on the network.

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OCENA KOMPETENCJI CYFROWYCH LOKATORÓW ZASOBU MIESZKANIOWEGO W CZĘSTOCHOWIE

Streszczenie: We współczesnym świecie technologie informacyjno-komunikacyjne stanowią narzędzia powszechnego użytku. Umiejętności poruszania się w cyfrowym świecie są wymogiem rozwoju w XXI wieku. Niedostateczny poziom kompetencji cyfrowych pociąga za sobą poważne problemy społeczne, m.in. e-wykluczenie, oraz naraża użytkowników sieci na szereg zagrożeń związanych z bezpieczeństwem danych. W artykule przedstawiono wyniki badania przeprowadzonego w lutym 2018 roku na grupie 300 lokatorów zasobu mieszkaniowego zarządzanego przez ZGM TBS Sp. z o.o. w Częstochowie. Celem badania było zdiagnozowanie poziomu kompetencji cyfrowych oraz potrzeb w tym zakresie badanej grupy. Zdecydowana większość respondentów wykorzystuje Internet i uważa sieć za narzędzie ułatwiające życie. Wyraźnie jednak widać, że poziom umiejętności cyfrowych jest niewystarczający. Szczególnie w zakresie rozpoznawania bezpiecznych stron internetowych, odpowiedniego zabezpieczenia przeglądarki internetowej, poprawy ochrony przed wyłudzeniem informacji, zwiększenia znajomości praw konsumenckich, znajomości zasad tworzenia dobrych haseł internetowych i zrozumienia istoty ochrony danych osobowych oraz odpowiedniego zabezpieczania łącza internetowego. Badanie wskazało dalsze kroki, jakie powinny być podjęte w celu zwiększenia poziomu umiejętności w zakresie bezpiecznego korzystania z Internetu. Sformułowane wnioski stanowią wytyczne dla zarządcy zasobu mieszkaniowego do planowania działań związanych z doskonaleniem kompetencji cyfrowych.

Słowa kluczowe: inteligencja cyfrowa, kompetencje cyfrowe, technologie, Internet, umiejętności, zagrożenia



INNOVATIVENESS IN POLISH ENTERPRISES AND THE FOURTH INDUSTRIAL REVOLUTION

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Abstract: The paper addresses issues related to the development of companies from the micro and SME sector with reference to the fourth industrial revolution. It constitutes the effect of dynamic market changes associated with permanent shortening of the product life-cycle and thus, the necessity to increase the quality of offered products. The aim of the present paper was to evaluate the implementation level of the fourth industrial revolution elements in Polish production companies operating the micro and SME sector. Additionally, the tools to use the 4.0 concept at the highest level in Polish enterprises, including the factors and persons responsible for their implementation were indicated. The study attempts to distinguish the technologies that are most widely applied in the sector of these enterprises and evaluates their impact on developing a competitive advantage on the market. For this purpose the *Smart Industry Poland. Innovativeness in the sector of small and medium-sized producing companies in Poland* report published by the Kantar Millward Brown Institute on behalf of Siemens in April 2018 was used.

Keywords: innovativeness of enterprises, industry 4.0, management processes computerization, process management

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Introduction

A key factor of enterprise innovativeness is its entrepreneurship, particularly in the aspect of management through making use of innovative technologies. In the conditions of dynamic market changes, it conditions the possibility of implementing actions of all kinds aimed to improve their functioning (Kowalik 2016, p. 170-171; Włodarczyk 2017, p. 117). This also means the willingness of enterprises to invest financial resources in the purchase of advanced technological, informatic and analytical solutions or modern management methods (*Smart Industry Polska 2018...*, p. 5). The application of digital technologies in the manufacturing company sector allows the costs to be decreased related to producing a trial series of prototypes of products that are indispensable for tests and in the perspective of further development introducing new products to the market. This is of key importance to gain a market advantage. Moreover, the application of these technologies significantly influences the development of industry through increased competitiveness of particular business entities (Brodowska-Szewczuk 2009, p. 87). The development of digitisation in turn depends on the accessibility and possibility of using these tools at a given place and time with regard to the current needs of enterprises. This allows the omnipresence

of technologies in their successive development, among others, through adjusting their market offer to the interests of customers. In other words, digitisation is an element of the economic environment that facilitates the acquisition of additional tangible and intangible assets, such as knowledge on the potential and possibility of utilising available technologies (Michalski 2014, p. 80; Godlewska-Majkowska, Skrzypek, Płonka 2016, p. 45).

The level of implementing the tools of the fourth industrial revolution in Polish enterprises

The use of digital technologies to a large extent conditions the competitiveness of enterprises. Over decades, its level has been dependent on the application of various technologies of product manufacturing, which result from the needs of customers as well as the functioning of particular business entities (*Figure 1*).

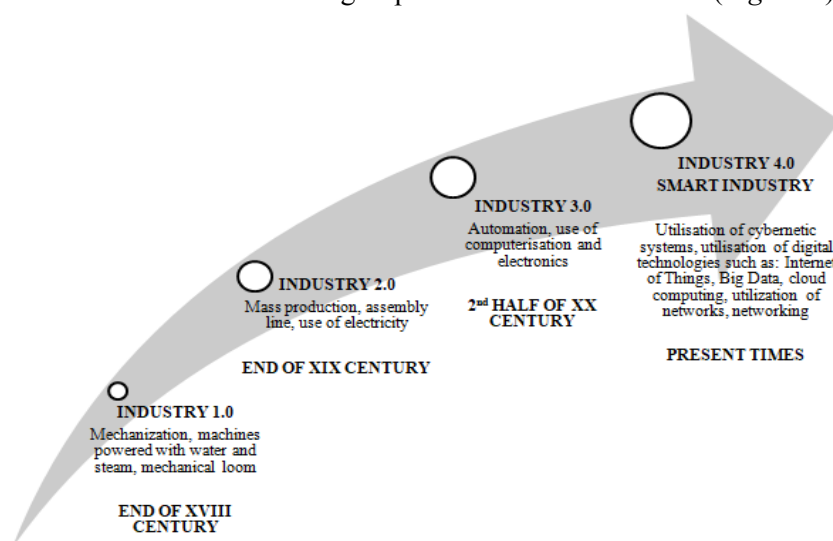


Figure 1. Development of industry over decades

Source: Author's own elaboration based on (*Smart Industry Polska 2018...*, p. 5)

Social and economic development has had a serious impact on increasing the awareness of consumers and the decisions of enterprises to shorten the product life-cycle. These actions force the decision-makers in organisations to introduce significant alterations to the existing manner of their functioning, among others, by implementing the tools of the fourth industrial revolution (extremely advanced technological, informatic or managerial solutions). Thus, the development of technologies that improve the changeover of machines and production equipment allows companies to adjust the offer to the demand occurring on the market. Moreover, making use of widely understood computerisation as well as digital and analytical solutions such as the Internet of things, cloud computing or big data, make it possible to acquire and gather a larger amount of data and information, and

therefore make decisions that increase the probability of achieving overarching strategic goals (Kraszewska, Pujer 2017, p. 16; Porter 2006, p. 63; Pierścionek 2007, p. 199-200; Łobejko, Pierścionek 2011, p. 18; Adamkiewicz-Drwiłło 2006, p. 23; Koczerga 2008, p. 91-93).

The Smart Industry Poland 2018¹ survey conducted by Kantar Millward Brown on behalf of Siemens in April 2018 shows that the functioning of currently operating production companies from the micro and SME sector is not based on full implementation of the fourth industrial revolution tools (*Figure 2*).

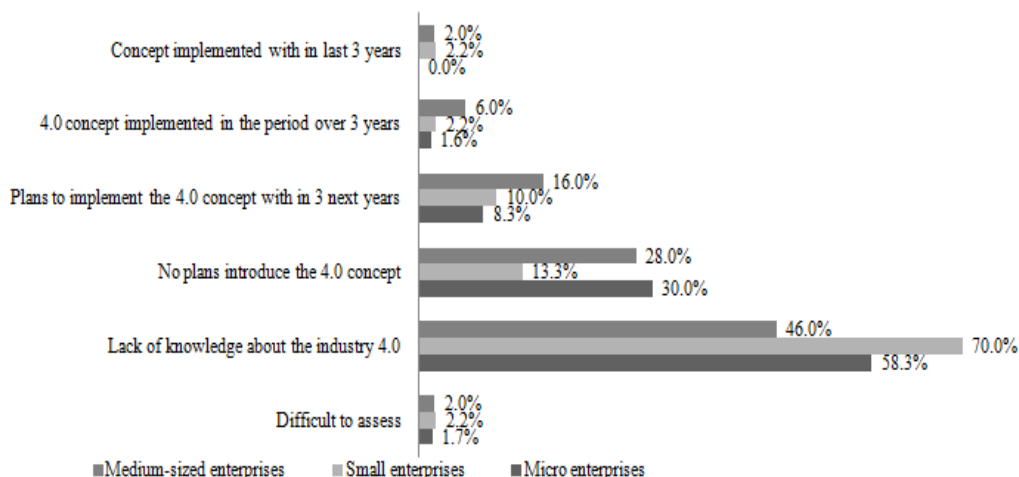


Figure 2. Implementation level of 4.0 concept in Polish production companies of micro and SME sector

Source: Author's own elaboration based on (*Smart Industry Polska 2018...*, p. 17)

The evaluation of the results of the survey included in the *Smart Industry Poland 2018 Report, Innovativeness in the sector of micro and small and medium-sized enterprises in Poland* has shown that a significant number of the analysed enterprises demonstrated a lack of knowledge related to the fourth industrial revolution. This concerns in particular small enterprises, which probably results from the lack of sufficient financial resources that could be designated for financing investment and development activities (70% of business entities). In the case of micro enterprises, it was observed that 58.3% of the businesses demonstrate a lack of knowledge related to the elements of the 4.0 concept. The survey also shows that Polish enterprises are willing to implement modern technological, informatic or managerial solutions, which concerns in particular medium-sized enterprises (48%). This is probably an outcome of the established market position

¹ The Smart Industry Polska Survey – carried out in April 2018 on behalf of Siemens by Kantar Millward Brown. Its goal was to evaluate the motivation and barriers of implementing innovative solutions in the group of Polish manufacturing and industrial companies of the micro and SME sector. The survey was conducted among 200 enterprises, where the level of employment was up to 249 persons.

compared to rival enterprises, and what follows, achieving higher profits. In this group of enterprises decision-makers demonstrate plans to implement the elements of the fourth industrial revolution within the next 3 years (16% of enterprises). Efforts made to develop the activity may also be noticed in the case of micro and small enterprises. The distribution of answers given by these enterprises was as follows:

1. micro enterprises – 10% of enterprises,
2. small enterprises – 8.3% of enterprises.

The results of the survey presented in the *Smart Industry Poland 2018* Report show that a lack of sufficient financial resources and knowledge of industry 4.0 functioning in Polish enterprises is not a barrier to their implementation (*Table 1*).

Table 1. Percentage of Polish production companies that declare implementation of 4.0 concept

	Concept has been implemented within last 3 years	Concept has been implemented over period of 3 years
Micro enterprises	-	1.6%
Small enterprises	2.2%	2.2%
Medium-sized enterprises	2.0%	6.0%

Source: Author's own compilation based on (*Smart Industry Polska 2018...*, p. 17)

In the analysed period, 2% of medium-sized enterprises implemented innovative solutions and 6% of organisations used the tools of the fourth industrial revolution in the production process over 3 years. This means that Polish enterprises decide to implement solutions that foster their development. In the case of micro enterprises, a lower level of conducting investment activity was observed related to purchases of innovative technological solutions. In the period of the last 3 years the decision-makers of micro enterprises demonstrated a lack of implementation of the 4.0 concept in their enterprises. At the same time, 1.6% of the entities declared that over a 3 year period they made the decision to introduce alterations to the existing manner of functioning. The distribution of the results of the survey may be an outcome of insufficient amounts of financial resources due to the short period of market operations and insufficient number of customers. Therefore, Polish manufacturing companies should strive to strengthen their market position compared to rival companies, among others, through an increase in the level of digitisation and importance of modern technologies. The analysis of the survey results also showed that 2.2% of small enterprises in the analysed period implemented the 4.0 concept.

Moreover, one can conclude that the lack of knowledge among Polish enterprises related to the benefits of implementing the 4.0 strategy significantly influences the decisions to implement it in the future. Owners of micro enterprises who decided to participate in the survey of Kantar Millward Brown declared that they did not have plans to implement the elements of the industry 4.0 in the future

(30%). Medium-sized enterprises were classified in the second position (28%), while small business entities came third (13.3%).

The key element of the *Smart Industry Poland 2018 report Innovativeness in the sector of micro and small and medium-sized producing companies in Poland* was also evaluation of the factors that determine the implementation of all types of innovative solutions in Polish production companies of the micro and SME sector (Figure 3).

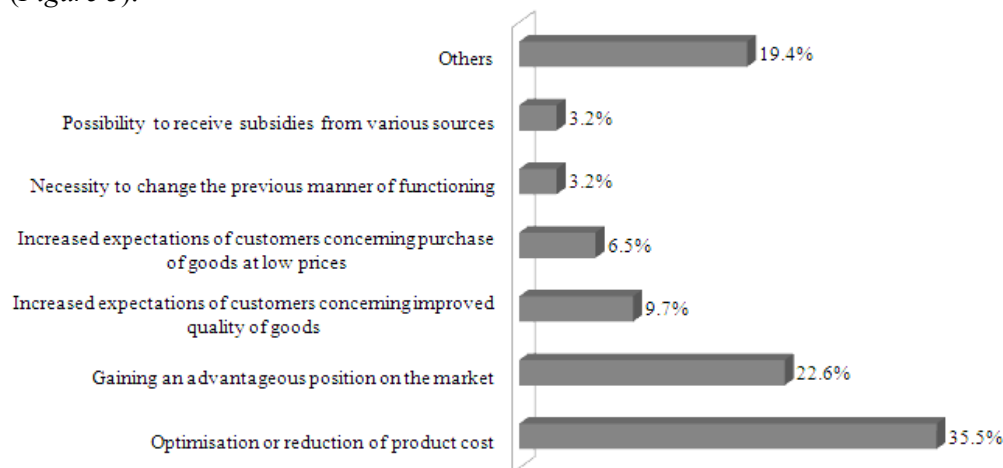


Figure 3. Factors that determine implementation of innovative solutions in Polish enterprises of micro and SME sector

Source: Author's own compilation based on (*Smart Industry Polska 2018...*, p. 19)

The factor that to the largest extent determines the implementation of innovative solutions in Polish production companies is the possibility to optimise or decrease production costs (33.5%). The aspiration of business entities to establish a competitive position on the market occupies second place in the ranking (22.6%), while increased expectations of customers in the aspect of purchasing a product characterised by high-quality parameters came third (9.7%). The factors that determine the implementation of innovative solutions also include: increased expectations of customers in relation to used products (6.5%), aspiration to introduce alterations to the existing manner of operations (3.2%), as well as attempts to finance the activity from external sources, such as subsidies (3.2%). Therefore, one can conclude that the development of enterprise innovativeness depends on satisfying the requirements of customers, who are interested in purchasing high-quality products at a relatively low price. This requires enterprises to optimise and lower production costs. To do so, decision-makers in manufacturing companies should strive to introduce alterations to the existing work organisation and purchase machines that allow a prompt changeover. These actions in the perspective of further development will allow them to maintain a competitive position on the market, and therefore increase their profit from the sales of the manufactured products.

The role of the tools of the fourth industrial revolution in increasing the level of innovativeness and competitiveness of micro and SME sector enterprises

An attempt to increase the level of innovativeness of Polish production companies results from their internal needs as well as possibilities in relation to rival enterprises. Selection of the proper instruments allows organisations to adjust themselves to changes occurring in their external environment. The portfolio of tools applied within industry 4.0 includes devices of all types whose functioning is based on robotics and production automation, software that lowers the costs of prototyping and introducing new products to the market as well as extremely advanced analytical tools, such as (*Smart Industry Polska 2018...*, p. 35):

- the Internet of things,
- Industrial Internet of Things,
- 3D printing, collaborative robots²,
- digital twin and production digitalisation,

cloud computing, big data, artificial intelligence. The application of the tools that belong to the 4.0 concept in particular organisational structures of Polish production and industrial companies is diversified. Therefore, a significant number of business entities decides to transfer the responsibility for implementing innovative solutions to particular departments (*Figure 4*).

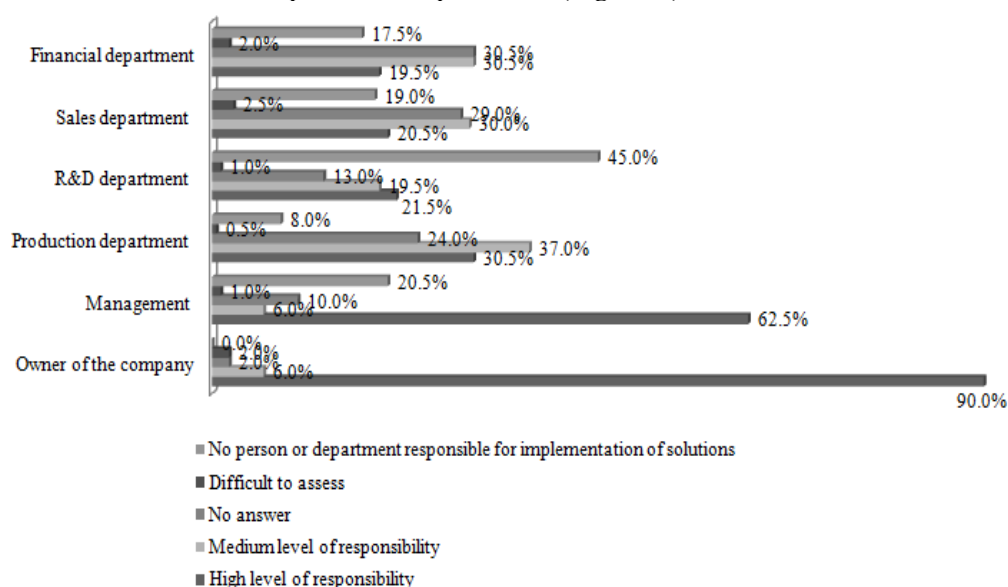


Figure 4. Level of responsibility of persons and structures in aspect of implementing industry 4.0 tools in Polish production and industrial companies of micro and SME sector

Source: Author's own compilation based on (*Smart Industry Polska 2018...*, p. 21)

² Industrial robots, collaborative ones.

The results of the survey presented in the *Smart Industry Poland 2018* report have shown that the decision-makers responsible for implementing modern solutions and technologies in the group of Polish enterprises of the micro and SME sector are the owners of enterprises (90%). The second place was occupied by organisations where the execution of decision-making processes depends on managerial board members (62.5%). Moreover, a high level of responsibility may be observed in the case of: the production department (30.5%), R&D department (21.5%), sales department (20.5%) and financial department (19.5%). While evaluating the presented results, one may conclude that the implementation of 4.0 tools is a complex process that is conditioned by decisions of persons who are responsible for achieving strategic goals and who possess knowledge in the scope of the financial and investment capabilities of enterprises. The sales department's responsibility in turn is to evaluate the usefulness of particular groups of products from the user perspective and collaboration with the financial department, whose functioning is aimed at adjusting the scope of investment to the financial standing of the economic entity. The survey presented in the *Smart Industry Poland 2018 report* also shows that in the case of the production department, a medium level of responsibility for making decisions on implementing extremely advanced solutions and technologies occurs. This confirms the qualifications and interdisciplinarity of employees in the aspect of making adjustments in accordance to market changes (37% of enterprises). The perspective of implementing industry 4.0 solutions at a medium level can be observed in the case of persons employed in the sales department (30% of enterprises) and financial department (30.5% of enterprises). The decisions about applying modern solutions and technologies are seldom made by employees responsible for implementing R&D projects. They constituted 45% of the total number of respondents. This may mean that the adopted development strategy of Polish manufacturing companies allows the carried out tasks to be adjusted to the abilities and professional qualifications of their employees. From the perspective of their successive development, these actions may to a great extent cause a reduction in the time of performing particular operations as well as the distribution processes of ready products to customers.

An element of the survey by Kantar Millward Brown also constituted evaluation of the difficulties in implementing particular tools of industry 4.0 in Polish production companies of the micro and SME sector (*Figure 5*).

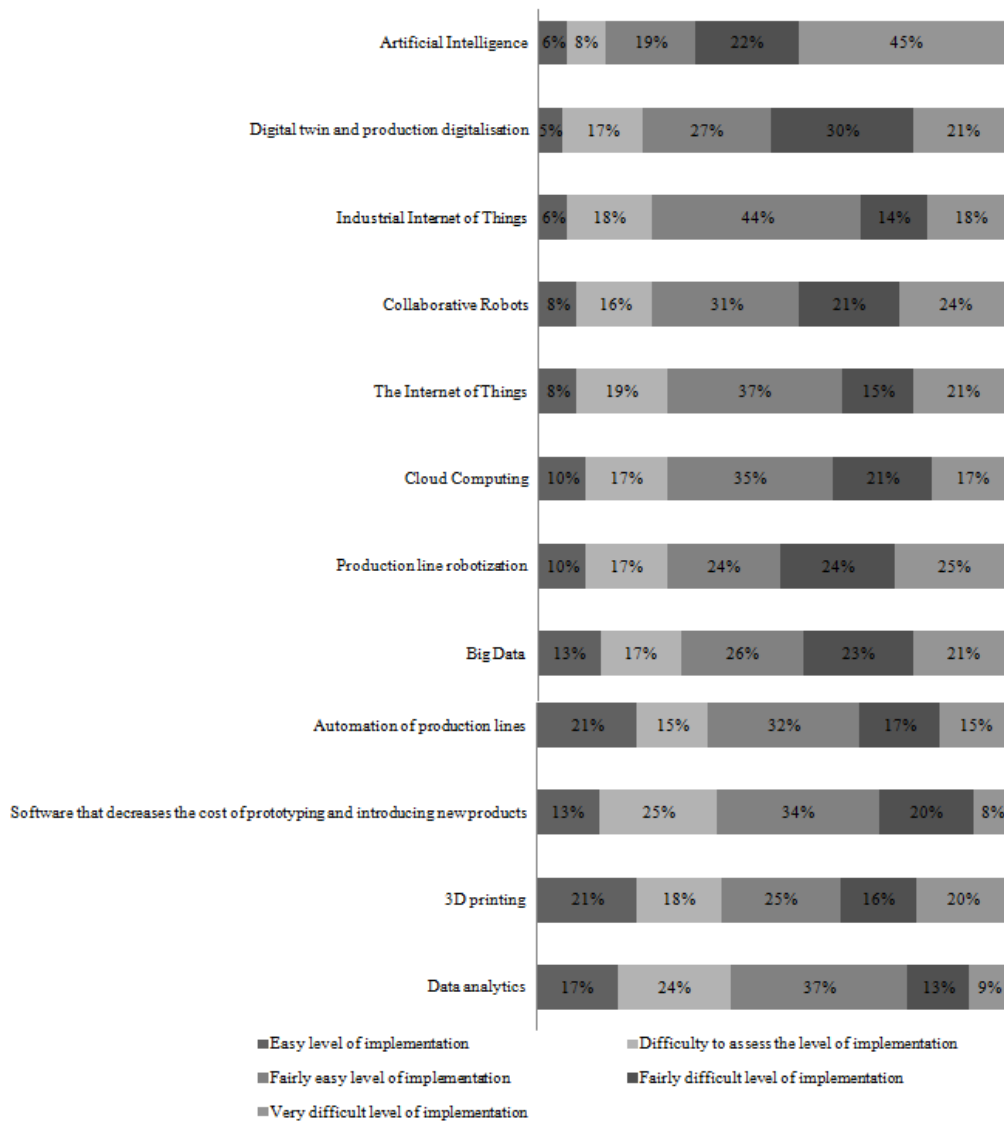


Figure 5. Evaluation of difficulties in implementing particular tools of industry 4.0 in Polish production and industrial companies of micro and SME sector

Source: Author's own compilation based on (*Smart Industry Polska 2018...*, p. 36)

Difficulties in actions of this type have been observed in the case of: artificial intelligence tools (45%), production line robotization (25%), collaborative robots (24%), digital twin and production digitalisation (21%) and 3D printing (20%). This probably results from the necessity to gather large resources of knowledge in the scope of computerisation of management processes as well as improving the course of production processes, which requires hiring qualified employees.

Additionally, the survey results presented in the *Smart Industry Poland 2018 report* demonstrated the difficulty in implementing the tools used to acquire and process the collected data and information:

1. Internet of things – 21%,
2. big data – 21%,
3. cloud computing – 17%,

The complexity of implementing analytical tools may also result from the necessity to process large information resources and use extremely advanced IT systems in order to analyse them. In the case of developing enterprises, this is a barrier to using these solutions in everyday work due to limited financial resources. This also influences the inability to conduct training for employees that improve their level of professional qualifications in the scope of using innovative informatic solutions, as well as creating new work positions for persons equipped with knowledge in this area. A similar distribution of results can be observed while evaluating the implementation of 4.0 concept tools described as *fairly difficult*:

- production line robotization (24%),
- big data (23%),
- digital twin and production digitalisation (30%).

Applying tools that improve the functioning of manufacturer companies in the micro and SME sector is supposed to increase their level of competitiveness. Therefore, an element of the Kantar Millward Brown Institute survey was to evaluate the influence of extremely advanced technological, informatic and analytical solutions on building the market position of enterprises in relation to their competitors (*Figure 6*).

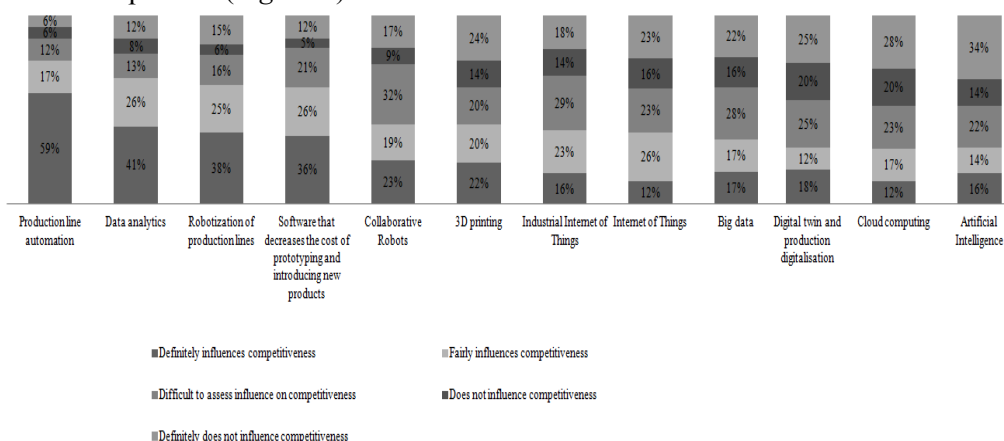


Figure 6. Evaluation of enterprises in aspect of influence of particular 4.0 industry tools on building a competitive advantage

Source: Author's own compilation based on (*Smart Industry Polska 2018...*, p. 38)

The respondents who decided to participate in the survey demonstrated that the level of enterprise innovativeness is to the largest extent conditioned by production line automation (59%). Enterprises whose decision-makers indicated that the

application of analytical tools determines their competitiveness came in second place (41%). Additionally, the respondents indicated that successive development and building a competitive advantage depend on production line robotization tools (38%) and software that decreases the costs of prototyping and introducing new products (36%). Financial expenditures aimed at improving the functioning of enterprises may mean an aspiration of decision-makers to introduce alterations to the existing manner of functioning so as to satisfy the needs of customers and to manufacture high quality goods. All of the actions require a thorough analysis, assessment of the prototype needs, manufacturing a pilot series of prototypes of goods and evaluating their usefulness by customers. Therefore, the decision-makers of Polish production companies indicated that the following tools of data analysis may have a serious impact on building a competitive advantage:

- Data analytics – 26%,
- Internet of things – 26%,
- Industrial Internet of Things – 23%.

The results of the survey presented in the *Smart Industry Poland 2018* report demonstrated the willingness of enterprises to increase the scope of conducted investments, among others, through purchases of tools that optimise the costs of prototyping and introducing new products to the market. The production of a pilot series of goods allows enterprises to decrease the costs that may occur when production processes are carried out in a manner not compliant with the adopted procedures and standards. This makes it impossible to satisfy the expectations of customers and therefore results in the discontinuation of investment projects. Simultaneously, it is possible to identify business entities in the Polish sector of manufacturing companies that negatively evaluate the positive influence of applying analytical tools in their successive development. This concerns in particular the following tools:

- cloud computing – 20%,
- digital twin and production digitalisation – 20%,
- Internet of things – 16%,
- big data 16%.

Conclusions

Attempts of decision-makers in enterprises to increase the level of market competition requires the introduction of significant alterations to the existing manner of their functioning. These alterations include carrying out investment projects that are also based on applying extremely advanced solutions of goods manufacturing, creating new distribution channels, as well as introducing alterations to the existing manner of organisation management. These actions have an influence on increasing the level of digitisation and computerization of enterprises, resulting from acquiring new resources of useful knowledge.

Over the decades one can observe an evolution of enterprise development and a tendency to accumulate resources of all types. Moreover, a key factor of their development and competitiveness is to evaluate the opportunities and threats that

occur in the market environment as well as the organisation's internal potential in the aspect of the capability of achieving strategic goals. Therefore, persons responsible for carrying out production tasks strive for successive development and all possible solutions that are elements of the so-called fourth industrial revolution. Their implementation has a significant impact on improvement in the functioning of enterprises, among others through the integration of particular organisational structures.

While evaluating the implementation of the tools of the fourth industrial revolution in Polish production companies of the micro and SME sector, it can be observed that business entities aspire to increase their range of conducted investment projects. The actions that have been implemented are aimed at optimising or decreasing the costs of manufacturing goods, while simultaneously increasing their quality. Moreover, the functioning of enterprises based on modern technological and informatic solutions may significantly influence the changeover of production devices and therefore supply products to the market that are in high demand. The review of the survey results in the aspect of enterprise functioning which is based on use of the 4.0 concept has shown that a lack of knowledge among decision-makers concerning extremely advanced technological and informatic solutions is not a barrier to their implementation. A significant number of enterprises of the micro and SME sector, despite limited financial expenditures designated for investment activity while striving for development, decide to implement all types of solutions that increase knowledge transfer among particular organisational units (tools of cloud computing, Internet of things and big data). These actions enable enterprises to evaluate the pace of market changes and adjust their functioning with respect to their abilities and accumulating indispensable financial resources.

In the perspective of further development, decision-makers of enterprises from the micro and SME sector should strive to implement all kinds of solutions to streamline the existing processes (highly advanced IT and analytical systems). In addition, a key element in maintaining a competitive position in this group of economic entities is market analysis in the aspect of adjusting the manufactured products to customer expectations and market demand. Therefore, an important element of the functioning of small and medium-sized enterprises is also the use of analytical solutions, enabling the acquisition of data and information, their processing into useful knowledge and its transfer between individual organizational structures. The whole range of activities can significantly affect an increase in profits from the sale of offered products, and thus maintain the profitability of enterprises over a longer period of time.

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INNOWACYJNOŚĆ W POLSKICH PRZEDSIĘBIORSTWACH A CZWARTA REWOLUCJA PRZEMYSŁOWA

Streszczenie: W niniejszym opracowaniu poruszono tematykę związaną z rozwojem przedsiębiorstw sektora mikro i MŚP w odniesieniu do czwartej rewolucji przemysłowej. Stanowi ona efekt dynamicznych zmian rynkowych związanych z permanentnym skróceniem cyklu życia produktu, a tym samym koniecznością zwiększenia poziomu jakości oferowanych wyrobów. Celem niniejszego opracowania jest ocena poziomu implementacji elementów czwartej rewolucji przemysłowej w polskich przedsiębiorstwach produkcyjnych, prowadzących działalność w sektorze mikro i MŚP. Ponadto wskazano narzędzia wykorzystania koncepcji 4.0 na najwyższym poziomie w polskich przedsiębiorstwach z uwzględnieniem czynników i osób odpowiedzialnych za ich implementację. W opracowaniu podjęto próbę wyodrębnienia technologii, które w największym stopniu są stosowane w sektorze wspomnianych przedsiębiorstw, oraz dokonano oceny ich wpływu na budowanie przewagi konkurencyjnej na rynku. W tym celu wykorzystano raport *Smart Industry Polska 2018. Innowacyjność w sektorze mikro oraz małych i średnich przedsiębiorstw produkcyjnych w Polsce* opublikowany przez Instytut Kantar Millward Brown na zlecenie firmy Siemens w kwietniu 2018 roku.

Słowa kluczowe: innowacyjność przedsiębiorstw, przemysł 4.0, informatyzacja procesów zarządzania, zarządzanie procesowe



STATIC AND DYNAMIC ANALYSIS OF ORGANIZATIONAL EFFICIENCY

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Abstract: The article discusses the issue of two different approaches to economic efficiency, such as static efficiency and dynamic efficiency. They represent different concepts of organizational effectiveness. Both approaches are used, but the growing popularity of the dynamic approach is increasingly noticeable. In the current market situation, maintaining a dynamic approach to efficiency brings more benefits to the organization than just eliminating waste as is the case of the static approach.

The aim of the article is to present two perspectives of economic efficiency, such as static efficiency and dynamic efficiency. Both approaches and their most important features were described in the text. The analysis of source literature is used as a research method.

Keywords: economic efficiency, static efficiency, dynamic efficiency, innovation

DOI: 10.17512/znpcz.2018.4.06

Introduction

The rationale for taking up this topic is that now organizational effectiveness is the basis for the assessment of each organization (Ziębicki 2012), and its determination contributes to the evaluation of the selected organizational strategy. The concept of efficiency is quite complex and can be considered on many levels. One of such areas is the theory of economy according to which efficiency is determined and adopted as economic efficiency.

On the basis of source literature review, two approaches to efficiency according to the theory of economics can be distinguished: static and dynamic (Korenik 2017). They come from various trends of economic theory: neoclassical economics and evolutionary economics (Korenik 2017). These approaches differ significantly, which results in maintaining a given approach in the organization, leading to other consequences and resources (Pyszka 2015). In source literature, it can also be noted that the allocation efficiency (static efficiency) and the contribution of innovation to technological changes (dynamic efficiency) are some of the criteria for assessing the efficiency of economies (Maksimczuk 1998, p. 43).

Static efficiency

Static efficiency is an approach used in economic theory, especially neoclassical economics (Korenik 2017). The genesis of the static approach goes back to the

1920s, when the concept of perfect competition examined the organization as a system that demonstrated the efficiency of resource allocation in the sense of Pareto optimality (Szudy 2013) and also in the context of the general equilibrium concept (Kozuń-Cieślak 2013).

The static approach to efficiency can be divided into two types: technical efficiency and allocation efficiency. Technical efficiency is understood as an efficient way to use resources, but it is also referred to as production (cost) efficiency dealing with the optimal allocation of resources in production processes with the assumption of minimizing all production costs (Korenik 2017). The static approach is aimed at minimizing the waste of resources and their optimal allocation, at the same time referring to the theory of resources (Zbierowski 2012), which teaches how organizations should gain a competitive advantage and better economic results (Ujwary-Gil 2009). In turn, Miąsik (Miąsik 2012, p. 155) emphasizes that this approach applies in particular to technologies used in an organization. Static efficiency, therefore, evaluates the production and distribution of possessed resources, which should be relatively optimal, and additionally managed in such a way that the production possibilities curve can be satiated at a given moment (Kozuń-Cieślak 2013). The static approach, therefore, requires a maximum level of production in a given organization and at a given moment (Korenik 2017). The value of static efficiency is defined as the product of technical efficiency and allocation efficiency. The static approach to efficiency is an element of the dynamic approach, although it does not condition its reception.

The analysis of static efficiency in an organization sets two underlying assumptions. The first is based on the permanent resources that the organization has at a given moment, and the second assumes that the achievement of static efficiency is possible only in the conditions of perfect competition. An organization effective productively should also be effective technically.

Static efficiency according to Korenik is synonymous with the optimal production and allocation of resources held by an organization, with a view to obtaining by the organization a curve of production capabilities that will be known at a given moment in time (Korenik 2017).

Obtaining efficiency in the sense of Pareto (Pareto optimum) is possible only in conditions of perfect competition. These conditions include, among others (Kozuń-Cieślak 2013):

- constant access to optimal information;
- homogeneity of goods.

The conditions mentioned above result in the creation of a not very realistic market structure. The market structure that is the closest to the current market structure is the structure of monopolistic competition, that is, the structure in which the information provided is not optimal and even insufficient, and also with a vast diversity of manufactured goods and services. One can also notice organizations with the possibility of tight market control, often leading to disturbances in the proper functioning of static efficiency (Kozuń-Cieślak 2013).

Dynamic efficiency

The dynamic approach is a different approach to economic efficiency. Its formulation was caused by a different understanding of organizational efficiency as an alternative to the concept of static efficiency, or efficiency understood in the Pareto's sense (the so-called Pareto optimum) (Nowak 2015). The dynamic approach to efficiency is understood as a specific ability of an organization that leads to its growth and development, related to dynamic capabilities (Zbierowski 2012), which refer to such features of the organization thanks to which it can adapt to changing environmental conditions in a short period of time (Penc-Pietrzak 2015), taking into account the introduction of innovations to the organization.

Dynamic efficiency is also considered in the Austrian praxeological trend. Representatives of this trend consider entrepreneurship as a force starting dynamic efficiency. Thanks to this power, it is possible to observe that the organization does not adjust to the prevailing market conditions and at the same time it reacts to them to achieve the state of equilibrium. Later, to optimize processes in the organization (Nowak 2015) entrepreneurial behaviors lead to meeting the goals selected by the organization with the help of ever newer solutions.

According to the definition formulated by I. Kirzner, dynamic efficiency is such an ability of an organization that significantly contributes to the inspiration of entrepreneurial vigilance for new knowledge "*whose existence was not even previously suspected*" (de Soto 2010, p. 29). The entrepreneur is a popularizer of all market processes, and this difference is significant between the static approach and the dynamic approach (de Soto 2010, pp. 9-62). Miąsik points out that the problem of correct understanding of the concept of dynamic efficiency is noticeable. The general and dominant meaning is the reference to the pace of innovative activity in the organization, and thus to the introduction of new products or processes. This importance of dynamic efficiency corresponds to the phenomenon of dynamic competition, which is also focused on technological progress. However, Miąsik emphasizes that one can distinguish another approach to dynamic efficiency, referring to the effectiveness of using resources for innovative purposes (Miąsik 2012, p. 155).

Another definition of dynamic effectiveness is presented by Szudy, according to which dynamic efficiency is the choice of present and future consumption. It means, therefore, the state described by means of the relationship between the level of savings and investment. The same author also notices the growing importance of dynamic efficiency in the current economic situation (Szudy 2013).

The dynamic approach to economic efficiency can be divided into: adaptive efficiency and innovative efficiency (Kozuń-Cieślak 2013).

Adaptive efficiency is the ability by which the organization is able (Korenik 2017) to adapt gradually to changes in the environment while recognizing the problem and responding to it in a short period of time (Kozuń-Cieślak 2013).

Innovative efficiency is called the organization's ability to develop and introduce (Korenik 2017) innovations (Kozuń-Cieślak 2013). These innovations may concern, for example, the improvement of production processes, methods that significantly affect the reduction of any production costs by introducing new technologies to

production processes, new products, forms of organization of activities or methods of financing processes taking place in the organization (Korenik 2017).

Innovative efficiency can be divided into technological and product-related (Kozuń-Cieślak 2013). Technological innovation concerns innovation in the scope of production processes through the introduction of improvements to the technological process and new production methods. Product innovation means innovation in the field of introducing innovations within the manufactured product, taking into account the changing needs of potential customers.

The leitmotiv of dynamic efficiency according to Kozuń-Cieślak is the constant shifting of the production capacity curve to the right (Kozuń-Cieślak 2013), as evidenced, inter alia, by the application of innovations in the production process. In addition, dynamic efficiency involves creating new goals as well as measures to improve the production process. According to de Soto, the goal of dynamic efficiency is to create new goals for the organization (de Soto 2010, pp. 9-62).

On the market of goods where there is no perfect competition, organizations are able to achieve and maintain efficiency in the long term, taking into account the improvement of their processes or products. The dynamic efficiency model is based on the model of evolutionary economics, i.e., taking into account some typical phenomena of imbalance, a case or a crisis related to economic life (Korenik 2017).

Organizations that operate under conditions of uncertainty and risk may get such a state of equilibrium. However, it will be a temporary state destabilized by different variable external factors (Korenik 2017). Thanks to the introduction of innovations into these organizations, be it in the form of new products or in the form of new production process technologies, legal framework, or financial instruments, it is possible to achieve success (Glapiński 2012, pp. 284-285), because they will become competitive.

To achieve dynamic effectiveness, the company has to organize and apply employees' skills, as well as specific features and skillful use of available production technology (Korenik 2017).

It can be noticed that in organizations maintaining a dynamic approach to efficiency, the use of analogous inputs as well as similar manufacturing processes brings different results regarding, inter alia, the number of manufactured products. This phenomenon indicates a certain inefficiency of the organization and shows that not only resources, inputs, production methods or availability of a specific production line have an impact on production. It is also influenced by the appropriate way of managing the organization, and perhaps above all by the motivation of employees servicing this production line. However, there is also a different opinion according to which the motivation of employees is considered to have no significant impact on technical efficiency.

Comparison of two approaches to organizational efficiency

Both approaches to efficiency described in the text differ significantly. It should also be mentioned that the dynamic approach is introduced as an alternative to the static approach due to the critical evaluation of the assumptions of the latter.

Nevertheless, the static approach is also an element of the dynamic approach. In *Table 1*, the most significant elements of the two approaches to economic efficiency are presented, and the differences between them are shown.

Table 1 highlights seven main elements of both approaches to economic efficiency. Although the static approach is an element of the dynamic approach, achieving static effectiveness by the organization does not determine that it will achieve dynamic effectiveness (Kozuń-Cieślak 2013).

The most general difference between the two different approaches to economic efficiency is the time horizon in the context of which the analysis is carried out, which consequently leads to a different understanding of the objectives of the organization's activities (Kozuń-Cieślak 2013). The organization can maintain static efficiency in the short term, while dynamic efficiency is maintained over a long period.

As far as the resources considered in both approaches to economic efficiency are concerned, a different tendency can be noticed. Static efficiency focuses on the optimal use of the resources possessed by the organization for a given period of time and the appropriate allocation of resources, which consequently eliminates waste, which is the goal of static efficiency. Unlike static efficiency, in dynamic efficiency one can see the introduction of new resources to the activities of organizations such as, for example, new technology used in production processes or product innovations, which results in the growth but also development of the organization. The change in the purpose of the two approaches is quite noticeable because organizations are slowly moving away from minimizing waste (static efficiency) in favor of entrepreneurial activities (dynamic efficiency), thanks to which it is possible to discover and create new diverse profit opportunities (Pyszka 2015).

Table 1. Comparison of two approaches

	Static efficiency	Dynamic efficiency
Relationship	Resource-Based View	Dynamic capabilities
Time horizon	Short-term approach	Long-term approach
Type	Technical Efficiency Allocation Efficiency	Adaptive Efficiency Innovative: Efficiency -technological innovation -product innovation
Objective	Avoiding waste	Growth, organization development
Resources	Optimal use of resources and their appropriate allocation	Introduction of new resources (new products, new technological processes, innovations)
Management	Achieving a production capacity curve and knowing it at a given moment	Shifting the production capacity curve to the right
Trend in economy theory	Neoclassical economics	Evolutionary economics

Source: Author's study

The link between the static approach and the resource theory reflects the inability of the organization to be flexible, which helps to maintain static efficiency. A flexible organization is one that uses dynamic capabilities, related to the dynamic approach to economic efficiency, which is mainly manifested by the introduction of innovations in the manufactured products and technological processes carried out.

Conclusions

The analysis shows that the static approach to efficiency is the most common; however, because it focuses primarily on reducing these areas of the organization that cause high costs, it limits the development potential of the organization, which in the current market situation hinders many organizations in their activities.

The development of an organization is associated with significant financial outlays, *inter alia*, for the implementation of new solutions. The static approach eliminates areas that are highly expensive and therefore does not provide for development investments. Organizations applying this approach focus mainly on cost reduction, without investing in new solutions, which in turn contributes to blocking the development potential. Organizations that invest in their development, incurring large financial outlays for new product solutions or new technological solutions, create their development potential, invest in innovation and become flexible organizations.

It can, therefore, be concluded that under conditions of contemporary competition, the static approach is not sufficient to maintain effective organization activities at a high level of market competitiveness and is often insufficient to implement the strategy selected by them. This opinion is confirmed by the fact that the current economic environment and consumers' needs are changing very quickly, which requires the organization to have some flexibility, which is not a determinant of the static approach. Flexibility can be provided to the organization, *inter alia*, by implementing continuous innovations, which is related to the dynamic approach.

The discussed approaches to economic efficiency present different perspectives, but nowadays organizations more and more often decide to follow the concept of dynamic efficiency, relying on innovations to increase their competitiveness, and giving up the concept of static efficiency. According to the Smart Industry Poland 2017 survey, in 2016, about 58.6% of Polish companies from the SME sector decided to implement innovations in order to increase their competitiveness. These innovations most often concerned product innovations (37.8%) and process innovations (32.7%). Innovations related to marketing were at the medium level in innovations implemented into the organization (15.5%), and organizational innovations were at the lowest level (8%). The introduction of innovations (as much as 73.3%) was mainly due to the expectations of potential customers (Smart Industry Poland 2017 research report).

Therefore, it is concluded that organizations, maintaining a dynamic approach to efficiency in the present times, when their external environment is a turbulent

environment, are better adapted to operate, as well as better meet the needs of potential customers through, inter alia, the implementation of innovation. It is also essential that dynamic efficiency shows connections with dynamic abilities, or such abilities thanks to which the organization has a chance to become an organization flexible enough to adapt in a short time to changing environmental conditions and create new products or apply innovations in processes technology. An organization that is better adapted to operate in a changing environment has a chance to meet its strategy, but it can also react quickly to the constantly changing market needs. It should also be emphasized that a one-time innovation does not cause the organization to be already innovative or maintain the dynamic approach to efficiency throughout its entire operation. Introducing innovations into manufactured products or technological processes should be a continuous process and preceded with the recognition of market needs because what is innovative today may be obsolete in a few years.

The proof of a better match of the dynamic approach to efficiency in today's situation is that organizations operating in accordance with the assumptions of dynamic efficiency based on an innovative formula are more modern organizations, "thrive on the market shaped by oligopolies and monopolies, achieving extraordinary gains through research and implementation innovation" (Pyszka 2015, p. 23), and the products produced by them, thanks to the introduction of modern technologies, are getting better, which in turn contributes to building a strong brand.

Summing up, on the basis of the quoted sources, it can be concluded that because of the dynamic competition organizations operating in the present situation more and more often maintain dynamic efficiency, acquiring not only goods in the form of innovative solutions, but also gaining new knowledge, new skills or experience, which affects the ability to constantly introduce new solutions to their processes.

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STATYCZNE I DYNAMICZNE ANALIZOWANIE EFEKTYWNOŚCI DZIAŁANIA ORGANIZACJI

Streszczenie: W artykule poruszono problematykę dwóch odmiennych podejść do efektywności ekonomicznej, jakimi są efektywność statyczna oraz efektywność dynamiczna. Reprezentują one różne pojmowanie efektywności działania organizacji. Oba podejścia są stosowane, jednakże coraz częściej zauważyć można rosnącą popularność podejścia dynamicznego. W obecnych realiach rynkowych utrzymanie dynamicznego podejścia do efektywności przynosi więcej korzyści dla organizacji niż zatrzymanie się tylko na eliminowaniu marnotrawstwa, jak to ma miejsce w przypadku podejścia statycznego.

Celem artykułu jest przedstawienie dwóch ujęć efektywności ekonomicznej, jakimi są efektywność statyczna oraz efektywność dynamiczna. W tekście więc scharakteryzowano oba podejścia, a następnie dokonano ich porównania z uwzględnieniem najważniejszych cech. Wykorzystaną metodą badawczą jest analiza literatury przedmiotu.

Słowa kluczowe: efektywność ekonomiczna, efektywność statyczna, efektywność dynamiczna, innowacje



THE PROBLEM OF DIGITAL DIVIDE OF SENIORS IN MANAGEMENT OF MUNICIPAL HOUSING STOCK

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Abstract: The development of information technologies has led to the fact that digital skills are not just an option for the willing but a necessity for everyone. The pressure exerted on the computerization of business and legal transactions raises an important problem for entities managing municipal housing resources, which must combine the requirements of computerization of management processes with the digital capabilities of their clients. The purpose of this article is to describe the gap in the digital abilities of tenants of municipal premises, in particular seniors, as well as its consequences, resulting in exclusion of this group of tenants from the possibility of using the services offered to them. The article discusses the findings of the study carried out by ZGM TBS Sp. z o.o. (i.e. Department of Housing Management, Social Housing Association in Czestochowa LLC) in Czestochowa in terms of using new technologies by the seniors of Czestochowa. The study has confirmed that a significant proportion of seniors does not have appropriate tools in this area. At the same time, the study has shown that seniors are motivated to use new technologies in connection with renting premises. The conclusion was that effective implementation of information technologies in the area of tenant service is closely related to educational activities in the area of raising the digital skills of seniors.

Keywords: digital divide/digital exclusion, municipal housing stock, public tasks, seniors, the elderly

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Introduction

The municipality is the basic unit of local self-government. The role of the municipality comes down to implementing the tasks of a public utility character. Its main obligation is to satisfy the collective needs of its residents (Nalepka 2008, p. 5). One of the basic tasks of the municipality is to meet the housing needs of the local community. In Art. 75 (1) of the Constitution of the Republic of Poland of 2 April, 1997 it is stipulated that public authorities pursue policies that are conducive to satisfying the housing needs of their citizens, in particular they prevent homelessness, support the development of social housing and support the actions of citizens aimed at obtaining their own apartment. On the other hand, Art. 163 of the Constitution states that territorial self-government performs public tasks not reserved by the Constitution or statutes for the organs of other public authorities. In Art. 164 (3) of the Constitution, however, it is stipulated that the municipality carries out all the tasks of the local self-government not reserved for other units of the local self-government.

The municipality's competence in terms of satisfying the housing needs of the commune has also been reserved in ordinary legislation. Namely, in Art. 7 (1) (7) of the Law of 8 March 1990 on municipal self-government, satisfying the collective needs of the community belongs to the tasks of the municipality, in particular these tasks include the issues of municipal housing construction. Moreover, in Art. 4 of the Law of 21 June, 2001 on the protection of the rights of tenants, municipal housing stock and amending the Civil Code, the legislator predicted that creating conditions to meet the housing needs of the local community belongs to the municipality's own tasks (Sec. 1), and the municipality, under the rules and in cases provided for in the Law, provides social and substitute housing, and satisfies the housing needs of low-income households (Sec. 2).

With regard to the aforementioned statutory regulation in the literature, it is rightly pointed out that the municipality is one of those entities whose constitutional obligation is to improve the housing situation of the local community (Doliwa 2015).

In addition to the tasks concerning the fulfillment of housing needs, a number of other public tasks rests on local government units at the municipal level. An example of their catalog was indicated by the legislator in Art. 7 (1) of the Law on municipal self-government.

In the context of this article, it is also necessary to mention the activity of the municipality, as provided for by the legislator, in terms of promoting intergenerational solidarity and creating conditions to stimulate civil activity of the elderly within the local community (Art. 5c (1) of the Law on municipal self-government).

Management of the municipal housing stock

According to Art. 20 (1) of the law on the protection of the rights of tenants, the municipality can create and own the housing stock in order to perform tasks to satisfy the housing needs of the local community. What is more, in Sec. 2a of the quoted legal article, it is stipulated that in order to implement these sentences, the municipality may also rent premises from other owners and sub-rent them to people whose households achieve a low income. Owning the housing stock is therefore aimed at enabling municipalities to perform their own tasks. The stock includes premises owned by municipalities, municipal companies (excluding Social Housing Associations) and, moreover, premises that are in the sole possession of the indicated entities (Nalepka 2005, p. 65). In addition, it should be pointed out that the indicated regulation is in a sense an authorization for municipalities to undertake substantive and legal actions, aimed at acquiring property or spontaneous possession of new premises (Doliwa 2015).

With the housing stock at its disposal, the municipality should take appropriate actions in terms of running and managing this stock so that the tasks that within its responsibilities it are implemented in the best possible way. According to Art. 25 (2) in connection with Art. 23 (1) of the Law of 21 August, 1997 on real estate management, activities in the area of managing the housing stock of the commune

include, among others, proper registration of real estate, securing real estate against damage or devastation, appropriate disposal and acquisition of real estate, leasing and renting real estate, drawing up plans to use the resource, making divisions and consolidations and dividing real estate, as well as equipping it, as much as possible, with the necessary technical infrastructure devices (Sowier-Kasprzyk, Chrzan, Pietrasieński, Surowiec 2017, p. 203). The obligation to manage the communal real estate resource rests on the head of the commune/mayor of the city.

Municipal real estate management may be conducted using various management models. The three basic models of municipal property management are commonly distinguished (Nalepka 2008, p. 6):

1. direct – management carried out by municipal authorities and employees of the commune office,
 2. indirect – management performed by organizational units of the commune (e.g. budgetary units) or municipal legal entities (so-called municipal companies),
- order – management carried out by an external entity on the basis of a management contract. The management of the municipal housing stock is also influenced by its environment. This environment influences the resource through political, socio-demographic, economic and financial as well as technical and legal factors (Sikora-Fernandez 2010, p. 190).

With regard to the responsibilities of the commune in terms of managing its housing stock, in addition to the above-mentioned technical activities aimed at securing the premises against damage, or typical administration and accounting activities, one cannot overlook the number of other aspects connected with this management (Skowron-Grabowska, Mesjasz-Lech 2016, p. 23). It is assumed that the use of municipal real estate is not intended solely to implement public tasks. The commune's activity in this area should also serve to implement the local strategy connected with socio-economic development (Małkowska 2010, p. 77). The municipality, as the basic unit of territorial self-government, encounters problems of the inhabitants such as social exclusion, unemployment or poverty (Baskiewicz 2017, p. 42). One of the aspects of public activity is to counteract those phenomena which, along with crime and addictions, are related to the security of tenants' premises (Fehér, Teller 2016).

An example of the commune's activities in the management of its housing stock, also aimed at socio-economic development, is for instance seen in different kinds of debt relief programs. Their aim is to aid people in a difficult life and financial situation to repay debt due to rent payments, and consequently, to help them escape the whirlwind of indebtedness. At the same time, these activities are aimed at increasing self-esteem, integration with the environment and increasing the professional activity of the indebted. These objectives should be implemented by the municipality while taking into account the costs it incurs in order to maintain the housing stock. Proper debt management within the framework of managing the housing stock is of crucial importance. Socio-economic development is also determined by the actions of the commune as part of the tenants' participation in management of the housing stock. This participation is aimed at enabling the tenants to influence the management of the stock, which results in the cooperation

and integration of residents, improvement of social ties, or mobilization in terms of caring for the inhabited properties. Tenants may thus exert a real influence on decisions concerning the real estate that is inhabited by them.

The aforementioned examples of activities in the management of the housing stock have been undertaken particularly by the administrator of the housing stock of the Municipality of Czestochowa – Zakład Gospodarki Mieszkaniowej Towarzystwo Budownictwa Społecznego w Częstochowie Sp. z o.o. (i.e. the Department of Housing Management, Social Housing Association in Czestochowa LLC, hereinafter referred to as: ZGM TBS Sp. z o.o.) (Dziadkiewicz, Pabian 2017; Dziadkiewicz, Cichowski 2017).

Digital exclusion of seniors in the management of the municipal housing stock

The tenants of the commune's housing stock are people with a diverse demographic structure. Importantly, a significant part of municipal premises is inhabited by elderly people. As a consequence, the problem of the digital divide of seniors is becoming increasingly more important in managing the municipal housing stock.

The development of new information technologies, and particularly an increase in the use of the Internet has transferred many aspects of private and public life to the digital space. They are used, among others, as the place of work, education and entertainment. Moreover, they are widely used for communication purposes (Szmigielska, Bąk, Hołda 2012, p. 141; Bogdanov 2013, p. 362; Stawicka 2015, p. 3). They can also serve to monitor health problems (Iancu, Iancu 2017, p. 11).

In connection with the above, it becomes obvious to have skills in terms of using the computer and mobile devices which allow one to use the Internet. The lack of this kind of skills makes many aspects of everyday life difficult (Kuchta 2013, p. 165). These skills are not a facilitation but rather a necessary condition for one's active participation in professional, social and cultural life (Stawicka 2015, p. 3).

The development of modern information technologies has led to social stratification of people into those who use the discussed technologies and Internet resources and those who do not use them. In the case of the second group of people, this phenomenon may consequently lead to economic and social exclusion, as well as to the deepening of social divisions. This phenomenon is referred to as digital exclusion or digital divide (Bogdanov 2013, p. 3; Szmigielska, Bąk, Hołda 2012, p. 142; Kuchta 2013, p. 169).

The elderly - seniors are indicated among those particularly subjected to digital exclusion. It should be stressed in here that the boundary between mature age and old age has not been precisely defined. There are different approaches when it comes to recognizing a certain age as the beginning of old age. In addition, the stages of old age – early old age, late old age and ripe old age - are also differentiated (Kuchta 2013, pp. 166-167). For the purpose of this article, it is assumed that seniors are people over 60 years of age.

The literature draws attention to the existence of degrees of digital divide – physical access (no possibility to use a computer etc.), competence access (lack of knowledge, skills and competences in using new technologies) and motivational access (Bednarczyk 2014, p. 2). The digital exclusion of seniors is also influenced by factors such as education, technical interests, gender, state of health, income or marital status. They are classified respectively as factors at an individual level and economic-context factors (Friemel 2014, p. 5). With regard to obtaining knowledge in the use of new technologies by seniors, it is indicated that this process is hindered due to the weakened perception process of the elderly, focusing attention or memorizing. The specificity of modern websites which use, among others, diverse embellishments or advertisements, and which make these sites illegible for seniors is also emphasized (Bogdanov 2013, p. 368). It is also pointed out that computer systems are not being designed in a friendly way for seniors (McMurtrey, McGaughey, Downey 2008, p. 132; Paul, Stegbauer 2005).

The development of modern information technologies becomes increasingly significant in management of the municipal housing stock. Examples might be found in say electronic access to tenant accounts, electronic correspondence, making rent transfers or even in various kinds of mobile applications. As a consequence, due to the diverse demographic structure of the housing resource and the fact that elderly people inhabit it, real estate managers are increasingly facing the problem of digital divide.

Seniors living in the premises managed by ZGM TBS Sp. z o.o. in Czestochowa and their digital activity

The Department of Housing Management, Social Housing Association in Czestochowa LLC, i.e. Zakład Gospodarki Mieszkaniowej Towarzystwo Budownictwa Społecznego w Częstochowie Spółka z o.o. (hereinafter: ZGM TBS Sp. z o.o. in Czestochowa), the administrator of the housing stock of the Municipality of Czestochowa conducted a study in 2018 to analyze the digital activity of seniors who live in the premises managed by it. The study was justified by the actions of the aforementioned entity aimed at using modern technologies in its stock management, while taking into account the interests of Czestochowa seniors, increasing their social integration and counteracting social exclusion, including digital exclusion. The research was of a qualitative character. It covered a population of approximately 8,500 people who are tenants of municipal premises. 300 subjects were examined in the defined population, of which 56 people were over 60 years of age and consequently, were considered as seniors. The research was conducted in the form of a survey. The questions included in the survey concerned issues related to, among others, seniors using tools that enable use of the Internet, access to the Internet, activities undertaken by seniors using modern technologies and the Internet.

The conducted study revealed that only 37.50% of seniors living in the housing stock managed by ZGM TBS Sp. z o.o. in Czestochowa have a computer in their

households. Thus, as many as 62.50% of seniors do not own a computer (Figure 1), by mean of which they might be able to use the Internet.

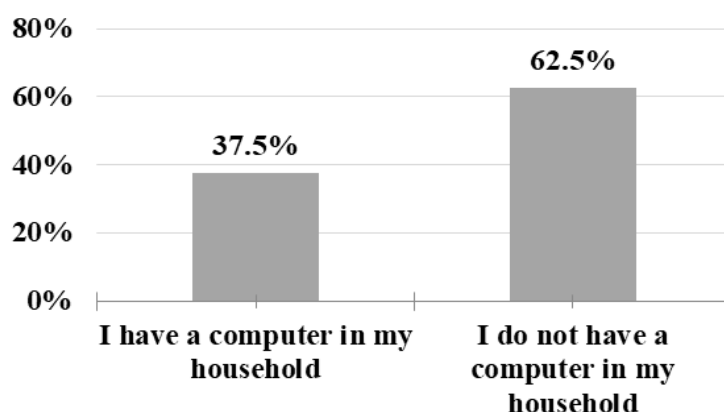


Figure 1. Having a computer in households of Czestochowa seniors living in housing stock managed by ZGM TBS Sp. z o.o. in Czestochowa

Source: Author's own compilation, based on research carried out by ZGM TBS Sp. z o.o. in Czestochowa

The conducted study also revealed similar results in the percentage of Czestochowa seniors who have a mobile phone that provides them with access to the Internet (Figure 2). This kind of device is owned by 39.3% of all the respondents, whereas 60.7% of the subjects do not have one.

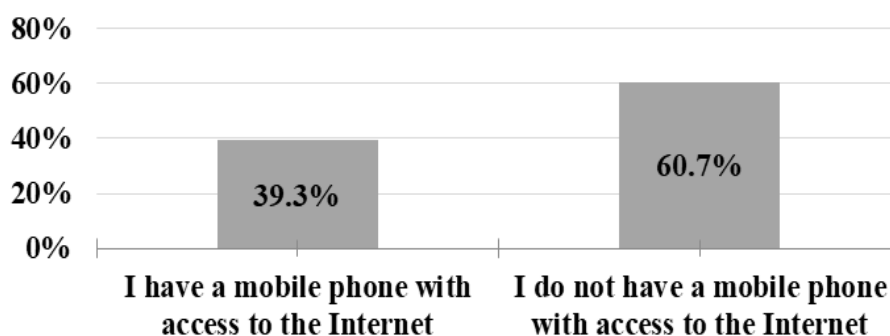


Figure 2. Having a mobile phone providing access to Internet among Czestochowa seniors living in stock managed by ZGM TBS Sp. z o.o. in Czestochowa

Source: Author's own compilation, based on research carried out by ZGM TBS Sp. z o.o. in Czestochowa

Czestochowa seniors also commented on the frequency of using the Internet (Figure 3). Nearly 20% of them regularly use the Internet. The same proportion of the subjects use the Internet every day or almost every day. In turn, 14.6% use it at least once a week. On the other hand, 7.3% of seniors use the Internet less than

once a week, and the same percentage use it only a few times a month. At the same time, almost half of the surveyed people (43.9%) declared that they did not use the Internet.

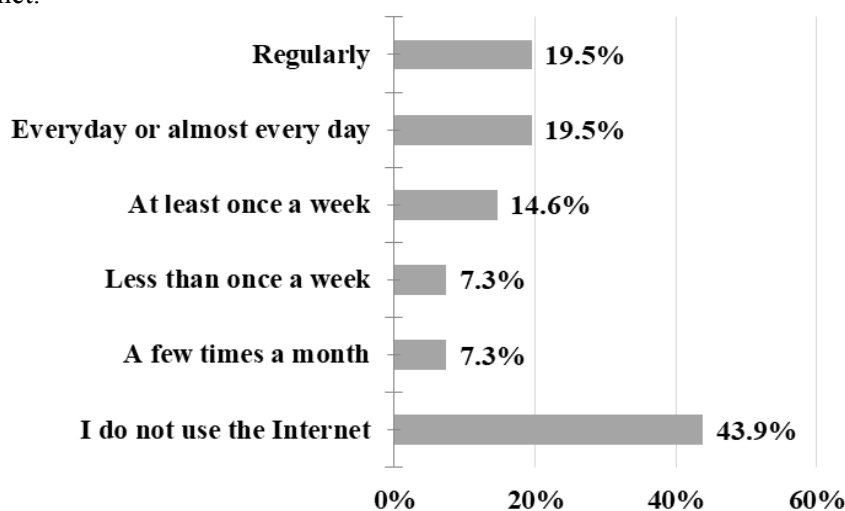


Figure 3. Frequency of using Internet among Czestochowa seniors living in stock managed by ZGM TBS Sp. z o.o. in Czestochowa

Source: Author's own compilation, based on research carried out by ZGM TBS Sp. z o.o. in Czestochowa

It might be added that the most frequent forms of activity of Czestochowa seniors on the Internet include browsing websites, checking weather forecasts and atmospheric conditions, as well as searching for information.

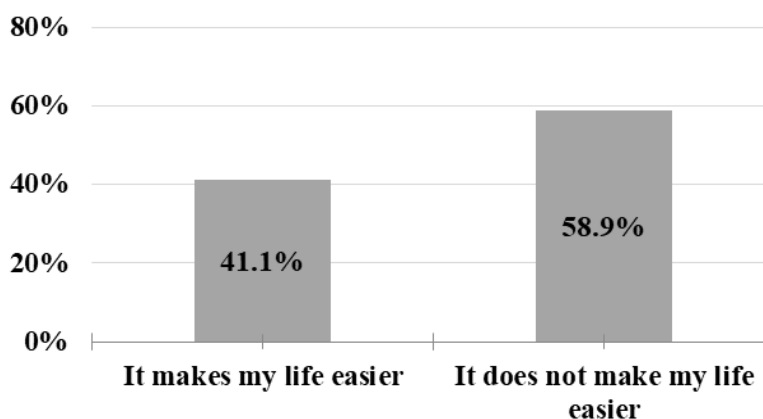


Figure 4. Influence of Internet on lives of Czestochowa seniors living in stock managed by ZGM TBS Sp. z o.o. in Czestochowa

Source: Author's own compilation, based on research carried out by ZGM TBS Sp. z o.o. in Czestochowa

The conducted survey was also aimed at verifying Czestochowa seniors' opinions in terms of the influence of the Internet on facilitating their lives (*Figure 4*). Almost 41.1% of the subjects indicated that the Internet made their lives easier. On the other hand, 58.9% said that the Internet did not exert such influence. However, one cannot overlook the fact that the percentage of individual answers coincides with the responses on having a computer and a mobile phone that provide access to the Internet. Therefore, it seems that the lack of influence of the Internet on one's life might have been indicated by those people who do not use it on a daily basis, particularly due to not having appropriate electronic tools in this area.

In the conducted study, ZGM TBS Sp. z o.o. in Czestochowa also took into account the matter of Czestochowa seniors' interest in receiving SMS notifications concerning the residential premises (*Figure 5*). A significant proportion of seniors, i.e. as many as 67.4%, indicated that they were interested in receiving SMS notifications which would be related to the premises. However, the lack of interest in receiving this kind of notifications was indicated by 32.6% of the respondents.

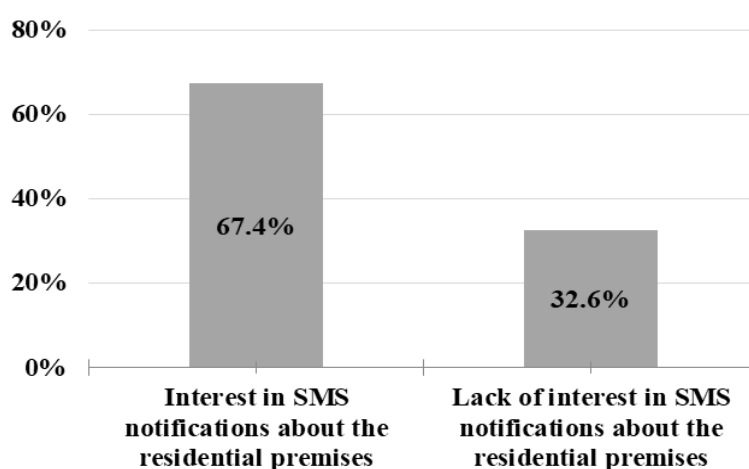


Figure 5. Interest of Czestochowa seniors living in stock managed by ZGM TBS Sp. z o.o. in Czestochowa in terms of receiving SMS notifications on residential premises

Source: Author's own compilation, based on research carried out by ZGM TBS Sp. z o.o. in Czestochowa

Figure 6 illustrates the results of the study in the part referring to the seniors' interest in terms of ZGM TBS Sp. z o.o. implementing solutions based on web applications (*Figure 6*). 57.1% of the respondents declared interest when it comes to implementing this kind of application, whereas 42.9% lack such interest.

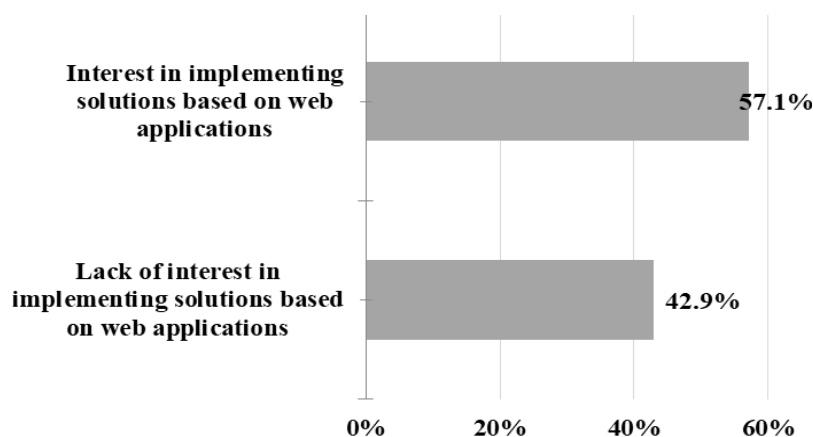


Figure 6. Interest of Czestochowa seniors living in stock managed by ZGM TBS Sp. z o.o. in Czestochowa in terms of implementing solutions based on web applications

Source: Author’s own compilation, based on research carried out by ZGM TBS Sp. z o.o. in Czestochowa

Importantly, the seniors participating in the study also indicated for what purpose they would like to use new technologies implemented by ZGM TBS Sp. z o.o. The most popular are solutions which allow them to make payments, submit documents, receive answers to inquiries or report failures. Additionally, the seniors indicated obtaining information about local issues as well as obtaining information on initiatives undertaken by ZGM TBS Sp. z o.o.

It should also be emphasized that more than half of the Czestochowa seniors living in the housing stock managed by ZGM TBS Sp. z o.o. (53.2%) declared they were interested in developing competences in the use of the Internet (*Figure 7*). However, the remaining part (46.8%) did not declare interest in this respect.

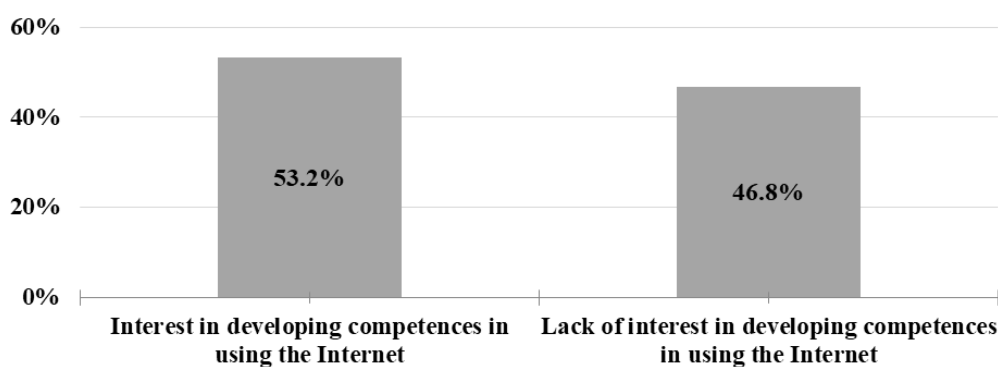


Figure 7. Interest of Czestochowa seniors living in stock managed by ZGM TBS Sp. z o.o. in Czestochowa in terms of developing competence in use of Internet

Source: Author’s own compilation, based on research carried out by ZGM TBS Sp. z o.o. in Czestochowa

Conclusions

The development of modern information technologies undoubtedly affects the management of municipal housing stock and the situation of the tenants of this stock. The use of various applications and other solutions by administrators in the course of managing the housing stock undeniably exerts the greatest influence on the situation of seniors. This group faces the problem of digital exclusion to the greatest extent.

The trends and reasons for the digital divide of seniors were confirmed by the study carried out by ZGM TBS Sp. z o.o. in Czestochowa. It results from the findings that a significant part of Czestochowa seniors living in the housing stock managed by this company does not have a computer in their household, or even a telephone that enables them to use the Internet. Regular use of the Internet was declared by only 1/5 of the people participating in the study.

It is important, however, that the seniors from Czestochowa declare their willingness to develop their competences in terms of using the Internet. Furthermore, they show interest in the implementation of solutions based on web applications or in SMS notifications within the scope related to the housing stock.

Thus, it seems that in case of the elderly who live in the resources managed by ZGM TBS Sp. z o.o., the main factor affecting the digital activity of seniors is the difficulty connected with access to appropriate devices. On the other hand, psychological and motivational issues are of a lesser importance.

Administrators of municipal housing resources, as part of executing their duties, should undertake appropriate initiatives in terms of implementing modern technologies, including internet applications. At the same time, they should take into account the problem of the digital divide of seniors in managing the housing stock. Consequently, in order to meet the expectations of seniors, organizing appropriate actions that would be aimed at informing seniors about modern technological solutions and the ways of using them is well grounded.

Adopting the above solutions will undoubtedly influence a decline in the number of seniors affected by the problem of digital exclusion, as well as improvement of the quality of seniors' lives in the area related to housing and their private life, particularly by facilitating access to information, communication or dealing with official matters (even as part of so-called e-administration). At the same time, it will also have a positive effect in terms of the efficiency of housing management. With the help of the above-mentioned solutions, tenants can even be reminded about the necessity to pay their rent. Moreover, by using these solutions, it is possible to reach seniors with various types of information campaigns, also in terms of their safety and threats that seniors might face every day.

The activities indicated above were undertaken by ZGM TBS Sp. z o.o. in Czestochowa and the Municipality of Czestochowa. These entities, in particular, use the appropriate application whose aim is, among others, to inform residents about matters directly related to management of the housing stock or about information in the field of safety, health, culture etc. What is important, the actions

of ZGM TBS Sp. z o.o. in Czestochowa also take into consideration the problems and needs of Czestochowa seniors.

At the same time, it should be emphasized that these actions simultaneously have effects in terms of promoting intergenerational solidarity and creating conditions to stimulate civic activity of the elderly in the local community. The tasks in this area, as mentioned above, rest on the commune, which is the disposer of the housing stock.

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PROBLEM WYKLUCZENIA CYFROWEGO SENIORÓW W ZARZĄDZANIU KOMUNALNYM ZASOBEM MIESZKANIOWYM

Streszczenie: Rozwój technologii informatycznych spowodował, iż umiejętności cyfrowe nie są tylko opcją dla chętnych, ale koniecznością dla wszystkich. Presja wywierana na informatyzację obrotu gospodarczego i prawnego rodzi ważny problem dla podmiotów zarządzających komunalnymi zasobami mieszkaniowymi, które muszą połączyć wymogi informatyzacji procesów zarządczych ze zdolnościami cyfrowymi swoich klientów. Celem niniejszego artykułu jest opisanie luki w zdolnościach cyfrowych najemców lokali komunalnych, w szczególności seniorów, a także jej konsekwencji skutkujących wykluczeniem tej grupy najemców z możliwości używania oferowanych im usług. W artykule omówiono wyniki badań przeprowadzonych przez ZGM TBS Sp. z o.o. w Częstochowie w zakresie wykorzystania nowych technologii przez częstochowskich seniorów. Badanie potwierdziło, iż znaczna część seniorów nie dysponuje w tym zakresie odpowiednimi narzędziami. Badanie wykazało jednocześnie, iż seniorzy zmotywowani są do korzystania z nowych technologii w związku z najmem lokali. W konkluzji ustalono, iż skuteczna implementacja technologii informatycznych w płaszczyźnie obsługi najemców jest ściśle powiązana z działaniami edukacyjnymi w zakresie podnoszenia umiejętności cyfrowych seniorów.

Słowa kluczowe: wykluczenie cyfrowe, osoby starsze, seniorzy, komunalny zasób mieszkaniowy, zadania publiczne



SYNERGY EFFECT AND FUNCTIONING OF SHARED SERVICES CENTERS

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Abstract: Shared Services Centers (SSCs) have become a strategic component of today's business environment. Most large companies centralize their business processes in specialized units called SSCs or outsource some of their processes to third-party providers – the so-called Business Process Outsourcing (BPO) companies – that effectively manage SSCs for them. The goal of the paper is to investigate the activity of SSCs in Poland. On the basis of statistical data, the growth of SSCs on the Polish market was diagnosed. One of the most important factors having an impact on the significant growth of SSCs seems to be the synergy effect. This paper aims to indicate the main benefits and savings resulting from the synergy effect for the organization.

Keywords: Shared Services Centers, synergy effect

DOI: 10.17512/znpcz.2018.4.08

Introduction

Theoretical considerations related strictly to the concept of shared services historically are not solidly grounded in the literature as the whole subject (i.e., the modern approach to business supportive functions via Shared Services) is relatively new. Although the shared services model is quite new (its origins date back to the 1980s of the 20th century), the more general concept of outsourcing of certain services was already known in the ancient times (!) – “the contracting out of organizational activities is no new phenomenon. The Romans contracted out tax collection, while in eighteenth- and nineteenth-century England, service provided by the private sector under contract to local authorities included the maintenance and operation of street lights, prison management, road maintenance, the collection of public revenue” (Kakabadse, Kakabadse 2000). This type of cooperation between state-owned organizations and private sector was also well known (already in the 19th century) in France (railways, water storage), the USA and Australia (mail delivery) and many other countries.

Identifying Shared Services Centers

Among the many definitions of what an SSC is, the definition by Peeriosity, one of the leading best practice research programs for shared services professionals, suits us the best. Peeriosity says that “Shared Services is a business model that enables resources to be leveraged across an entire organization resulting in lower costs with agreed upon customer service levels. In many instances, Shared Services is a separate

business unit created within a company or agency accountable for delivering a suite of services to both the operating business units and the corporate functions” (Szpor, Ziółkowska 2018). One of the key aspects in the definition above is that SSCs operate using a service level agreement (SLA), which enforces proper quality of service. In the SSC model, other business units become customers, and this relationship requires continuous improvement in processes that are in the field of SSCs operations. Janssen and Joha consider the SSC as “a separate and accountable semi-autonomous unit within an (inter)organizational entity, used to bundle activities and provide specific pre-defined services to the operational units within that (inter)organizational entity, on the basis of agreed conditions” (Janssen, Joha 2006). From the point of view of the shared services model, and in particular the provision of internal services, such as accounts payable, we can highlight the opinion of Sam Walton, the founder of Wal-mart. According to him “There is only one boss. The customer. Moreover, he can fire everybody in the company from the chairman on down, simply by spending his money somewhere else.” Currently, this statement is very true for such services because every SSC must nowadays prove its value and compete with BPOs that are ready to take over the services within such a short period of time as a couple of months. Typically, transferring services from an internal SSC to a third-party BPO provider takes not more than a few months and often less than a month. Also, various organizations including non-commercial organizations, such as ministries, municipalities, hospitals, and universities, have started to embrace the concept and set up SSCs for supporting tasks (Janssen, Joha 2006).

One could ask what is the difference between a centralized department and an SSC. Typically, centralized departments are seen more as corporate functions focused on meeting the requirements of the headquarters, whereas SSCs work for business units or divisions and these are the business units and divisions that are the customers of SSCs. Thus, business units and headquarters effectively define the requirements and expectations in terms of the provided services. Centralized departments do not have written contracts/services level agreements (SLA) with other business units, whereas it is hard to find SSCs that do not have clear contracts and key performance targets in these days. SSCs, in the majority of cases, are placed in other locations than the headquarters, whereas centralized departments are usually located in the same location as the headquarters. Typically, SSCs are placed in relatively low-cost areas in order to generate the required savings for companies. Modern SSCs employ thousands of people in different parts of the world. In order to show the scale of the SSC undertakings, we would like to discuss the example of the Royal Dutch Shell Company that has approximately 10,000 employees working in shared services organizations only. These people are spread across five main SSCs in Glasgow, Kuala Lumpur, Cracow, Manila, and Chennai and provide very sophisticated services including financial reporting, logistics processes, statutory accounting, and stock exchange reporting.

The real "boom" for outsourcing / shared service type functions started in the 1990s of the 20th century when corporations initiated the separation of back-office functions and started converting them into specialized units (either as part of their organization or as an outsourced service).

As in the case of many other "inventions," the genesis of this trend is not clear. The range of alleged beginnings varies from evolutionary theories to the concept of "big bang." One of the stories stipulating that the model was "invented unintentionally" was brought by Tom Olavi Bangemann (Vice President Business Transformation at The Hackett Group), who says that in the early 1980s of the 20th century a large group of finance people left a Finnish subsidiary of Ford Motor Company at the same time. As it was too difficult for Ford to rebuild finance organization in Finland in a short time, they went for emergency support from their Swedish facility. The solution worked well, and Ford decided to keep it as a permanent arrangement for Finland and also implement a similar setup in other countries. About 20 years later, Ford moved the first finance process on a global basis to India (Bangemann 2005).

Genesis and development of SSCs since the early 1990s

The term *Shared Services* has been in use since the early 1990s. At that time American companies started creating on a bigger scale dedicated business units that were responsible for providing specific business processes to other internal organizational units. In the early 1990s, the SSCs focused purely on transactional processes like accounts payable or payroll. Successful American SSCs managed to decrease the back office costs significantly, which was an excellent example for European companies. Along with globalization, multinational companies started comparing back office costs in North America and Europe. In the 1990s, the costs of European back-office operations were at a significantly higher level, which was one of the triggers for European companies and the European branches of American companies to set up SSCs in Europe. S. Cacciaguidi-Fahry, J. Currie and M. Fahy present in the ACCA Research Report No. 79 *Financial Shared Services Centres: Opportunities and Challenges for the Accounting Profession, 2002* other important factors that enabled and stimulated the growth of the SSC business model in Europe. In particular, the authors mentioned the fact that organizations were put under a continuous pressure to cut costs and improve margin. The harmonization of European accounting standards and tax regimes as well as the liberalization of telecommunication markets were other incentives for the growth of the SSC sector. Another critical factor was the technological development in the form of International Direct Dial, Enterprise Resource Planning systems (ERPs) and International Virtual Private Networks (VPNs). In addition to that, the development of workflow technologies enabling scanning documents and electronic approval flows, as well as improved access to internet and broadband connections, has enabled the creation of 'modern – remote' SSCs (Ślusarczyk 2017).

According to the above mentioned ACCA report, in 2002 60% entrepreneurs from the Fortune 500 list (the largest companies) had SSCs in their structures. Over the next eleven years, the SSC coverage increased significantly. According to Tanya Bondarouk, who is the editor of the book *Shared Services as a New Organizational Form, 2014*, in 2013, the number of Fortune 500 companies that

used the SSC model for at least one function, reached 85%. It shows clearly that the model was adopted on a widespread scale.

The first SSCs were created in the United States of America. Then in the 1990s, a number of multinational companies adopted this model in Europe, mainly in the UK and Ireland. Until the end of the 1990s, the SSC business model was largely used by Anglo-Saxon companies in the domestic market. In the first decade of the 21st century, a number of mainland European companies decided to create SSCs. This period of time also represents a considerable change in selecting locations for SSC organizations. With continuous globalization and the opening of new markets, predominantly in Eastern Europe and the Asia-Pacific region, large multinational companies decided to open their SSCs in these emerging regions. Clearly, the cost aspects and labor arbitrage were one of the key factors why these markets were selected. Technological progress played here a critical role and made remote work possible. According to the report *Business Services Sector in Poland 2015*, prepared and published by the Association of Business Service Leaders (ABSL), which is an association of SSCs and BPOs with foreign capital in Poland, there were approximately 4.3 to 4.4 million people employed globally in this sector in 2015. Out of this number, 80% were employed in the APAC region, 52-56% in India, 20-23% in the Philippines, 8% in the so-called “near shore Europe”, mainly in countries of the Central and Eastern Europe, 6% in Latin America and the Caribbean, and 6% in other countries. The numbers exclude domestic markets. The fact that more than 4.3 million jobs were moved to a foreign SSC/BPO location shows the scale of operations and the phenomenon of this business model.

Historically, only transactional processes, such as accounts payable, accounts receivable, human resources database maintenance, travel and expense administration, and some basic help desk activities were in the scope of SSCs. These processes were considered the most labor-intensive and offering the largest return on investment from centralization. Over time, the companies realized that the savings and efficiency come not only from replacing expensive accountants in Western Europe and North America with cheaper personnel in Eastern Europe or Asia-Pacific but mainly from process optimization and standardization, and improved control in a centralized environment. Moreover, the management of business units was able to focus on strategic core functions without worrying about all the supportive functions that were moved to the SSC. Bondarouk (2014, p. 3) argues that US companies achieve between 40-70% cost savings within the first two years of SSC functioning. In comparison, European companies achieve cost saving in the range of 25-50%. In the course of time, the companies expanded the scope of services covered in the shared services model to the following processes: general ledger accounting processes, controlling, financial reporting, fixed assets accounting, procurement including process administration and sourcing activities, sales support including customer help desks and back office activities including order maintenance, HR processes including recruitment, employee on-boarding, employee relocation, training administration, compensation and benefits and pension administration, internal audit, cash management, project management, tax/regulatory compliance, insurance administration, communications services,

media relations, information technology services, including helpdesk, application development, application maintenance, hardware and software acquisition. Currently, a large number of companies are trying to introduce the whole end-to-end processes to the SSC model. For example, not only accounts payable are included within the scope of services but the whole process from ordering goods to payment. Thus, not only processing supplier invoices but also sourcing, purchase order maintenance, supplier master data maintenance, and payments are covered by one stream within an SSC. Analogically, we can speak about Order-to-Cash function on the customer side, Hire-to-Retire function on the HR side, Record-to-Report in the finance area and Acquire-to-Retire in the Fixed Assets process.

Analysis of the SSC/BPO market in Poland

Current employment in SSCs/BPOs is indeed very high in Poland. We should accentuate that the level of employment in this area is higher than in the coal mining industry. According to ABSL, in 2018 there are approximately 279,000 people employed directly in the SSC/BPO sector. This number consists of 225,000 employees in SSCs/BPOs with foreign capital and more than 50,000 of employees in SSCs/BPOs with Polish capital only. Thus, what is the employment in the mining industry? According to *Portal Gospodarczy WNP.PL* the coal mining industry employed 82,700 people at the end of 2017 ([https://gornictwo.wnp.pl/...](https://gornictwo.wnp.pl/)). This illustrates that the SSC/BPO sector is one of the key business sectors in Poland although it is not publicized in the media.

The Association of Business Service Leaders (ABSL) is an association of more than 170 global investors who created SSCs and BPOs in Poland. Its mission and strategy are based on five pillars: knowledge sharing, human resources, legislation, economy, and public relation. The strategy is executed through the cooperation with Polish authorities, networking, building sector awareness, and employer branding. The ABSL publishes annual reports showing numbers and trends in the SSC/BPO industry in Poland. These reports are the main sources of data that will be used in this section to analyze the phenomenon of the SSC/BPO market in Poland. According to the ABSL report, *Business Services Sector in Poland 2015* (p. 8, 17), the SSC/BPO industry in Poland in 2015 was as shown in *Table 1* below.

Table 1. Key figures describing the Polish SSC/BPO Market

Employment in business service centers with foreign capital	<u>150,000</u>
Number of business service centers with foreign capital	<u>532</u>
Number of foreign investors (some investors have more than one center)	<u>356</u>
Employment growth between April 2013 and April 2015	<u>36%</u>
Average number of employees in business service centers in Poland	<u>285</u>
Number of newly opened centers in the period of time 2014- mid-2015	<u>60</u>
Projected employment in the sector by the year 2020	<u>250,000</u>
Share of centers providing services in the financial sector	<u>48%</u>
Number of Business Centers employing more than 1,000 people	<u>30</u>
Number of locations in Poland with foreign capital	<u>40</u>

Source: Author's study based on (ABSL 2015, p. 8, 17)

The data show the vast scale of this business. In our opinion, the pace of growth of this sector is even more impressive, which is illustrated below.

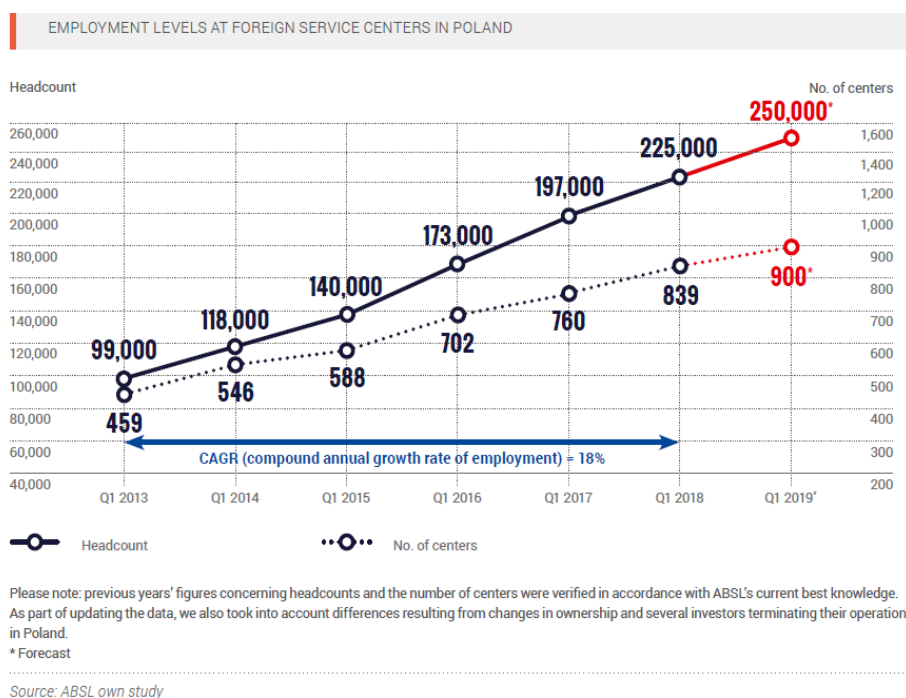


Figure 1. Development of Employment in the SSC/BPO sector in 2013-2018

Source: (ABSL 2017, p. 32)

Figure 1 shows the dynamic growth in employment between 2013 and 2018. In 2018, the employment was at the level of 225,000. It is important to notice that 70 companies of the Fortune 500 company list have their SSCs/BPOs in Poland. It is hard to find any other business field with a comparable growth in Poland. The projected employment of 275,000 people by the year 2020 is not something unlikely. However, it may be difficult to accomplish given the fact that there is a trend to move some more transactional and labor-intensive processes to India and the Philippines. As an example of this trend, we could take Danfoss – a Danish company that outsourced its finance and accounting processes to the Capgemini BPO center in Cracow and then, after the stabilization period, moved its accounts payable to another Capgemini BPO center in India. Another example could be Shell that moved its accounts payable processes from the SSC in Krakow to a center in Chennai, India.

Apart from skilled labor and good infrastructure, one of the main drivers to centralize work in SSCs and BPOs in Poland is the relatively low labor cost. Table 2 shows salary levels in the SSC/BPO sector in Poland. Gross salary of 1,500 EUR for an experienced senior accountant is a relatively small portion of labor costs in North America or Western European countries. In the USA, a person

with similar experience is valued by the market to around 4,000 EUR per month. There is no need to explain the reasons for transferring such personnel to SSCs in lower cost countries.

Table 2. Salary Costs in the BPO/SSC sector in Poland

Position	Salaries (candidates with English) EUR gross		
	min	opt	max
F&A			
Transition Manager	3,000	4,500	6,000
Business Improvement Manager	2,750	3,500	4,000
Process Improvement Specialist	1,500	2,250	2,750
Financial Controller	2,000	2,750	3,500
AP/AR Junior Accountant (0-1 year experience)	625	875	1,000
AP/AR Accountant (1-3 years experience)	925	1,250	1,500
AP/AR Senior Accountant (3-5 years experience)	1,250	1,500	1,750
AP/AR Team Leader (5-15 people)	1,500	2,000	3,000
AP/AR Process Manager (50 people)	3,000	3,500	4,500
Junior GL Accountant (0-1 year experience)	875	1,000	1,125
GL Accountant (1-3 years experience)	1,125	1,375	1,625
GL Senior Accountant (3-5 years experience)	1,375	1,625	1,875
GL Team Leader (5-15 people)	1,750	2,250	3,250
GL Process Manager (50+ people)	3,750	5,000	6,000

Source: (ABSL 2015, p. 51)

The ABSL report presents an analysis of businesses/companies transferring their processes to Poland. The chart below (*Figure 2*) shows the countries of origin (location of the headquarters was the criterion) of companies that centralized their processes in Poland.

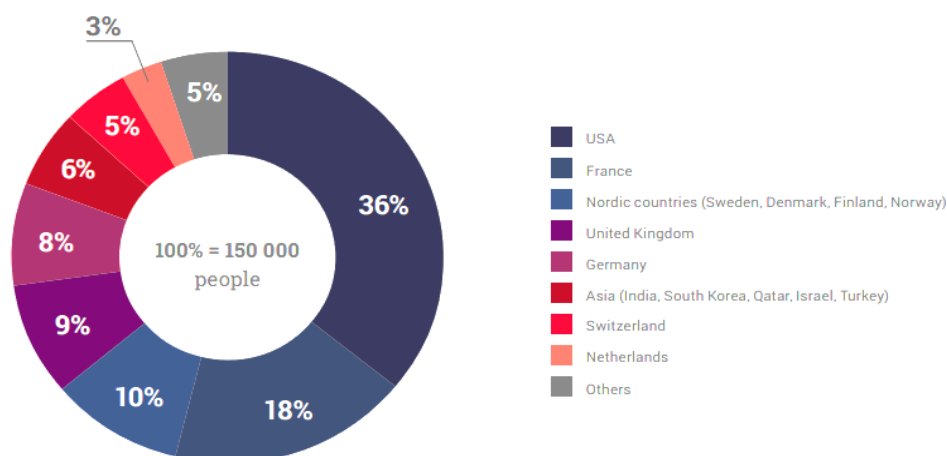


Figure 2. Employment in the SSC/BPO sector by the country of company origin

Source: (ABSL 2015, p. 16)

The majority (36%) of the companies that have their SSCs/BPOs in Poland originate from the USA. In general, it can be observed that American and British companies are more active than the mainland European companies in adopting the SSC model on the global market. There is a considerable variety regarding the functions centralized in Poland. The chart below shows that the main areas supported by the SSC/BPO sector in Poland are finance and accounting, IT, HR and procurement. Recently, there has been a clear trend to expand the services of individual centers to new functions. For example, a finance and accounting center starts providing procurement and HR services to its customers.

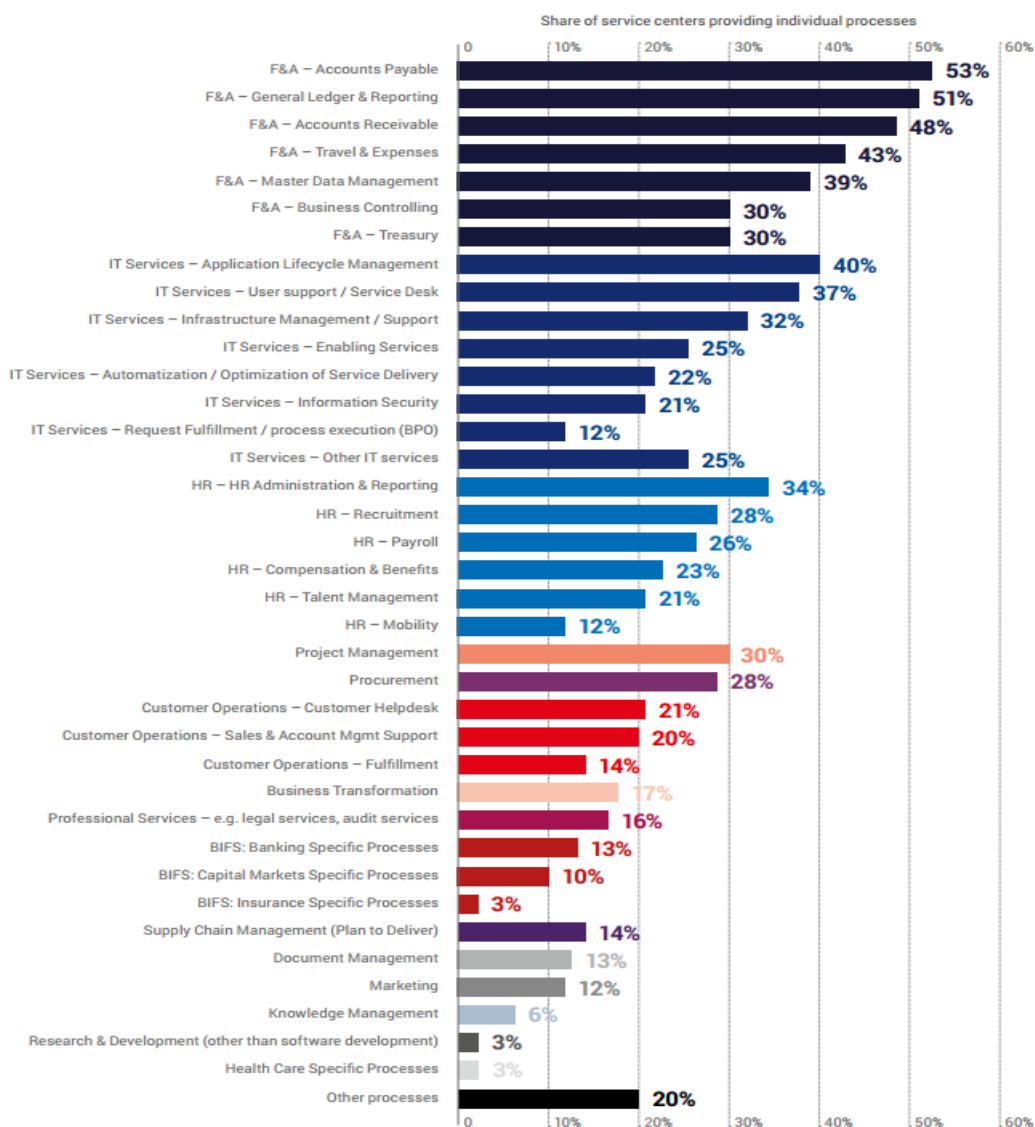


Figure 3. Functions Centralized in the SSCs and BPOs in Poland

Source: (ABSL 2015, p. 22)

The main cities where the investors decide to locate SSCs/BPOs are Krakow (e.g. Lufthansa, Shell, Heineken, Hitachi, Capgemini, IBM, Delphi, Electrolux, Amway, GE Healthcare, HSBC, RWE, Rolls Royce, State Street, Motorola Solutions, Nokia Networks, Philip Morris International, UBS, Brown Brothers Harriman, Cisco), Warsaw (e.g. Accenture, BNP Paribas, Coca-Cola, Colgate Palmolive, GE, Goldman Sachs, Orange, Samsung, Siemens), Wrocław (e.g. Hewlett Packard, Dolby, McKinsey, Google, UPS, Volvo, Parker Hannifin, Viessmann), Katowice agglomeration (e.g. ArcelorMittal, General Motors, Oracle, Rockwell Automation, Vattenfall), Gdańsk agglomeration (e.g. Sony, Bayer, Arla Foods, Intel, ThyssenKrupp, Wipro, GE), Łódź (e.g. Infosys, DHL Express, Takeda, Nordea, TomTom, Atos, Veolia). There are also emerging cities, such as Lublin (e.g., Genpact, Orange), Opole (e.g., Capgemini, IFM Ecolink), Bydgoszcz (e.g. Atos, Alcatel-Lucent, SDL), Rzeszów (e.g. Nestle, Mobic), Bielsko-Biala (e.g. Fiat, Cooper Standard), which attract more and more investors.

Some companies with a very strong market presence create additional centers in less popular cities to reduce the risk of having all operations in one place and access labor markets that have not been yet penetrated by competitors. Following this strategy, Capgemini opened a BPO center in Opole. Another reason for that was the fact that this city offered a relatively large population of German speakers.

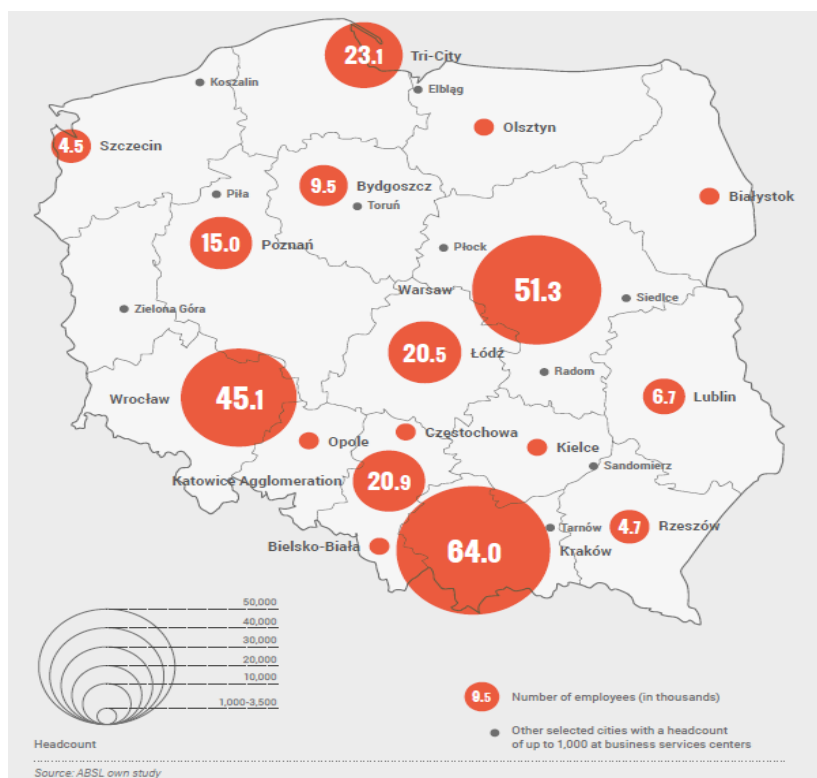


Figure 4. Geographic of the Polish SSC/BPO Market

Source: (ABSL 2018, p. 14)

The map below (*Figure 4*) illustrates the geographical placement of SSCs/BPOs by employment in Poland. The concentration of SSCs in large cities is related to the availability of skilled workforce and language skills. According to the ABSL report, SSCs and BPOs in Poland support services in 40 languages. Typically, these are the large university cities where companies can find graduates with proper language skills. For some simple processes, companies often hire graduates of language studies and train them in the field of processes. Thus, cities in which graduates of languages studies are available are a good placement for SSCs/BPOs.

The SSC sector is now a phenomenon due to its growth and the transformation of modern companies into virtual organizations. Poland on the European SSC/BPO market is so far the most significant player. According to the ABSL report, in 2014 40% of jobs in the SSC/BPO environment in Central and Eastern Europe (Czech Republic, Slovakia, Romania, Bulgaria, and Hungary) were placed in Poland.

Eastern European governments use incentives to attract foreign investors to locate SSCs in their countries. In most cases, these incentives are given in Special Economic Zones (SEZs), which are created to stimulate the economic development of particular regions. Typically, within the SEZs investors benefit from corporate income tax exemptions. Also, local authorities, often invest in infrastructure to make the region more attractive. For example, several years ago local authorities built a train station in Zabierzów, a small town very close to Cracow in order to connect it with the Cracow agglomeration and enable employees from Cracow to commute to work. The train station was a requirement of an investor who built a group of office buildings, which became home for a number of SSCs employing thousands of employees (e.g., Shell, HSBC, ACS, UBS, Delphi). The tax exemption in an SEZ is available for investors who commit to a certain level of investment and employment. Depending on the region, the tax exemption is limited to 25% - 50% of the two-year investment or labor costs.

The synergy effect and the environment of shared services centers

Currently, most of the large multinational companies continue investing in the SSC model. For SSCs, support functions become the core activity, and SSC management focuses on continuous improvement using lean management principles, Six Sigma methodology, and other tools previously used only in the production environment (Skowron-Grabowska 2015; Brzozowska 2013). The analogy with the production environment is accurate as for an SSC document processing is nothing else than a production process. Posting millions of invoices is a repetitive process that has its input, "production" methodology, and output.

The adoption of this "production" approach and the focus on the methodology of production optimization generates a number of tangible benefits and significant savings for the organization. One of the most important is the synergy effect.

The nature of the synergy effect fits perfectly to the shared services environment. The main advantages of combined activities and acting as one organization are:

1. better use of resources,
2. sharing best practices,
3. the ability to use advanced tools not available for "small players."

A shared services organization, as a unit designed for specific tasks, is much better structured to render services in a highly efficient way. Its scale of operations allows to efficiently allocate all three types of resources: tangible assets (office space, social facilities, IT infrastructure, etc.), intangible assets (advanced software solutions) and finally human capital. For all three elements in the SSC model, idle time can be reduced to almost zero because the flexibility of the process allows the organization to maximize the use of its working time. Unlike in small finance teams, the unexpected absence of one or two specialists is not a threat to the continuation of services. Employees' cross training, job rotations, standardized procedures help to minimize "safety buffers" in work capacity and at the same time keep customer satisfaction on a high-level, offering (if needed) 24/7 business support. Working around the clock is possible, provided that the critical mass of workload is concentrated in one place. In a large shared services organization, the partial coverage of second or even third shift is possible and hardly possible (even on a reduced scale) in a regular finance organization. In the shared services model "effects of staff turnover and absence are minimized, as there are always similarly trained individuals available to fill in" (Statements of Management Accounting, 2000).

The optimized workload allocation is also reflected in the ease of accepting additional tasks. A manager or a team leader managing a group of similarly skilled people can easily accommodate additional work representing, for example, 0.2 of full-time equivalent (FTE) by distributing tasks to several individuals. This flexibility is much more difficult if a job of 0.2 FTEs has to be undertaken by one person in a small accounting team. The other alternative (in a small organization) of bringing the second person on board to deal with additional tasks is a costly and not suitable option.

A significant advantage of the shared services organization is also visible in the fragmentation of tasks. This relatively narrow specialization in one position results in the possibility of hiring employees with lower qualifications for relatively easy tasks. Accordingly, the employment levels and related remuneration costs may be more carefully adjusted to the real needs of the organization. The mass scale of processing allows for a more industrialized setup that, like in the case of a regular manufacturing production line, makes process optimization possible (e.g., using Six Sigma techniques or lean manufacturing approach).

Finally, in a shared services environment, process fragmentation and clear work instructions allow Key Performance Indicators (KPIs) to be used to monitor performance regularly and to allocate resources efficiently. In line with the famous statement by W. Edwards Deming, – *'you can't manage what you don't measure'* – a well-developed KPIs system allows the organization to monitor both quantitative and qualitative parameters of the process. The example of features measured by KPIs may be:

- the number of documents or line items processed (per team or per individual accountant),
- the number of manual postings vs. the number of automated postings (self-billing, EDI, etc.),
- the number of invoices posted per average FTE month-by-month and y-o-y trends,
- time needed to complete the cycle from invoice receipt, invoice posting, and preparation for payment,
- the ratio of on-time payments made vs. the total number of payments made,
- timeliness of feedback from local organizations (e.g., goods receipt recording in the ERP system, confirmation of services rendered, etc.), and
- others.

A comprehensive set of KPIs allows the management of shared services to monitor performance, analyze trends over time, identify and address potential problems in the process and finally allocate resources to fluctuating transaction volumes as appropriate.

Many, if not all, large organization try to promote sharing of best practices. The ability to spread good ideas, efficient processes, and error proofing approaches is a highly desirable behavior in all organizations. Unfortunately, business practice demonstrates that having, for example, financial teams in many different locations, made up of people from different countries, is not conducive to creating an environment with high potential for sharing best practices.

In this respect, the SSC model is entirely different as it gathers people in one place, standardizes processes, and the ability to trace processes from different factories in different countries leads in a natural way to process "self-optimization." Each smart solution invented by one accountant is replicated almost immediately by his/her colleagues seating at the neighboring desks. Each (sometimes systemic) error found for one plant is "automatically" examined in the rest of the population. In this regard, a shared services organization which hosts all processes of the same type (e.g., posting of vendor invoices on behalf of whole company in the given region) in one place, is a unique environment where each single good practice can be easily promoted in the entire organization, and on the other hand, each error or non-efficiency can be systematically eliminated from the whole pool of services.

In a mature shared services organization, all the above-mentioned behaviors are not just "a side effect" of seating in one place. This advantage is usually very thoroughly cultivated by the management of the organization. The best ideas are extra rewarded in financial terms (bonus for a team or an employee), and they also contribute to the annual assessment of the employee. This approach is a great motivation for young and ambitious people to demonstrate positive creativity and stand out from the group as process experts or group leaders. This type of competition between peers in a given role leads to the continuous improvement of processes and cost savings initiatives. "Best in class" organizations make use of high-level changes (e.g., effective customization of the ERP system) as well as from "small things" where, for example, one Excel macro may replace hours of

manual input. All these bits and pieces contribute to the organization's success at the end of the day.

All the above mentioned good practices, employee professionalism, together with day to day courtesy in customer support, are measured periodically by shared services centers by means of customer satisfaction surveys. This tool allows the management board to monitor the level of customer satisfaction and, as a result, check whether the efforts lead to the expected state of the optimal cost-value relationship and added value generated for the entire company.

Last but not least, the example of an advantage coming from the synergy effect is the ability to undertake actions, changes, investments not available to small individual players. The best example of systemic changes which is frequently implemented by shared services, but not accessible to diversified finance functions, could be the implementation of Optical Character Recognition (OCR) systems. OCR systems effectively lead to process automation and productivity improvement. A properly selected and customized OCR system (the best solutions with the possibility of "intelligent self-learning") may replace hundreds of people by eliminating the manual data input from incoming invoices to ERP systems. In OCR systems, documents are scanned, and the OCR software converts the data to a format which enables automatic posting. Needless to say that relatively high initial investments pay off in a reasonable time frame only for the invoices turnover exceeding the critical mass threshold. This type of solutions (OCR, e-invoicing, EDI, electronic workflow, etc.) improve productivity tremendously and accordingly reduce the cost of financial support. Its implementation is reasonably possible only in a standardized, mass transactional shared services environment. This opportunity seems to be implemented by business leaders, and the majority of large companies started to take advantage of shared services systems and modern IT technologies. The schedule below presents a fairly dynamic reduction of financial costs for companies in the 1990s of the 20th century when the implementation of shared services was booming.

Table 3. Ten-year development of financial costs as a percentage of company revenue

	1992	1994	1996	1998	2000	2002
Average (%)	1,90	1,70	1,50	1,52	1,20	1,10
World Class (%)	1,50	1,26	1,10	0,98	1,00	0,72

Source: (Bangemann 2005, p. 40)

Conclusions

Thanks to their significant advantages, Shared Service Centers and Business Process Outsourcing have become a key component of the modern industry. Almost all big companies have already introduced this type of core business supporting services and others, including smaller-scale businesses, are planning to do so. The domains typically operated within the SSC/BPO business model are

finance & accounting, IT, banking, procurement, and HR. The key advantage of SSC/BPO is higher efficiency of processes as compared to the traditional delivery model coming mainly from the utilization of advanced technologies, economy of scale and, first of all, synergy effects. The other important factor is the ability of SSCs/BPOs to render its services remotely, which allows businesses to locate delivery centers in cost-attractive countries. Thanks to this feature and the availability of skilled employees, in recent years SSCs/BPOs have become one of the largest industries in Poland. Thanks to the existing potential, further growth seems to be inevitable.

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EFFECT SYNERGII A FUNKCJONOWANIE *SHARED SERVICES CENTERS*

Streszczenie: Centra usług wspólnych (SSC – *Shared Services Center*) stały się strategicznym elementem dzisiejszego środowiska biznesowego. Większość dużych firm scentralizowała swoje procesy biznesowe w wyspecjalizowanych jednostkach zwanych SSC lub zleciła część swoich procesów zewnętrznym dostawcom – tzw. *Business Process Outsourcing* (BPO), które skutecznie zarządzają SSC. Celem artykułu jest zbadanie aktywności SSC w Polsce. Na podstawie danych statystycznych poddano ocenie rozwój SSC na rynku polskim. Jednym z najważniejszych czynników wpływających na rozwój *Shared Service Center* wydają się być korzyści wynikające z efektu synergii. Z tego też względu w niniejszym artykule wskazano główne korzyści i potencjalne oszczędności wynikające z wystąpienia efektu synergii dla organizacji.

Słowa kluczowe: centra usług wspólnych, efekt synergii



ASPECTS OF SOCIAL SECURITY IN CZESTOCHOWA COMMUNITY

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Abstract: The sense of social security refers to the assessment of the threats and risks of a given environment or area. The perception of security in a given territory and its inhabitants invariably refers to the activities of local authorities and other institutions responsible for minimizing threats in the environment. An essential aspect of social security is also the inclusion of the inhabitants. In this article, the author presents the results of an assessment of Czestochowa residents' sense of security, which is conditioned by the involvement of local authorities, the housing company ZGM TBS and the residents themselves. The paper aims to assess the impact of the initiatives and programs undertaken by ZGM TBS entities on the residents' sense of security. The research is based on literature studies on ensuring safety in local communities and surveys conducted among the tenants of ZGM TBS. The results are analyzed using the method of structure indicators. The conducted research demonstrated that jointly implemented initiatives and programs contribute significantly to the increase of the city residents' sense of safety; therefore, they should be improved and continued

Keywords: community security, local problems, public security, management

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Introduction

Safety is treated in many areas of life as one of the most important values for people. It results from the characteristics of the environment, and more specifically from the threats that it brings. According to Korzeniowski, safety is expressed by an objective condition reflecting the lack of danger, subjectively perceived by the human (Korzeniowski 2000, p. 437). In turn, Sak sees security as a multilateral phenomenon, which is an added value resulting from the sum of the absence of threats (Sak 2004, p. XX). The World Health Organization – WHO – defines safety as the fundamental source of daily life that individuals and communities need to fulfill their needs (Whitzman, Zhang 2006, p. 6). The concept is assessed through the prism of individuals, organizations, and communities that must regularly cooperate in order to achieve a lasting, optimal level of security.

A sense of security reflects the everyday life of people and their commitment to their community. The safer people feel, the more actively and willingly they participate in the community life. The assessment of the sense of security of the local community should be considered in the dimension of territorial security, in which local authorities play an essential role. It refers to the concept of "community security", which describes the complementarity of the role of local

governments in enabling residents to live without fear of crime or anti-social behavior (*Community Safety...*, p. 5). Local security is included in the definition of public security, which in the broadest sense means a state in which no crime is committed (Korzeniowski 2007, pp. 181-192).

There are many conditions that affect the process of assessing the level of security in a given area (Tumalavičius, Ivančiks, Karpishchenko 2016, pp. 546-547):

1. The assessment of the residents' sense of security is subjective, which means that it will be treated differently depending on the life situation.
2. The threat to public order may be not only human activities but also other factors that can often be difficult to predict and utterly independent of human will or legal regulations.
3. In the face of natural hazards, crimes and other behaviors threatening the environment are only one the dimensions of security.
4. Some problematic aspects related to public order are also related to public order as an extraordinary dimension of security.

Place of the local community in activities minimizing threats

A comprehensive perception of security requires the involvement of all important entities in a given territory, in particular, local communities and private-public institutions, whose joint activities lead to the effect of synergy in ensuring public safety (Dziadkiewicz, Cichowski 2017, pp. 49). Districts seen as safe encourage social activity in the field of cooperation and communication. According to the studies by Nikartas, the society definitely overestimates the role of police officers, assuming all actions concerning their safety should be performed by the police (Nikartas 2012, pp. 12-13). The citizens' approach to the police as a dominant entity responsible for ensuring public order may even testify to underdeveloped civil society.

In order to ensure a safe residential environment, it is necessary to reduce the indifference of residents and encourage them and surrounding business organizations to engage in activities to improve security in their area. The cooperation of both public authorities and other participants in a given territory reflects a balanced approach to community security. The research carried out in this area in the city of Red Deer allowed to draw specific conclusions useful in further analyzes and research on this topic (*Toward of Vision...* 2016, p. 6). First, social security covers activities that are wider than policing and law enforcement by the police. Effectively responding to existing and emerging threats is conditioned by partnership with the environment (Bohátová et al. 2015, pp. 27-30). In addition, a full spectrum approach should be pursued in the cycle of safety management in the community: education, prevention, intervention, and enforcement. An important factor is also prevention, which includes taking preventive initiatives. In cooperation, personal awareness and responsibility of every resident are essential.

The role of local authorities in improving safety

Usually, the actions of local authorities to ensure public security are focused on reducing crime. However, this approach is incorrect and too narrow, because it does not protect the residents sufficiently. Local authorities should also pay attention to work safety, civil security and other spheres not directly related to crime. Local governments play an important role in building safe communities by (*Drugs and Crime...* 2012, pp. 81-101; Bajdor 2012, pp. 43-44):

- Providing a wide range of services and programs related to social planning, public health, health promotion, environmental protection, waste management, street lighting or public event management;
- Innovative projects for creating and promoting a safe and attractive space;
- Creating a safe, active and healthy environment;
- Conducting public consultations for the planning, program, and development of the city;
- Collaborate with partner organizations to strengthen crime and law enforcement activities by sharing local knowledge and approaches;
- Responding to emerging local problems.

The task of public authorities is to create such security programs that, through their implementation, counteract existing threats and social pathologies. The development and implementation of such programs should be preceded by a strategic diagnosis of key problems and threats occurring in a given area that affect the assessment of the level and sense of security of a given community (Nowakowska-Grunt 2010, pp. 5-7). In line with this objective, the author carried out an assessment of the sense of security of Czestochowa residents inhabiting residential areas managed by the ZGM TBS company.

Research on the perception of security by the Czestochowa residents

The research scope and the structure of the research sample

77 employees of lower and middle level participated in the study, which is 100% of the surveyed population from all six branches of the ZGM TBS Company. The quantitative structure of the sample, classified according to the branch as a workplace, is distributed evenly (on average 16%).

The same survey was also carried out among tenants selected at random. 50% of residents were examined in each branch. Ultimately, 300 tenants took part in the survey. Gender in both study groups was evenly distributed 57% of the respondents belong to the age group between 46-60. Almost one-third of employees are aged between 31 and 45 years old (29%). In the case of the tenants studied, their age was similar, the majority was aged from 31 to 60 (61%). (*Table 1*).

Table 1. Structure of the statistical sample of staff and tenants in %

Age range	Staff	Tenants
18-30	3.9	14.0
31-45	28.6	30.0
46-60	57.1	31.0
More than 60	10.4	25.0
Total	100.0	100.0

Source: Own research

Usually, the surveyed tenants live in a proprietor or rented premises. Almost half of all surveyed tenants have an employment contract (42%). Every third tenant is a pensioner (29%) (*Table 2*).

Table 2. Division of tenants due to the owned housing and professional activity

Type of premises	Tenants	Professional activity	Tenants
Proprietor	39.3	Employment contract	42.3
Social	20.3	Retired / pensioner	29.0
Rented	40.3	Casual work	12.3
Total	100.0	Lack of answer	16.4
		Total	100.0

Source: Own research

The study consisted of two parts:

1. Evaluation of general living and safety conditions in the Czestochowa commune.
2. Evaluation of initiatives taken for security by ZGM TBS.

Analysis and assessment of housing conditions in the Czestochowa commune

According to the residents' opinions (*Table 3*), Czestochowa is a rather pleasant place to live. Over 75% of employees and over 59% of tenants believe that. Every fifth employee (20%) and fewer tenants (17%) seem to have a favorable opinion.

Table 3. Is Czestochowa a good place to live?

Answers	Staff	Tenants
Definitely yes	19.5	17.1
Rather yes	75.3	58.7
Rather no	5.2	19.3
Definitely no	0.0	4.3
Total	100.0	100.0

Source: Own research

Table 4. Do you support activities to improve security in your housing complex?

Answers	Staff	Tenants
Yes	93.5	58.0
No	6.5	42.0
Total	100.0	100.0

Source: Own research

Almost all employees support activities aimed at improving safety in their housing complex (93%). However, a significantly lower number of tenants (58%) take action to promote safety in their place of residence. Almost half of the inhabitants of ZGM TBS do not show motivation to support such activities (*Table 4*).

Table 5. What, in your opinion, would reduce crime?

Activities	Staff	Tenants
Constant monitoring	64.9	66.3
Better lighting of streets and parking lots	67.5	64.3
More patrols of the municipal police	66.2	65.7
Possibility to report crimes anonymously	28.6	40.3
Involving the inhabitants	40.3	31.7

Source: Own research

Among the proposed activities that can positively affect the improvement of safety, the surveyed employees most often indicated constant monitoring, better lighting of streets and parking lots, and more patrols of the municipal police (65% on average). Likewise, the tenants indicated the same activities as important. At the same time, employees are more likely than residents to see residents' involvement as a way to reduce crime (*Table 5*).

In addition, the respondents had the opportunity to indicate initiatives and activities that should be launched to improve the level of safety. Employees in this area pointed to increased control, police and municipal police patrols, illumination of backyards and monitoring of streets and buildings, launching a special hotline for quick response to reports of vandalism, destruction of property, a separate ZGM TBS hotline, and increase the number of plainclothes police and municipal police patrols. On the other hand, the tenants mentioned activities such as more patrols, increasing the safety of children and seniors, more traffic lights, more police patrols controlling drivers and pedestrians, and self-defense courses.

Table 6. Which of the following phenomena are in your opinion the most significant problems in the area for which your branch is responsible?

Problem	Staff	Tenants
Home abuse	3.9	1.7
Alcoholism	14.3	15.0
Drug addicts	3.9	17.0
Vandalism	48.1	38.3
Demoralized youth	14.3	19.0
Drunk drivers	1.3	3.0
Theft and burglary	14.3	6.0
Total	100.0	100.0

Source: Own research

Both surveyed groups indicated as the most important problem in the area occupied by their ZGM TBS branch, vandalism (48% of indications by the staff and 39% of tenants' indications). Joint observations also concerned alcoholism (successively 14% and 15%) and demoralized youth (14% and 19% respectively). Differences in opinions between staff and tenants concerned drug addicts, where this is a problem noticed by tenants. In turn, the problem of theft and burglary was rated higher by the ZGM TBS Company's staff (*Table 6*).

Table 7. On which aspects, in your opinion, should the local government concentrate the most?

Activities	Staff	Tenants
Improving access to medical care	31.2	26.3
Development of culture, entertainment, sport and recreation	24.7	21.0
Increase in assistance to the poorest	33.8	37.3
Improving security and public order	22.1	26.3
Actions to reduce unemployment	29.9	25.7
Supporting entrepreneurship	39.0	38.7
Improving the quality of life of disabled people	54.5	45.7
Increase in the number of housing	31.2	34.3
Establishment of a social integration club	14.3	12.7
Counteracting homelessness	39.0	28.7

Source: Own research

According to the surveyed staff and tenants (*Table 7*), the government of Czestochowa should pay more attention first and foremost to improving the quality of life of disabled people (on average half of the responses) and supporting

entrepreneurship. Employees also consider it very important to counteract homelessness. Every third respondent in this group was also concerned with the improvement of access to medical care (31%), increase in assistance to the poorest (34%) or increase in the number of housing (31%). Tenants also strongly support activities supporting the development of entrepreneurial behavior (39%). They also pay attention to increasing the support for the poorest and, more often than the staff, supporting the increase in the number of housing (34%).

Table 8. Level of satisfaction with individual areas of the commune's life

Areas of community life	Satisfied		Unsatisfied	
	Staff	Tenants	Staff	Tenants
A sense of security in the city	9.1	8.3	15.6	28.0
Cleanliness in the commune	5.2	5.7	19.5	32.7
Level of primary and junior high school education	7.8	5.0	20.8	26.3
Access to kindergartens and nurseries	9.1	8.3	2.1	19.0
Transportation (urban transport, connections with other places)	5.2	5.3	50.6	45.7
Job opportunities	10.4	5.7	28.6	32.0
Availability of facilities for sports and recreation	14.3	7.3	24.7	31.0
Culture (participation in cultural and entertainment life)	27.3	15.7	2.6	12.0
The possibility of convenient shopping	9.1	10.7	14.3	15.7
Convenient use of various types of "small services "	7.8	5.0	41.6	48.7
Availability of health facilities	13.0	9.3	7.8	10.7
Quality of social welfare services	9.1	6.7	29.9	29.3
Municipal infrastructure (water supply, sewerage, electricity)	24.7	7.3	7.8	18.7
Road infrastructure (road network, quality, pavements, parking lots)	23.4	7.7	9.1	18.3

Source: Own research

Both groups are mostly satisfied with (*Table 8*) access to culture in the city (participation in cultural and entertainment life) (27% staff and 16% tenants). All respondents show a high level of dissatisfaction with the transportation system (urban transport, connections with other cities) (successively 51% and 46% of indications), and the assessment of the convenience of using various types of "small services" (successively 42% and 49% of indications). Significant differences in the perception of individual areas by staff and tenants are observed concerning the availability of facilities for recreation, municipal and road infrastructure, where the staff are much more often satisfied with these areas than

the tenants. On the other hand, the tenants are much more dissatisfied with the sense of security in the city and its cleanliness. It should be noted that on average, half of the respondents from both groups were unable to determine their opinion.

Table 9. Do you have to deal with the following phenomena in your immediate vicinity? (positive indications)

Phenomena	Staff	Tenants
Poor air quality resulting from human activities	67.5	72.0
Excessive noise caused by traffic	51.9	58.7
Burdensome neighborhood of people disturbing the social order	50.6	56.7
Fear of burglary, devastation, assault	0.0	51.3

Source: Own research

Both the staff and the tenants (*Table 9*) in the vast majority have to cope with poor air quality resulting from human activities (68% staff, 72% tenants). Both groups also complain about excessive noise and burdensome neighborhood. Only tenants fear additional burglary and devastation (51%).

Table 10. Have the living conditions in the municipality changed for better in recent years?

Answers	Staff	Tenants
Definitely for better	37.7	19.0
Rather for better	53.2	56.7
Rather for worse	3.9	17.0
Definitely for worse	5.2	7.3
Total	100.0	100.0

Source: Own research

Over 50% of the respondents in both groups believe that living conditions in the commune slightly improved (*Table 10*). Slightly over 37% of the staff even believe that these conditions changed definitely for the better. Only every fifth tenant (19%) thinks similarly. It means that the tenants assess the changes taking place in the commune less favorably than the staff.

Analysis and evaluation of the selected initiatives undertaken by ZGM TBS to improve safety

The evaluation covered seven selected initiatives taken by the ZGM TBS Company and the municipality to improve safety among tenants.

Table 11. Which of the following initiatives implemented by ZGM TBS and Czestochowa Commune are known to you?

Initiatives	I know very well / I am familiar	
	Staff	Tenants
Application CLOSE	61.1	42.4
Be safe, Senior!	80.5	69.7
Sensors for security	90.9	84.3
Stop illegal graffiti	77.9	54.7
Drink-driving is no fun	83.1	74.7
A clean backyard is a clean city	81.8	67.0
Debt program	71.4	63.3

Source: Own research

The best-known initiative in both groups is "Sensors for security" (90% and 85% respectively). Generally, among the staff, each of the evaluated initiatives is known by at least half of the respondents. However, a lower number of tenants declare that they are familiar with the above-mentioned initiatives. The Close app is known to the smallest number of the respondents (*Table 11*).

Table 12. Please specify the level of your activity in the implemented initiatives

Initiatives	I participate	
	Staff	Tenants
Application CLOSE	33.8	12.3
Be safe, Senior!	75.3	26.0
Sensors for security	87.0	43.0
Stop illegal graffiti	70.1	18.0
Drink-driving is no fun	77.9	25.7
A clean backyard is a clean city	75.3	29.0
Debt program	50.6	18.3

Source: Own research

In the evaluation of the involvement of both groups in the implemented initiatives, the number of indications is smaller (*Table 12*). Both the staff and the tenants, despite their knowledge of initiatives, are less likely to participate in them. At the same time, the staff more often than the tenants participates in activities for the benefit of safety, which may be a consequence of fulfilling professional duties. Moreover, tenants are most willing to participate in the "Sensors for security" campaign (43%). Nevertheless, more than half of the residents did not participate in the program. Only every fifth occupant actively participated in the campaign "Drink-driving is no fun" (26%).

Table 13. How do you perceive individual initiatives?

Initiatives	Useful / rather useful	
	Staff	Tenants
Application CLOSE	63.7	46.3
Be safe, Senior!	88.3	79.0
Sensors for security	93.5	85.0
Stop illegal graffiti	81.9	66.7
Drink-driving is no fun	87.0	85.0
A clean backyard is a clean city	89.6	75.3
Debt program	84.4	75.4

Source: Own research

The level of indications increases again when assessing the suitability of particular activities (*Table 13*). Consequently, in assessing the improvement of Czestochowa residents' safety, the program "Sensors for safety" is rated most useful (94% and 85% respectively). Employees more often than tenants rate all initiatives more useful but the ratings of both groups are at a high level. At the same time, according to the respondents, the Close application is least useful.

Table 14. Which initiatives did you think improve the safety of tenants?

Initiatives	Definitely influences/affects	
	Staff	Tenants
Application CLOSE	45.5	36.4
Be safe, Senior!	89.6	70.7
Sensors for security	90.9	89.0
Stop illegal graffiti	45.5	40.0
Drink-driving is no fun	88.3	77.0
A clean backyard is a clean city	61.1	46.3
Debt program	49.4	44.3

Source: Own research

Both groups (*Table 14*) believe that the "Sensors for security" campaign has the greatest impact on improving the safety of tenants (successively 90% and 89%). According to the staff, the program "Be safe, Senior!" (89% of responses) and "Drink-driving is no fun" (88%) are significant. Tenants less often than employees observe the positive impact of individual initiatives on improving their safety. The Close application is again the lowest by both groups.

Table 15. Please highlight the three most important initiatives that you think are the best to improve the safety of tenants

Initiatives	Staff	Tenants
Application CLOSE	11.7	9.7
Be safe, Senior!	67.5	68.7
Sensors for security	89.6	79.3
Stop illegal graffiti	10.4	17.3
Drink-driving is no fun	81.8	67.7
A clean backyard is a clean city	10.4	21.3
Debt program	15.6	16.7

Source: Own research

Both groups agree (*Table 15*) that the three most important initiatives affecting the improvement of safety are "Sensors for safety", "Drink-driving is no fun" and "Be safe, Senior!". Tenants also more often than staff mention the "Clean backyard is a clean city" campaign.

Table 16. Which of the initiatives, keeping in mind tenants' security, requires in your opinion changes?

Initiatives	Requires enlargement and /or continuation	
	Staff	Tenants
Application CLOSE	24.7	28.3
Be safe, Senior!	28.6	32.7
Sensors for security	16.9	33.0
Stop illegal graffiti	20.8	31.7
Drink-driving is no fun	27.3	33.7
A clean backyard is a clean city	32.5	34.7
Debt program	19.5	34.7

Source: Own research

In the opinion of the staff and tenants (*Table 16*), the program "Clean backyard is a clean city" (successively 33% and 35% of responses) requires the most significant changes. According to tenants, modifications should also introduced to the "Debt program" currently implemented at the Company. At the same time, it is observed that on average every third employee and tenant expect expansion and/or continuation in all initiatives.

Discussion

Almost half of the tenants of ZGM TBS do not show motivation to support security activities and to engage in its improvement. At the same time, tenants are less likely to rate Czestochowa as a good place to live and are less likely to assess positively the changes taking place in the commune.

The studied groups are most satisfied with broad access to culture in the city (participation in cultural and entertainment life), whereas the transportation system requires the greatest changes. The respondents complain most often about poor air quality, excessive noise, and troublesome neighborhood.

Among the proposed actions that can positively affect the improvement of safety, both groups usually suggest constant monitoring, better lighting of streets and parking lots and more municipal police patrols. At the same time, both groups indicated vandalism and alcoholism as the most important problems threatening their safety. According to the respondents, Czestochowa government should primarily pay more attention to improving the quality of life of disabled people and to supporting entrepreneurship.

The best-known action in both groups is "Sensors for security", in which half of the tenants also participate. Consequently, this program is considered to be the most useful in assessing the improvement of the safety of Czestochowa residents and is perceived by both groups as such, which significantly affects the improvement of tenants' security. Both groups agree that the three most important initiatives affecting the improvement of safety are "Sensors for safety", "Drink-driving is no fun" and "Be safe, Senior!". On the other hand, the program "A clean backyard is a clean city" and "Debt program" currently implemented in the company require major changes. At the same time, it is observed that both employees and tenants expect the initiative to be broadened and/or continued. At the same time, the application Close, which is rated as least useful and not significantly affecting the security of the residents of the commune, enjoys the smallest popularity.

Conclusions

Public security and the related maintenance and ensuring of public order are essential for every member of society, particularly those at risk of exclusion. The introduction and development of community security is an inevitable trend of economic and social development. Public order is the primary and fundamental starting point that determines the level of stabilization in the region. A secure community includes the cooperation of all participants in the environment in order to increase safety, manage risk and generally increase engagement through daily activities.

The conducted research has shown that the involvement of both the municipalities of Czestochowa and ZGM TBS contribute significantly to the sense of security of the city residents. At the same time, the residents themselves show the least involvement in the implementation of a balanced approach to cooperation against threats. Future actions of the authorities should be aimed at a more

balanced cooperation of stakeholders, including in particular the involvement of the local community and stimulating the awareness of the role of the individual in building a safe environment for everyone.

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ASPEKTY SPOŁECZNEGO BEZPIECZEŃSTWA W GMINIE CZĘSTOCHOWA

Streszczenie: Poczucie bezpieczeństwa społeczności odnosi się do oceny zagrożeń i ryzyka płynącego z danego otoczenia czy obszaru. Postrzeganie bezpieczeństwa w kategoriach danego terytorium i jego mieszkańców nieodzownie nawiązuje do działalności władz lokalnych oraz innych instytucji odpowiedzialnych za minimalizowanie zagrożeń w otoczeniu. Ważnym aspektem społecznego bezpieczeństwa jest także włączanie w te działania samych mieszkańców. Na przykładzie mieszkańców gminy Częstochowa dokonano oceny poczucia ich bezpieczeństwa w miejscu zamieszkania, warunkowanego zaangażowaniem władz lokalnych, spółki mieszkaniowej ZGM TBS oraz samych mieszkańców. Cel pracy to ocena wpływu podejmowanych inicjatyw i programów przez podmioty ZGM TBS na poczucie bezpieczeństwa mieszkańców miasta. Cel ten zrealizowano w oparciu o studia literaturowe z zakresu zapewnienia bezpieczeństwa lokalnym społecznościom oraz poprzez badania ankietowe przeprowadzone wśród lokatorów ZGM TBS. Dane przeanalizowano za pomocą wskaźników struktury. Przeprowadzone badania wykazały, że realizowane wspólnie inicjatywy i programy znacząco przyczyniają się do wzrostu poczucia bezpieczeństwa mieszkańców miasta, dlatego należy je doskonalić i kontynuować.

Słowa kluczowe: bezpieczeństwo wspólnotowe, problemy lokalne, bezpieczeństwo publiczne, zarządzanie



TENANT PROFILE OF HOUSING STOCK IN CZESTOCHOWA COMMUNE

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Abstract: Residential real estate management is a public task that forces the housing stock management staff to establish and maintain relationships with the environment. The quality of these relations is conditioned by the attitude of both parties, which are represented by the staff and the tenant community. The quality of customer service methodology is widely described in the literature. This is accompanied by the attitudes and behaviors of consumers of a market focused on generating profit. The purpose of the article is to characterize the tenant's profile as a client of a municipal housing stock manager. This goal was achieved based on literature studies in the field of broadly understood customer service and surveys conducted among employees of a selected entity managing housing stock. As a result of the analyses, the tenant's behavior was identified, which forms the basis for choosing the model of service for the tenant community.

Keywords: tenant, housing stock, customer service, Czestochowa

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Introduction

The specificity of housing stock management is conditioned by the legal form of premises, which can be treated as a social resource. Thus, meeting the housing needs of the commune's inhabitants takes on a social function, which is to provide premises for the most economically disadvantaged group of city residents, including social and temporary housing (O'Sullivan, Gibb 2003, p. 138). Effective property management therefore requires appropriate social competences from the property manager (Dessoulavy-Śliwińska 2013), which are used in the process of serving the tenant. The new service model enforces the necessity to treat the tenant not as an applicant, but as a customer who is a service recipient of the entity and co-creates its offer.

An important aspect of efficient service is building a customer relationship based on the development of communication and interpersonal skills. What is more, improving the quality of service requires observation of the attitudes and motives of customer behavior. According to M. Bugdol (2008, pp. 8-10), it is human behavior and its variability that have the greatest impact on the quality of the service provided and affect the feedback of the relationship (Sztompka 2007, p. 77).

Assumptions of the contemporary customer service model

The new model of customer service in public administration units, which can include those managing social and municipal housing stocks, requires from employees the ability to accurately diagnose the essence of the client's motivation, who is reporting a particular case (Serafin 2013, p. 146). An approach in line with the client's expectations allows the employee to control the case, increasing the chance of his satisfaction (Kott 2009, pp. 248-249). Proper customer service requires proper preparation based on the characteristic features of the client (Nowakowska-Grunt, Nowakowska 2007, pp. 138-140).

The base of the values presented by the client also enables one to establish a positive long-term relationship, as well as to cope more effectively with more difficult matters. It is also important to retain objectivity towards the served tenant by (Belgrave 1995, pp. 310-315; Bajdor, Lis 2015, p. 137):

1. limiting interpersonal relationships, for example through the use of IT solutions;
2. delegating certain matters and decision-making powers;
3. creating databases to ensure more efficient service;
4. limiting the variability of proceedings by creating internal procedures and standards.

The report developed by the Joseph Rowntree Foundation identifies contemporary types of tenant communities resulting from a combination of various factors (*Mixed Communities...* 2010, pp. 8-10):

- Housing communities inhabited mainly by young families. This type of housing related to the educational infrastructure is the right place for young people and is based on the so-called social mix.
- People living in communities under the so-called income mix, which do not reveal negative behaviors characteristic of low-income groups. This type of community allows one to create safe and friendly places to live and work. A social mix comprising different types of rental and income levels, which does not cause additional problems. The community treats people threatened with exclusion as "ordinary people", these relations are friendly.

The concept of a tenant mix is aimed at providing a diverse housing offer, which is focused on the needs and expectations of various groups of tenants: families, seniors, people with disabilities, lonely or impoverished people who are threatened by social exclusion. Furthermore, it should be noted that properly managed housing stock should create the conditions to counteract social exclusion and homelessness of the most economically vulnerable group of inhabitants, which together with their co-existing poverty, crime and addictions, are strongly connected with the security of tenants' premises (Fehér, Teller 2016, p. 69).

Expanding the possible goals set for social housing, Milligan, Phibbs, Gurran and Fagan indicate that apart from the minimal goal of providing affordable housing, the entity creating the housing stock should set additional goals such as:

- creating an environment for participation in housing stock management by tenants,

- directing the rental and debt collection policy to strengthen the economic position of the weakest group of tenants,
- shaping lease relations in a way to strengthening the competences and social ties of tenants, in particular by moderating participation in the labor market, supporting the family in terms of its safety and well-being,
- help in health care, sense of contentment and help in the education of people living in the housing stock,
- support for seniors by preventing their exclusion,
- development of local communities (Milligan et al. 2007, p. 36).

To adjusting the indicated goals to Polish possibilities, the need becomes obvious to create an efficient entity (for example, a single-person municipal company) that, using available tools, will actively shape municipal housing policy as well as the social ties between tenants and apartment owners, thanks to the management of housing communities (Dziadkiewicz, Pabian 2017, p. 38).

Typology of employees' and clients' behavior

M. Huczek's research (2013, pp. 12-15) convinces readers that customer orientation counteracts crises. Meanwhile, the previous attitude of employees of public units was focused on a quick settlement of the matter, without involvement in the relationship with the tenant. *Table 1* presents the basic differences in the approach to the customer.

Table 1. Differences in the employee's approach to the customer

An employee's approach to servicing a tenant	
Service orientation	Customer orientation
Focus on the time and not quality of tenant service Focus on creating tenant satisfaction	Orientation for working out the tenant's satisfaction
Developing only one-sided benefit	Developing mutual benefits
Settling the issue depends on the employee	Common problem solving
Handling the case is equivalent to getting rid of the tenant	Handling the case is equivalent to solving the tenant's problem

Source: Author's own elaboration based on (Hejda 2009, p. 25; Ratajski 2007, pp. 62-63)

While the key motivation of the employees is to efficiently handle the tenant's case, the main motivation of the tenants' attitudes comes from the willingness to satisfy their needs. According to A. Maslow's pyramid, the most important of them are physiological needs (Kaur 2013, p. 1062), security and belonging, which can also be applied to the needs of the tenant community. Among the motivations to establish a tenant relationship with the manager of the housing stock, there is a need for comfort, peace, security or a clear legal and financial status.

In the literature on the subject, specific consumer behavior models can be found that, to some extent, reflect the behavior of tenants (*Table 2*).

Table 2. Psychological division of clients allows reference to certain models in relation to tenants

Type 1	
Me	Others
Characterized by the willingness to make decisions independently, expects the possibility of choosing a solution to the matter.	Needs help to solve the case, has difficulties in making decisions.
Type 2	
Compatible	Negating
Agrees with every solution, rarely criticizing the service. Satisfied despite the fact that he did not satisfy his needs.	Perceives the issue negatively, is critical, sometimes aggressive.
Type 3	
Goals	Problems
Focused on achieving a specific goal.	Distrustful and suspicious of the employee dealing with his case.
Type 4	
Systematic	Chaotic
Able to clearly explain the matter and related needs.	Cannot accurately describe the problem or the expectations in connection with it.
Type 5	
Personal	Material
Strengthens the relationship with the employee, willingly talks with him, can manipulate.	Specifically and objectively presents the problem.

Source: Authors' own elaboration based on (Tomaszkiewicz 2010, pp. 36-39)

Proper identification of attitudes, behaviors and values expressed by the tenant community is an important element of effective customer service.

Identification of the tenant's attitude on the example of the ZGM TBS residents in Czestochowa

Scope and methodology of research

According to the data of ZGM TBS, the housing stock of the commune comprises a total of 9,020 residential premises with a total area of 393,995.52 m², located in 660 buildings. Of this number, 190 buildings belong 100% to the commune – all the apartments located there are its property (2,263 dwellings so approximately 1/4 of the commune housing stock).

The largest group of buildings are those which, due to the sale of part of the premises to tenants, have evolved into housing communities and the commune is only the owner of a part of the flats there, and the remaining owners are individuals. Czestochowa also has 597 social premises (*Table 3*).

Table 3. Share of flats and buildings in entire Czestochowa housing stock

Housing stock	Flats	Buildings
buildings 100% of commune's property	25.1%	28.8%
buildings of communities managed by ZGM, in which commune has flats	60.4%	53.8%
community buildings in foreign board, in which the commune has flats	5.6%	7.0%
private buildings owned by commune	7.6%	9.1%
buildings in co-owned by commune	1.3%	1.4%

Source: Authors' own elaboration based on ZGM TBS data

Management of the commune housing stock has been entrusted to the appointed Zakład Gospodarki Mieszkaniowej "Towarzystwo Budownictwa Społecznego" (Department of Housing Management, Social Housing Association in Czestochowa LLC) in Czestochowa. The management activities entrusted to the company are in the field of (Polityka Mieszkaniowa... 2015, p. 34-35):

1. managing the housing stock of the commune and non-residential real estate;
2. performing the function of a substitute investor in the area of municipal housing investment in the commune;
3. management of real estate with an unsettled legal status being in possession of and managed by the commune;
4. management of property shares belonging to the commune.

Managing a large housing stock means contact with a large tenant community, whose service is complex and time-consuming. In order to improve the tenant service, a study was conducted in which the characteristics of the company's typical tenant were determined. The obtained image will serve to develop a model for serving tenants.

Therefore the aim of the study was to create the tenant portrait through the eyes of an employee. The subject of the research was a group of employees of Zakład Gospodarki Mieszkaniowej Towarzystwo Budownictwa Społecznego in Czestochowa Sp. z o.o. (ZGM TBS Czestochowa).

This goal was achieved by means of a questionnaire survey. According to the received data, the group of surveyed employees occupied the lowest-level positions and is in direct contact with the tenants. The questionnaires were supplemented with short interviews with employees. The research sample was the employees of the company, specifically, 55 people participated in the study (over 80% of the whole population) (*Figure 1*). The obtained results made it possible to describe a typical tenant, who is client of ZGM TBS Czestochowa.

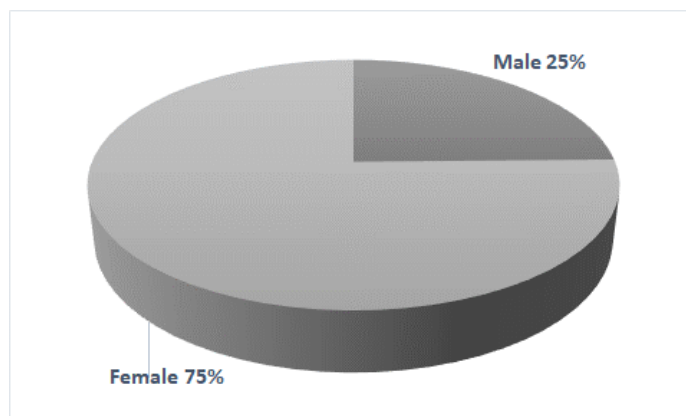


Figure 1. Structure of surveyed employees by gender

Source: Authors' own compilation

The task of the company's employees is to handle tenant matters and be in direct contact with the tenant. The condominium environment, which the study indirectly concerns, occupies both ordinary dwellings and municipal premises. The structure of the occupied premises and the number of tenants is shown in *Figure 2* and *Figure 3*.

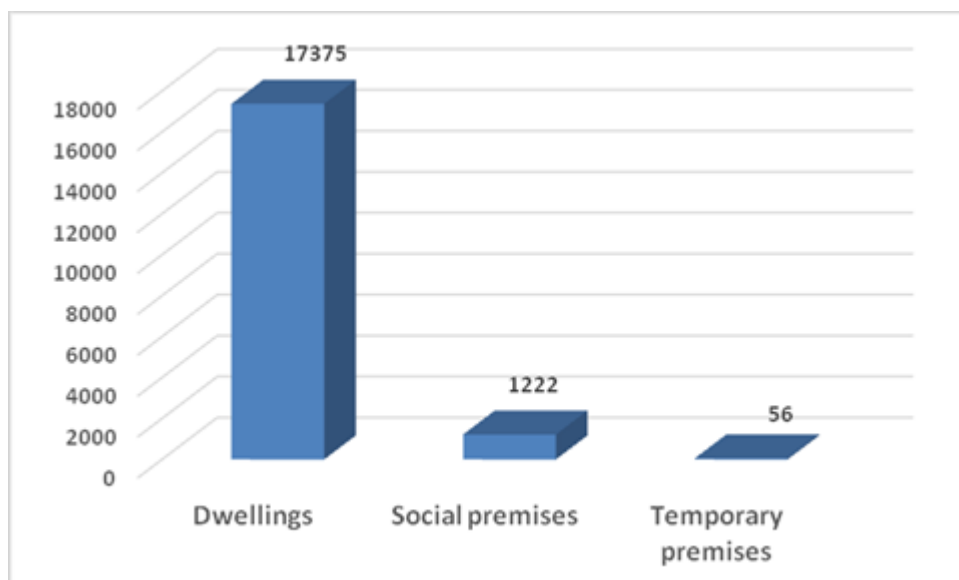


Figure 2. Number of tenants in municipal flats according to type of premises

Source: Authors' own compilation

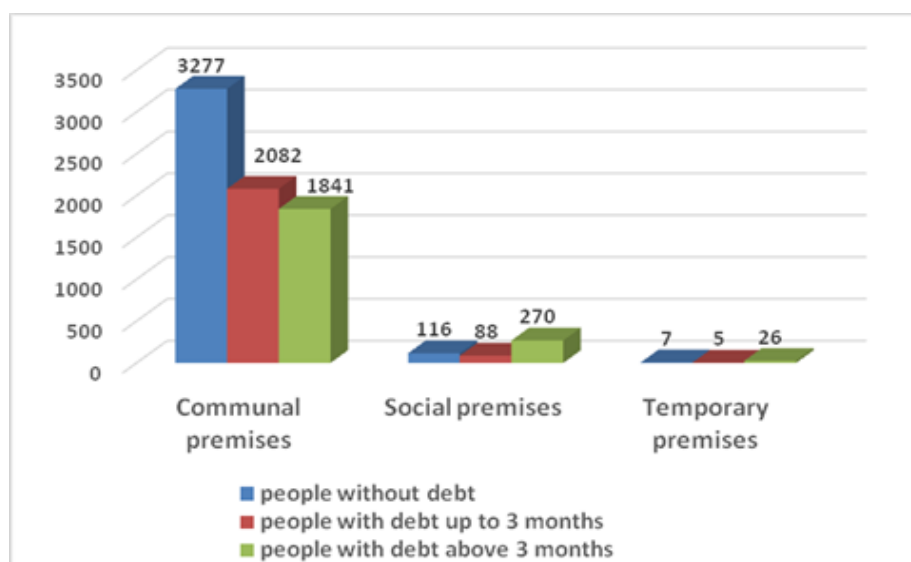


Figure 3. Level of tenant debt divided into type of premises

Source: Authors' own compilation

The company has a total of over 18.6 thousand premises intended mainly for housing purposes. The highest level and duration of indebtedness in comparison to the absence of indebtedness is observed among social premises, which are usually occupied by people affected by social exclusion and impoverishment.

Initial characterization of a typical tenant of ZGM TBS Czestochowa

The company serves various social groups, whose origin and financial condition determine certain behaviors and attitudes of employees towards the tenants.

According to the surveyed employees, a typical customer who is served on a daily basis is usually polite, cultivated, forgiving, determined, without the knowledge needed, expecting help, consistent and inquisitive (over 70% of positive traits). At the same time, he can be impatient, demanding, unhappy, anxious, demanding, nagging and throw unfounded accusations. Among the company's tenants, a significant place is occupied by older people, in retirement age, in need of assistance in clarifying and making payments.

According to the surveyed employees, almost half of all the tenants are so-called difficult customers. Thus, a significant number of cases is complex and complicated, which translates into both the customer service and time spent on them.

According to employees, it means a tenant with a claim making pretences or demands without showing intent to reach an the agreement. This is usually a person who cannot assimilate the acquired information, who does not agree with the information provided, makes irrational accusations and blames not only the employees, but also the entire company. It usually requires repeating the same information several times, and yet the client does not accept any arguments.

A difficult customer is characterized by arrogance, malice and a negative attitude. A difficult tenant, according to the employees' opinion, is under the influence of alcohol, is quarrelsome, loud and clamorous.

Handling a case with this type of client requires a greater effort and commitment to the problem. At the same time, practice indicates that the more appropriate concept in such a situation will be to use the concept of "difficult matter", which allows one to pay attention to the type of problem and not to the client, and more effectively seek the solution. The basis of the new model is the approach to a difficult customer, whose behavior was determined by a specific situation, which is why the problem should be identified with the tenant's case and indirectly with him, i.e. behavior, appearance or mental state (Berry 2015, pp. 46-47).

Identifying the tenant's features present in the process of serving him

Assessing the importance of the tenant's individual features in the process of serving him was also a significant step. A total of seven features were identified that were important from the point of view of establishing a positive relationship with the employee (*Table 4*). The grading was made on a scale of 1 to 4, where 1 meant great importance, and 4 - very little significance.

The average level of the assessment was also calculated as the arithmetic average of the ratings for individual attributes of tenant characteristics observed while serving him.

Table 4. Tenant features observed while serving him

Statements	Definitely important	Rather very important	Rather small importance	Definitely little importance	Average rating
	Data in %				
The way the customer refers to me.	54.0	32.7	10.9	1.8	1.60
Aesthetic appearance of the client.	40.0	30.0	20.0	9.1	1.98
Help in completing and / or writing documents.	47.3	47.3	5.5	0	1.58
Client's readiness to understand.	41.8	54.5	3.6	0	1.62
Friendly atmosphere.	54.5	41.8	3.6	0	1.49
Customer's competences.	49.1	36.4	9.1	5.5	1.71
Customer's mood.	45.5	29.1	18.2	7.3	1.87

Source: Authors' own compilation

All average assessments of statements regarding the importance of individual customer characteristics are in the range of 1.6 - 2. The employees assigned all the traits a high importance in the process of efficient and positive service. According to the respondents, the most important way of establishing customer relations is the

manner of referring to the employee and the friendly atmosphere of the meeting (over 50% of all indications). No less important is also the client's knowledge and competence (49% of responses). Employees attach slightly less importance to customer readiness to understand the situation or the information he is given. At the same time, an aesthetic appearance and the tenant's mood play the least role (about 20% of negative indications).

Conclusions

An important feature affecting communication barriers in the customer service process is the attitude of the tenant towards the employee. The employee devotes more than half of his / her working time to direct contact with the tenant. According to the conducted research, the way of referring to the employee and a friendly atmosphere of the meeting affect a positive and effective settlement of the matter.

A typical client served by an employee exhibits mostly positive attributes and is usually an elderly person who expects help in settling housing matters. However, an important problem was identified during the research and requiring further analysis is the so-called difficult client who makes up almost half of all the served tenants. It is usually associated with a difficult situation, which is accompanied by aggression, hostility, strong dissatisfaction and the tenant's demanding attitude.

Thus, a significant number of cases is complex and complicated, which translates into both the customer service and time spent on them. It also affects the performance of other professional duties and daily work. Serving "difficult clients" leads to conflicts, whose sources lie in communication barriers. Such situations generate mutual aversion and lack of mutual understanding of the matter. All customer service activities in the audited company should be focused on developing interpersonal and technical solutions that will improve the handling of difficult matters.

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SYLWETKA LOKATORA ZASOBU MIESZKANIOWEGO GMINY CZĘSTOCHOWA

Streszczenie: Zarządzanie zasobem nieruchomości gmin to zadanie o charakterze publicznym, które wymusza nawiązywanie i utrzymanie relacji z otoczeniem. Jakość tych relacji warunkowana jest postawą obu stron, które reprezentowane są przez kadrę oraz społeczność lokatorską. W literaturze bardzo szeroko opisywana jest metodyka jakości obsługi klienta. Towarzyszy temu tematyka postaw i zachowań konsumentów rynku ukierunkowanego na generowanie zysku. Celem artykułu jest charakterystyka sylwetki lokatora jako klienta gminnego zarządcy nieruchomości. Cel ten zrealizowano w oparciu o studia literaturowe z zakresu szeroko pojętej obsługi klienta oraz badania ankietowe przeprowadzone wśród pracowników wybranego podmiotu zarządzającego zasobem mieszkaniowym. Na skutek dokonanych analiz zidentyfikowano zachowania lokatora, które stanowią podstawę wyboru modelu obsługi społeczności lokatorskiej.

Słowa kluczowe: lokator, zasób mieszkaniowy, obsługa klienta, Częstochowa



THE ROLE OF TENANT SERVICE IN HOUSING STOCK MANAGEMENT ON EXAMPLE OF CZESTOCHOWA INHABITANTS

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Abstract: Residential housing management is an important issue, primarily in the context of the social development of municipalities. Real estate management bodies are public, and their task is to meet the housing needs of various social groups. The level of realization of this task is determined by many factors. One of them is the quality of tenant service which represents the client's side. The aim of the paper was to assess the staff's approach to serving tenants. The research was based on the results of a survey conducted among employees of the housing management entity – Zakład Gospodarki Mieszkaniowej Towarzystwo Budownictwa Społecznego w Częstochowie Sp. z o.o. – ZGM TBS Czestochowa (Department of Housing Management, Social Housing Association in Czestochowa LLC). The data was analyzed using structure indicators. The obtained results showed a positive attitude of employees to tenant service, at the same time paying attention to the main problem, which is the limited time of individual customer service.

Keywords: tenant, housing stock, management, customer service, Czestochowa

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Introduction

In managing housing stock, the key goal is to meet the housing needs of the local community, while the main group of beneficiaries should be the economically weakest inhabitants (O'Sullivan, Gibb 2003, p. 138). The competences of the commune in this respect are in Art. 7 of the Act of 8 March 1990 on municipal self-government, satisfying the collective needs of the community belongs to the commune's own tasks and in accordance with Art. 4 of 21 June 2001 on the protection of tenants' rights, the housing stock of a commune and the amendment of the Civil Code [i.e. Journal of Laws of 2016 Item 1610 with later amendments], where the legislator predicted that creating conditions to meet the housing needs of the local government community belongs to the municipality's own tasks (Paragraph 1), the commune, on the terms and in the cases provided in the Act, provides social housing and replacement premises, as well as satisfies the housing needs of low-income households (Paragraph 2).

With reference to the statutory regulation mentioned in the literature, it is rightly pointed out that the commune is one of the entities whose constitutional duty is to improve the housing situation of the local government community (Doliwa 2015).

Literature review

The management of a commune's housing stock can be carried out in one of three forms - housing stock management by employees of the commune office, housing stock management through municipal companies or other municipal organizational units, or entrusting the responsibility to a private entity (Dziadkiewicz, Cichowski 2017, pp. 49-50).

Regardless of the legal and organizational form of the property manager, it performs primarily a sociological function, which means "satisfying collective and individual needs of citizens resulting from social coexistence by pendent state organs and local self-government bodies" (Gierszewski 2012, p. 8).

An equally important goal is to counteract the phenomena of social exclusion and homelessness of the most economically disadvantaged group of inhabitants, which together with their co-existing crime and addictions are strongly connected with the security of the tenants' housing (Jadach-Sepiolo, Jarczewski 2015, p. 381; Fehér, Teller 2016, p. 69). The role of the housing stock management entity is also to maximize the social welfare of dwellers living in the housing stock, as well as other residents of the commune, who necessarily interact with tenants and who usually occupy city centers (Aalbers, Van Loon, Fernandez 2017, p. 4; Priemus 2004, p. 3).

From the point of view of public administration, the sociological approach is perceived as a product of the collective life of people and the accompanying phenomena.

By adapting the administration theory in organizational terms, the management of the housing stock is based on (Gierszewski 2012, p. 8):

1. A formalized social group or a tenant community;
2. System structures inside the property manager;
3. A system of mutual relations.

The public mission established on this basis indicates that "the main task of the administration is to serve society and satisfy its needs by providing services of appropriate quality" (Rudzewicz, Michalak 2013, p. 96). In the case of a property manager, this task will be narrowed down to providing a flat that meets the requirements and needs of a given community. As in the administration, as well as in the management of the housing stock, the actions undertaken should be focused on satisfying the needs of social groups and perceiving tenants as customers (Lenkowsky, Perry 2000, p. 299). In this category, emphasis should be placed on the quality of services rendered, which imply actual changes in the life of the inhabitants of a given commune.

The concept of customer service

The very concept of customer service means "a lot of mutually coupled logistic activities, deciding on customer satisfaction when buying a product (service), i.e. the last act of the process, which usually starts with the order and ends with the delivery of the product to the customer" (Kempny 2001, p. 19). J. Grabowska (2013, p. 170) believes that this is "a set of activities aimed at meeting customer

expectations, specific standards of services provided or even as a customer-oriented philosophy of business management". What is more, this process is an information system that consists of a specific concept of relationship orientation, designated service standards, decisions to be made and methods of contact with the client (Dembińska-Cyran, Hołub-Iwan, Perenc 2004, pp. 36-37).

Maintaining an appropriate quality of customer service therefore requires, above all, continuous improvement of communication between the parties, which allows them to present certain values, meet expectations and build trust (Figure 1).

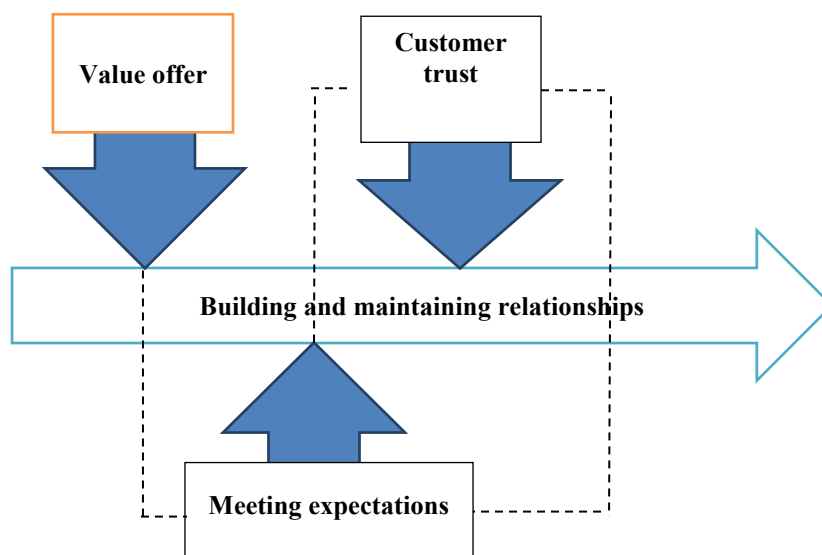


Figure 1. Customer service process

Source: Authors' own elaboration based on (Gegeckaite 2011, pp. 4-13)

At the same time, analysis of the subject theory presents customer service in the following dimensions (Sobczak-Matysiak 1997, p. 7):

- private, which focuses on customer service as a key factor stimulating a competitive position and increasing generated profits from business operations;
- public, where the success of the social and economic system of the whole country is conditioned by the public service of social units;
- public-private, where public and private interests are intertwined.

In each dimension, the essence of customer service is based on understanding the client's attitudes, emotions, behaviors, expectations and needs.

Housing stock customer service

Both the administration of the property manager and residents are involved in the management of the housing stock. Thus, the public dimension of customer service can be adopted, which takes place as a result of interaction between the interested parties. The quality of this service is conditioned by (Nalepka 2009, p. 38):

1. The structure and nature of the relationship between the residents of individual properties;
2. Accepted patterns, attitudes and behavior of residents;
3. The level of education and qualifications of residents and the resulting method of maintaining the property;
4. The form of ownership of the premises.

In the case of the housing stock manager, the customer service process is based on communication with the local community regarding the conditions of its operation and providing support to particularly excluded social groups. Paying attention to the needs of the entire community allows the housing stock manager to identify the values it promotes and thus more effectively establish positive relationships.

Customer service process in the selected research entity

Characteristics of the goal and research sample

Ensuring the proper quality of tenant service is largely due to the approach to the topic by the employees who provide such a service. Due to the aim of the research which was to evaluate the concept of serving housing stock tenants, a survey was conducted in a selected research entity (ZGM TBS Czestochowa) that manages housing stock. The target group was the employees of the company. The research sample is 55 people who participated in the study (over 80% of the whole population). The task of the survey was to evaluate the level of tenant service provided by ZGM TBS Czestochowa from the employees' perspective. The detailed structure of the research sample is characterized in *Table 1*.

Table 1. Cross-table of surveyed employees' age and work experience

Age	Seniority				
	Less than 5 years	6-10 years	11-15 years	16-20 years	More than 20 years
20-30	2	2	0	0	0
31-40	8	8	1	0	1
41-50	3	2	1	1	8
51-60	1	0	1	0	16
Total	14	12	3	1	25

Source: Authors' own compilation

Among the surveyed employees, 41 were women (75% of the total). At the same time, regarding seniority, most employees have been employed in the company for over 20 years (25 people, which is 45% of the total), and their age range is from 51 to 60 years. A significant number of employees have been employed in the company for less than 11 years (47% of the total). Concerning age, employees over 40 (60%) predominate.

From the observations of the respondents, the results are (Table 2) that on average half of their daily work time is devoted to direct contact with the client, on which they usually spend about 14 minutes. During the working day, they effectively carry out, on average, 13 tenancy matters. At the same time, more than half of the employees (71%) declare that they have much less time to perform other duties, and most of these people lack sufficient time (60%).

Table 2. Selected indicators of tenant service

Customer service indicators	Percent of daily work devoted to serving tenants	Average number of served cases per day	Average time devoted to serving a single tenant
Average	49.5%	13 cases	around 14 minutes
Standard deviation	1	1.6	2.1

Source: Authors' own compilation

Employees' perception of tenant service process

There are some elements of customer service that determine its proper course (Tomaszkiewicz 2010, p. 8). They are: attitude, skills in interpersonal communication, possessed knowledge and personality traits of the employee. These components were evaluated in the research questionnaire.

The assessment of the employee's approach to customer service was preceded by gathering opinions on the approach to the duties performed by them (Table 3).

Table 3. Attitude of staff to performing their duties within framework of customer service

Questions	Yes %	No %
Do you have a positive attitude to your daily work?	96.4	3.6
Do you believe that you serve customers well?	100.0	0.0
Do you show initiative to take care of good relations with clients?	100.0	0.0
Would it be more beneficial for you to deal with matters over the phone instead of direct contact?	47.3	52.7
Would it be more beneficial for you to deal with matters online instead of direct contact?	52.7	47.3
Is the information provided by you usually sufficient for the client?	89.1	10.9
Do you inform your clients about the formalities to be met in order to settle the matter effectively?	92.7	7.3
Do you inform your clients about the approximate date of settling the case?	96.4	3.6

Source: Authors' own compilation

Almost all the surveyed employees are characterized by a positive attitude to their everyday duties. Each of them is convinced that she serves her clients well and has good relations with them. Nevertheless, half of them think that it would be more beneficial for them to settle some matters by phone (47.3%) or online (52.7%) instead of via direct contact. At the same time, according to the vast majority of respondents, the provided information is sufficient for the client, who is usually notified about the formalities for the issue to be effectively solved (92.7% of positive employees' opinions) and the approximate date of completion (96.4% of positive opinions). At the same time, every tenth case of customer service requires greater attention from employees.

Next, the evaluation was carried out on a four-level scale (where 1 and 2 meant a positive character of the assessment, while 3 and 4 - negative):

1. Attitude of the employee to the process of serving the tenant;
2. Interpersonal skills of the staff in communication with the tenant;
3. The impact of staff knowledge and competence on the tenant service quality.
4. Personality features of a tenant service employee.

The percentage structure of the share of individual ratings is presented in *Tables 4-7*. The average level of the assessment was also counted and calculated as the arithmetic average of the ratings for individual features of the studied elements of tenant service.

Table 4. Attitude of employee to tenant serving process

Statements	Definitely yes	Rather yes	Rather not	Definitely not	Average rating
	Data in %				
Timeliness of dealing with matters.	80.0	20.0	0	0	1.20
Completeness of service.	69.1	27.3	3.6	0	1.35
Reliability of service.	70.9	25.5	1.8	1.8	1.35
Speed of service.	63.6	34.5	0	1.8	1.40
Efficiency of service.	69.1	29.1	0	1.8	1.35
Competence.	74.5	21.8	3.6	0	1.30
The clarity of my explanations.	50.9	47.3	1.8	0	1.51
Reliability of my service.	60.0	36.4	1.8	1.8	1.45
Aesthetics of my appearance.	61.8	29.1	9.1	0	1.47
Individual customer treatment.	54.5	40.0	3.6	1.8	1.53
Respect for client's time.	52.7	40.0	7.3	0	1.55
Overall quality of my customer service.	65.5	34.5	0	0	1.35

Source: Authors' own compilation

Analyzing the features characterizing the employee's attitude to tenant service (Table 4), it is observed that the key in this process is respect for the client, an individual approach to his / her matters and the clarity of explanations provided by the employee. At the same time, it is difficult to identify such features that would not matter in the approach to the tenant. The physical appearance of the employee is only slightly the least important in the process of effective handling of matters.

Undoubtedly timeliness of the handled issues and the general competence of the employee affect the level of customer service (100% positive answers). Slightly less frequent but equally important is the speed and efficiency of service. The lowest impact on the level of service is, in turn, the occupied position of the employee and his personality traits (over 7% of negative responses). The interpersonal skills of the staff in communication with the tenant were based on the assessment of individual statements related to customer service on a scale of 1 to 4, where 1 meant strong agreement and 4 strong disagreement (Table 5).

Table 5. Interpersonal skills of staff in communication with tenants

Statements	Strong agreement	Agreement	Disagree-ment	Strong disagree-ment	Average rating
	Data in %				
I like direct contact with clients.	23.6	61.8	10.9	3.6	1.95
Talking to clients is not a problem for me.	38.2	60	1.8	0	1.64
Talking with clients makes me feel stressed.	3.6	14.5	52.7	29.1	3.07
I feel that I am helpful and I help clients to solve their problems.	30.9	69.1	0	0	1.70
Persons in my position should be characterized by high personal culture.	43.6	5.5	1.8	0	1.58
I can control my emotions during contact with clients.	30.9	65.5	3.6	0	1.73
I cope well in stressful and crisis situations.	25.5	65.5	5.5	3.6	1.87
I inform clients about the course of the case throughout its duration.	32.7	58.2	9.1	0	1.76
I am willing to provide comprehensive information.	32.7	61.8	3.6	1,8	1.75
A person in my position must be polite to clients.	41.8	56.4	1.8	0	1.60

A person in my position should be pleasant, understanding and patient.	49.1	49.1	1.8	0	1.53
I always try to settle a given case.	47.3	52.7	0	0	1.53
I always try to settle a case with minimal negative effects for the client.	40.0	60.0	0	0	1.60

Source: Authors' own compilation

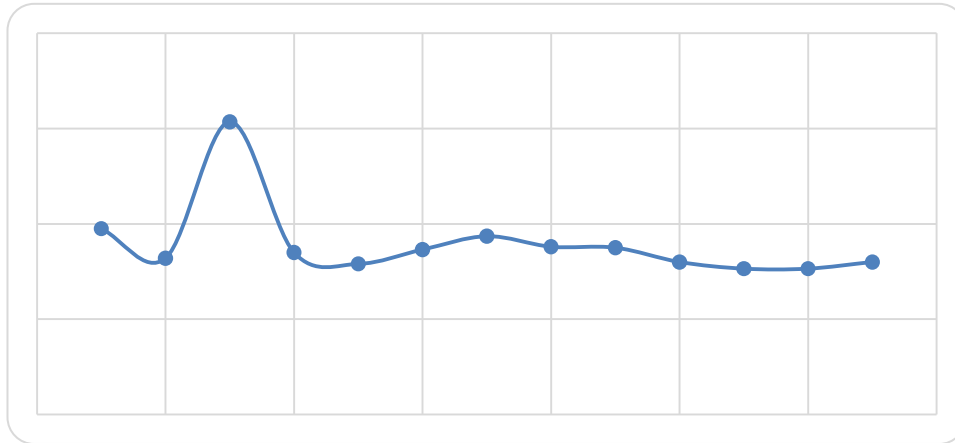


Figure 2. Average assessment of statements regarding interpersonal skills of surveyed employees

Source: Authors' own compilation

The average assessment of the individual statements presented in *Figure 2* varies from 1.5 to 1.9, which mainly means positive employee declarations in relation to customer service. The respondents are positive about contact with the client and help solve his problems, while providing comprehensive information. They cope well in crisis situations, being aware of the features necessary for direct communication with the tenant. At the same time, employees deny that customer service involves stress (3.07). The results of the obtained assessments prove that the employees are properly oriented towards customer service.

Then, according to the scale from 1 to 4 (where 1 meant definitely yes, and 4 - definitely not), they were asked to indicate how their knowledge and competences affect tenant service (*Table 6*).

Table 6. Impact of staff knowledge and competence on tenant service quality

Statements	Definitely yes	Rather yes	Rather not	Definitely not	Average rating
	Data in %				
Number of people working in the office.	58.2	23.6	16.4	1.8	1.62
My competences and experience.	69.1	38.2	0	0	1.31
The efficiency of my service.	61.8	38.2	0	0	1.38
Excellent knowledge of my job.	74.5	23.6	1.8	0	1.27
General competences.	69.1	30.9	0	0	1.31
My position.	52.7	30.9	12.7	3.6	1.67
Knowledge of law.	52.7	43.6	3.6	0	1.51

Source: Authors' own compilation

All the average ratings of statements regarding the importance of individual elements of customer service are in the range of 1.31 - 1.62. This means that the current knowledge and acquired competences according to the employees' opinions are of great importance when conducting negotiations and talks with the tenants. At the same time, the position held and the number of people working in the office that interact directly with the tenants have a major influence on this process. No less important is also the knowledge of the law in the field of housing stock management.

The character traits of the employee should also be assessed in order to provide the highest level of service (*Table 7*). The grading was made on a scale of 1 to 4, where 1 meant definitely significant and 4 was definitely irrelevant.

Table 7. Personality features of tenant service employee

Features	Definitely important	Rather important	Rather unimportant	Definitely unimportant	Average rating
	Data in %				
Stubbornness	34.5	40.0	23.6	1.8	1.93
Patience	70.9	29.1	0	0	1.29
The ability to listen	80.0	20.0	0	0	1.20
Openness	76.4	18.2	5.5	0	1.29
Self-reliance	67.3	30.9	1.8	0	1.35
Amicability	45.5	38.2	16.4	0	1.71
Pessimism	10.9	23.6	29.1	36.4	2.91
Likeability	43.6	32.7	20.0	3.6	1.84

Professionalism	85.5	14.5	0	0	1.15
Optimism	61.8	32.7	5.5	0	1.44
Confidence	69.1	29.1	1.8	0	1.33
Creativity	76.4	23.6	0	0	1.24
Assertiveness	65.5	30.9	3.6	0	1.38
Empathy	49.1	38.2	12.7	0	1.64
Communicativeness	85.5	14.5	0	0	1.15
Aesthetic appearance	61.8	34.5	1.8	1.8	1.44

Source: Author's own compilation

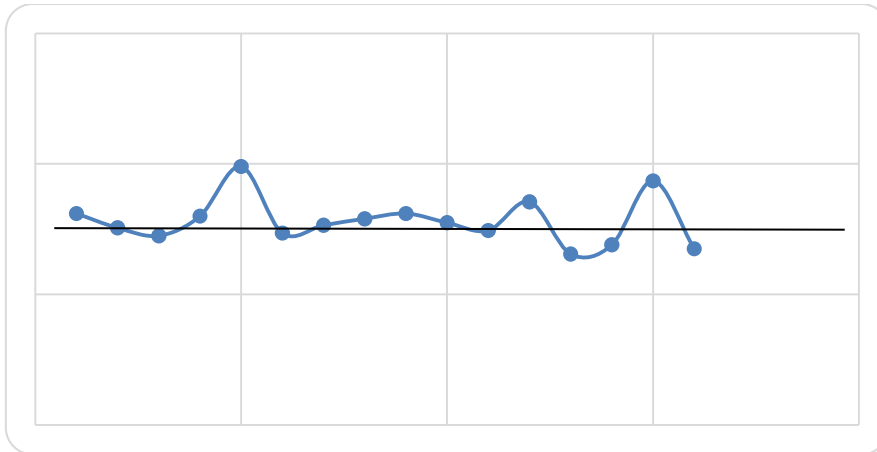


Figure 3. Average assessment of ideal customer service employee characteristics

Source: Authors' own compilation

The assessment of the importance of individual character traits in the customer service process is highly diversified and ranges from 1.15 to 2.91 (*Figure 3*). According to the respondents' opinions, the most important are patience, listening skills, professionalism, solving problems and communicativeness (100% positive answers). Self-reliance and self-confidence are also important (over 98% positive indications). Employee pessimism (65% negative assessments) definitely does not help in customer service, and also stubbornness, agreeableness, sympathy and empathy towards the tenant are less frequent.

Conclusions

The conducted research shows that the employees of the company managing the housing stock are characterized by a positive attitude to their daily duties. Each of them is convinced that he serves his clients well and has good relations with them.

The respondents are helpful in solving client's problems, and provide comprehensive information.

According to employees, the most important elements of customer service are primarily the number of people working in the office, the clarity and transparency of provided explanations, employee reliability, an individual approach to the case and respect for the client's time. In the service process, the knowledge, acquired competences and experience of the staff are also important. The ideal customer service employee should have patience, listening skills, professionalism, creativity in solving cases and communicativeness. At the same time, some problems arise due to the high frequency of direct contact with the tenant. Every tenth of them requires greater attention from employees. The time gained from using the telephone and electronic communication tools to transmit simple messages could be allocated to solve more demanding and complex tenant matters.

A positive approach and the right perception of the tenant as a partner for the relationship build a positive image of the subject among the tenant community. The confidence gained among them influences the effectiveness of the communication process with regard to identifying and satisfying social needs and security. It also facilitates implementation of the housing policy and the social mission of the commune which is to raise the quality of life in the urban tissue, build a community of residents, prevent social exclusion, leading to sustainable development of the city, ensuring high economic, social and spatial standards for all residents and future generations. The obtained results will be used to further examine the service level from the perspective of tenants.

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ROLA OBSŁUGI LOKATORA W ZARZĄDZANIU ZASOBEM MIESZKANIOWYM NA PRZYKŁADZIE MIESZKAŃCÓW CZĘSTOCHOWY

Streszczenie: Zarządzanie zasobem mieszkaniowym stanowi istotne zagadnienie przede wszystkim w kontekście społecznego rozwoju gmin. Organy gospodarujące nieruchomością mają charakter publiczny, a ich zadaniem jest zaspokajanie potrzeb mieszkaniowych różnego rodzaju grup społecznych. Poziom realizacji tego zadania determinowany jest wieloma czynnikami. Jednym z nich jest jakość obsługi lokatora, który reprezentuje stronę klienta. Celem artykułu jest ocena podejścia personelu do obsługi lokatorów. W badaniu posłużono się wynikami ankiety przeprowadzonej wśród pracowników podmiotu zarządzającego zasobami mieszkaniowymi – Zakład Gospodarki Mieszkaniowej Towarzystwa Budownictwa Społecznego w Częstochowie Sp. z o.o. (ZGM TBS Częstochowa). Dane przeanalizowano za pomocą wskaźników struktury. Otrzymane wyniki wykazały pozytywne nastawienie pracowników do obsługi lokatorów, jednocześnie zwracając uwagę na główny problem, jakim jest ograniczony czas indywidualnej obsługi klienta.

Słowa kluczowe: lokator, zasób mieszkaniowy, zarządzanie, obsługa klienta, Częstochowa



PROFESSIONAL BURNOUT OF EMPLOYEES IN LOCAL PUBLIC ADMINISTRATION – KNOWLEDGE, CAUSES AND PREVENTION

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Abstract: The article presents the results of a pilot study carried out in Poland, on the basis of which it is possible to diagnose the knowledge of local government administration employees on professional burnout, identify factors contributing to its development and define activities that in the employees' opinion could reduce professional burnout. The discussion of the results is related to current theoretical concepts concerning the phenomenon of burnout.

Keywords: burnout, commitment, prevention of professional burnout, local public administration, professional burnout studies

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Introduction

One of the phenomena intensively developing in the 21st century is occupational burnout, which negatively affects people, causing emotional, psychological and physical weakness. Public administration employees are confronted with increasing workloads, inconveniences and risks. The strain caused by working conditions, or the existence of pathological behaviours (mobbing, workaholism) results in high psychological labour costs, at the same time lowering the adaptability of the employee. The impact of such phenomena does not only manifest in the sphere of individual comfort in the social or health dimension but also have serious economic consequences. The intensifying dynamics of the global work environment calls for the continued exploration of professional burnout, which has become an issue that requires constant control and in-depth analysis (Lubrańska 2012, p. 33).

Public administration constitutes a specific organizational set-up, in which employees are also exposed to the effects of professional burnout. Public administration employees often work at a higher emotional level because of their contacts with citizens, who often seek assistance from the government at the worst time of their worst day of life (Guy, Lee 2015). Such emotionally engaging work can lead to a high degree of burnout and work dissatisfaction. Factors such as the organization's public image, work efficiency and quality of service (Cichoń,

Padlowska 2016, p. 217) can have a negative impact on the consistency and stability of services offered to customers, thus leading to serious problems in organizations (Kim, Stoner 2008, pp. 5-25; Mor Barak, Nissly, Levin 2001, pp. 625-662; Pierścieniak, Grzebyk 2015, pp. 59-61). One can observe the existence of disharmony regarding practical perspectives on the issue, both in theoretical considerations and practical analyses in the available global literature.

The aim of the article is to diagnose the state of knowledge of local government employees about professional burnout, to identify factors contributing to its development and to determine solutions which in the opinion of employees could alleviate the problem.

The research was carried out in May 2017 in four public institutions (social insurance institution, powiat labour office, and tax office), operating in randomly selected districts (powiats) in the Podkarpackie Province. A questionnaire for the pilot study consisting of 19 questions was used to collect data. The 5-degree Likert scale was used to evaluate the responses from 99 respondents. The group was diverse in terms of sex, age and work seniority. 74 female and 25 male employees, aged from 30 to over 50 years, completed the questionnaire. The respondents had work experience of various length – from one year or less to over 20 years of professional experience. The conclusions emerging from the research may serve as the basis for formulating research hypothesis to study the issue of professional burnout in local public institutions across Poland.

Professional burnout as a social phenomenon

Professional burnout is a complex phenomenon, occurring in the work environment, and defined in various ways in source literature. One of the earliest definitions of burnout was provided in the 1970s by the American psychiatrist, H.J. Freudenberger. In his opinion, professional burnout is a condition characterized by mental and physical exhaustion, caused by excessive demands made by a given person or the environment.

A broader definition of professional burnout was presented by Ch. Maslach (2004, pp. 15-19), who describes it from a three-dimensional perspective. One of the three components of the syndrome is emotional exhaustion that results from earlier excessive commitment or work overload and often from excessive stress in the work environment. Diminished reduced sense of personal accomplishment is manifested by lack of confidence in one's skills, low self-esteem, or pessimistic attitude towards one's professional achievements (Schultz, Schultz 2011, p. 447).

A detailed analysis of other definitions of „professional burnout” leads to the conclusion that it is an ambiguous concept that can be understood in different ways. In the context of an individual, some authors look for irregularities in the personality of the employee (Schaufeli, Maslach, Marek 1993). Other approaches take into account the impact of the work environment and organizational culture (Farber 1983), or interpersonal relations (Sełk 2004, pp. 19-44). The overview of the selected definitions presents the phenomenon from several perspectives,

although its proper assessment is only possible through a combination of these alternatives, treating them as a complementary picture (Sokal 2017, p. 11).

C. Cherniss (1993) identified three models of changes that characterize employees that will be affected by internal burnout. Such characteristic changes include the loss of understanding and tolerance towards clients and the tendency to blame clients for one's failures, the loss of one's idealism and optimism about possibilities of making changes, as well as searching for fulfilment outside their professions. M. Grzegorzewska (2014, p. 66) noted that C. Cherniss expressed the opinion that the feeling of burnout is mainly due to differences between what employees receive in return for their work and what they give to others.

Contemporary studies indicate that the state of professional burnout may go beyond the working environment, affecting the behaviours of individuals in other spheres of life. Professional burnout mostly affects people who are overly committed, with a high level of motivation, setting excessive requirements and striving for perfectionism (Hołyst 2013, p. 296; Ober, Karwot 2017, p. 284; Krawczyk-Sokołowska 2008, p. 272).

Causes and consequences of professional burnout of employees of local public administration

Public administration performs services and duties for the benefit of citizens, meeting both their basic and higher demands. Public administration workers offer services in accordance with Polish law and applicable regulations regarding both state and local government administration (Izdebski, Kulesza 2004, p. 130; Lenik 2014, p. 64). This government organ functions for the benefit of society, while its duties are specified by the highest state authority. There is an established hierarchy that cannot be breached. The prevailing organizational structure sets limitations to the kinds of services to be provided. The employee is thus entirely dependent on the state and its rules. Moreover, such employees are subjected to strict control. Employee performance is constantly monitored and checked. The evaluation is based on whether the employee's actions are guided solely by the public interest (Zirk-Sadowski 2003, p. 263).

Both M. Litzke and H. Schuh (2007) draw attention to the intensification of the phenomenon in bureaucratic institutions. According to them, the cause for the occurrence of this syndrome among employees of such institutions, according to the authors, are mainly, work overload, lack of autonomy, lack of sufficient remuneration and gratitude (Pabian 2017, pp. 10-11; Pabiś 2017, p. 20). B. Farber, on the other hand, focuses on the socio-economic and economic perspectives of the phenomenon. He suggests that factors contributing to professional burnout include low remuneration for work performance, employees' unfulfilled expectations, and lack of job satisfaction. Combined with social and family conditions or life changes, this can trigger disillusion and initiate professional burnout (Grzegorzewska 2014, p. 66). In this case, sustainable aspects are also important (Chluska, Sikora 2018, p. 21).

Employees in public administration are recruited on a permanent basis, which means that they perform their duties over a long period of time. There also exist rules and guidelines that specify under which circumstances an employee may be dismissed or deprived of his / her duties. This is one of the reasons that may cause burnout in this social group, because over time routine and professional monotony may appear. Moreover, they perform repetitive jobs often associated with inefficiency and lack of job satisfaction (Szaban 2011, p. 60). The eight-hour work schedule in public offices means that the employee who needs to deal with formal matters does not have time to do that because most offices in Poland and other public institutions are open from 7 am to 3 pm. Therefore, it makes it difficult for an employee to reconcile these separate demands of life. The reason is often the improper management of time and daily schedules. Other factors determining the emergence of burnout syndrome among public administration staff include a large scope of responsibility in these positions (Fengler 2002, p. 104).

Public administration work involves assisting members of the public. The scope of services provided supports the state and, above all, meets the needs of its citizens. Constant contact with people, counselling and support, frequent prolonged conversations with applicants may be exhausting for administrative staff. There is a danger of excessive involvement in the client's issues that require urgent attention. The administrative staff is exposed to a variety of personality types in their daily work, including those who are pleasant to work with, as well as those that arouse frustration and anger, which eventually leads to burnout. Occupations that necessitate frequent interpersonal contacts, as well as those aimed at assisting others, are at high risk of professional burnout (Litzke, Schuh 2007, p. 173).

Professional burnout in selected local government institutions in Podkarpackie Province – research results

State of current knowledge

As many as 77% of the respondents of the survey conducted among public administration employees understand professional burnout as a condition that arises as a result of overwork, excessive duties or professional stagnation. Instead of feeling satisfied with one's work, the employee begins to experience lack of pleasure in fulfilling their duties – an experience that previously did not exist. According to 15% of the respondents, burnout is the result of the excessive commitment to office work, while only 8% associated it with stress-related factors in the work environment.

According to 60% of the respondents, a symptom of professional burnout is the lack of motivation to work. Other symptoms mentioned by the respondents include irritation (17%) and depressive moods (12%). However, 8% of the respondents experienced anger and resentment, with only 3% (all female) experiencing sleep disorders.

The respondents declared that they acquired their knowledge about professional burnout mostly from the mass media (Internet, TV and radio) – 41.4%, and through

conversation with acquaintances – 33.3%. Other sources of information include organized conferences and training workshops – 17.2%, reviews of specialized publications – 6.1%. Only 2% of the respondents indicated personal experience or observing other employees experiencing the problem as their source of knowledge about professional burnout.

The next question was to assess the respondents' level of professional burnout, using a five-point scale, where 1 meant lack of burnout and 5 indicated complete burnout. The results show that 23.2% of all administrative employees feel completely burnt out, indicating the maximum level of 5. 27% of the respondents who felt this way were females, while 12% were males. The respondents who were on the verge of burnout amounted to 16.2%. However, 14.1% of the respondents never observed such symptoms in their lives, while 18.2% observed the first symptoms. Level 3 burnout was experienced by 28.3% of the respondents. This level is considered a warning stage, which calls for actions to be taken to prevent the next phases of burnout.

A key factor that influences the emergence of the syndrome is workplace seniority. It was observed that among 23.2% of the employees experiencing burnout, 52% had work experience exceeding 20 years, 39% had 11-20 years of work experience, and 9% worked for 6-10 years. Burning out was not observed in the employees with shorter work experience. Additionally, 14.1% of these employees that did not observe professional burnout syndrome in their life had less than one-year working experience.

Reason for the increase in burnout

14% of the respondents did not experience job satisfaction while performing their official duties. Low level of job satisfaction was also indicated by 27% of the respondents. 45% of public administration employees defined their job satisfaction as average, placing themselves somewhere between complete satisfaction (5) and lack of satisfaction (1). The highest level of satisfaction (level 4) was indicated by 11% of women and 20% of men, which made up only 14% of all the respondents. In the study, none of the administrative employees reported complete professional satisfaction.

When assessing the impact of their actions, none of the administrative employees admitted their lack of productivity. Only 6% of the respondents admitted the low level of individual effectiveness. It may suggest that even though it is the most common symptom, and at the same the result of professional burnout, the employees do not admit it. From a different perspective, it may indicate some level of job satisfaction because the employee shows efficiency and effectiveness, which gives him/her the strength to continue functioning.

As much as 78.8% of the administrative staff (72% of female and 22% of male respondents) were dissatisfied with the low remuneration for work. None of the respondents was satisfied with their level of earnings for the work performed. However, it should be emphasized that 6.1% of the employees indicated some level

of satisfaction. Although 15.2% of the respondents claimed to be satisfied with their remuneration, they thought it could be higher.

The decision to take up employment in public administration was in 68 instances unplanned (69%). Working in public administration was a dream job only for 15% of respondents, and in 14 cases (7%) the respondents based their decision on their parents' suggestion. The others (5%) were guided by the prestige attached to the job, and 3% of the respondents attributed it to the lack of suitable qualifications for other jobs, while for 1% the family tradition was a significant factor.

Employees that were employed for not longer than one year do not think about changing their profession. Indeed, only one employee expressed the desire to retrain his/her skills. A similar trend was observed in the case of employees with up to 5 years of professional experience, as most of them were satisfied with their current job. In this group, 69% of the respondents do not plan to resign from current positions, whereas 31% think about leaving their jobs. The situation is rather stable for those with 6-10 years of work experience, where 50% of the employees want to leave their job and 50% want to keep it. The results are different for the employees with 11-20 years of working experience, as 69% of them would like to give up their current job, and 31% would like to keep it. Among the employees with 20-year and longer seniority in public administration, 34% indicated their intention to quit their jobs, while the rest had no intention to change their careers. 43% of the respondents were either willing to quit their jobs or change their current positions irrespective of their work experience. On the other hand, 57% of the respondents had no intention to take actions in this respect.

According to women occupying administrative positions (41%), the most problematic factor of the profession was low remuneration. Only nine respondents (13%) declared that it was the fatigue and exhaustion associated with providing services to clients that had a negative impact on their work attitude. It was the opinion expressed by 28% of the women surveyed. In the opinion of 16% of the employees, the lack of opportunities for personal development and promotion contributed to the emergence of occupational pathologies. Other features that negatively affected the nature of work include less attractive assignments (12%) and frequent contacts with colleagues and/or clients (3%).

On the other hand, according to the male respondents, in 68% the low remuneration is the most troublesome feature of this profession. Fatigue and exhaustion, which were significant features indicated by women, in the case of men accounted for only 12%. The same percentage of the respondents indicated the lack of development opportunities and self-improvement as having a negative impact on their work environment. Only in 8%, the cause was low attractiveness of the profession.

When employees of public administration were asked whether they were affected by stress, anxiety or irritability caused by burnout, 56% of the respondents admitted to such symptoms, while 44% did not report similar symptoms.

Employees with work experience in public administration under five years made up 25% of all respondents. About 64% of the respondents claimed that their

approach to work did not change over this period, compared to when they started. Every fourth employee (25%) claimed that they were more satisfied with their job at that moment. A contrary opinion was expressed only by 8% of the respondents, who pointed out that their approach to work had deteriorated. Only one respondent did not report any changes in his attitude.

The results were different for the employees with 6-10 years of working experience. At least half of them claimed they experienced less satisfaction with the services they provided. Those experiencing greater job satisfaction constituted a larger group (31%). Those whose attitude to the performed duties had not deteriorated made up 19% of all the respondents. All employees observed some form of change in their attitude.

The analysis of respondents with work experience above 11 years indicated that as much as 64% of all employees experienced the negative impact of professional relationships, which originally did not evoke such emotions. Only three employees (5%) experienced improvement in work relations. The employees whose approach to work did not change in any way constituted 19% of the respondents. As much as 12% of the personnel did not report any changes.

Neither women nor men (24%) with work experience under five years (24%) experienced the early morning melancholy of going to work. About 32% of women and 16% of men experienced such feelings several times a year. This phenomenon is more common for employees with longer work experience. Among them 39% experience apathy a few times a month. The study findings indicate that such occurrences are more prevalent amongst women than in men.

Factors minimizing professional burnout

In the third part of the questionnaire, the respondents were asked to indicate ways of eliminating or alleviating professional burnout. Such factors are varied depending on the work environment as well as on the person's personality traits.

A way of curtailing professional burnout, according to the female respondents, is relaxation or taking a leave from work (45%). In order to avoid discomfort, 26% of the respondents maintain an active social life. On average, every fourth woman (24%) pursues a hobby to keep away from professional life. Only 5% of the female respondents deal with the problem of professional burnout by enhancing their professional qualifications and skills.

On the other hand, 44% of the male respondents claim that pursuing one's interests, passions and hobbies is the best way to prevent burnout. According to 32% of the respondents, another equally effective way of counteracting burnout is relaxation. According to 12% and 8% of the respondents respectively, a good way to minimize the burnout syndrome is maintaining social contacts and improving skills. In comparison to women, as much as 4% of men turned to alcohol and drugs as measures to minimize burnout.

The research findings indicated that 46% of the respondents usually seek help from family members when confronted with occupational difficulties. About 21% of administrative employees seek help by consulting their colleagues, while 8% of

them consult their supervisors. Others prefer talking to their close friends (19%), away from the professional environment, or consulting specialists and psychologists (5%), who have an objective view of the situation.

The majority of the female (42%) and male respondents (48%) think that the atmosphere at work may cause burnout; hence they advocate creating a pleasant atmosphere at the workplace. On average, every third employee (27%) argues in favour of reducing working hours. The efficiency of employees may be improved thanks to a longer health leave. This opinion was supported by 23% of the respondents. The survey showed that only women (6% of the respondents) suggested closer cooperation in assisting customers.

Conclusions

On the basis of the conducted research, it can be concluded that employees of local administration understand professional burnout as resulting from overwork, excessive duties or professional stagnation. They do not associate this phenomenon with stress, which may suggest that professional burnout in local administration may differ slightly from that in public organizations because it does not confirm the three-dimensional concept of professional burnout proposed by Ch. Maslach (2004, pp. 15-19).

Nearly half of the surveyed employees of local public administration face the problem of professional burnout, although at different stages. It is usually less noticeable and less intense among employees with shorter work experience, in contrast to employees with longer seniority, who report experiencing burnout more frequently.

A key factor causing burnout among administrative employees is the low level of job satisfaction and low remuneration. In addition, people in administrative positions suggest that their attitude to work has deteriorated over time and that their daily duties are accompanied by discouragement. Their decisions to take up such jobs were mostly accidental. The reasons for professional burnout identified in the study may suggest the similarity of the nature of the studied phenomenon to the theoretical concept of professional burnout described by C. Cherniss (1993; 1998), which could be pivotal in developing knowledge about professional burnout among employees of local public administration.

The results obtained in the study constitute a significant incentive for further in-depth analyses and discussions on this phenomenon. They are an inspiration to undertake specific diagnostic, preventive and management activities in the working environment.

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WYPALENIE ZAWODOWE PRACOWNIKÓW LOKALNEJ ADMINISTRACJI PUBLICZNEJ – WIEDZA, PRZYCZYNY I PRZECIWDZIAŁANIE

Streszczenie: W artykule zaprezentowano wyniki badań pilotażowych przeprowadzonych w Polsce, na podstawie których można zdiagnozować stan wiedzy pracowników lokalnej administracji samorządowej na temat wypalenia zawodowego, zidentyfikować czynniki przyczyniające się do jego rozwoju oraz określić działania, które w opinii pracowników mogłyby wypalenie zawodowe zminimalizować. Dyskusję wyników powiązano z aktualnymi koncepcjami teoretycznymi dotyczącymi zjawiska wypalenia zawodowego.

Słowa kluczowe: wypalenie zawodowe, zaangażowanie, przeciwdziałanie wypaleniu zawodowemu, lokalna administracja publiczna, administracja publiczna



PRODUCT INNOVATIONS AND PARAMETERS CONCERNING MOTOR VEHICLE INSURANCE AND MANAGEMENT PROCESSES APPLIED BY INSURANCE COMPANIES

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Abstract: The objective of this article is to present the situation on the insurance market in reference to the selected elements of the management process applied by insurance companies. The author aims mainly at drawing attention to the activities performed by insurance companies which have decided to introduce innovative services and new solutions concerning organizational structures in order to improve their management standards. Implementing innovative solutions results in development and effective competition on the insurance service market. What is more, this study indicates product parameters concerning motor vehicle insurance referring to the subject of insurance and the scope of insurance coverage. In this context, proper management processes seem to be significant in reference to the application of innovative solutions shaping the relationships operating within the environment of insurance companies.

Keywords: innovations, management process, motor vehicle insurance, service

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Introduction

Economic development as well as the fact that Polish society is gradually becoming wealthier result in the increased demand for insurance services and a growing number of insurance companies. Market economy has forced insurance companies to perform activities aimed at improving their competitiveness. Prices, timeliness, quality and innovation of services enable keeping one's position in a competitive market.

Management processes in insurance companies allow these entities to discipline their internal activities in the area of innovation of insurance services. Insurance companies operate under specific environmental conditions covering a number of elements which have to be analyzed in order to make proper decisions.

Insurance services constitute a specific group of services as customers cannot verify them based on their senses. Service requirements should be specified in a transparent manner by indicating features which can be assessed by the customer. The concept of innovative services is significant in reference to insurance. The insurer makes a promise addressed to the policyholder. The value of the

contract/agreement can be determined only in the future, namely at the time when the insurer is obliged to pay.

Innovations on the motor vehicle insurance market

Source literature indicates numerous definitions of innovation. It is increasingly recognised that the concept of innovation covers every aspect related to generating and applying new knowledge to achieve a competitive advantage (Nowicka-Skowron, Pachura 2009, p. 41).

Innovation permeates all areas of corporate activities determining its success and development. This term understood in a broader context includes not only technical but also economic projects, as well as, for example, taking over a new market, mastering a new source of raw materials, or altering the organization (Krawczyk-Sokołowska 2011, p. 140).

Analyzing sources of information for innovative activity, we can list basic areas that are relevant to an innovative enterprise, containing information that (Nieć 2015, p. 32):

- can be found inside a given enterprise or in another enterprise belonging to a group of enterprises,
- can be obtained from suppliers, customers, competitors or consulting companies,
- comes from institutional sources, namely universities, research institutes, foreign public research centres,
- results from participation in fairs, exhibitions, conferences, groups and industry associations as well as from deriving information from magazines, professional literature or industry publications.

What is more, operational excellence constitutes a significant factor in focusing on innovation, namely on solutions which are to save time and money and to increase efficiency and effectiveness (Jelonek 2015, p. 140).

The need for constant improvement in various areas has led to the development of an innovation policy covering the most significant aspects of effective innovation management (Zawada, Herbuś 2014, p. 44).

The entity's strategy determines the principles concerning company management aimed at achieving objectives adopted by that entity (Chluska 2016, p. 73), defining the level and structure of resources, opportunities and threats, establishing the objective of the activity (Skowron-Grabowska 2015, p. 361).

At the same time, the strategic approach to innovation encourages companies to focus on customer needs and demand. Incorporating innovation into a development strategy is necessary to compete in an effective manner (Jelonek 2015, p. 141).

It is slightly easier to introduce innovations in manufacturing enterprises than in service units as most often the novelties refer to the product itself, applied technologies or activities aimed at the environment (Zawada, Herbuś 2015, p. 93).

Moreover, innovative activities concerning the services sector frequently are a continuous process and cover a series of gradual changes in products and processes. In some cases, it is difficult to recognize innovations concerning the services sector in relation to individual events, namely the implementation of a

significant change concerning products, processes or other methods (*Podręcznik Oslo* 2010, p. 40).

According to KPMG International, the success of insurance companies depends, to a great extent, on the level of their innovation. However, less than half of the companies use a formal innovation strategy, less than a quarter employ a person or team responsible for innovation, and only every third respondent claims that his or her company was a pioneer of innovation (KPMG 2015).

According to 83% of insurance industry representatives from 20 countries (including Poland), the success of an insurance company depends significantly on whether the company is more innovative than its competitors. The greatest opportunity for development involves more effective use of technology (60% of responses) and wider use of digital technologies (53% of responses). At the same time, only 47% of companies use a formal innovation strategy, and only 32% (29% considering only the entities located in Europe) consider themselves the pioneers of innovation (English term “first mover”). Less than 25% of companies employ a person or a team responsible for innovation. In the case of other companies, there is more or less formally defined collective responsibility borne by the entire company ([http://it-manager.pl/...](http://it-manager.pl/)).

The essence and concept of services and parameters of motor vehicle insurance

A service is defined as an appropriately oriented, useful activity performed by an individual that meets its specific needs, without the use of a material object (Kolman, Tkaczyk 1996, p. 14).

It is often stated that this unique character of services makes it possible to distinguish them from products. The four most characteristic features of services include (Payne 1997, p. 21):

- immateriality – services are, in most cases, not related to the production of material goods,
- diversity – services are inconsistent, non-standard and very varied,
- inseparability – services are provided by the service provider and consumed by the customer simultaneously,
- impermanence – there is no possibility to store services.

The concept of services is essential as regards insurance. The insurer makes a promise addressed to the policyholder. The value of the contract/agreement can be determined only in the future at the time when the insurer is obliged to pay. A. Banasiński formulated the following definition by analyzing the role and function of insurance based on methods such as system analysis and the application of modern economic cybernetics apparatus: “Insurance is understood as a multi-regulator of national economy development processes disturbed by random events – natural disasters and unfortunate accidents. The cost of this regulation is distributed directly or indirectly to pre-defined units (legal or natural entities) using this regulator” (Banasiński 1996, p. 74).

Insurance involves a contract/agreement concluded between the insuring party, the person purchasing the protection service covered by the insurance, and the insurer or insurance company. The insurance company is to perform a specific service in the form of payment of a specified sum of money in the event of a specific event or accident specified in the contract. On the other hand, the insurer undertakes to pay the premium specified in the insurance contract.

The number of motor vehicles increasing year by year combined with the low capacity of Polish roads have a significant impact on the number of transport-related accidents. As a result of these events, road traffic participants suffer from various types of damage related to both to health and property. Any damage caused must be compensated, which entails significant costs (Zielińska 2012, p. 344).

Because of freedom (or its lack) in establishing insurance coverage under insurance, compulsory and voluntary insurance is distinguished (Garbiec 2007, p. 43).

This results from the fact that, as in all other types of insurance, compulsory insurance is contractual in its character. However, in the case of compulsory insurance, the legal obligation to conclude insurance contracts is imposed on particular entities.

In order to define clearly and precisely the mutual rights and obligations of the parties with respect to insurance contracts, insurance companies introduce general insurance conditions aimed at simplifying and facilitating the mass conclusion of insurance contracts, consequently harmonizing these contracts. Thus, separate terms and conditions of this insurance are established for each type of insurance operated by the insurer. Typically, the general conditions of individual insurance determine the scope of liability of the insurance company, the limitation of this liability, the duration of insurance, the beginning and termination of the liability mentioned above as well as the amount of compensation. General insurance terms and conditions constitute an integral element of the insurance contract, determine the rights and obligations of the parties to the insurance contract, ensure proper protection of both parties to the insurance contract as regards the legitimacy of insurance claims.

Motor vehicle insurance constitutes the dominant field of activity in reference to insurance companies in Poland. Insurance companies provide insurance against risks concerning the vehicle itself, namely “autocasco” insurance (AC) and liability insurance (OC) addressed to car owners in reference to damage arising in connection with the movement of these vehicles in and outside Poland. The main product parameters concerning motor vehicle insurance are presented in *Table 1*.

Table 1. The main product parameters concerning motor vehicle insurance

Product parameters concerning motor vehicle insurance	
Subject of the insurance	The scope of insurance protection
<p>Third party liability insurance (OC) addressed to vehicle owners, the insurance deals with the civil liability of each person who caused damage in connection with the movement of the vehicle while driving this vehicle during the term of the contract.</p>	<p>This insurance protects the vehicle owner from the financial consequences of damage suffered by third parties in connection with the movement of the vehicle, such as:</p> <ul style="list-style-type: none"> – damage to the property: <ul style="list-style-type: none"> • the cost of repairing such a damaged vehicle, • effects of damage, destruction or loss of property other than the car (for example, building, fence), – personal damage: <ul style="list-style-type: none"> • covering the costs of treatment undergone by the injured parties, • payment of the disability pension for the injured individual, • compensation for the death of a close relative, <p>The insurance coverage is the same in the case of all vehicle owners. It includes not only damage caused while driving but also damage caused when the car was in the garage, damaged caused while getting in and out of the car, during loading and unloading as well as while parking.</p> <p>The rules concerning the conclusion and performance of compulsory TPL insurance addressed to vehicle owners are specified in the Act issued on the 22nd of May 2003 on compulsory insurance, the Insurance Guarantee Fund and the Polish Motor Insurers' Bureau.</p>
<p>Autocasco (AC) insurance provides comprehensive protection as regards:</p> <ul style="list-style-type: none"> – vehicle – vehicle equipment, <p>against material (non-operating) losses connected to the possession and use of this vehicle.</p>	<p>Damage to the vehicle connected to movement and lack of movement due to:</p> <ul style="list-style-type: none"> – collision with another vehicle, people, animals or objects, – activities of third parties, for example, burglary. <p>Damage or loss of a vehicle due to unexpected events such as:</p> <ul style="list-style-type: none"> – natural disasters (for example, flood, hurricane) and the forces of nature (for example, hail), – fire, explosion, activities connected to the application of a thermal or chemical agent. <p>Damage to the interior of the vehicle by persons when transportation of these individuals was required due to the need of providing medical assistance.</p> <p>Theft of the vehicle, its parts or equipment.</p> <p>Damage to the vehicle resulting from its short-term use, theft of the vehicle, its parts or equipment.</p>

Source: Author's study based on general terms of motor vehicle insurance

Environment and management processes of insurance companies

In contrast to the macro-environment, in a competitive environment, the influence of the environment on the company is more noticeable and can be experienced in a much shorter period of time. As regards the macro-environment perspective, some changes belong to the dimension of insignificant events while they evoke concern directly from the point of view of objects and this information is extremely significant. Therefore, enterprises should ensure access to the appropriate quality source of information about the environment, apply modern and effective analytical and information tools that enable a fast and synthetic diagnosis of their functioning, determining their position in relation to their competitors (Jelonek 2002, pp. 35-36).

The fundamental aspect of the new management paradigm involves the application of knowledge and innovation as a cooperation factor both within the company and in shaping the relations with its environment. The company strengthens its relationship with the customer, monitors competitors and applies data analysis system generating information on the market and competitors, which proves useful in establishing new strategies. Modern management is to be accompanied by changes in the organization's activities, such as (Pomykalski 2011, pp. 74-75):

- planning how to obtain relevant knowledge from the market and from the customer, its application in the internal growth and development process and, most importantly, innovations concerning products, processes and management,
- increase in the acquisition of external knowledge, which is achieved through importing innovation or via mergers and acquisitions.

Information used in management processes is determined on the basis of specific criteria corresponding to the nature of the company. One should pay special attention to the quality of information applied in the management process. The features of qualitative information include (Kucęba, Sokołowski 2002, pp. 55-56):

- accuracy of reliability – information should reflect the reality in a reliable manner,
- completeness – information obtained by the manager has to contain facts and details necessary for this entity,
- timeliness, staying up to date – information has to be available on time to enable proper operations of the manager,
- responsibility – information should prove to be useful for the manager in reference to special conditions and in relation to special needs,
- significance – information has to be useful and obtained in a particular situation, it eliminates the excess of information which is referred to as redundancy,
- brevity, substance – the obtained information has to be in an understandable form which can be used immediately; this information is described as absorbable; namely, it does not require additional modifications,
- usefulness – aggregated information is necessary and useful for making decisions and corresponds to its timeliness.

Management processes are aimed at ensuring effective planning and operating of fundamental and auxiliary processes as well as the improvement of the entire insurance company management system. Management processes include strategic planning, operational planning and company management (Gąsioriewicz 2015, p. 13).

The advantages of management through innovation include (Bieniok 1997, p. 204):

- favouring or even imposing progress, consequently resulting in the development of the company,
- activating absolutely all members of the organization and assigning them with a common objective, namely development,
- personal development of employees via constant self-education and professional development, as well as improving the organizational culture functioning in the company,
- increasing the competitive advantage of the company as well as its capabilities due to the need to constantly monitor competitors' actions and customer's reactions, as well as the need to implement new products in a permanent manner.

Process orientation should involve a comprehensive manner of thinking about processes as related activities. Their identification can contribute to the better understanding of value establishment and their facilitation as well as continuous improvement of the company efficiency and satisfaction of both internal and external customers (Bitkowska 2009, p. 12).

Conclusions

Insurance services demonstrate the possibility of using innovative technological solutions to improve their quality and management efficiency. Nevertheless, it is significant to avoid losing the so-called personal factor and using it in a manner adding up to the features which are expected by customers, such as clarity, trust, reaction, confidence and empathy. The progress achieved so far in the application of innovative technologies in most cases corresponds to decreasing the costs and increasing efficiency. Technology and personal services are to complement each other. A service system providing customers with innovative technology as well as a high level of personal contact can increase the results. Insurance companies must bear in mind the significance of innovative management of insurance services. If a company aims at surviving in the conditions of arduous competition, standing out is the key feature which can be implemented by establishing an image of an insurance company as an institution providing innovative services.

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INNOWACJE PRODUKTOWE I PARAMETRY UBEZPIECZEŃ KOMUNIKACYJNYCH A PROCESY ZARZĄDZANIA ZAKŁADÓW UBEZPIECZEŃ

Streszczenie: Celem niniejszego artykułu jest przedstawienie sytuacji na rynku ubezpieczeń w aspekcie wybranych elementów procesu zarządzania zakładów ubezpieczeń. Chodzi tu przede wszystkim o zwrócenie uwagi na działania zakładów ubezpieczeń, które w celu poprawy standardów zarządzania zdecydowały się na wprowadzenie innowacyjnych usług oraz nowych rozwiązań w strukturach organizacyjnych. Efektem wdrażania innowacyjnych rozwiązań jest rozwój i skuteczne konkurowanie na rynku usług ubezpieczeniowych. W opracowaniu przytoczone zostały również parametry produktu w ubezpieczeniach komunikacyjnych ze względu na przedmiot ubezpieczenia i zakres ochrony ubezpieczeniowej. W tym kontekście odpowiednie procesy zarządcze wydają się być kluczowe ze względu na wykorzystanie innowacyjnych rozwiązań do kształtowania relacji w otoczeniu zakładów ubezpieczeń.

Słowa kluczowe: innowacje, proces zarządzania, ubezpieczenia komunikacyjne, usługa



ETHICS IN LOCAL GOVERNMENT – CASE STUDY OF BOLESŁAWIEC TOWN HALL

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Abstract: This work is intended to present the rules of ethical conduct adopted by local government entities and to identify some general ethical principles based on the example of Bolesławiec Town Hall. The paper is based on source literature and internal documents of the described local government entity. The monographic method was chosen to explore the characteristics and elements of a specific structure/system/process (here the ethical behaviour in the administration) and to identify their nature, functioning, and development. The article raises a cognitive classification-type and explication-type problem. Thus, the authors are looking for answers to the following question: what innovative actions do Bolesławiec authorities take in finding new quality in service provision relationships between clerks and between clerks and customers? Based on the source literature, the first part of the work describes the problem in purely theoretical terms. The literature analysis serves to determine the facts regarding the phenomenon in question. The empirical part presents the results of the study. The article was prepared on the basis of source literature on the management, organization, and planning of countryside renewal, national and European documents related to this subject, analysis of surveys and statistical data collected by the town of Bolesławiec.

Keywords: local self-government, county, ethic, management

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Introduction

Public institutions are the entities where interests of various groups of people are solved, which is related to the fact that there is some great discrepancy between their particular interests (Krawczyk-Sokołowska, Mesjasz-Lech, Nowicka-Skowron 2017, pp. 236-237). Such institutions are to carry out tasks in a way reconciling the frequently contradictory interests of the customers in a fair and neutral manner. This would not be possible if it was not for the detailed and restrictive regulations concerning the principles of ethical conduct (Dębicki, Kudrycka 2000, pp. 47-49).

The first part of the paper provides a general definition and analysis of the Employee Code of Ethics in Bolesławiec Town Hall. Afterwards, the profile of a local government official, as a person holding a public function, is presented. Particular attention is paid to the discussion of limitations imposed by the Act on local government employees. The last part of the paper includes the analysis of theoretical and practical issues of ethical infrastructure, based on the example of Bolesławiec Town Hall. Additionally, this chapter describes the notion of corruption and strategies counteracting this phenomenon (Ordinance No. 156/2013).

The purpose of this study is to present the general characteristics for local government ethics, based on the example of Bolesławiec Town Hall.

The first part of this paper, based on source literature, presents the issue of ethics in local governments from a purely theoretical perspective. The literature was analysed in order to determine the facts related to the discussed phenomenon. The second part of the paper presents the results of empirical research.

This article is based on the review of source literature on management, organisation and planning operations carried out by local government units, with particular emphasis on the analysis of ethics followed by officials. The discussion presented in this paper is based on the methodology of the survey and on statistical data collected by the town in question.

Code of ethics

A code of ethics adopted by a local government is defined as a set of standards regulating the conduct of public officials and a list of ethical values that should be observed in the pursuit of public interest. The purpose of this logically organised set of rules is to adapt general ethical rules to a nature of a particular profession. The code of ethics covers (Kowalski 2005, pp. 100-102):

- definition of the duties of officials towards the society;
- manner of managing any conflict situations;
- disclosure of information on property;
- abuse of power;
- private use of public resources;
- manner of conduct after leaving the position in the public sector;
- behaviours, situations, methods and conduct non-compliant with the code;
- sanctions imposed when provisions of the code are violated.

Code of ethics in Bolesławiec Town Hall

The purpose of the Employee Code of Ethics of Bolesławiec Town Hall is “[...] to regulate the values and standards of behaviour of Bolesławiec Town Hall employees, related to their duties, to collect them in a form of a catalogue, and to inform citizens about the standards of behaviour that they are entitled to expect from the Town Hall employees” (*Kodeks Etyki...* 2005).

The general principle adopted in the aforementioned document is that the employees treat their work as public service, thus their actions both at work and outside influence the perception of the Office as a whole. In turn, the detailed principles include acting in a lawful, objective, responsible, impartial and disinterested, honest and reliable, transparent and dignified manner, both in and outside the workplace, taking care of the good name of the Office and officials, and not neglecting the rules of politeness and kindness in contact with people.

The employees of Bolesławiec Town Hall should perform their tasks in compliance with the strictly defined norms. It is not permissible for an employee to make decisions, participate in sittings or voting meetings, or express their own

opinions in situations that may lead to any personal benefits (*Kodeks Etyki...* 2005). Furthermore, they should not participate in any political activities or fall under the influence of political pressure leading to the way of conduct contradictory to public interest. An official should manage the entrusted public funds carefully and in a cost-efficient manner, bearing in mind the purposefulness and legality of decisions made in this area, and reveal any cases of waste, corruption and fraud of funds. In their relations with citizens, they should show impeccable personal culture, politeness, helpfulness and accuracy of answers (*Kodeks Etyki...* 2005).

If the above-mentioned code is not observed, the employee undertakes to bear the disciplinary or procedural liability.

The profile of a local government official – a person performing public functions. Statutory restrictions on local government employees

The legal status of a local government official is referred to in the Act of 21 November 2008 on Local Government Employees. A local government employee, depending on the function and position they hold (clerical – including managerial, auxiliary and maintenance functions), can be employed on the basis of election, appointment or contract of employment. An official performing public services exercises a profession of public trust. This is the reason why ethics is highly important here (Act of 21 November 2008 on Local Government Employees).

According to the Act, a person willing to become a local government employee must meet the following requirements (Fenrych 2006, pp. 97-99):

- 1) have Polish citizenship. Positions whose scope of duties does not include direct or indirect participation in the exercise of public authority and protection of the main national interest, are exceptions;
- 2) have full legal capacity and can exercise public rights without any restrictions;
- 3) meet the qualification requirements for the effective performance of duties;
- 4) in the case of employment on the basis of election or appointment, a clean criminal record for intentional offenses prosecuted by public indictment or as a result of deliberate fiscal offenses is an additional requirement.

An official employed under a contract of employment should additionally (Act of 21 November 2008 on Local Government Employees):

- 1) have at least secondary education;
- 2) have a flawless reputation.

In the case of managerial positions, the potential employee must also:

- 1) have at least 3 years of experience or run business activity in this period, the nature of which is in line with requirements for a given position;
- 2) be a graduate of first- or second-degree studies.

A local government employee may be employed for an indefinite or definite period, or under an employment contract for replacement. Persons who take up an official or managerial position for the first time, i.e. those who have not been yet employed in the local government entities for an indefinite period or for a definite period exceeding six months, are employed for a definite period shorter than six

months (Romanowska 2015, pp. 4-5). Before they start their job, the future officials make the following oath in the presence of the heads of the entity: "I solemnly swear that I will serve the Polish state and local government community on the position I hold, obey the legal order and conscientiously carry out the duties entrusted to me" (Act of 21 November 2008 on Local Government Employees).

Structure of ethical local government – ethical infrastructure in the office

An ethical infrastructure can be defined as a system of methods and standards contributing to the legal, ethical and transparent operations of a local government unit. According to the Organisation for Economic Co-operation and Development, three fundamental pillars of ethical infrastructure can be distinguished (Act of 21 November 2008 on Local Government Employees):

- management;
- support;
- control.

The scope of ethical management includes specific organizational solutions, such as establishing advisory positions and an ethics committee, as well as consistent implementation of procedures for clear and transparent decision-making processes and free access to public information for the society. Supporting the ethical infrastructure is based on defining the operational frameworks for administration and ways for development of ethical skills. An example of support for such infrastructure is a code of ethics or a code of conduct. The performed controls include such tools as legal regulations, internal statutes and procedures concerning the liability of local government officials ([http://www.wspolnota.org.pl/...](http://www.wspolnota.org.pl/)).

Whereas, according to M. Dębicki and B. Kudrycka, the elements shaping the ethical infrastructure are as follows (Dębicki, Kudrycka 2000, pp. 47-49):

- regulations concerning the conduct of officials (laws, ethical codes);
- bodies responsible for operation and development of ethical actions;
- transparency in operations;
- liability borne by officials for the activities violating the accepted ethical rules.

Ethical infrastructure in Bolesławiec Town Hall

Regarding the need to regulate the official's course of conduct, on 30 August 2005 the President of Bolesławiec issued the Ordinance No. 255/05 on the introduction of the Code of Ethical Conduct for the Employees of Bolesławiec Town Hall (Ordinance No. 255/05), as well as the principles of operation and procedures for the Ethics Commission of Bolesławiec Town Hall. On 20 June 2006, the Ordinance No. 182/2006 was published, concerning the introduction of a review and monitoring procedure for the Employee Code of Ethics in Bolesławiec Town Hall, as well as the Code of Ethical Conduct for the Employees of Bolesławiec Town Hall (Ordinance No. 182/06). In 2013, Ordinance No. 156/2013

came into force, where minor changes to the content of the Ordinance No. 182/06 were introduced (Ordinance No. 156/2013).

The body mainly responsible for effective shaping of ethical attitudes of the Town Hall's employees is the Ethics Commission of Boleslawiec Town Hall, established in 2005. The effectiveness of the code of ethics is controlled every year and it consists in town residents and officials filling in the questionnaires provided in Appendixes No. 1 and 2 to this paper (Ordinance No. 156/2013).

The results of the analysed questionnaires are presented in reports on the functioning of the codes that are submitted to the President by the end of June, and afterwards made available to the public (Ordinance No. 156/2013).

Moreover, the Commission constantly monitors the compliance with the Code. Information about violation of the standards is obtained through:

- complaints delivered to the Town Hall, concerning the officials' behaviour;
- evidence obtained from the accomplished inspections, as well as from the internal and external audits;
- TV and press releases;
- constant observation of employees¹.

After all collected information is analyzed, the Ethics Commission makes changes to the codes and presents them to the President.

In the area of promoting transparent activities in the local government, in 2005, Boleslawiec Town Hall joined the project entitled "Transparent Poland", which was intended to improve the exercise of power and administration and was aimed at eliminating all forms of pathology, with particular emphasis on the problem of corruption. Performance of the obligatory tasks under the Six Principles of Good Governance, which were aimed at developing a fair and effective local government, were the condition for completing the project with a positive result and receiving a certificate. These rules are as follows (<https://boleslawiec.eu/pp/arch.htm>):

- 1) transparency;
- 2) no tolerance for corruption;
- 3) social participation;
- 4) predictability;
- 5) professionalism;
- 6) accountability.

The town completed all obligatory and optional tasks, which is confirmed by the Certificate provided in Appendix 3 to this paper. In the following years, Boleslawiec continued participation in the project.

In the case of breach of the ethical norms, the employees of Boleslawiec Town Hall bear disciplinary or procedural liability (<https://boleslawiec.eu/pp/arch.htm>).

¹ On April 20, 2013, the Regulation No. 182/06 of the Boleslawiec President was issued, concerning introduction of the review and monitoring procedure for the Employee's Code of Ethics in Boleslawiec Town Hall, as well as the Code of Ethical Conduct for the Employees of Boleslawiec Town Hall.

Three ways to fight corruption in administration

Corruption is the phenomenon based on providing or receiving any material or personal benefits. The following forms of corruption are specified in the Polish Penal Code (MSWiA 2011):

- active and passive bribery;
- paid protection;
- exceeding or failing to perform duties, in order to obtain personal or material benefits;
- election bribery;
- economic corruption;
- creditors' corruption.

Extensive anti-corruption strategies are prepared on the state level, but local government entities are not completely powerless when it comes to this type of locally occurring phenomena. Three basic strategies applied by the municipal authorities can be distinguished.

The first one is a communication strategy which consists of three elements. First of all, town authorities should ensure the citizens that they undertake all available measures to prevent the phenomenon of corruption (Cichoń 2016, p. 71). Since communication should be reliable, the authorities should present specific action plans for particular problems. Secondly, communication should be open and transparent (Skowron-Grabowska, Nowakowska-Grunt 2017, pp. 97-98). Information should be delivered in a way that is clear and understandable for a wide group of recipients. Citizens who understand the applicable rules are less prone to corruptive behaviours. Communication should also inform a particular citizen of their very situation (MSWiA 2011). A crucial element is the transparency of tender terms or in other situations where the selection is made among applicants. Thirdly, communication inside and outside the town hall should be coherent, because the lack of such coherence can undermine the credibility of actions and cause and maintain the feeling of uncertainty regarding the objectives, requirements and methods of a local government entity.

Another strategy is to keep databases. The town hall should collect information about the intensity of corruptive events occurring both nationally and locally. This database should contain some information about the suspected and actual corruptive events (Fenrych 2006, pp. 97-99). The Ministry of Justice database can be used for this purpose. In addition, the town hall should systematically collect the information on anti-corruption strategies applied in other organizations.

The third strategy is to catalogue the hazard fields, based on the analysis of operations carried out in particular departments, as well as of their actions and decisions. The analysis should be carried out especially when the demand is higher than the supply, i.e. when bribing involves large benefits and when it is possible to ensure lower risks of the performed tasks. One tool enabling monitoring the activities at departments is a questionnaire filled in by customers. Such a material should be systematically analysed and presented, e.g. to the town council. Another tool is a decision-making system hindering any corruptive activities (Fenrych 2006, pp. 97-99).

Conclusions

The need for compliance with ethical norms plays a key role in the operation of contemporary local government entities. The employees' compliance with ethical codes and statutes determines the level of culture, trust to the office and the extent of corruption. The greater compliance with ethical norms, the greater contribution of an organisational unit to common good.

Bolesławiec Town Hall is an example of an entity highly compliant with standards thanks to the introduction and application of numerous regulations concerning ethical rules, as well as thanks to the establishment of the Ethics Commission, which systematically supervises and updates the regulations adapting them to the current needs.

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ETYKA W SAMORZĄDZIE NA PRZYKŁADZIE URZĘDU MIASTA BOLESŁAWIEC

Streszczenie: Celem niniejszej pracy jest przedstawienie zasad postępowania etycznego w pracy jednostek samorządu terytorialnego, jak i identyfikacja ogólnych zasad etycznych w samorządzie na przykładzie Urzędu Miasta Bolesławiec. Referat oparty jest na literaturze przedmiotu oraz na wewnętrznych dokumentach opisywanej jednostki samorządowej. Wybrano metodę monograficzną służącą zgłębianiu cech i elementów określonej struktury/systemu/procesu (tu: postępowanie etyczne w administracji) oraz identyfikacji ich charakteru, funkcjonowania i rozwoju. W pracy został postawiony problem poznawczy typu klasyfikacyjnego i eksplikacyjnego. Wobec tego autorzy szukają odpowiedzi na pytania: Jakie innowacyjne działania, przy zastosowaniu jakich instrumentów, podejmują władze Bolesławca w poszukiwaniu nowej jakości świadczenia usług w relacji urzędnik–urzędnik, urzędnik–petent? W pierwszej części pracy, na podstawie zgromadzonej literatury przedmiotu, zapoznano się z problemem w ujęciu czysto teoretycznym. Analiza literatury służy ustaleniu faktów w kontekście rozpatrywanego zjawiska. Druga część pracy jest częścią empiryczną, w której zaprezentowano wyniki badań.

Artykuł przygotowano na kanwie studiów literaturowych z zakresu zarządzania, organizowania i planowania pracy w jednostkach samorządu terytorialnego, dokumentów krajowych i europejskich z tego zakresu tematycznego, analizy badań ankietowych oraz danych statystycznych gromadzonych w strukturach opisywanego miasta.

Słowa kluczowe: samorząd, powiat, etyka, zarządzanie



HUMAN RESOURCE MANAGEMENT IN AN ENTERPRISE AND DEVELOPMENT STRATEGY

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Abstract: Human resource management in an enterprise undoubtedly has a significant impact on its development, thus it is an inseparable element of its strategy. The study explains what human resource management is and how it affects the company's development strategy. The purpose of the study was to investigate, among others, opinions on whether in the area of human resource management strategies are used to build a modern organization and what strategies are used in personnel development. The study included a group of experts holding an academic degree and experience in the field of Human Resource Management. The conducted study confirmed that the company's strategy should take into account human resource management strategy. The research was published in the Research Report – *Management Strategies* authored by Dr Janusz Grobicki.

Keywords: development, enterprise, human resource management, management, strategy, success

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Introduction

Contemporary enterprises operating in a dynamic and competitive environment face the necessity to develop an appropriate operating strategy. Undoubtedly, they increasingly appreciate the role of intangible resources. The human factor determines the competitiveness aspect of enterprises because as we know, human resources are a unique and irreplaceable resource. The capital included in the human – knowledge, skills, predispositions and experience are an important source of success for many enterprises. This study attempts to indicate that human resources, or intellectual capital as the value of accumulated abilities and employee knowledge, lead to a change in the quality of the offered services or products. Thus, these resources and the potential resulting from them form the uniqueness of the organization on the market, affect the competitive advantage, and are a key factor for the enterprise's success (Michna 2016, p. 131).

Human resource management

On the basis of literature in the field of human resource management, the definition of the concept of “human resources” itself is the starting point. Many authors have attempted to define this concept. The human resource is the total of the features and properties embodied in people that enable the fulfilment of roles in the organization (Pocztowski 2003, p. 36). H. Król notes that the concept of human

resources is a valuing concept that underlines the important role of employees in the process of the company's functioning, because they affect the use of other resources, e.g. material and financial ones (Król, Ludwicyński 2007, p. 54). It should be emphasized that the very concept of human resources is used interchangeably with other concepts in the context of people performing work for the company. Such terms are commonly used: employee, personnel, staff, the human factor, human potential or human capital. However, the listed concepts do not always mean the same, they all have similarities and differences.

Human resources nowadays do not include only those employed on the basis of an employment relationship, but also – more broadly – people working and providing work in various loose forms, neither employed or employees: so-called temporary workers and subcontractors performing tasks for the enterprise within outsourcing, contract work, freelance¹ and others. The awareness of the fact that human resources working for the organization are not only employees, is by no means common – even among (it seems) professionals and authors of textbooks (Oleksyn 2016).

The management of human resources is the subject of interest in this article. So what is this management? In the literature on the subject, the term human resource management has many meanings (*Table 1*).

Table 1. Definitions of human resource management

HUMAN RESOURCE MANAGEMENT				
M. Armstrong – it is a strategic and coherent approach to managing the most valuable assets of the organization – people working in it, who individually and collectively contribute to the achievement of its goals,	A. Pocztowski – it is a specific concept of management in the area of personnel function of enterprises, in which human resources are perceived as a component of assets and source of competitiveness, a strategic integration of personnel matters with business affairs is postulated, an active role of the linear management.	T. Listwan – a set of activities related to people, aimed at achieving the organization's goals and meeting the needs of employees, related to, among others, their development.	H. Król – it is the current concept of the implementation of the personnel function of the organization, whose task is to adjust the characteristics (nature) of human resources for the purposes of organizations harmonized with the needs of employees in specific internal and external conditions.	Z. Pawlak – it is a modern approach to the implementation of the personnel function in the organization. It involves shaping and applying the human resources of the company in such a way that it is not possible to fully achieve the objectives while taking into account the interests of the employer and employees.

Source: Author's own elaboration based on (Pawlak 2011, pp. 33, 34)

¹ A freelancer is a person who is self-employed and is not necessarily committed to a particular employer long-term (Wikipedia).

Human resource management consists of three main elements that should be interrelated and constitute a system (Pawlak 2011, pp. 36-41):

1. Personnel and HR policy – is a set of goals, principles and measures resulting from the personnel/HR strategy, aimed at its implementation, thanks to appropriate guidelines in relation to the operational management of people. The personnel policy may apply to various elements of HRM, but the utmost importance is paid by the boards of the enterprises to three functions: employee selection, remuneration and development.
2. Human resource management functions – they are specific actions that contribute to shaping human resources in the enterprise. The main functions of HRM include, among others: work analysis, work evaluation, human resource analysis, human resource planning.
3. Organization of human resource management – it is the division of work between the management entities established by internal organizational regulations and the policy of a given enterprise.

Human resources and their management are the most important element in the majority of modern enterprises. Currently, in a well-managed company, the main focus is on the following human issues (Stankiewicz 2005; Jędrzejczyk 2013):

- planning human resources – development of detailed employment plans, conducting proper recruitment and selection of personnel,
- training and development of employees – analysis of training needs, evaluation of the effects of the conducted training,
- motivation – proper management of professional career paths, conducting a rational promotion policy,
- remuneration – correct determination of the amount of remuneration,
- assessment – reliable evaluation of the effects of the performed work,
- communication – providing conditions for interactive communication,
- leadership – preparation for new organizational roles.

Effective management of enterprises depends on factors occurring inside the enterprise, as well as the ever-changing environment and the need for quick responses of the enterprise to changes. Human resources are the most important internal factor. In recent years, the role of human resources in building the competitive advantages of enterprises has increased (Gajdzik, Ociecek 2015, p. 7). The rapid development of information and telecommunications technologies prevents reasonable prediction of future opportunities in the perspective of 3-5 years (Jelonek 2017). There are examples of companies that have been subjected to changes under the impact of modern technologies – Microsoft or Intel being examples here. Probably in the future, technology will more or less replace the presently existing specialists and even the lower levels of management – server-client architecture, cloud computing business models and social media will replace the former manager-employee relations. The role of specialists could be limited to taking care of production “electronic employees”. The issue of education and employment of narrowly specialized employees whose responsibilities and competences will be taken over by new technologies may be questionable

(Surowiec 2018). The companies that produce software using artificial intelligence algorithms will surely nurture the continuous “intellectual” development of the machines (Michna 2016).

The fundamental elements of the human capital model include investments in employees (Skowron-Grabowska, Mesjasz-Lech 2016). It is impossible not to discuss here the new techniques and activities for professional development, whose effective implementation brings the enterprise many more benefits than using traditional methods for personnel improvement. These methods include coaching, mentoring and tutoring. Coaching is a technique of employee improvement in which the main role is played by an experienced employee (coach, teacher, trainer) and an employee to be trained (student, coachee, client). The essence and the greatest value of coaching is to support the employee in making changes in the way he expects. The concept of mentoring is associated with the person managing the development, i.e. the mentor. A mentor is a master or person who, in addition to leadership traits and extensive professional knowledge, should have the characteristics of a guardian, tutor and counsellor. On the other hand, tutoring can be understood as a planned development process, which takes place in an individual relationship between the pupil and the other person (tutor). It is primarily directed at talented employees who stand out and can play the role of leaders in the future (Moczyłowska, Kowalewski 2014).

Companies are already experiencing a shortage of talented employees. Many studies indicate that these tendencies will deepen over time. In addition, employee loyalty to companies is constantly weakening. In a survey conducted among others in Russia, Hongkong, the Ukraine and Eastern European countries, an average of 40% of people replied that today one cannot be as loyal to their company as in previous times. The greatest number of disloyal employees can be found in France (56%), and the least in the Ukraine (29%) (Tkaczyk 2008). The transaction of an employer with an employee is, in accordance with the concept of personnel marketing, an exchange transaction (Boone, Kurtz 1992, p. 661). In return for the initiative, ideas, creating customer values and multiplying the company's profits, the employee receives an attractive package of working conditions as well as the opportunity to develop and participate in projects. Similarly, when selecting an employer, a talented employee tries to obtain a job in a company that offers the best benefits package. One of the long-term solutions responding to these challenges are activities undertaken to create an employer brand, slowly becoming an increasingly important element of the work of personnel departments in Poland. The second extremely important element of the strategy of building the desired image of a good employer is an employment policy consistent with the image's assumptions (Schiavo-Campo, McFerson 2015, p. 178), activities focused on their development and drawing satisfaction from work (Lewicka 2010, p. 264).

Business development strategies

When searching for the answer to the question – how should proper human resource management look so that the enterprise is successful? – one should

consider another question – what is business development strategy itself (Stańczyk-Hugiet 2017, p. 53)? Each enterprise needs to develop a long-term concept of development and efficient operation on the market in order to survive and develop. This concept is called strategy. Despite the fact that strategy is a heterogenous and variously defined concept in the subject literature, it still remains an object of interest for both management theoreticians and practitioners (Dyduch, Bratnicki 2017, p. 92). This ambiguity of the concept of strategy results from the evolution of strategic management and a different view of its essence on the basis of various epistemological assumptions (scientific cognition), axiological (theory and values) and methodological (scientific research methods) (Zakrzewska-Bielawska 2018, p. 9). For the strategy to be good, it must be coherent, coordinate actions, rules and resources in such a way as to achieve goals, and at the same time create new advantages by changing perspectives and discovering new possibilities (Table 2) (Rumelt 2013, pp. 18-19).

Table 2. Characteristics of a good strategy

Enterprise strategy:

- | | |
|---------------|-----------------|
| – complexity | – importance |
| – flexibility | – omnipresence |
| – reality | – communication |
| – optionality | – dynamism |
| – coherence | – innovation |

Indicating to others the captivating vision (goal)	Directing the company's strengths to opportunities	Logical decision system and coordination of activities	Values and expectations of stakeholders	Use of current success and simultaneously exploring new opportunities
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Source: Author's own elaboration based on (Zakrzewska-Bielawska 2018, p. 20)

For companies to have a strategy, on the one hand it seems to be a necessity, and on the other – it is burdened with high risk (Fatehi 1995, p. 297). Looking at contemporary organizations with a well-established image, often dictating conditions in individual industries, it is difficult to resist the impression that they had to think strategically through the prism of their 50 or 100 years of operation. These organizations and, above all, their subsequent managers had to look into the future, trying to bring the bold visions of their development to life (Pabian 2017). However, the problem is the too imperfect tool to assess the company's potential and its surroundings. Despite many strategic analysis tools and various types of management methods, they do not often give an approximate assessment of the current economic situation of the company (Filipiak, Panasiuk 2008, p. 75). The company's top management should have a comprehensive and long-term business development plan, which is called a strategic plan. The elements of the strategic plan that form a general strategy are:

1. Mission – reflects the most defined general goal, task or important assignment for the implementation of which the enterprise was established
2. Vision – it is an imagination of what the company is to become in the specific future
3. Strategic goals – these are the main goals, the achievement of which serves realization of the mission and the vision of the company

The personnel strategy is part of the overall strategy of the company. Its basis is the strategic analysis of human resources, that is assessment of the strengths and weakness of the staff. It is a long-term plan that includes general specification of the company's goals in the area of human resources and tasks, as well as methods and means of their implementation. The company's strategic goals in the area of human resource management may concern various aspects of the personnel function. The most common are desired changes, such as the level of employment, wages, labour costs, labour effectiveness and work safety.

Formulating the company's strategy, especially its general part, is one of the main duties of the board. Functional strategies, including the personnel strategy, may arise as a refinement of the overall strategy (the top-down method of building the company's strategy) or constitute input, a starting point for formulating the overall strategy (the bottom-up method). In larger enterprises, the managers of functional divisions and personnel units supporting the management are involved in formulating functional strategies. The company's strategic plan is a hierarchical set of goals, in which the objectives related to human resources are at a high level, but not at the highest. The highest level is always created by existential goals, i.e. defining the way of existence, development and operation of an enterprise. In fact, for the head of the company, human resources are not an end in itself, but a means to achieve higher-order goals. Personnel strategy should always be subordinated to the overall strategy of the enterprise, regardless of whether it is based on a top-down or bottom-up method (Pawlak 2011, pp. 190, 191).

The key success factors indicated in the Vision of Sustainable Development for Polish business 2050 from the point of view of human capital are (Nowodziński 2013, p. 15):

- important and urgent: change of lifestyle and value system,
- important in the future: greater mobility, system solutions that increase the availability of work, professional activation of excluded groups,
- vision 2050: the optimal number of working people adequately qualified for the needs of the labour market.

Emphasizing the role of human resources in the enterprise, distinguishing managers, their effective communication skills and their ability to adopt new communication tools should be stressed (Kiełtyka 2002, pp. 78-84). The organization of the future is based on highly developed leadership and culture, it includes the creation of organizational integrity, leading to a strategy and mission based on fundamental values, more resulting from what the given organization is than what the given organization does. If others outside – customers, suppliers, partners – do not see that the company is a coherent whole, a strong compact culture, aware of its power, potential and strength, this proves its low market

position. The company's strategy and mission should be built in the long term with the possibility of its flexible adjustment to the environment. This will be a feature of the enterprise of the future (Michna 2016).

Analysis of research results

In 2012 in Poland, a group of female students under the direction of Dr Janusz Grobicki conducted research, the main aim of which was to examine and describe the strategies used in the area of human resource management for building a modern organization. For the purposes of the project, the group formulated the definition of an expert as a person with many years of experience in a given field, with the ability to collect knowledge, interpret it and put into practice. Experts with an academic degree and experience in the field of human resource management participated in these studies. The conducted research was to give an answer, among others, to the following research questions:

1. Do managers develop a human resource management strategy in connection with the adopted strategy of the organization?
2. Are human resources adapted to the organization's strategy?
3. Are employees at any level of the organization aware of the current human resource management strategy?
4. Do lower-level employees influence the creation of the organization's strategy?
5. What elements of the organization's strategy influence its proper functioning?

The results of the measurements were as follows (Grobicki 2012):

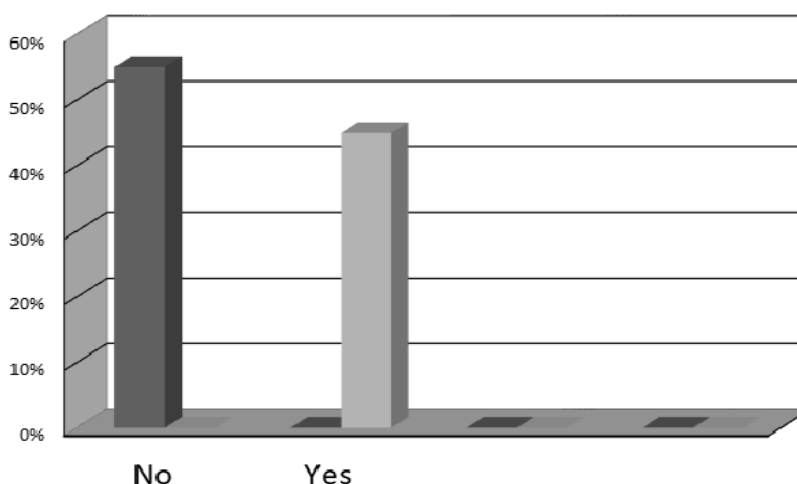


Figure 1. Human resource management strategy in connection with company's strategy

Source: Author's own compilation based on research conducted in April – May 2012 by seminar group as part of joint research project on management strategies

The above chart presents the distribution of responses to the question whether managers develop a human resource management strategy in connection with the adopted strategy of the organization. It follows that the vast majority of respondents (82%) believe that managers develop HRM strategy in conjunction with the adopted strategy of the organization, but (18%) disagree with it. The negative replies were justified as follows: usually not, because they do not know that it is necessary and profitable. Research indicates, however, that the manager, in order for the overall strategy of the company to function properly, must involve the creation of a human resource management strategy. This is reflected in the literature on the subject of management, where as we know, there are dependencies between the strategy of the organization and the human resource strategy.

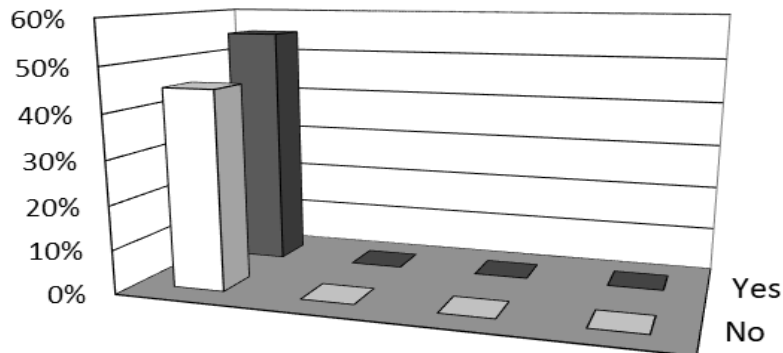


Figure 2. Adjusting human resources to company's strategy

Source: Author's own compilation based on research conducted in April – May 2012 by seminar group as part of joint research project on management strategies

The chart above shows that most experts (55%) think that human resources are tailored to the company's strategy, while only slightly fewer experts (45%) think the opposite. The negative opinions were justified as follows: in some organizations there are too many employees; while in others – employees are overloaded due to the lack of employees; it is difficult to translate the strategy into operational levels – that is, directors or managers, despite clear guidelines are stuck in the old paradigms in large organizations because they do not see a connection; some existing situations are forced by legal regulations. In practice, this means that human resource management should refer to decisions that have a fundamental and far-reaching significance for employment policy and human development in the organization, affecting the relationship between management and personnel, and which are crucial to the success of the enterprise.

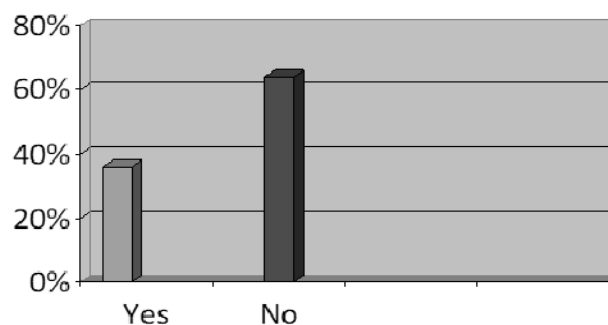


Figure 3. Awareness of employees of implemented human resource management strategy

Source: Author's own compilation based on research conducted in April – May 2012 by seminar group as part of joint research project on management strategies

The above chart shows that the vast majority of experts (64%) believe that employees at all levels of the organization are unaware of the implemented HRM strategy, while (36%) think they are aware. The reason may be the lack of informing employees about the human resource management strategy, and thus inappropriate communication and, as a consequence, the lack of interest of employees at selected levels in the HRM strategy.

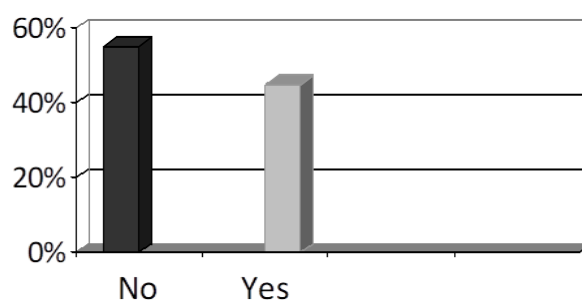


Figure 4. Impact of lower-level employees on creation of company's strategy

Source: Author's own compilation based on research conducted in April – May 2012 by seminar group as part of joint research project on management strategies

The surveyed experts had varied opinions on this subject because (55%) answered that they had no influence, and less than half of the experts (45%) marked the answer that they have. The respondents who gave a negative answer were asked to explain their response. The negative opinions were justified as follows: employees are not educated enough to “bring” anything new to the strategy; the senior employees have an influence; the organization’s specificity does not require it; nobody takes into consideration so-called serial employees; when it comes to creating strategies, they have no influence on it – but they do on the implementation. Many factors in this case directly related to the human factor

(including employee involvement, coordination of their activities, control, establishing an appropriate relationships) play a huge role in implementing the strategy. That is why it is so important to increase employee participation in formulating strategies, which leads to their greater emotional involvement, and may translate into a higher degree of implementation of the strategic plan and the success of the strategy.

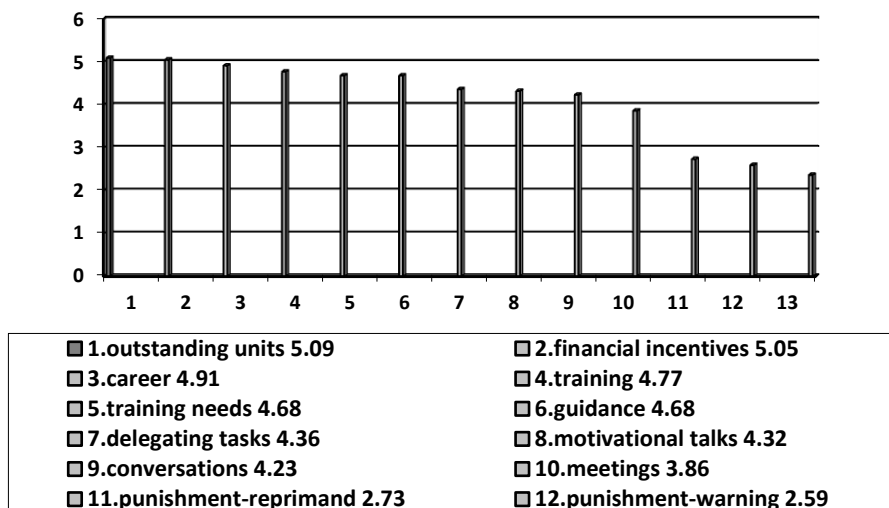


Figure 5. Influence of elements of organization's strategy on its proper functioning

Source: Author's own compilation based on research conducted April – May 2012 by seminar group as part of joint research project on management strategies

From the above chart one can read the significance of the influence of elements of the organization's strategy on its proper functioning. The results were quite similar among the top six elements. However, most respondents were in favour of looking for outstanding individuals and for financial motivation. Punishment with a fine turned out to be the least productive tool. Every successful company differs from those less effective ones by the way employees are treated. The research on the above question is reflected in the theory of management sciences. The authors of strategic human resource management recognize that this approach in the strategic management process has an implementation function, which includes selecting employees, assessing work results, implementing incentive systems or fostering employee development.

Conclusions

The article indicates that human resources have a very large impact on the functioning and development of the organization. There is no doubt that good human resource management, tailored to the company's strategy, favours the achievement of a competitive advantage. The considerations undertaken in this

article on human capital and its impact on the company's development strategy allow the authors to formulate conclusions relevant to the company's practice. The presented discussion of the conducted research shows that each enterprise, in order to function well, should have a developed strategy of its operation, and human resource management should be part of the company's strategy. Therefore, the development of human resources should be treated as an integral part organization development. Nevertheless, lower-level employees have no knowledge that they form the basis for the company's development. A great deal of work should be put into working out a method or model of informing employees, which will show how important the value of the entire strategy is. However, achieving success with people requires proper management. Such management (motivation, training, talks) that will build a unique configuration of these resources and will lead to satisfaction and contentment of the employees themselves, will affect the proper functioning of the entire company's strategy.

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ZARZĄDZANIE ZASOBAMI LUDZKIMI W PRZEDSIĘBIORSTWIE A STRATEGIA ROZWOJU

Streszczenie: Zarządzanie zasobami ludzkimi w przedsiębiorstwie niewątpliwie istotnie oddziałuje na jego rozwój, stanowi tym samym nieodłączny element jego strategii. W opracowaniu wyjaśniono, czym jest zarządzanie zasobami ludzkimi i jaki ma wpływ na strategię rozwoju przedsiębiorstwa. Natomiast celem przeprowadzonych badań było zbadanie m.in. opinii, czy w obszarze zarządzania zasobami ludzkimi stosowane są strategie służące do budowania nowoczesnej organizacji, a także jakie strategie wykorzystywane są w rozwoju personelu. Badaniem objęto grupę ekspertów mających stopień naukowy oraz doświadczenie w dziedzinie zarządzania zasobami ludzkimi. Przeprowadzone badania potwierdziły, że strategia przedsiębiorstwa powinna uwzględniać strategię zarządzania zasobami ludzkimi. Badania opublikowane zostały w raporcie badawczym – *Strategie Zarządzania* autorstwa dra Janusza Grobickiego.

Słowa kluczowe: strategia, sukces, przedsiębiorstwo, rozwój, zarządzanie, zarządzanie zasobami ludzkimi



ORGANIZATIONAL CULTURE AS STRATEGIC AREA OF CSR

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Abstract: The study discusses the importance of organizational culture in the company and the possibility of using it as a strategic potential in realizing the idea of corporate social responsibility. Theoretically, the strategic importance of this concept was justified for the effective functioning of the enterprise. In the next part, the possibilities of shaping the organizational culture as an element strengthening the corporate social responsibility strategy were defined. The main aim of the study is to analyze the importance of organizational culture to implement the idea of CSR in an enterprise. The applied method of research consists in phenomenological analysis of content available in literature and the results of previously conducted research.

Keywords: CSR, organizational culture, strategy

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Introduction

The phenomenon of organizational culture has existed since the times of the first organizations, regardless the participants' awareness. To a large extent, its shape was then strongly determined by social and cultural factors, as well as the individual character of the owners and his/her managerial intuition. Currently, the working community and culture they represent have been thoroughly researched and described. Despite the many advantages and great importance confirmed for the effective functioning of the company, entrepreneurs rarely classify this element a priori in the area of management. It activates most often only in the case of extreme situations when its benefits, abilities or dysfunction are revealed. It is worth keeping in mind the organizational culture when making strategic decisions as well as in current management activities. Organizational culture is a delicate matter that cannot be reprogrammed easily, especially with dishonest, selfish intentions. However, by acting methodically, it can be re-evaluated, activating its innovativeness, used as an additional strength and a key success factor.

The aim of the study is to determine the importance of organizational culture to implement a CSR idea in an enterprise. The applied research method consists in a phenomenological method, based on observation and analysis of the content available in literature and research, with the rejection of all intentions and assumptions.

The importance of organizational culture in the enterprise

When defining the company's culture, emphasis should be placed on learning the history and geopolitical surroundings of the working societies, as the structure of each organization has the characteristics of the national culture of its participants (Strategor 1997, p. 511). Based on the above statements, one can formulate a definition of organizational culture as a set of norms and intellectual values that characterize a given organization and develop for a long time, the result of which is the formation of behavioral patterns for a given social group and a certain hierarchy of values. B. Nogalski gave a comprehensive definition of organizational culture (Trutkowski 2006, p. 153): "[...] the culture of a business organization creates a system of typical values, norms and symbols that develops for a long time, and results in the formation of behavioral patterns for a given social group and a certain hierarchy of values. It consists of conceptual elements that create the intellectual foundations of norms and patterns of behavior and perception, i.e. symbols and anthropological and sociological patterns."

More generally, E. Schein presented it as an experimental process (Strategor 1997, p. 512). In his opinion, the company's culture is the whole collection of the fundamental assumptions that the group has invented, discovered or created, which concern learning how to solve the problems of adaptation to the environment and internal integration. These assumptions have been confirmed by practice so that they could be considered valid and inculcate to each new member of the group as the appropriate way of thinking in the organization.

In a holistic approach, the enterprise has, of course, more dimensions than just the organizational culture, namely the organizational structure and the individual strategy of operation. All these elements, in a dynamic management process, are subjected to mutual interdependence and interactivity. The most important factors affecting the organizational culture should therefore be included (Perechuda 2000, p. 286):

- influence of dominant leaders,
- history and traditions of the company,
- technologies, products and services,
- clients,
- company expectations,
- information and control,
- legal environment,
- organization's incentive system,
- company organization and resources,
- employees' goals, resources and beliefs.

A strong impact can be observed on the part of the macro and micro social environment, currently implemented organization strategy and its leaders on the organizational culture. An enterprise pursuing the main economic goal, that is, to achieve profit, strives to adapt its strategy of operation, organizational structure and the way of targeting the environment, and tries to influence it in some way. This is due to the fact that the social environment is an objective factor and has the

greatest "inertia" and strength determining the activities of the organization, among the factors listed earlier¹.

Therefore, the company engages its potential, i.e. the internal structure, strategy of operation and the organizational culture that binds the entire organization, to successfully adapt to the changing conditions of the environment or even influence, to some extent, the surroundings. It uses the interpenetration of the working environment with the local community and the increasingly emerging feedback at the interface between the organization and the social environment. Enterprises sometimes use organizational culture as an adaptable element of the strategic management process, applying a management strategy through organizational culture (Perechuda 2000, p. 287). Strong organizations are able to influence to a certain extent the social culture of the environment, modifying even its structure of values, especially effectively in the immediate environment from which its representatives supply the ranks of the organization.

The strategic importance of CSR for the organization

In this field, one can observe an ideological dispute justifying the recognition or rejection of the concept of corporate social responsibility, which is of strategic importance. The basic argument used by the opponents of the concept is the thesis that the main goal of the company is to maximize profits, carried out in accordance with the principles of free competition, without tricks or frauds, which also provides tangible benefits to shareholders or stakeholders. There is also the question of the costs of social involvement. An entrepreneur making decisions about getting involved in social activities, if it is not purely philanthropic, justifies it strategically, that is, it includes a system of financial settlements. The consequence may be lower dividends and employee wages, and as a result, the costs of social responsibility will be taken over by the society (Rybak 2004, pp. 56-57). Enthusiasts of corporate social responsibility emphasize the fact that the market does not have sufficient autonomy in the field of self-regulation, which is why countries with market economies cyclically struggle with crises, inflation, unemployment and the unfair division of national income (Rybak 2004, pp. 21-22).

There is a definition in the literature on this subject, with varying degrees of generalization. In one of those works, J. McGuire, motivating the necessity to take up social responsibility, states that corporations in addition to economic and legal responsibility, to some extent also respond to the society as a whole (McGuire 1963, p. 144).

On the other hand, B. Rok provides several terms of this concept; among others he states that corporate social responsibility is an effective management strategy that, by conducting social dialogue at the local level, contributes to the growth of enterprise competitiveness at the global level and at the same time to shaping favorable conditions for social and economic development. In a slightly more synthetic definition, it defines corporate social responsibility as a strategic and

¹The authors consciously reduced the environment to the social factor only.

long-term approach, based on the principles of social dialogue and the search for solutions beneficial to all (Ścibiorska-Kowalczyk 2013, p. 99).

Increasing the emphasis placed on introducing the principles of corporate social responsibility into everyday functioning is a way to maintain the best employees. In order to encourage potential employees to work in a socially responsible enterprise, ethical conduct of the organization must be ensured. A number of privileges guaranteed to employees are mentioned (apart from wage benefits), which are supposed to have a positive impact on the company's image (Bartkowiak, Ścibiorska 2008, p. 344). The increasing ethical knowledge of customers influences consciously made consumer decisions, thus deciding on the success or failure of the business. By implementing socially responsible goals, the organization positively influences the creation of the right organizational culture and identifies the employee with the enterprise and the enterprise with the environment through its socially responsible activities (Mróz 2008, p. 250).

In accordance with the evolution of corporate social responsibility presented by W. Wisser, the current management era incorporates the issues of the company's impact on society and the natural environment into the existing standards of business operations (Olejniczak 2016a, p. 324). In this way, the strategic importance of CSR in the management process was emphasized, especially in the context of implementing sustainable development assumptions.

The influence of organizational culture on the perception of CSR

In the light of current trends observed in the social environment, clients' awareness of ecology, their own rights, the rights and obligations of enterprises regarding liability for unfair and harmful impact of business organizations on the environment, the organization's success has acquired a social meaning.

Striving to maximize profits is a fundamental economic assumption of the functioning of each entity. The problem is whether this approach is strategically, long-term or short-term, aimed primarily at maximizing profit in a given period. The above-mentioned extremely different approaches to the strategy of action result from a proper or declarative understanding of social responsibility.

The examples of enterprises' strategic choices quoted above regarding the inclusion of CSR in their actions, result from the different, individual goals of business owners. On the one hand, there are owners who simultaneously deal with management, on the other, managers who only have to multiply the capital belonging to the owners. In the last example, the organizational culture and business mission may be in contradiction with the individual aspirations of the managers and the owners of the capital.

Furthermore, among clients, that is representatives of the society, there is a tendency resulting from the economic awareness of managing one's own resources and expenses, that is to maximize functionality and satisfaction when making decisions. We observe here an analogous typology in choosing the "best" product or service by a potential customer. One type of choice is the hasty (short-sighted) choice of the cheapest merchandise, quickly losing its useful properties, often

produced without respecting generally understood social and environmental factors and polluting the natural environment as waste or in a better variant as secondary raw material. This choice is made by customers with a limited budget (out of necessity) or customers unaware of the consequences that they cause for themselves, the economy and the environment. Another choice, considered theoretically reasonable, is the combination of the maximization of functionality with responsibility for its decision, regarding the quality, harmfulness of the place of production and environmental effects, at the time of production and after disposal or recycling. In the context of the extremely different consumer attitudes presented, we can talk about consumer social responsibility.

The priority (mission) of a contemporary, socially responsible enterprise is to strive to establish a close relationship with society. The local community from which its employees originate is of particular importance to the organization. These relationships should be built on trust, loyalty, respect, credibility and integrity, also in the context of products or services offered by the company. Local or regional enterprises have a relatively greater opportunity to build direct relations with the public. Bigger, and especially global enterprises, due to the specific structure and global distribution of the supply chain and the production process, lose direct contact with local communities, also because of functioning as corporations with central management. The managerial way of managing a company described earlier is not conducive to proper personal relations in the organization either, which automatically transfers to the social environment. A conscious society, both as regards CSR and its own consumer responsibility, guided by the above principles and its own views, flawlessly finds a product or manufacturer that acts reliably and in accordance with the mission it performs, produces or provides services in accordance with the principles of social responsibility. Therefore, in the interest of an enterprise with "principles", it establishes contact with the largest group of clients aware of their purchasing decisions. It is easier to gain new allies in society in the form of clients, meeting not only their standard needs but also the expectations of those potential consumers.

Organizational culture is the cradle of ethical and pro-social behavior of the company, which is part of the CSR idea, and represented by the crew, is also a representative of the local community. For this reason, the organizational culture has a double strategic significance for the enterprise, it consolidates the organization by strengthening internal personal relations and emphasizes the awareness of the social responsibility of the organization².

Forming OC as a CSR carrier

In the theory of business management, supported by many years of experience, the organizational culture has an established position. It is known, therefore, that if it is properly shaped, it supports and is even indispensable in implementing the strategic goals of its own organization. CSR is derived from similar moral and

² If such an idea was consciously implemented into the organization by management.

ethical foundations, hence the proper place for "incubating" awareness, responsibility and expected pro-environmental attitudes seems to be the organizational culture. An organization as an institution is not able to conduct socially responsible activities. It is the employees who create the organizational group and their own culture, acting on its behalf at all levels of the organizational structure, which can act responsibly (Olejniczak 2016b, p. 155).

Undertaking a challenge by the organization, introducing responsibility for the consequences of its operations into the strategy must flow from the conscious, autonomous decision of the owners or management. In special cases, this may require the use of configuration changes of certain cultural elements to adapt them to the new operating conditions.

Organizational culture is inseparably connected with the human resources of an enterprise, affecting every employee and, consequently, its development. The influence of organizational culture manifests itself in: the work ethos, the employee morality, readiness for change, willingness to do work, and involvement in the life of the organization (Puto, Łukasik, Brendzel-Skowera 2016, p. 65).

Employees are the basic resource of any enterprise, which is sometimes not the case of its owners. They are part of all the problems and creative solutions, therefore it is worth creating an individual OC model appropriate for a given organization and implemented strategy. Most enterprises do not have the habit of managing their basic resource, which is employees. Their attention (from the crew) focuses only on individuals who stand out in a special way, both positively and negatively. In both cases, they usually cause problems for the organization. One of the psychologists of organizations, D. McGregor, presented two extreme social models of the organization. The first under the name "Theory X" in which (Oblój 1999, p. 301):

- people are lazy and do not like to work,
- people must be forced to work and punished and rewarded so that they know what to do,
- people are not ambitious, they do not like responsibility, they need to feel safe, not challenged.

In this model employees are incompetent, not ambitious, they avoid work and they have to be watched all the time. The second model, "Theory Y", assumes that (Oblój 1999, p. 301):

- effort and work are as natural and necessary as rest,
- people are willing to accept responsibility and seek it,
- employees are able to regulate their behavior, set goals and control their achievements themselves.

The creator of these theories stressed that both have a chance to test themselves in practice, everything depends on the way of managing the staff. Employees behave according to the system imposed on them by the management.

The quoted theories undoubtedly polarize the real situation in the organization, and the employees of the organization usually are not homogeneous. It is enough, however, to fulfill some of the "Theory X" postulates, such as a sense of security,

reward system, ensuring satisfactory work and apply basic ethical standards of business in relation to employees, such as (Łukasik 2014, p. 148):

- justice,
- credibility,
- honesty,
- truthfulness,
- faithfulness to promises or obligations made.

In addition we can use the "Theory Y" suggestions to arouse in employees: natural effort and willingness to work, responsibility and self-control according to established organizational standards.

If we take into account in the initial conditions of the organization, an organizational culture that includes CSR, we can define strategic strengths and eliminate potential weaknesses, then adjust all the attributes of strategic management such as mission, vision, OC functioning profile (e.g. competitive or entrepreneurial OC), to the assumptions of CSR. The consistency of these elements regarding ethical standards, tasks and goals, is the foundation for implementing CSR in the enterprise (Abdullah et al. 2014, pp. 142-143).

Adapting the culture to the intended state can be divided into continuous activity, related to raising the level of culture in relation to the mission of the enterprise and activities coupling the employees of the organization with the currently implemented strategy.

We can include, among others, the following general actions (Królik 2009, pp. 51-52):

- select appropriate personnel (personal culture and qualifications),
- circulate internal staff (reduces the negative impact of informal groups),
- search for leaders of groups focused on a specific task,
- make employees aware of the mission of the organization,
- solve destructive conflicts,
- keep conflicts at a minimal, creative level,
- build the employee's relationship with the organization, appreciate and make employees aware of their usefulness for the organization,
- build the prestige of the organization inside and around it,
- ensure a good flow of information,
- ensure appropriate qualifications of the management staff.

The activities making connection to the current strategy are (Królik 2009, pp. 51-52):

- integrate employees around the organization's objectives and priority tasks,
- make employees aware of the implementation of strategic goals at all levels,
- reward initiative and creativity as well as the best achievements in the implementation of the subsequent stages of the strategy,
- provide a personal example of the boss's involvement, e.g. by integration with employees in joint implementation of the company's goals,
- indicate leaders as a reference point to assess the implementation of works.

In the process of introducing the concept of social responsibility to the organizational culture, it is necessary to continually engage management in this process. To eliminate fatigue and routine resulting from the previously established guidelines (Theory X), a group of employees needs continuous stimulating incentives, keeping them as a cohesive group at a high level of creative activity (in accordance with the characteristics of Theory Y).

One of the methods to strongly activate employees is the method based on the chaos theory. Chaos in the environment, caused by a disproportionately strong reaction to disproportionately weak changes in initial conditions can become a positive factor, an opportunity that we initiate ourselves (Krupski 1999, pp. 408-413). This may seem like a brutal move, but if initiated in a controlled manner, brings the intended effect.

Another way to stimulate employee activity in the CSR area can be a creative, rational and preferably spontaneous conflict. It brings a quick, objective assessment of the situation. Quick resolution of such a conflict usually improves the overall situation compared to the previous state, provided it is an open conflict (Kowalczyk, Sieczyński 1987, pp. 222-223). Within the framework of sustainable development and application of CSR, apart from objective and spontaneous conflicts, a certain amount of stimulated, creative conflicts should be included in the portfolio of management activities.

An important aspect of the strategic dimension of corporate social responsibility is effective CSR communication with the environment. Through education, the organization builds and strengthens the company's reputation among consumers who then consciously buy its products. The organization's culture in the area of communication has little capacity or scale of action compared to the media potential of the entire company. However, it can effectively influence customers and the local community by popularizing the idea of CSR in the nearest environment and during: festivals, editing the local newspaper and other employee initiatives.

Conclusions

The phenomenological method of research allowed the authors to state that organizational culture is of great importance to implement the company's strategy and has a significant potential for the implementation and strengthening of corporate social responsibility.

Regardless of the intentions of creating an image, the external impact of a socially responsible enterprise on society will always bring a positive effect to the CSR idea, and a cognitive result from the point of view of knowing the rights and obligations of the consumer.

Society quickly learns (especially the young generation) about its rights, the trends and applied market techniques, gains experience, is increasingly more able to distinguish and verify reliable sources of information and form a view on the subjects declaring them. Therefore, the dishonest, ostensible use of CSR by companies to create their own image only on a PR basis is quickly verified by

clients aware of this matter and such enterprises are punished by "abandonment". Organizations that are honest in propagating this idea then gain double (Otoła, Tylec 2016, p. 86).

Among the competing enterprises, the differentiating and distinctive feature in the strategic group, which influences success, is the value of the organizational culture, which additionally has an external, positive impact. A properly shaped OC can become a strategic asset of the organization and a weapon in implementation of the CSR idea.

People and their knowledge are becoming increasingly more often the final frontier of competition.

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KULTURA ORGANIZACYJNA JAKO STRATEGICZNY OBSZAR CSR

Streszczenie: W opracowaniu podjęto temat znaczenia kultury organizacyjnej w przedsiębiorstwie i możliwości wykorzystania jej jako strategicznego potencjału w realizowaniu idei społecznej odpowiedzialności biznesu. Teoretycznie uzasadniono strategiczne znaczenie tej koncepcji dla efektywnego funkcjonowania przedsiębiorstwa. W dalszej części określono możliwości kształtowania kultury organizacyjnej jako elementu wzmacniającego strategię społecznej odpowiedzialności przedsiębiorstwa. Głównym celem opracowania jest analiza znaczenia kultury organizacyjnej dla realizacji idei CSR w przedsiębiorstwie. Zastosowaną metodą badań jest analiza fenomenologiczna treści dostępnych w literaturze i w wynikach przeprowadzonych już badań.

Słowa kluczowe: CSR, kultura organizacyjna, strategia



THE INFLUENCE OF FRANCHISING ON THE DEVELOPMENT OF ENTREPRENEURSHIP – A PERSPECTIVE OF FRANCHISORS AND FRANCHISEES IN TURKEY

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Abstract: The growing popularity of franchising as one of the forms of business development by the so-called ‘budding’ seems to have a strong influence on entrepreneurial behaviors of the players in the franchising market. Particularly in Turkey, a country disturbed by turbulent political and economic changes, the company development in the franchising chain gives a sense of security. The aim of this article is to present the impact of franchising on the development of entrepreneurship among franchisors and franchisees in Turkey. The article is based on author’s own research carried out on the Turkish franchising market in 2016 and 2017 as well as on secondary data, using the qualitative method.

Keywords: development, entrepreneurship, franchising, Turkey

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Introduction

In today’s highly competitive economy, franchising has become one of the most popular forms of running a business. Some entrepreneurs prefer developing a company in a franchising chain rather than beginning from zero. A ready business idea, well-known brand, know-how, marketing and operational help, as well as general support provided by a franchisor, are the main advantages of this form of a business model. The goal of this paper is to present the main characteristics of franchising as a way of expanding a company and its connection with entrepreneurship development in order to determine the ways of influence that franchising has on entrepreneurship’s development among Turkish franchisors and franchisees. The study is mainly based on empirical data collected during the research carried out on Turkish franchising market as well as on secondary data and literature review.

Entrepreneurship and company’s development

The concept of entrepreneurship has a long history in the economic and business world. The most popular definition of entrepreneurship comes from Schumpeter, who put high pressure on innovation as an internal drive of evolutionary change. Following his thought, entrepreneurs implement novelties by

setting and running a business financed by risk-friendly capitalists. Innovations, which should be understood as new goods or new methods of production, can create profit (Ebner 2006, p. 324-325). One broad agreement is that innovation is considered as the main element of economical growth. Thanks to innovative ideas, goods and services are more competitive (Skowron-Grabowska, Mesjasz-Lech 2017, p. 23), which allows companies to expand to more markets. According to Smith, the main component of the Wealth of Nations is the division of labor and the former depends mainly on the extensions of market and as a consequence on innovation process (Mendez, Galindo, Sastre 2014, p. 843). Leibenstein distinguishes two types of entrepreneurship (Leibenstein 1968, p. 72): on one hand routine entrepreneurship as a type of management, and on the other hand a Schumpeterian style of a 'new type' entrepreneurship. By routine entrepreneurship one can understand actions to coordinate and navigate an established market, concentrating on alternatives to a current use of production functions on well-defined markets. New type entrepreneurship, on the contrary, describes actions needed to create or continue a business where not all markets are established or not all parts of the production functions are clearly defined or known (Seroka-Stolka, Surowiec, Pietrasieński, Dunay 2017, p. 122). The role of an entrepreneur is to coordinate activities that are spread in different markets. According to Leibenstein, in both cases the entrepreneur is responsible for coordination of all markets. But in the second case not all markets may exist or operate well so his role is to cover the market insufficiencies. An entrepreneur is a person who can seize an opportunity, an out-of-the-box thinker who is unable to conform to traditional structures. Furthermore, entrepreneurs treat risk as an opportunity and take a chance to develop an idea to a business project.

Franchising as an entrepreneurial way of running a business

The word 'franchise' derives from the old French for 'franche' meaning free or favored. In the Middle Ages it meant a right or privilege granted by a sovereign power – a king, church powers or government. Franchisees were given the right for enterprises such as building roads, organizing markets, holding fairs or collecting taxes in exchange of a certain fee or share of products or profit – a so-called royalty (Blair, Lafontaine 2005, p. 3-4). This period is known as the first stage in franchising development. In Great Britain it existed in a form of so-called *tied house contracts*, by which a king or other authority gave long-term monopoly rights in some business fields in exchange for certain fees or services. The background of such contracts was in rationing of alcohol sales permissions. Breweries started buying out clubs that owned a sales permission and pushing them in the lease contract to sell only certain brands of alcohol. Alcohol producers also offered some restaurants and pubs modernization services in exchange for a commitment to sell only certain brands (Ziółkowska 2010, p. 13).

The second stage took place in the 19th Century mainly in United States of America. One example is American Railways, which gave the rights to construction of rails and train stations to unaffiliated enterprises, thus contributing

to a fast development of the railway system in the country. In the 20th Century the world-renown Coca-Cola company created a distribution chain of beverages, giving the bottling plants the license to purchase the concentrate of a drink. It also gave rights to use the brand name of the producer, uniform packaging and final product distribution (Ziółkowska 2010, p. 16). Other famous brands that developed their business through chains were: Rexall (drugstores), General Motors (automotive) and General Oils of Indiana (oil industry). In Europe, a pioneer in this business model was a Czech shoe producer Bata (Ziółkowska 2010, p. 17).

The real boom in franchising development took place in the second half of the 20th Century. Producers did not only give the license for distribution of their goods or services, but also for implementation of their whole business idea: trade mark, standardization of branch design, service level or financial settlement of accounts (Ziółkowska 2010, p. 17). Also, franchising became attractive to other industries, such as catering (including fast-food industry), real estate and electronics. The most famous company is McDonald's, whose business idea was based on high standard of service level that should be offered in each unit. Other illustrative companies are Yves Rocher, Kentucky Fried Chicken, The Body Shop, Mövenpick (Dudzik 1996, p. 7).

Nowadays franchising is understood as a co-operation between two legally independent firms, whereby one firm (the franchisor) is being paid by the other firm for the right to distribute the franchisor's goods (Blair, Lafontaine 2005, p. 3-4).

As for its definition, Mendelsohn, an absolute expert on franchising, describes this form of company's development as 'a method of marketing goods and services which has proved remarkably successful' (Mendelsohn 1992, p. 7). According to the European Franchise Federation 'franchising is a system of marketing goods and/or services and/or technology, which is based upon a close and ongoing collaboration between legally and financially separate and independent undertakings, the Franchisor and its individual Franchisees, whereby the Franchisor grants its individual Franchisee the right, and imposes the obligation, to conduct a business in accordance with the Franchisor's concept' ([http://www.eff-franchise.com/...](http://www.eff-franchise.com/)). Kolarski describes franchising as a method of running a business in distribution of goods and services, where an enterprise receives the rights to offer and sell certain goods using marketing forms of another enterprise, its brandname, trade mark, technical and organizational experience (Kolarski 1992, p. 6).

Franchising is a way of developing a company whereby a franchisor, as an owner of a business idea, is giving the right to run his business to other independent investors, or franchisees, in exchange for a fee. At the same time the franchisor is in control of its proper implementation. A franchisor is the owner of the trademark and a founder of an innovative and difficult to replicate idea. His role is to offer a set of goods, services or technology, provide trainings and workshops, marketing and operational support and in some cases train staff in order to ensure that a franchisee will encounter the same or better success. Generally, a franchisor is a well-known company with years of experience and a

proven business idea. On the other side of a co-operation chain there is a franchisee, an entrepreneur seeking a ready business idea and protection of a more experienced partner (Nitescu, Isac 2014, p. 179-180).

Some studies, however, consider franchisees and entrepreneurs as two different and not connected terms. An entrepreneur is described as a person ready to take risks in order to create something original and sustainable. Franchisees, on the contrary, take over a ready business idea and try to make it sustainable using the experience and know-how of a franchisor. Nevertheless, due to the fact that franchisees invest their own capital and take certain risk of running a business – as franchising does not give 100% success guarantee – they fall into frames of entrepreneur's definition. In Kaufmann's work two perspectives about why franchising can be considered entrepreneurial business models have been presented. Firstly, franchisees using their acquisition power finance the retail companies to expand. Secondly, with their knowledge of the local market and contacts they help the franchisor to adapt to the local conditions in a faster way (Kaufmann, Dant 1998, p. 12).

A franchising entrepreneur creates an exclusive business model and is responsible for efficient management of a complicated system of independent business owners (Kaufmann, Eroglu 1999, p. 65). According to Dada and Watson, diversified markets in which franchisees operate make them adapt to flexible conditions and use innovations in order to meet the market requirements. These actions bring competitive advantage. Both authors also claim that franchising has three main features of an entrepreneurial business format: go in for innovations, proactive performance and undertaking risks (Dada, Watson 2013, p. 795).

Universality of franchising allows it to be of a great use in generally all business sectors: production, trade and services. Nowadays, it still triumphs in industries such as gastronomy, real estate or services, but increased in popularity in others, such as the cosmetic industry, education, sports and recreation.

Franchising in Turkey

The Republic of Turkey is located in Asia (97% of the country's territory) and in Europe (3%). The country boasts a population estimated at about 78 million. Its capital city, Ankara, is located in the central part of the country. Its most populous city, Istanbul (pop. ca. 15 million people) is located on the Bosphorus Strait, between Europe (Barcik, Dziwiński, Jakubiec 2017, p. 19) and Asia. Turkey can be characterized with a dynamic demography. Between 1950-2000 its population increased yearly by 2, 6%-3, 3% only to slow down in 2008 to 1, 3% per year. Still, compared to other countries, it is a high number (Turkish Statistical Institute: [http://www.turkstat.gov.tr/...](http://www.turkstat.gov.tr/)). About 70% of the population live in the cities (International Franchise Association [https://www.franchise.org/...](https://www.franchise.org/)).

According to Organisation for Economic Co-Operation and Development (OECD) unemployment in Turkey in the last quarter of 2017 was at the level of 10, 1%, which places Turkey near the bottom of the OECD 35 member countries. In comparison, Polish unemployment rate was about 4, 6%, German 3, 6% and the

average for all OECD countries 5, 5% ([https://data.oecd.org/...](https://data.oecd.org/)). The main attributes of Turkish society is its young and dynamic populous (52, 4% of the population is in production age), rich inner market, strategical geographical location of the country, strong infrastructure and improving quality in the service sector. On the other hand, lack of transparency in business relations and minimal trust in state institutions has led to the fact that national and international investors have increasingly refrained from investing in Turkey in the last several years (Genckaya et al. 2016, p. 3).

Turkish economy is based on a modern industry (especially textile and clothing) and traditional agriculture. The Turkish franchising sector can be described as an example of a rising market, which is mainly supported by a relatively cheap workforce and a high population with an average age of roughly 30 years. Research indicates that it is a young society with an increasing purchasing power, which expects a presence of global brands on the local market and service on the highest level.

Although franchising in Turkey is rooted in the 1970s of 20th Century, especially trough a network of dealers in automotive, beauty industry and home appliances, the official term ‘franchising’ had been introduced to the business and economic terminology at the beginning of 80’s, when some of the most famous world-wide known brands entered the Turkish market using this type of a business model. Additionally, the Turkish market became more business friendly to foreign investors through a simplification of legal regulations and minimizing of bureaucratic barriers. Franchising spread rapidly and dominated the food industry, in particular the fast-food industry and coffee houses. This is connected with a national trend of eating out of home (Olçay 2007, p. 69-70). Similar to many other countries, the first franchising chain that operated in the Turkish market was McDonald’s, followed by Pizza Hut, Kentucky Fried Chicken (KFC) and Wendy’s. A real franchising evolution took place at the beginning of the 90’s, as a result of an increased number of shopping malls – as a main location of franchising units. The true dynamics of the Turkish franchising market can be proven by the numbers. In 2007 there were around 200 franchising chains, which grew by almost seven times by 2014. The exact number of franchising chains and franchising units in Turkey has been presented in *Table 1*.

Table 1. Number of franchising chains and franchising units in Turkey in 1993, 1997, 1998-2000, 2007-2010 and 2014-2016

Year	Number of franchising chains	Change in % in comparison to previous period	Number of franchising units	Change in % in comparison to previous period with available data
1993	36			
1997	100	178%	2 000	
1998	54	-46%	4 612	131%
1999	66	22%	5 580	21%

2000	82	24%	6 150	10%
2007	200	144%		
2009	800	300%	44 000	615%
2010	1 200	50%		
2014	1 471	23%	47 000	7%
2015	1 850	26%	47 000	0%
2016*	1 840	-1%	55 000	17%
* forecast				

Source: Author's elaboration based on ([http://www.franchisetimes.com/...](http://www.franchisetimes.com/);
[http://www.haberdem.com/...](http://www.haberdem.com/); UFRAD 2016, p. 1)

A strong financial support is being offered through a governmental subsidy Turquality, sponsored by the Turkish Ministry of Economy. The law, which has been passed in 2011, allows Turkish entrepreneurs (including franchisors) to apply for a subsidy for their national and international expansion, partially covering fair attendance costs and foreign investments (<http://www.turquality.com/>). Additionally, small and medium enterprises are being supported by the government in fair and exhibition organizations, covering marketing costs or salaries (up to 50%) and can receive trainings organized by Turkish Chamber of Commerce (UFRAD 2016, p. 3).

The influence of franchising on entrepreneurship in Turkey

Data used in this article has been collected in a research to doctoral thesis, which has been carried out between 2015 and 2017. Questionnaires have been sent out between August 2016 and March 2017 to a group of a 2505 Turkish entrepreneurs: 113 franchisors and 2392 franchisees. A descriptive method has been used. In most cases (2479) the questionnaire has been delivered by e-mail, 26 questionnaires have been fulfilled through a personal contact. Research sample has been chosen intentionally by the author, based on her experience and data availability. In order to approach franchisors and get their contact details, the author used the members' list of UFRAD (Turkish Franchising Association), but during the research it turned out that some of the members do not operate in a franchising chain anymore, never worked in any, failed in developing their business in a franchising chain, are not planning to do it or they are at the very beginning of the planning process of developing the company through a franchising chain. Clarifying this vagueness and time invested in reaching proper respondents delayed the research respectively. The main criteria of choosing the research sample were that the franchising chain should be operating for at least 3 years and should have at least 3 franchisees. This requisite was supposed to pick only strong companies, which have already gathered experience and managed to sell their ideas to new investors (franchisees).

Due to random data availability regarding the Turkish franchising market, lack of consistency in qualification of membership or execution of membership conditions in UFRAD association, general entrepreneurs' reluctance to reveal any information were a certain limitation to this study. Additional difficulties were caused by political and economical events that took place between 2015 and 2017: winning the presidential election of a conservative AKP party, influx of Syrian population, terrorist attacks, political crisis with Russia and unsuccessful coup. It all had a strong effect not only on the economical situation in the country but also on the morale of entrepreneurs and potential investors. While carrying out the research, the author came across some opinions that investors, instead of –as planned - allocating their financial capital on franchising market, are afraid of investing in the country. Moreover, foreign investors, especially from Germany and France, gave up investing in Turkey because of the unstable political situation which reflects the economical uncertainty in this country. Also, Turkish entrepreneurs – potential franchisors, are often afraid of revealing the know-how and business secrets as well as uneager to open themselves for new business ideas. It is mainly connected with some cultural and mental conditions of the society.

Pessimistic atmosphere, fear and uncertainty were noticeable among the respondents, who in many cases did not hide their dislike to the author. Some of them ignored multiple reminders of returning the questionnaire; others replied in a vulgar way or offended the author. Some of the franchisees meant that due to data confidentiality they are not allowed to participate in the research without the permission of their franchisor, however, after receiving the latter by the author (and author's assurance of confidentiality of received information), the franchisees kept on ignoring the reminders. On the other hand, although some of the franchisors did provide full information, they refused to reveal contact details to their franchisees or even forbid to contact their franchisees, should the author manage to get the contact details from another source. It gave the impression as if they were afraid that their franchisees may reveal some information that might have a negative effect on company's image. A significant impediment on finding the contact details of franchisees was a nonexistent e-mail address of each single franchisee. It turned out that in many – also well-known franchising chains consisting of numerous units – all units use one common e-mail address, assigned also to the franchisor. The reason may be that a franchisor wants to control the electronic mail of the whole chain and does not give his franchisees the right and freedom of contact with customers.

From 2505 people who received the questionnaire, the author received 135 replies (33 from franchisors and 102 from franchisees) which give the return rate of 29, 20% for franchisors and 4, 26% for franchisees. Due to a low feedback level the data evaluation has been done in a qualitative way. Sectors which have taken part in the research have been presented in *Figure 1*.

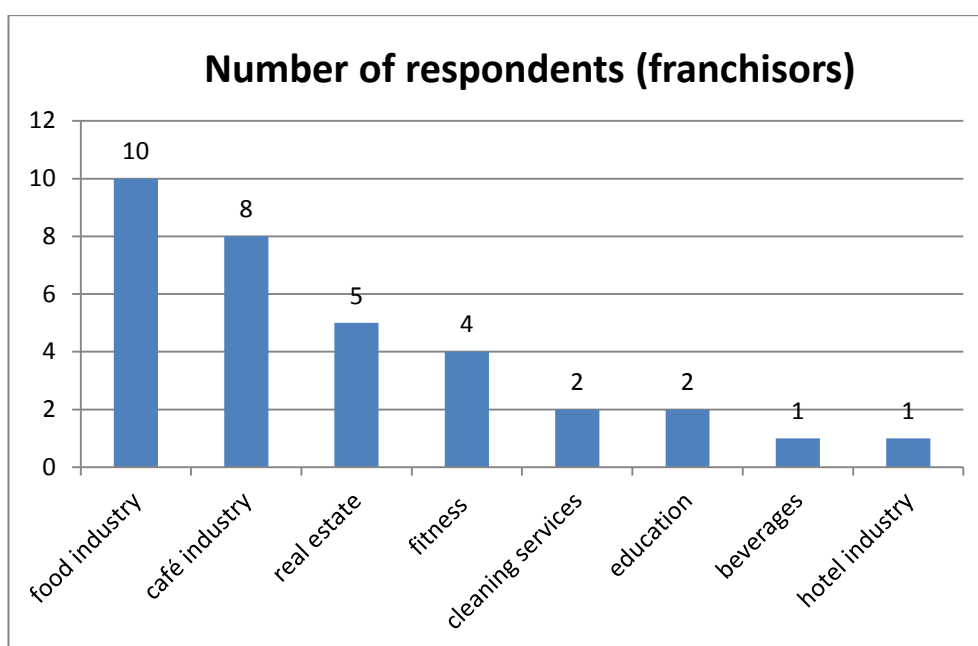


Figure 1. Number of respondents (franchisors) in each industry

Source: Author's elaboration

Questionnaires consisted of 16 questions for franchisors and 18 questions for franchisees. In both cases the aim of the first questions was to understand the nature of the business, its place on the market (number of units, years of activity, entrance fee level). The role of the further questions was to estimate the influence of franchising on a company's development in Turkey, through recognizing the advantages and disadvantages of this form of co-operation, the influence of franchising on Turkish economy, on company's performance in general and particularly on the interviewed company. The questionnaire mainly consists of open-ended questions, the rest were multiple choice questions. The construction of the questionnaire and types of questions has been consulted with a specialist from University of Lodz, basing on author's experience after a trial research and peculiarity of the Turkish market.

One of the common questions, accurate to the scope of this article was 'What is the influence of franchising on entrepreneurship (business) development in Turkey?'

In their replies, franchisors showed a distinctively positive attitude towards the influence of franchising on entrepreneurial behavior. According to them, it increases the employment rate, gives investment opportunities, creates new brands and contributes to the improvement of work quality and standards or allows keeping them high. Most of the franchisors treat franchising as their second job opportunity, which means that they were in search of additional income possibilities. In this way the franchising market grows. Franchising does not only

stimulate the labor market but also decreases the unemployment rate. Additionally, in their opinion, franchisors actively support their franchisees by a know-how transfer, wisdom advice and years of experience. They take care of quality and standards and can demand that their franchisees decrease the rate of development in order to provide a ‘healthy and stable development of the company’. Nowadays, young entrepreneurs also have the financial capital to start their own business. But instead of setting up a new business and creating a brand from zero, they prefer the security that franchising gives. It is also a good option for those with little or no business experience and low financial capital. To sum up, franchising development in Turkey has a huge impact on entrepreneurship development in this country. Most Turkish entrepreneurs want to have their own business and to be their own bosses. Franchising gives a stable business idea with relatively low costs. In the end, being a franchisor or a franchisee gives a competitive advantage over other entrepreneurs not working in a chain.

Both parties, franchisors and franchisees, were asked to reveal their age. Due to the fact that franchisors have been mainly represented by general managers or other staff members, the age has not been taken into consideration in the further research. Franchisees, however, ranged between 24 and 61 years old and the average age was 41 years old. It indicates already that this business model is adequate for all age groups. Sectors which have responded to the research questions, including quantitative data, have been presented in *Figure 2*.

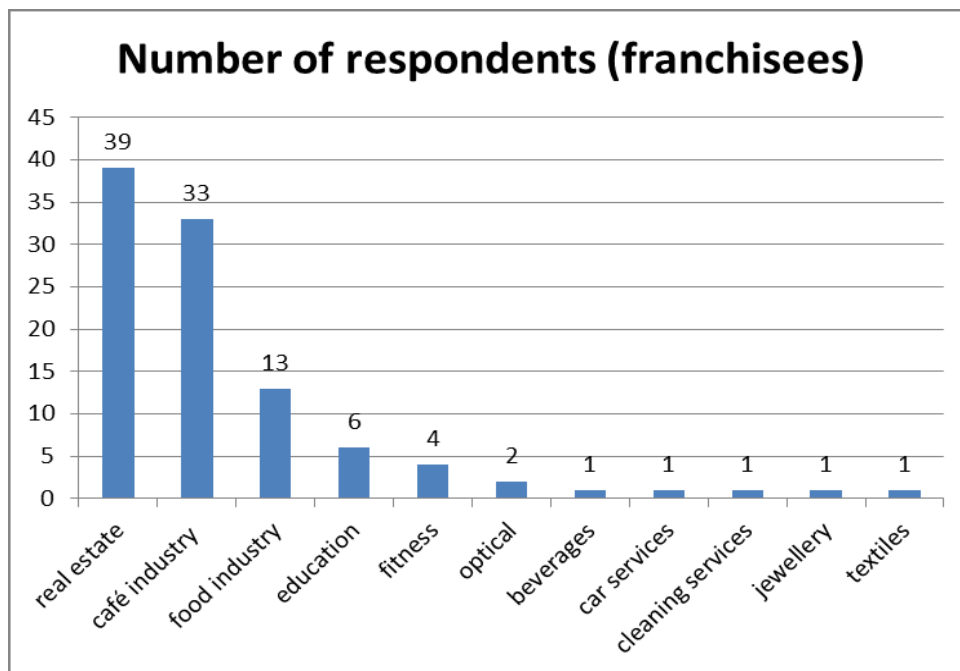


Figure 2. Number of respondents (franchisees) in each industry

Source: Author's elaboration

As it has been mentioned above, franchisees were asked about the influence of franchising on entrepreneurship development in Turkey. Similarly to franchisors, franchisees admitted that franchising has had a positive influence on entrepreneurial behaviors and entrepreneurship development in Turkey. First of all, it helps to set the first steps in business life and allows people with low financial capital to own a business. Franchising helps people who are afraid of taking the risk of starting a business under his/her own name. Also, even though many entrepreneurs have a business idea, they lack the finances to make such an investment, while at the same time other companies offer a business idea on low cost, thus more readily available. The possibility of using elaborated standards and franchisors' experience allows minimizing the bankruptcy risk. In each sector business experience gives a competitive advantage and franchising allows achieving the same in a relatively shorter time. According to franchisees, Turkey needs more entrepreneurs who keep high standards and those are created by franchising. Turkish entrepreneurs try their luck in different industries and franchising is a business model that gives a chance to those with no experience in those industries. Additionally, franchising gives people hope, courage and sense of safety. Franchisees stated that in today's highly competitive world, in order to succeed, it is safer to develop a company under the wings of a famous brand. In other words franchising is an effective way of company development, where an entrepreneur can run the business in a professional way, act faster and use their knowledge in a better way. Running a business in a franchising chain increases the number of investments, which has a positive influence on the economic development of Turkey. This way of co-operation was compared to a situation of beginning a football match with a head start. However, there were two distinct replies that stated although franchising may have a positive impact on economy, it kills the creativity in people, and secondly that franchising has nothing to do with entrepreneurship. It only shows the lack of basic knowledge on franchising.

As mentioned earlier, due to inconsistency in the member's list of UFRAD, the respondents who took part in the were both successful and unsuccessful franchisors and franchisees; however, the latter were only single cases. All answers, though, have been included in the data evaluation.

It must be mentioned that official statistical data on franchising topic in Turkey is extremely limited. UFRAD, Turkish Franchising Association, collects only quantitative data on franchisors' numbers, and only from those who are willing to participate in this procedure. As for franchisees' numbers, they are being roughly collected from franchisors that are eager to reveal them. There is no data on franchising topic collected by Turkish Statistical Institute (TurkStat). As a consequence, any further research, including official study on franchising's influence on unemployment or investment rate in Turkey has not been carried out yet.

Conclusions

Today's globalised, highly competitive and challenging business world puts potential investors under extreme pressure. Entrepreneurs, who decide to run their own business, in order to succeed, prefer more often to run it in a franchising chain.

Franchising became one of the most popular business models in the last decades, known as a way of company's development with a recipe for success. The same increasing trend can be observed in Turkey where most entrepreneurs prefer to run their own business and in most cases they opt for franchising. The research, which was carried out among Turkish franchisors and franchisees, showed that franchising has a strong influence on entrepreneurship's development. On one hand it allows the franchisor, who already developed an innovative business idea, to spread it on low costs, and on the other hand it gives franchisees a chance to have their own business and contribute to the franchising's further expansion.

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WPLYW FRANCHISINGU NA ROZWÓJ PRZEDSIĘBIORCZOŚCI – PERSPEKTYWA FRANCYZODAWCÓW I FRANCYZOBIORCÓW W TURCJI

Streszczenie: Rosnąca popularność franczyzy, jako jednej z form rozwoju działalności przez tzw. „pączkowanie”, wydaje się mieć silny wpływ na rozwój postaw przedsiębiorczych graczy na rynku franczyzy. Szczególnie w Turcji, kraju, gdzie mają miejsce turbulentne przemiany polityczne i ekonomiczne, rozwój firmy w sieci francyzowej daje poczucie bezpieczeństwa. Celem artykułu jest zaprezentowanie wpływu franczyzy na rozwój przedsiębiorczości wśród francyzobiorców i francyzodawców w Turcji. Artykuł bazuje na badaniach własnych autora przeprowadzonych na tureckim rynku franczyzy w latach 2016 i 2017 oraz na danych wtórnych, z wykorzystaniem metody jakościowej.

Słowa kluczowe: rozwój, przedsiębiorczość, franchising, Turcja



EMPLOYEE'S PROPRIETARY COPYRIGHT IN THE STRATEGY OF MANAGING INNOVATIONS

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Abstract: Contemporary strategies for the competitiveness of enterprises are based more and more on innovations. Therefore, innovations generate higher and higher costs in the budgets of modern enterprises. As a result of investing in innovations, products and technologies that have specific, measurable value are created. They can be used, shared or disposed of so that they can be effectively managed. As a rule, proprietary copyrights belong to the author. However, this does not apply to the so-called employee's works, that is, works created as a result of performing official duties. The discussed matter, although legally regulated, raises legitimate controversies of a legal nature. The paper deals with proprietary copyrights to works created as a result of performing official duties. The purpose of the publication is to analyse the abovementioned issues from a legal perspective and dispel doubts of interpretation in the discussed aspect. The analysis of the above issues is based on available literature and legal acts.

Keywords: proprietary copyrights, a piece of work, intellectual property

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Introduction

The modern market economy is based more and more on knowledge and modern technologies. It is a consequence of the ever-deepening processes of economic globalization and the liberalization of world trade (Janasz 2012, p. 742). The abolition of customs barriers and the development of communication result in increased trade and the creation of a single common market at the expense of the depreciation of regional and local markets. Therefore, raising the level of competitiveness in such conditions may take place mainly through investments in innovations. These can be investments in new products, modern technologies, but also organizational changes (Konopka 2013, p. 177). These investments generate higher and higher costs in the budgets of modern enterprises, but in the future they allow to raise the level of competitiveness of these enterprises on the market (Kozerska 2015, pp. 181-191). The investment is cost-effective because innovations are the primary development factor of enterprises (Nogalski, Niewiadomski 2015, p. 460). It should be mentioned that the analyzed innovations in the form of patents granted for inventions, industrial designs, utility models, trademarks or know-how constitute a concrete, measurable value and can be traded. Therefore, it is essential to define the rights to the above products of human thought. Regardless of industries, trades or types of enterprises, innovations are

created by people. In this respect, one can speak about the author of the work as its creator. The Copyright Act (CA) uses the term *work*. According to art. 1 of the CA "A work is any manifestation of a creative activity of an individual nature, established in any form, regardless of the value, purpose, and manner of expression". What is important is the premise of creative activity, understood as activity which is creative, original and new. However, the premise of "individual character" is understood as uniqueness both in the thematic and expression approach (Bleszyński 1985, p. 43). As a rule, proprietary rights belong to the author. The exception to this rule is the so-called employee creativity, under which works are created as a result of the performance of employee duties. An employer investing in the development of innovation bears specific, measurable costs; hence on the basis of the applicable regulations, he has the copyright to the work created in his company. However, the existing legal regulations in this respect are not consistent and leave room for interpretation. The aim of the article is, therefore, an in-depth legal analysis of the indicated issues and the elimination of any interpretation doubts.

Sources of law

The analysis of sources of intellectual property law allows us to state that particular provisions regulating the subject matter are specified in the Constitution of the Republic of Poland, ratified international agreements, acts, and ordinances. The most important of them are:

- Berne Convention for the Protection of Literary and Artistic Works, 1886,
- Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), 1994,
- WIPO Copyright Treaty, 1996,
- Act on Copyright and Related Rights,
- Industrial Property Law,
- Civil Code.

However, the basic meaning of this aspect is expressed in the Act on Copyright and Related Rights and Industrial Property Law.

Employee's work

The Act on Copyright and Related Rights (hereinafter referred to as the CA), which is the primary source of law in the discussed aspect, distinguishes personal copyrights and proprietary copyrights. According to art. 16 of the CA, author's personal rights "protect the bond between the author and the work in a manner unlimited in time". This "bond" means in particular the right to:

- authorship of the work;
- mark the work with the author's name or pseudonym or make it available anonymously;
- inviolability of the content and form of the work and its fair use;
- decide on the first work publication;

- supervise over the ways in which the work is used.
- On the other hand, proprietary copyrights provide for:
- the right to use the work;
 - the right to manage the work in all fields of use;
 - the right to receive remuneration for using the work (Article 17 of the CA).
- The basic principle of copyright law, according to which the rights to the work (both personal and property) are vested in the author of the work, is regulated in art. 8 of the CA. However, it has many limitations, among which one can find the so-called employee's works (Flisak 2006, p. 35).

An employee's work in accordance with art. 12 of the CA is a work created by an employee as a result of performing duties under an employment relationship. The proprietary copyrights to such work are vested in the employer entirely. It means that in the above situation, the employer has the right to use the work, the right to manage the work in all areas of use and preserves the right to remuneration for using the work. Interpretation doubts concern the "employment relationship".

According to art. 22 of the Labor Code, "by entering into an employment relationship, the employee undertakes to perform a specific type of work for the employer, under his/her direction, in the place and time appointed by the employer, and the employer – undertakes to employ the employee for remuneration". According to the labor law, fulfilling the above requirements always constitutes the establishment of an employment relationship regardless of the name of the contract concluded by the parties.

On the other hand, an employee is a person employed on the basis of an employment contract, appointment, election, assignment or a cooperative employment contract (Article 2 of the Labor Code).

Therefore, according to art. 12 of the CA in conjunction with art. 2 of the Labor Code, an employee's work is only and exclusively a work created by a person employed under the contract of employment, appointment, election, assignment or a cooperative employment contract. Consequently, a work created by a person providing work on the basis of the so-called non-employee employment is not an employee's work, for example, managerial contract, commission contract, task contract or agency contract.

Further analysis of art. 12 of the CA indicates that the employee's work is exclusively "created as a result of the performance of employee duties". Employee (service) obligations under labor law can result from employment contracts, work regulations, or collective labor agreements. The direct verbal command of the employer may also be a source of professional duty (Domańska-Baer 2009, p. 67). Therefore, a work created in the workplace, with the use of employer's equipment and during working time is not an employee's work, if the creation of the work did not constitute a clearly defined duty of the employee. Inaccuracies in the aspect mentioned above may, therefore, lead to ambiguities in the determination of proprietary copyrights to the work. Therefore, employment contracts (as well as other grounds for employee-employment relationships) should include provisions as precise as possible regarding employee obligations and copyrights to created

employee works. In uncertain cases, the employer acquires all property rights to such a work. However, such acquisition is a derivative acquisition because from the moment the work is established to the moment the rights are transferred to the employer, all copyrights (both personal and property rights) remain with the author. However, the author is obliged to deliver the work to the employer. Then the employer may submit a statement on acceptance of the work, a statement on its rejection or he or she may refuse to make a statement.

Submission of the statement of work acceptance is the basis for the employer to acquire derivative property rights to the work. Submitting a work rejection statement results in leaving the proprietary copyrights to the author. Failure to submit any statement on acceptance or rejection of the work by the employer results in the acquisition of property rights to this work by the employer (Article 13 of the CA).

The Act on Copyright and Related Rights in a special way regulates the right of a scientific institution to a work created by a researcher as part of his/her duties as an employee. On the basis of art. 14 of the CA, such institution has the right of priority in publishing this work. However, this priority is limited in time and expires if within six months from the delivery of the work, the contract for the work publication has not been concluded with the author, or if within two years from the date of its acceptance, the work has not been published (Article 14 of the CA.). A scientific institution may also, without the requirement of separate remuneration, use the scientific material contained in the work and make this work available to third parties if it results from the intended use of the work or has been decided in a separate agreement.

In particular, copyright law also regulates employee's computer programs. In contrast to the general principles contained in art. 12 of the CA, these programs, if created as a result of performing official duties, are *ex-lege* owned by the employer. Acquisition in this case is of primary nature. Therefore, it is not necessary to deliver the work to the employer, and the employer does not have to submit a declaration of will on its acceptance. Once the work has been determined, the employer has the right to:

- reproduction of a computer program;
- translation, adaptation, layout changes;
- disseminating, including lending or renting a computer program or a copy thereof (Article 74 paragraph 4 of the CA).

As in the case of "ordinary work", employee's computer programs must be the result of performing work duties under the employment relationship. They shall not be subject to civil law contracts such as the contract of mandate or contract for specific work.

Legal regulation of employee's works in the Act on Copyright and Related Rights is not, however, mandatory. Derivative acquisition by the employer of the proprietary copyrights to the work will take place only when the employment contract does not provide otherwise. This means that the parties to the employment relationship may regulate the rights to works created as a result of performing

official duties in a different way, and statutory regulations will apply only if the employment contract does not regulate this matter.

Employee's invention projects

A similar regulation applies to the so-called employee's invention projects (Szewc 2013a, p. 6). According to art. 11 par. 3, the industrial property right (hereinafter referred to as the IPR), a utility model or an industrial design that arose as a result of the performance of duties from an employment relationship or other contract is vested in the employer unless the parties agreed otherwise. It means that the provisions of the Act are not mandatory and may be in the specified scope set aside by the provisions of the employment contract. The lack of such provisions results in the acquisition of property rights to an invention, utility model or industrial design by the employer. Producing an employee's invention must be closely related and result from a professional duty. According to T. Kuczyński, the employee's invention is not an invention "in a relationship" or "on the occasion" of official tasks (Kuczyński 2002, p. 2). This argument is confirmed by the ruling of the Supreme Court of 08.03.2010, according to which "the fact that an employee of a research and development unit is obliged to carry out research work from the essence of his duties does not mean that this unit is entitled to a patent for every invention he/she designs, irrespective of whether it arose under the conditions resulting from art. 11 para. 3 of the IPR. To recognize that an invention was designed as a result of the author's performance of employee duties must not only be confirmed by the fact that the employee for this purpose used the knowledge, skills, and experience acquired during the specific employment. It is necessary that the performance of employee duties takes place at the expense of the employer, as part of its organizational structure, using its technical and personnel facilities".

In contrast to the regulations contained in the Act on Copyright and Related Rights, art. 11 par. 3 of the IPR in addition to the employee forms of work, also allows "other contracts" to be applied, and the proprietary right may be vested in "employers or contractors". It means that the analyzed provision extends the circle of rights also to orderers who do not have the employer status. This provision can, therefore, be used by parties that conclude civil law agreements, such as an assignment contract, a contract for a specific task or a management contract. However, it should be remembered that art. 11 para. 3 of the IPR is limited to inventions, utility models and industrial designs that are only a part of potential works within the meaning of copyright law.

A separate category of inventive projects are "inventions, utility models or industrial designs" created by the author with the help of an entrepreneur (Article 11 (5) of IPR). This provision may apply to contracts of mandate and contracts for specific work concluded between the creator and the entrepreneur. In such a situation, the employment relationship does not take place, but "the entrepreneur may use this invention, utility model or industrial design on his/her own" (Article 11 (5) of IPR). There is no doubt that the "help" in question must be significant, and thus

contribute to the creation of the work. In this sense, it must take place before the creation of the work, and not just, for example, in the effective management of it.

The remuneration for the author is a separate issue. According to art. 22 par. 1 of the IPR The author has the right to remuneration for the use of his/her invention, utility model or industrial design by an entrepreneur when the right to use it is vested in an entrepreneur pursuant to article 11 par. 3 and par. 5 of the IPR The parties should, pursuant to art. 22 par. 2 of the IPR, agree "in advance" on the amount of remuneration for the work. In the absence of such an arrangement, the remuneration is set in a reasonable proportion to the benefit of the entrepreneur from the invention, utility model or industrial design, including the assistance given to the designer by the entrepreneur (Kostański 2010, p. 142). The statutory provisions in the given scope are not precise. The "benefits achieved by the entrepreneur" undoubtedly constitute a general clause, hence an indefinite term. The literature on the subject indicates any benefits achieved by the entrepreneur in connection with the acquisition of property rights to the invention, utility model or industrial design. A. Szewc points to, inter alia, improving the entrepreneur's economic condition, increasing his/her competitive ability and avoiding bankruptcy and liquidation (Szewc 2013b, p. 10).

Conclusions

Effective management of innovations is a condition for the development of enterprises in today's market. The human factor has a significant impact on innovation. That is why it is essential to determine the rules of creating inventions in enterprises (Romanowska 2016, p. 33).

The issue of proprietary copyrights to a work in the field of Polish legislation is regulated in two important normative acts: the Copyright and Related Rights Act and the Industrial Property Law Act. In both cases, the statutory provisions are not necessarily binding, which means that the provisions of the employment contract, and in the case of inventions, utility models or industrial designs, also provisions of civil law agreements may regulate the analyzed issues differently.

The employee's works within the meaning of the Copyright and Related Rights Act consists only of works created as part of job duties within an employment relationship. The lack of detailed provisions in agreements regarding proprietary copyrights to a work carried out under civil law contracts results in leaving these rights to the author.

The industrial property law regulates only the sphere of inventions, utility models and industrial designs. All other works created as a result of performing official duties are subject to the regulation of copyright.

Apart from the basic model of a work, copyright also provides for modified versions of it a scientific work and a computer program. Property rights to a scientific work created as a result of performing official duties remain with the author. The scientific institution is entitled only to the first publication of the work and concerns only the materials contained in the work. In this case, the employer's entitlement to the employer's work is smaller than in the case of the basic model. In

the regulation, employee computer programs are similar to the basic model. If the employment contract does not provide otherwise, the proprietary copyrights are vested in the employer.

Therefore, it follows from the above that employers have full freedom in shaping proprietary copyrights to employee works. The only condition is based on the provisions of the employment contract, which must contain a precise catalog of official duties and indicate the entity entitled to author's property rights to works created as a result of performing official duties (Szczepanik, Szewc 1993, p. 181). When analyzing a work created as a result of performing official duties, one should also determine whether the work meets the statutory definition requirements of the "work", and therefore whether it is original and whether it has an "individual character". Similarly, in the case of industrial property rights, the employee's inventive project must comply with the statutory criteria of the invention, utility model or industrial design.

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UTWORY PRACOWNICZE W STRATEGIACH ZARZĄDZANIA INNOWACJAMI

Streszczenie: Współczesne strategie konkurencyjności przedsiębiorstw oparte są w coraz większym stopniu na innowacjach. Stąd też innowacje generują coraz wyższe koszty w budżetach współczesnych przedsiębiorstw. W wyniku inwestycji w innowacje powstają produkty i technologie, które mają określoną, wymierną wartość. Można je wykorzystywać, udostępniać czy zbywać, a więc efektywnie nimi zarządzać. Co do zasady autorskie prawa majątkowe do utworu przysługują twórcy. Nie dotyczy to jednak tzw. utworów pracowniczych, a więc tych, które powstały w wyniku wykonywania obowiązków służbowych. Omawiana materia, choć prawnie uregulowana, budzi uzasadnione kontrowersje natury prawnej. Artykuł dotyczy autorskich praw majątkowych do utworów, które powstały właśnie w wyniku wykonywania obowiązków służbowych. Celem publikacji jest dokonanie prawnej analizy ww. problematyki oraz rozwianie wątpliwości interpretacyjnych w omawianym aspekcie. Autor dokonał prawnej analizy ww. problematyki w oparciu o dostępną literaturę oraz akty prawne.

Słowa kluczowe: autorskie prawa majątkowe, utwór pracowniczy, własność intelektualna



SEGMENTATION OF SMALL AND MEDIUM SIZE REGIONAL COMPANIES USING DATA MINING APPROACH AS A TOOL FOR OPTIMISING THE ACTIVITIES OF EUROPEAN REGIONAL DEVELOPMENT AGENCIES

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Abstract: The important beneficiaries of the EU funding that support the development of competitiveness based on innovation are Small and Medium Size Companies (SMEs). Their profiles may vary with respect to the type of business and the competitive environment. Currently, Regional Development and Innovation Agencies operating in the regions of the EU and in associated countries decide about the type and scale of financial support provided to SMEs on the basis of heterogeneous data resources, applying different SME segmentation criteria. The purpose of this article is to justify the necessity and technical possibilities of creating a coherent and intelligent tool for the segmentation of Small and Medium Size Companies, with the support of Regional Development Agency databases. This would allow to monitor the process of providing regional companies with innovative support and would increase the effectiveness of this support (the beneficiaries of the support would be the companies working most effectively on innovations). The analysis of the SME segmentation methods currently used in 18 different European Regional Development Agencies and associated regions was carried out. Furthermore, the approaches to SME segmentation in 15 countries and the European Commission were compared.

Keywords: innovation support measures, Regional Development Agencies, benchmarking, SME segmentation, business intelligence, OaSIS project

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Introduction

Innovation is one of the essential elements of the Europe 2020 development strategy and, in particular, the initiative for the European Union Innovation Community. One of the aspects of the Europe 2020 development strategy (European Commission 2018) and in particular of the initiatives for the European Union Innovation Community (Directorate, Union, Unit, Innovation, & Policy, 2014) is improving the efficiency, effectiveness and competitive advantage of European enterprises. This goal can be achieved thanks to innovation¹ (Rahman

¹ Innovation understood as creation, development, or implementation of a new product, process or service, whose purpose is to improve efficiency, effectiveness or competitive advantage.

2010). Europe is building its position of a knowledge-based economy² leader (Balcerzak, Pietrzak 2016, pp. 66-81) and therefore requires development based on smart, stable and inclusive solutions provided by innovations (Szczygielski et al. 2017, pp. 219-237).

According to the data presented by the Innovation Union, Europe is currently facing the threat of an ‘innovation crisis’. The level of investments in research and development for the European market measured by the percentage of the gross domestic product (GDP) is lower than in the USA by 0.8%, and by 1.5% lower than the expenditures for this purpose in Japan (Directorate-General for Research and Innovation 2014). Although the percentage of the gross domestic product (GDP) intended for innovations has increased recently, Europe achieves results which are significantly lower than those in South Korea, Canada, Australia, Japan and the USA with respect to the global efficiency of innovation³ (Hollanders, Es-Sadki 2018). It is expected that accomplishing the EU goal (until 2020) of increasing financial resources for the research and development investments (R&D) in member states up to 3% of gross domestic product (GDP) will stimulate Europe’s economic development, and consequently create about 3.7 million jobs and further increase the gross domestic product (GDP) by 795 billion euro annually until 2025 (Kaufman 2002). Looking for tools and methods which could increase the efficiency of innovation funding instruments currently applied by regional development agencies becomes a challenge for particular EU countries as well as for Europe as an economic area (Dijkstra, Athanasoglou 2015).

The purpose of this article is to substantiate the necessity and technical possibilities of creating a coherent and intelligent tool for segmentation of Small and Medium Size Enterprises (SMEs), with the support of Regional Development Agencies (RDAs) databases. This kind of a tool would allow RDAs to monitor the process of providing SMEs with financial support and would make regional support more effective by tracking companies’ development before, during, and after providing them with regional innovation funding. As a result, the companies working on innovations could benefit from segmentation the most.

The analysis of SME segmentation methods currently used in Regional Development Agencies of 18 European and associated regions was carried out. Furthermore, the approaches to segmentation of SMEs in 15 countries and the European Commission were compared. The data required for the analysis came from an online survey conducted by Regional Development Agencies and the European Commission.

² There are many definitions of a knowledge-based economy. Most researchers agree that a modern developed economy with high growth potential should be considered a global, entrepreneurial, and flexible knowledge-based economy. The factors that stimulate growth depend on the degree to which knowledge, technology and innovation are embedded in products and services.

³ Annual European Innovation Scoreboard (EIS) ensures comparable assessment of outcomes of research and innovation in the EU, member countries and other selected countries. It also indicates strong and weak points of their research and innovation systems. Furthermore, it enables countries to assess areas with smaller innovation potential and introduce changes in them.

Segmentation of innovative Small and Medium Size Enterprises, regional experiences, applied tools

An opinion suggesting that the efficiency of innovation results not necessarily from scientific research and technological development but primarily from new business models, implementing technologies, design and organisational changes and business internationalisation (Becker, Hall 2013, pp. 183-202) is relatively new. In this respect, the analysis of mechanisms supporting the development of innovation of particular SME segments requires finding the most adequate measures of support for a vast spectrum of introduced innovations.

The results of the research indicate the complexity of the problem since the European regions are heterogeneous (Engelhardt, Bijleveld 2013). Furthermore, the solutions supporting innovation are regionally diversified and difficult to analyse within a common indicators framework (Ploeg, van der Veen, Arnold 2015).

The effectiveness of the actions undertaken by Regional Development Agencies varies. Many regions try to identify companies with the greatest innovation potential and redirect support to them to make them grow. Unfortunately, the methodologies used in practice to determine high potential SMEs do not focus on the existing local industrial structure or regional Smart Specialisations (RIS3). Instead, RDAs often implement the standard innovation support measures portfolio, not taking into account the regional diversity. The effectiveness of the activities of RDAs is a rarely investigated matter and there is no common stance regarding their optimisation⁴.

Therefore, it is not surprising that programmes supporting innovations receive very diversified assessment, starting from negative in countries like Upper Austria⁵ (Kaufman 2002, pp. 147-159; Brzozowska, Kabus 2018) or Poland⁶ (Szczygielski et al. 2017, pp. 219-237) to more positive in Great Britain and Spain⁷ (Becker, Roper, Love 2017), where the regional aspect of support is included, to an enthusiastic evaluation promoting the public dimension of the provided support⁸ (Foreman-Peck 2012).

It has to be emphasised that the low evaluation of support programmes for the SME sector is not the same as the low assessment of innovativeness of companies in this sector.

The problem of adjusting the scope and type of support provided to SMEs in geographically and economically diverse regions is essential in the process of further social and economic development of the regions (Czarnitzki, Lopes-Bento 2011). Optimising the support for SMEs faces various difficulties. One of them is

⁴ The scope of the topic INNOSUP-07-2017 *Innovating SMEs – Segmentation along Lifecycle and Sectors (Analytical Research Activity)* in HORIZON 2020.

⁵ According to Kaufman Alexander's report, part of the support is poorly targeted.

⁶ According to the authors, financial subsidies from the EU resources to modernise human and physical capital were ineffective in supporting innovation and might even complicate the implementation of innovation.

⁷ In Great Britain only regionalisation of support leads to the growth of innovative sales. However, in Spain innovative sales are influenced by the regional, national and European support.

⁸ SME companies receiving support from British resources for innovation had better chances for innovation than the ones that did not cooperate with the Agency.

lack of a uniform approach to identifying, measuring and assessing innovations implemented in SME segments by the EU and regional institutions (Hollanders, Es-Sadki 2018). Until now, many dispersed efforts have been taken to map the SMEs ecosystems, but they still lack the regional background.

Every year, the European Commission conducts the *European Innovation Scoreboard* analysis (Hollanders, Es-Sadki 2018), which evaluates national innovation systems and thus provides comparable results within the range of innovation in the EU countries, other European and neighbouring countries.

Every second year, *Community Innovation Survey* is conducted by EUROSTAT. Its purpose is to measure innovative activities in companies. The data concerning innovation are collected concerning the types of companies, various kinds of innovations and diversified aspects of innovation development such as goals, information resources, public financing, expenditures on innovation and others. CIS presents statistics divided by country, type of innovators, economic activity and size.

The reference tool utilised by the Enterprise Europe Network, which is an advisory body for innovation, is IMProve – European Innovation Management Academy (IMProve Academy). It is a European methodology applying a wide range of tools which are used to assess and understand the innovative potential of companies, develop abilities and processes connected with managing innovations in enterprises. IMProve administers a set of data from 5000 companies in 80 countries, which diagnosed their innovation possibilities.

The *Innovation Health Check (IHC)*⁹ enables more personalised analyses which lead to the assessment of the company's innovation process. This methodology allows a company to identify and assess innovation as a process – from the customer's needs analysis (stated and unspecified), generating ideas, creating a concept, product or service development, to commercial implementation at all stages. *IHC* discusses the impact of this process on the company culture, business strategy and structure, resources and capabilities of the company's and the level of implemented innovative processes.

The Spanish standard *AENOR EA 0047* is an example of a national standard of certification and quality standards¹⁰. In 2015, AENOR published a compatibility certificate containing all the requirements for SME, which should be perceived as innovative. This certificate provides SMEs with automatic access to the public register of tax reliefs.

Introducing a methodology that would enable the segmentation of local SMEs and, at the same time, create conditions for optimal use of financial means needed at different stages of the innovation process, should be preceded by an in-depth analysis of the solutions applied. The existing approaches mentioned above and segmentation methods concerning SME companies should be examined, the wallets/portfolios of regional measures currently used to support innovations

⁹ Innovation Health Check – a self-assessment tool for companies, also used by the Enterprise Europe Network.

¹⁰ AENOR constitutes reference at the European level as it coordinates the creation of quality standards as well as research management and innovation standards within the framework of the European Committee for Standardization.

should be described and their efficiency as well as potential weaknesses should be analysed. Finally, new instruments and methodology could be created based on historical regional data analysis describing the impact of the selected innovation support instruments on the innovative SMEs.

In the following part of the article, partial results of the research scheduled for 2018-2019 are presented¹¹.

Characteristics of an innovative company and Key Performance Indicators (KPIs) applied in its identification

The processes of creating value based on innovation may be characterised differently depending on industry in which companies operate. Also, the effects of implementing innovation depend on various, often overlooked, factors such as regional and cultural differences, capital intensity or the dimension of the region's smart specialisations (RIS3) (Council on Competitiveness 2005). For this reason, creating a set of key performance indicators (KPI) that can be used to analyze the data collected by development agencies poses a challenge. These indicators could also be compared with similar indicators and data currently collected by Regional Development Agencies (Saublens 2013).

As part of the research (OaSIS project together with EURADA association¹²) we selected a set of 10 Key Performance Indicators adequate for the description of an innovative company in the SME sector.

Table 1. Set of 10 key performance indicators (KPI) which can be applied in the analysis of SME companies innovativeness

Area	Key Performance Indicators (KPI)	Reasons for the choice
1. Company turnover.	1.1. Change of turnover from a long-term perspective.	Differences in turnover are conspicuous and are objective indicators of business strength. The increase in turnover by 10% is the evidence of customers' acceptance and is usually associated with the innovation of commercialised products or services (Saublens 2013).
2. Human resources.	2.1. Staff assigned to the research and development area (R&D) as opposed to all human resources in the company. 2.2. Percentage of employees with PhD or a	Innovation requires significant workload. The enterprise is more innovative when the percentage of employees working on research and innovation is higher. Qualifications are also of great importance because all activities in research and innovation are specialised and require a high level of competence and abilities.

¹¹ The study is part of the project *OaSIS – Optimizing support for innovating SMEs*, currently coordinated by the Cracow University of Technology. The project is an example of the European Commission's interest in the problem of creating mechanisms and tools for rational and effective management of financial support provided for the SME sector.

¹² EURADA – European Association of Development Agencies.

	degree higher than masters.	The presence of employees with higher education and doctorate is positively valued (Becker, Hall 2013, pp. 183-202).
3. Economic and financial resources.	3.1. Percentage of turnover invested in research and innovation. 3.2. Participation in programmes supporting innovation financed from public funds.	Innovative enterprises invest a significant part of their turnover in research and innovation. They are active in getting funding from external sources in order to support their innovation investments. The most active ones receive public support from European Commission programmes (most complicated as they are extremely competitive), domestic ministry programmes and from regional authorities (Conti 2018, pp. 134-153).
4. Intellectual property.	4.1. Type of protection. 4.2. Extension to international protection.	Companies protect their innovations utilising intellectual property law to obtain exclusive rights to invest in research and innovation. Patents which safeguard inventions are the most expensive intellectual property rights. They can be extended to an international scale. Useful business models, trademarks, copyrights are also valuable (Radauer, Streicher, Ohler 2009).
5. Internationalisation.	5.1. Percentage of turnover from international trade. 5.2. Access to international markets.	Companies functioning in international trade are usually more innovative than those operating in local markets. They are exposed to international competition and, therefore, forced to constantly improve their products and services. Such companies can be occasional exporters or have a constant share in international markets. Moreover, companies which export outside of the internal European market are positively evaluated as they have to face various regulations, competitors investing in advanced technology or cheaper products (Rahman 2010).
6. Managing innovation.	6.1. Advanced tools and actions in innovation management.	There are other quality indicators showing the company's efficient internal resources, which consequently enable innovation. Some examples of such indicators are: i) the company made deals with universities or competence centres in order to carry out joint projects, ii) the company has internal system of technology surveillance enabling access to modern solutions that could influence their competition strategy, iii) the company has a license for some of the intellectual property rights, iv) the company introduced organisational innovations which change responsibility increasing efficiency of products' design and their commercialization (Saublens 2013).

Source: Authors' study on the basis of D2:2 key performance indicators, OaSIS – Optimising Support for Innovating SMEs, EURADA, H2020 GA 777443

The Key Performance Indicators (KPIs) set together in *Table 1* are nowadays utilised by regions in various configurations in order to identify local companies from the SME sector with the highest growth potential (so-called *gazelle* companies¹³). The experiences of Regional Development Agencies indicate that using support instruments, but excluding the region's characteristics is one of the reasons why the provided support is of low efficiency. There is a necessity to create new methods for SME segmentation in the context of innovation.

Audit of Regional Development Agencies' demand for a standard public SME segmentation methodology

The study was conducted in 18 Regional Development Agencies (RDAs) from 15 European Union countries and associated countries (Spain, Turkey, France, Belgium, Germany, Poland, Bosnia and Herzegovina, Croatia, Bulgaria, Romania, Italy, Czech Republic, Finland, England, and Hungary)¹⁴. The results indicate that RDAs do not have any internal assessment procedures which would be based on methods of the regional companies segmentation.

Figure 1 illustrates the results of the survey concerning the methods used by RDAs to identify innovative companies.

What is interesting is the fact that only 55% of the respondents gave a positive answer to the question: *Does the development agency apply any other segmentation methodologies, e.g. according to size, age of enterprise, or number of employees etc.?*

The criterion of internationalisation, understood as identifying companies with high increase of turnover from foreign markets as well as frequent cooperation in international projects, is used by more than a half of the RDAs for the purpose of SME segmentation. The question was: *Has the development agency implemented a system to identify SMEs with "high internationalization potential", e.g. via export data, product catalogue, EU grant?*

Exactly half of the RDAs use tools for identifying companies with high innovation potential¹⁵. The other half of respondents answered negatively the question: *Does the development agency identify "high innovation potential SMEs", for instance those with more: patents, scientific publications, external funding or grants, employees in R&D, expenses in R&D?*

¹³ *Gazelle* companies develop quickly and maintain stable growth of employment and turnover in a longer period (Gazelle Definition from Financial Times Lexicon).

¹⁴ The survey was conducted as part of the Open Call recruitment for the OaSIS project.

¹⁵ Companies with high potential are identified by research and development background such as staff and structures, patents, scientific publications, implemented research and development grants.

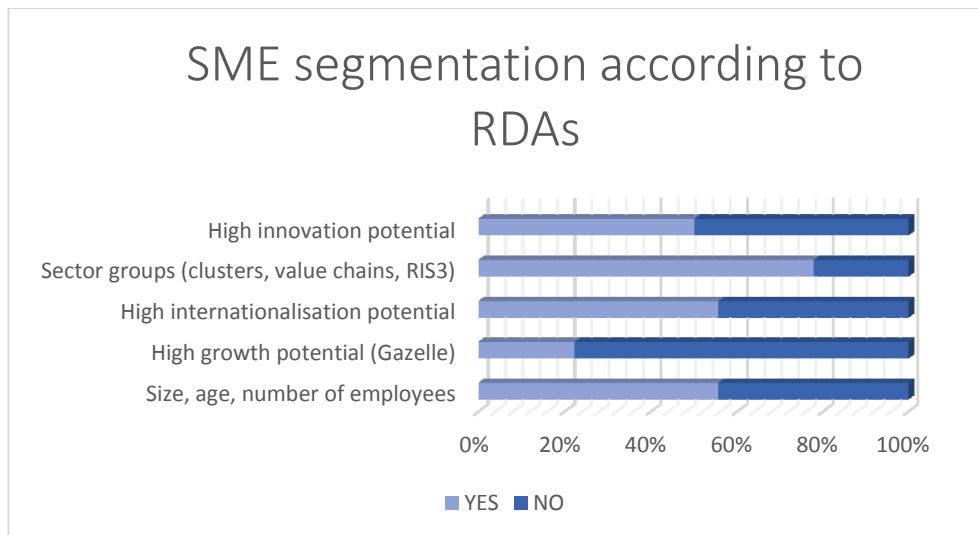


Figure 1. Priorities of SME segmentation according to RDAs

Source: Authors' study based on the survey www.surveymonkey.com/r/Project_OaSIS results

In the SME segmentation methodology, Regional Development Agencies use a well-known criterion of belonging to a particular sector group (clusters, industrial value chains, intelligent specialisation of the regions). Almost 80% of the surveyed RDAs gave a positive answer to the question: *Does the development agency profile the areas in which the supported SMEs are active, e.g. if they belong to specific clusters (biotech, aeronautics, robotics), or value chain (aerospace industry, construction industry), or smart specializations (RIS3)?*

The diagnosis presenting the application of tools by RDAs to identify companies with high growth potential (*gazelle* companies) indicates negligence in this area. Almost 80% of the RDAs were negative about the question: *Has the development agency implemented methodologies to identify "gazelle SMEs", which are high growth SMEs?*

At this stage of the study, it is difficult to claim that the lack of this tool has an impact on the quality of decisions made by Regional Development Agencies about providing support to the SME sector.

The conducted survey confirms the assumption that the detailed analysis of the existing segmentation methodologies and focus on regional SMEs (specifying strong and weak points of the used solutions as well as indicating opportunities to overcome barriers) is the necessary condition for selecting the best innovation activity strategies in different SME segments (Navarro et al. 2014, pp. 1-35). Implementing new methodologies for innovative SME segmentation, which could consequently facilitate the process of adjusting regional innovation support measures to the needs of innovative companies, will probably influence the efficiency and effectiveness of this support (Conti 2018, pp. 134-153).

Creating an objective, operational and easy to implement tool for segmentation of local SMEs is a prerequisite for increasing the social and economic impact of expenditure on supporting innovation in the EU and associated countries (Huggins 2010, pp. 639-658).

Conditions for the implementation of data mining techniques by Regional Development Agencies and public administration to support SME innovativeness

Increasing economic growth and innovative potential in Europe, affected by the innovation crisis, may be achieved by optimising programmes of innovation support distributed by RDAs and public administration (Foreman-Peck 2012).

Segmentation of innovative SMEs, identifying groups of entrepreneurs with the highest growth potential and directing them to different programmes which could help them achieve expected results corresponding to their needs, potential and ambitions (Hall, Lerner 2009) constitutes a necessary condition for optimising assistance funds.

Introducing data mining into the analysis of innovative SMEs helps in identifying behaviour patterns and analysing correlations which in further stages will lead to the faster recognition of potential success indicators of an innovative company (Ploeg, van der Veen, Arnold 2015). The results of such an analysis will lead to the optimisation of innovation funding to companies with the highest growth potential based on innovation. However, this task is not simple. On the one hand, regions are accustomed to a comparative analysis based on familiar tools, identifying good practices and adjusting their policies to these models¹⁶. Such a qualitative, soft approach represented by numerous financial projects, mainly from INTERREG programmes (for instance, ESSPO project) allows RDAs to gain knowledge and monitor new activities stimulating the regional economy.

Despite the openness of governmental data managed by the EU Directive on the re-use of public sector information (PSI) (The European Parliament and the Council of the European Union 2003) an attempt to gain access to databases of particular RDAs is perceived as untrustworthy and RDAs are reluctant to do that. It means that the hard approach based on Big Data algorithms is not yet popular at the regional level. Even after the introduction of the EU 2013/37/UE PSI directive on reusing public sector information, which facilitates sharing and publishing databases, the actual access to such information is still significantly limited. What is more, RDAs can enter such experiments only when all legal regulations are secured and the cooperation occurs at the level of security and confidentiality of data. Excluding or censoring personal data from the databases is extremely important in order to avoid the responsibility of adjusting activities to the GDPR

¹⁶ Examples of such analyses were conducted in countries such as Poland (Plawgo et al. 2013), Israel (Research Proposal Effect of Israeli Government Support for Business R&D on Recipient Firms, n.d.), Germany (Czarnitzki, Lopes-Bento 2011), England (Foreman-Peck 2012), the USA (Council on Competitiveness 2005), Belgium (Engelhardt, Bijleveld 2013), or Turkey (Bas et al. 2014). There are also comparative studies available for Spain and England (Becker, Roper, Love 2017).

directive¹⁷. Overcoming barriers for the purpose of spreading the approach based on big data analysis is possible, following the up-to-date recommendations of the European Commission, with especially helpful document called *Guidelines on Fair Data Management* published for the research teams taking part in the HORIZON 2020 programme (H2020 Programme 2016). Moreover, this is also encouraged by the EARTO platform as a new approach to the co-creation of governmental innovations for European institutions on the basis of open data for research (EARTO 2018).

The survey conducted in 18 regional development agencies indicates that the agencies are ready to cooperate and are interested in the results of database innovativeness (*Figure 2*).

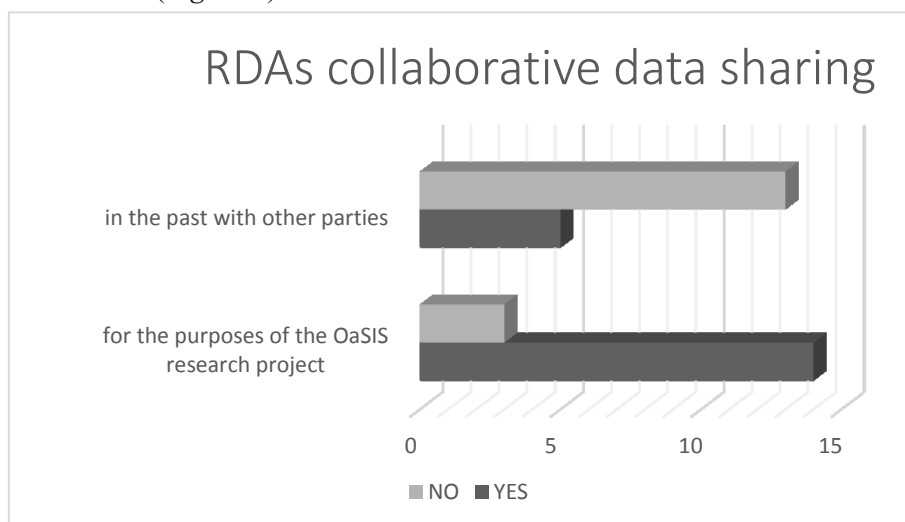


Figure 2. The attitude of 18 Regional Development Agencies to sharing companies' databases

Source: Authors' study based on the survey www.surveymonkey.com/r/Project_OaSIS results

Implementing the analysis of information resources based on big data algorithms by Regional Development Agencies assessment teams requires standardisation of this process (Ploeg, van der Veen, Arnold 2015). It is necessary to create publicly available and user-friendly software (possibility of using different frameworks of data by entrepreneurs, academics and by all interested parties) (Rahman 2010). The information platform should provide users with the ability to browse, search for and visualize information/reports/study results. Moreover, it should allow users to exchange data and reuse them if needed at the

¹⁷ GDPR or General Regulation on Data Protection is a Regulation of the European Parliament and the Council of Europe 2016/2017 of 27 April 2016 concerning the protection of people with respect to processing personal data, free flow of such data and repealing the directive 95/46/WE. The Regulation came into effect on 17 May 2016 and has been in force in national legal orders/systems since 25 May 2018. The regulation applies to all entrepreneurial entities that process personal data.

level of scientists, market institutions, organisations and countries (Czarnitzki, Lopes-Bento 2011). According to scientists, it is worth considering the application of the CERIF framework¹⁸ for data which are restricted by confidentiality (the data are not shared by regional agencies but are created through the research itself or come from open databases, such as offered by the European Commission – for example: Cordis database¹⁹).

It has to be emphasised that such 'hard' approach to research based on RDAs databases has recently appeared in the public sector and sharing data by managing entities has limited trust.

The team of researchers working on the OaSIS project together with Regional Development and Innovation Agencies created formal grounds for access to databases. In return to access to databases, the Agencies can get ready-made analysis technologies such as *Business Intelligence* tool²⁰.

Conclusions

Optimising segmentation techniques of regional SMEs is a necessary condition for Europe's development based on smart, permanent and inclusive solutions provided by innovations in companies. The support given by regional institutions, for instance, Regional Development Agencies (RDAs) to companies from the SME sector should be combined with the identification of SME groups with the most significant innovation potential (growth potential, internationalisation, innovativeness) and with assigning dedicated tools of regional support to them. Then, one can expect improvement of the effectiveness of the regional support expenditure on innovation and fast identification of new entrepreneurs with high potential. Individual support is a chance for the development of matching companies by their KPI: turnover, human resources, economic and financial means, intellectual property, internationalisation and innovation management.

The “hard” approach to the management of data collected by RDAs enables regional authorities to apply new techniques of obtaining information concerning the companies' ecosystems. Application of the Business Intelligence tools will help to optimise European resources intended for innovation in the SMEs sector. Currently, this issue poses the greatest challenge but at the same time it is an opportunity for European Regional Development Agencies which combine benchmarking of regional pro-innovative instruments for SMEs and the analysis of databases of beneficiaries of these measures, to improve the effectiveness of the assistance funds management. Only such a solution can lead to effective spending of resources on innovation. The personalized needs of the company should define the scope of support for innovation, and not vice versa.

¹⁸ Common European Research Information Format.

¹⁹ CORDIS is the Community Research and Development Information Service. It is the European Commission's primary public repository and portal to disseminate information on all EU-funded research projects and their results in the broadest sense.

²⁰ Business Intelligence – the process of transforming data into information and information into knowledge which can increase the competitiveness of companies.

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MOŻLIWOŚCI SEGMENTACJI MAŁYCH I ŚREDNICH PRZEDSIĘBIORSTW W REGIONIE Z WYKORZYSTANIEM PODEJŚCIA DATA MINING JAKO NARZĘDZIA OPTYMALIZACJI DZIAŁALNOŚCI EUROPEJSKICH AGENCJI ROZWOJU REGIONALNEGO

Streszczenie: Ważnym beneficjentem środków UE wspierających rozwój konkurencyjności opartej na innowacji są firmy sektora MŚP, zróżnicowane zarówno pod względem rodzaju działalności, jak i otoczenia konkurencyjnego. Obecnie Agencje Rozwoju Regionalnego oraz Innowacji poszczególnych krajów, regionów UE i państw stowarzyszonych podejmują decyzje o rodzaju i skali udzielanego wsparcia firmom MŚP w oparciu o niejednorodne zasoby danych, wykorzystując odmienne kryteria segmentacji MŚP. Celem artykułu jest uzasadnienie konieczności i technicznych możliwości stworzenia, w oparciu o zasoby informacyjne (bazy danych) Agencji Rozwoju Regionalnego, koherentnego i inteligentnego narzędzia do segmentacji MŚP, które pozwoliłoby nie tylko na monitorowanie udzielanego wsparcia, ale też na uczynienie regionalnego wsparcia bardziej efektywnym (beneficjentem wsparcia byłyby rzeczywiste innowacyjne przedsiębiorstwa). Przeprowadzono analizę metod segmentacji MŚP stosowanych obecnie w Agencjach Rozwoju Regionalnego przez 18 regionów europejskich i stowarzyszonych. W konsekwencji porównano podejścia stosowane do segmentacji MŚP przez 15 krajów oraz Komisję Europejską. Dane do analiz pozyskano metodą sondażu (ankieta online) z Agencji Rozwoju Regionalnego oraz Komisji Europejskiej.

Słowa kluczowe: wsparcie innowacji, Agencje Rozwoju Regionalnego, benchmarking, segmentacja MŚP, analityka biznesowa, OaSIS projekt



A GLOBALLY COMPETITIVE LOCAL CLUSTER: ANALYSIS OF VIDEO GAME INDUSTRY IN WROCLAW, POLAND

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Abstract: The article presents analysis of the competitiveness of the video games industry cluster in Wrocław, Poland using Michael Porter's national diamond, SWOT analysis, network analysis and cluster benchmarking in order to highlight the local qualities and possibilities to develop a global competitive advantage of the video game industry cluster. The analysis was preceded by an overlook of the global video game industry, highlighting the possibilities, especially for market growth through the lens of devices used to play games as well as through the lens of the geographical nature of market growth.

Keywords: Asian mobile games market, augmented reality, cluster analysis, e-sport, video games, video game industry, Wrocław, virtual reality

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Introduction

In a modern economy as Michael E. Porter stated, “National prosperity is created, not inherited”, meaning clusters artificially created or emerging organically and stimulated artificially, become the source of innovation, competitive advantage and prosperity for the regions they originate in. We can observe this phenomena in the Silicon Valley (Palo Alto, California), in the Digital Media City (Seoul, Korea), and countless less spectacular clusters around the world, but just as effective in their niches. It seems that clustering is a natural, emergent process that promotes local specialization, and with proper stimulation or steering in anticipation of upcoming trends, can provide an advantage on the global scale that is very hard to erode, especially with the “winner takes all” economy, which digital media seem to drift towards naturally.

The video game industry has grown from a small niche in the 1970s to a \$116 billion global industry in 2017 and is projected to grow to \$143 billion by 2020 (<http://newzoo.com/...>). It is characterized by global distribution, high product development time and cost, minimal per unit costs and transfer costs – going even further down thanks to online distribution through game stores and app stores - as well as high adaptability and innovation (Klimas 2016).

Analysis of global video game industry

The video game industry first emerged in the San Francisco Bay area, with Silicon Valley at its core. The video game industry spread out to the Los Angeles

area, in the 1990s. In LA as in Montreal, cross-fertilization with film is important (Pilon, Tremblay 2013). This shows, that the video game industry may be dependent on clusters in order to emerge and prosper, not the other way around. Video game industry clusters have typically emerged where a wide net of suppliers and supporting businesses had already been established locally and their global success and expansion of the network that followed allowed other video game companies to emerge and benefit from the thus formed network of relations (Klimas 2015).

The tight connection between the movie and game industries can be seen very clearly by studying the examples of major motion picture studios entering the video game industry in the 1990s. They did so by creating their own divisions such as Disney with its Disney Interactive/Buena Vista Games division in 1994, Fox Interactive in 1996, MGM Interactive, Warner Bros Interactive Entertainment, and Vivendi Universal Games in 2000 (Pilon, Tremblay 2013). Industry cross-fertilization is clearly evident here, as many large game studios opened offices or moved to Hollywood in order to benefit from its network.

The video G game industry consists of many different businesses and individuals coming together to produce, distribute, consume and profit from video games. We can observe that the game industry value chain is made up of six connected, distinctive layers (Flew, Sal 2005).

- Product and talent layer: includes developers, designers and artists, who may be working under individual contracts or as part of in-house developer teams (CD Projekt RED, Techland, Bioware, Blizzard, indie developers).
- Capital or publishing layer: involved in paying for the development of new titles and seeking returns through licensing of the titles (Sony).
- Production and tools layer: generates content production tools, game development middleware, customizable game engines and production management tools (Unity 3D, Cocos2D, Unreal Engine).
- Distribution layer: or the “publishing” industry, involved in generating and marketing catalogs of games for retail and online distribution (GOG.com, Steam).
- Hardware (or virtual machine or software platform) layer: provides the underlying platform which may be console-based (Atari, Sony, Nintendo), accessed online or accessed through mobile devices. This layer now includes a network infrastructure and non-hardware platforms such as virtual machines (Java or Flash), or software platforms such as browsers or social media sites (Mozilla, Facebook, Opera Software).
- End-user layer: the consumers of games (gamers, e-sports teams, streamers).

The video game industry resembles the film industry and music industry in many ways, but presently remains more connected to new technologies, both as their generator and consumer, as well as often offering lower barriers for entry, hence higher innovation, differentiation and branching rates, to which the existing laws and ways of gathering analytical data still have a difficult time adjusting.

In 2017 the majority of revenue from video games came from the smartphone (34%), C console (29%) and PC (23%) markets, with tablet (10%) and PC browser (4%) accounting for a small fraction of the global market. By 2020 the global revenue is projected to grow by approximately \$30 billion, mainly thorough growth of the smartphone market in Asia ([http://newzoo.com/...](http://newzoo.com/)).

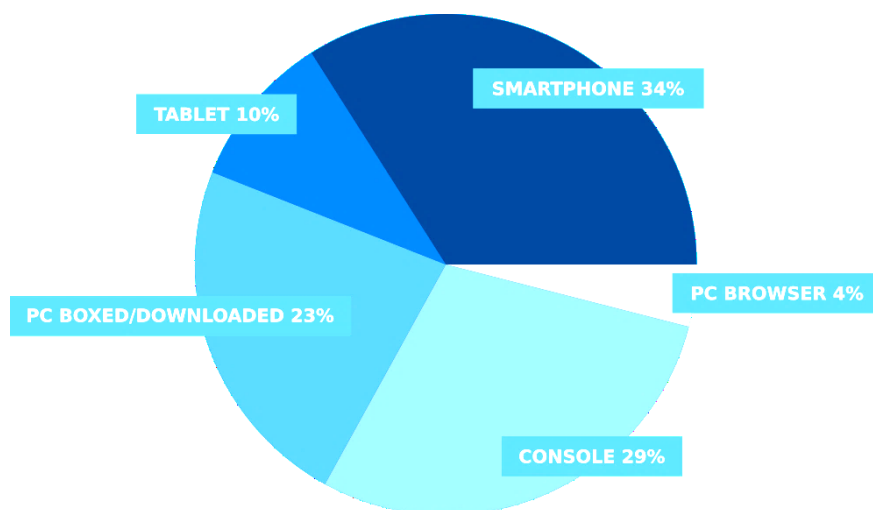


Figure 1. Division of world video game market revenue sources in 2017

Source: Author's own compilation

When it comes to consumers, they can be divided into:

- Hardcore – high-spending early adopters of both hardware and software, 70-80% of sales volume in the industry can be attributed to hardcore gamers.
- Casual – play regularly, more price-sensitive, 15-25% of total sales volume can be attributed to casual gamers.
- Mass Market – actively seeks free of charge games or Free2Play offers, accounts for approximately 5% of sales volume, does not play games regularly, nor invests in hardware (Clairfield International 2018).

While hardcore gamers provide most of the sales volume and are characterized by a high adoption rate, currently, the growth of the market is mainly driven by casual gamers. It is relatively easy for non-gamers to become casual gamers and the popularization of smartphones, especially in Asia, is projected to be the main growth driving force.

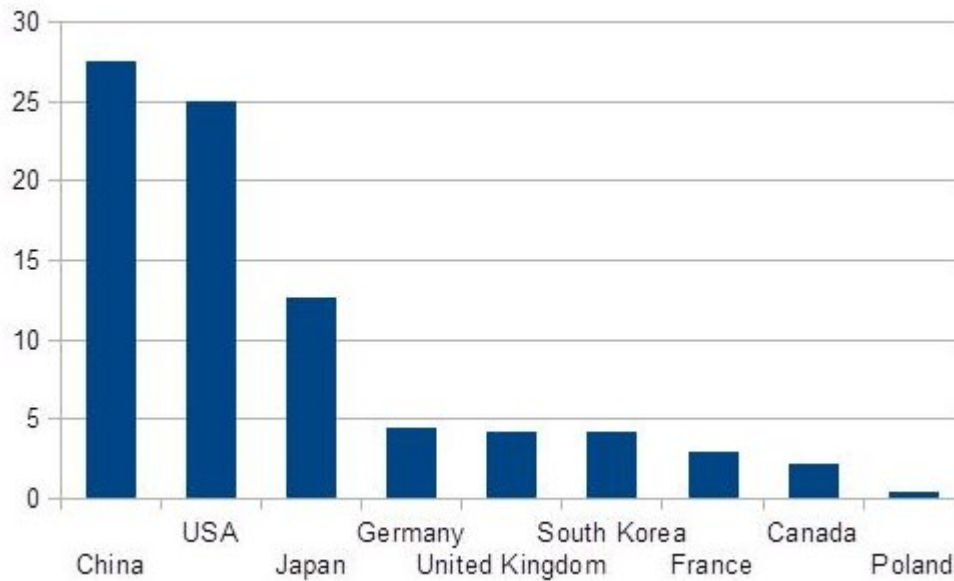


Table 1. Top gaming markets by gaming revenue (in billion USD, 2017)

Source: Author's own compilation based on (Clairfield International 2018)

The gaming market revenue share by region is as follows (in billion USD, 2017): Asia-Pacific 47%, North America 25%, Europe, Middle East & Africa 24%, Latin America 4% (Clairfield International 2018).

As we can observe, the Asia-Pacific region has both the biggest share as well as the largest projected growth rate in the near future. The casual gaming market is tightly connected to the smartphone population size, and its rapid growth in Asia has been followed by an increase in the game market in the region. Despite China being the biggest world market, Japan remains the leader in regional video game industry clusters, but the South Korean cluster, specialized in e-sports, also holds a strong position in the region.

When it comes to the production of games and game-related hardware and software, different clusters dominate in various sectors of the market, for instance Germany contributes significantly to Free2Play on-line browser games, South Korea dominates e-sports, Japan specializes in console games, the USA in games based on movie franchises or big AAA titles requiring substantial capital. Those clusters emerged mostly as a side-effect of the pre-existing related and supporting industries (Ito et al. n.y.), and often remain leaders in their niches. Those clusters typically have one globally successful company bringing in capital from around the globe and building most of the network, while smaller companies emerge naturally as their suppliers or competitors in smaller niches. The video game industry has a few segments that are very promising in the near future. While not yet considerable in size, they are characterized by very high growth rates and are expected to replace or supplement the current ways to consume games. Among them are:

- Virtual reality (VR) hardware – very promising and hard to develop technology, at present the most limiting factor remains the cost of production. As with some technologies in other industries, the game industry might prove to be the main force pushing the technology, but the game industry will benefit greatly from virtual reality hardware.
- Virtual reality games – most promising in terms of growth and potential, which still remain largely untapped. It is likely we will see a large number of games adapted to VR when the technology becomes accessible to a wide market of consumers. MMO (massively multiplayer online) VR might also be a groundbreaking step both in culture and in terms of game industry revenue growth when the technology is able to provide a sufficient quality of experience.
- Augmented reality (AR) – with the success of games like Pokemon Go, AR has gained momentum and provides new ways to experience games, never before available, often without the need for new hardware as smartphones have reached enough capability to handle the many required features. Its non-game applications are expected to drive the technology forward, while the game market is perfect to popularize AR solutions, and by 2020 it is estimated that \$60 billion will be spent on this aim (Porter, Heppelmann 2017).
- E-sports – small in comparison to the rest of the market, characterized by big growth and promising numbers as consumers mature. It is also hard to fully account for its reach and revenue, as much of it consists of streaming and sharing videos of game play.
- Casual mobile games – when in Asia and in the future Latin America and Africa billions of people will rise out from poverty, easily accessible and low-cost games will become available to new masses of consumers who adopt casual mobile games very fast and easily. This can be already observed with the massive consumer spending in the game industry shifting to Asia, and this trend is expected to continue.
- Indie Games – with the technology to develop games bringing entry costs down as well as the advancement of crowd-funding, small studios, sometimes even one person have been observed to produce increasing numbers of highly innovative games, generating new kinds of content and ways to consume them in a dispersed and non-cluster way. This trend is expected to continue and grow as the game industry tends to attract passionate content creators much like the music or movie industry.

Analysis of video game cluster in Wrocław, Poland

The Polish video game industry is relatively young compared to Japan or the USA, but examples of Polish companies such as CD Projekt RED (Witcher series – PC, Warsaw), Techland (Call of Juarez, Dying Light – PC, Wrocław) or Infinite Dreams Inc. (Jelly Defense – Mobile, Warsaw) to name a few, show that Polish game developers can be competitive in the global game market.

The Polish game market is relatively small – evaluated to be worth \$0.49 billion, which comprises 0.1% of the Polish GDP (Raport 2017), putting it far behind the largest world markets – the USA and China, both approximately 50 times larger, as well as in terms of the size of the industry in comparison to the country economy, with countries like South Korea (0.28%), Japan (0.26%), Malaysia (0.19%) or Great Britain (0.17%) leading the way. The Polish video game market is also projected to grow slower than the global video game market (Raport 2017; [http://newzoo.com/...](http://newzoo.com/)).

Data ([http://www.gamedevmap.com/...](http://www.gamedevmap.com/)) shows, that the biggest Polish developers are clustered in large Polish cities with a good academic base: Warsaw, Katowice, Krakow, Wrocław, Lodz, Poznan. It should be noted that Krakow has taken steps to artificially support the creation of its games industry cluster through the Krakow Technological Park and is over-represented on the list of the biggest developers for the city's size. Krakow is also home to the largest video game industry event in central Europe – Digital Dragons. Warsaw having oldest and best developed cluster for high-tech in Poland is the natural leader. The star of the Polish video game industry – CD Projekt RED, originated in Warsaw, but opened offices in Krakow in 2013 and Wrocław in 2018.

Of note for the topic of this article is that Wrocław is home to the second best Polish video game industry star – Techland, founded in 1991, switched to developing games in 2000, employing around 300 people, saw its first international success in 2006 with its Call of Juarez game and continues to compete with success on the global market expanding to new platforms as well as developing new titles and has recently branched into publishing. The author would like to mention that Techland formally is located in Ostrow Wielkopolski, but the majority of company business is considered to be conducted in Wrocław.

Wrocław is the 4th largest city in Poland, located and well connected by highways between Berlin, Warsaw, Krakow, Katowice and Prague, as well as having multiple connections with European cities through its airport – not nearly enough compared to large European hubs, though.

Wrocław was chosen as the 2016 European capital of culture and is the home of numerous universities with broad education profiles, hosting around 120 000 students (“Gazeta Wroclawska”, 01.10.2016). Compared to other EU countries the quality of life is high – with costs of living and housing being low - as well as having above average or high level of safety, Internet access and business freedom ([http://teleport.org/...](http://teleport.org/)), and salaries in the tech industry are often nominally on par with Western standards.

Unfortunately, venture capital and startups in Wrocław are ranked very low ([http://teleport.org/...](http://teleport.org/)). Wrocław has experienced a significant influx of Ukrainian immigrants in recent years. Because of its history after WWII, the city is relatively open to migrants and immigrants. While programmers tend to enjoy western salaries, many supporting and creative jobs are relatively low paid compared to

other regions in the world, providing a unique cost advantage for the region to export its labor globally.

The city has attracted companies like: Google, HP, Amazon, LG and McKinsey. The key factors creating the attractiveness of the city are its large talent pool of professionals and graduates, good quality of education, high level of language skills and quantity of modern office stock. Large numbers of R&D centers together with strong IT and finance sectors are features that distinguish Wrocław ([http://invest-in-wroclaw.pl/...](http://invest-in-wroclaw.pl/)).

Recently pollution has become a major issue for inhabitants ([http://www.numbeo.com/...](http://www.numbeo.com/)), especially during the winter months due to the city's geography and increasing tourism and population size (often not reflected in official data), traffic and reliance on coal as an energy source.

It is worth noting that Poland in general, and Wrocław as one of its parts has relatively short experience in creating a desirable company culture, unlike companies in the Silicon Valley famous for this feature, nonetheless, local companies are adapting rapidly as an effect of a general lack of programmers in the IT sector by offering non-salary incentives that will become available to other employees in time.

In summary the video game industry is characterized by a high growth rate, considerable size and high innovation rate as well as reliance on hi-tech and content creation industries (mainly the movie industry) for emergence and development. Wrocław, Poland seems to possess the right combination of traits to benefit from opportunities presented by the industry.

When analyzing clusters, it is beneficial to look at success stories and good practices, hence benchmarking is a helpful way to determine possible actions and look at possible ways to develop clusters. In cluster analysis, SWOT analysis and Michael Porter's National Diamond are often used as tools used to determine the forces of the environment and the qualities of the cluster itself. In this article, the author would like to add to that network analysis is a tool helpful in perceiving the cluster as part of a larger entity, interconnected with different market players and subject to changing forces of the environment.

Video game industry clusters like the one in Los Angeles area, Japan (Ito et al. n.y.) or Montreal emerged because of high-tech clusters already present, as well as closeness to the movie/media industry. Wrocław is unable to compete with them in terms of scale, available capital or a pre-existing network, but a study of successful cluster formation might be beneficial to understanding how Wrocław might best benefit and what strategy it should choose to stimulate its cluster growth.

More modest examples, such as Finland (Masira, Chowdhury 2014), Warsaw, Katowice or Krakow provide much better models and guidelines specific for Wrocław: The Finnish mobile gaming cluster became prominent after the staggering success of Angry Birds by Rovio, which became the flagship product for the whole mobile market at the time, the formation of the cluster and its success was possibly caused by the closeness to the Finnish mobile phone industry, namely

Nokia. The relatively small local market was not in any way a problem for the Finnish cluster to prosper.

Other Polish clusters seem to specialize: Warsaw seems to be home to productions requiring the biggest capital, with CD Projekt RED's *The Witcher* series as the best example, but also the city's considerable population in relation to Wroclaw, and its more developed network of international companies predestined it for this role. Katowice seems to be leading in the region in e-sports, organizing large events and promoting e-sports. This particular niche would be very hard for Wroclaw to compete in. Katowice competes with Seoul in this regard, but since it is located in central-eastern Europe, its distance and specialization in events allows it to grow and prosper.

Michael Porter proposed a national diamond as a tool to examine national clusters; its usefulness in examining city or regional clusters is universal and considered the best tool designed for this specific task.

Wroclaw's natural factor conditions are exceptional: the city has an excellent quality and quantity of skilled workforce required by the video game industry, relatively low cost of living that accounts for the high quality of life. Only access to funding is relatively weak.

Both Wroclaw's cluster and individual companies have easy access to the strategies and structures of local successful market players and can easily utilize them if needed. They are accessible both through know-how of the local workforce and through easy access to local cooperation with other market players.

As far as demand is concerned, there are numerous opportunities to help in marketing and sales both for the Polish and international market using the existing network of connections (Sales and Marketing) and reputation through association (Public Relations). A characteristic of the video game industry makes the local demand practically irrelevant – the ease and cost of digital sales all over the world triumphs any attempts at making it a local niche, hence the author chose to include locally available factors that enhance global competitiveness and give access to global demand, rather than local demand.

Wroclaw offers an excellent base for the video game industry through its long existent IT and financial sectors, as well as numerous universities supplying new talent each year. There is access to all kinds of required skill sets, among which programming and graphic design seem to be most prominent for game production and the local financial sector offers know-how in reducing the effect of relatively low access to local VC.

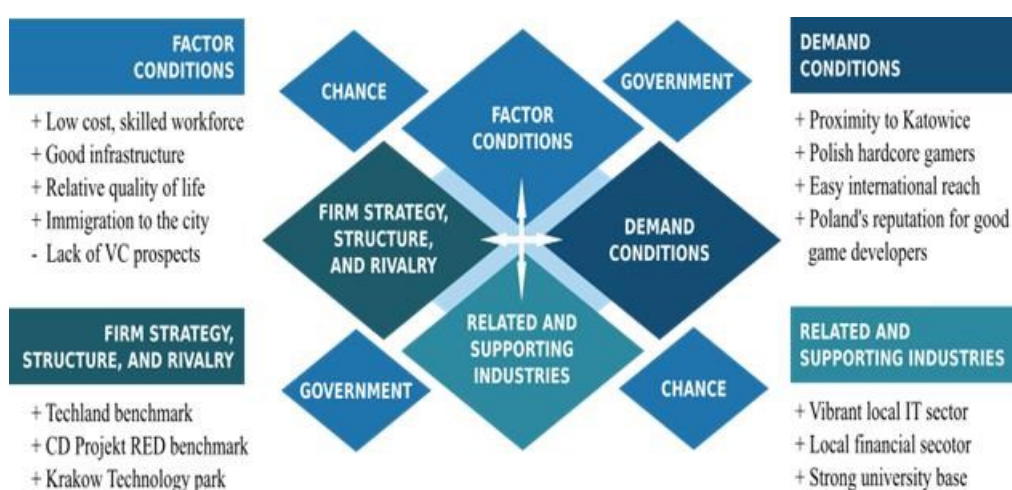


Figure 2. Wroclaw video game cluster diamond analysis

Source: Author's own elaboration

From the diamond analysis and the fact that major Polish game developers open their offices in Wroclaw, we can conclude that the city is perfectly suited to develop its video game cluster. The high quality of life stemming mainly from the low cost of life compared to Western Europe, central location in Western Poland among other video game clusters and high quality universities form a winning combination. The Wroclaw video game cluster, however, suffers due to a lack of formal support and guidance, with no clear niche or unique competitive advantages in the region, while – the Krakow video game cluster especially, seems to be developing at a faster pace.

Diamond analysis provides valuable insight into the qualities of the cluster, but in order to look at it from another angle and dive a bit deeper into its potential, SWOT analysis seems an appropriate method; the threats and opportunities are of particular value to analyse the cluster.

The strengths and weaknesses were chosen as the internal factors in developing the cluster as a whole. They are mostly the inherent, natural qualities of the city or local government activities. The opportunities and threats are viewed on a much larger scale, through the lens of the global video game market, and allow one to assess the cluster in view of global trends, markets and competitors – both clusters and individual companies.

	HELPFUL	HARMFUL
INTERNAL	<p>STRENGTHS</p> <ul style="list-style-type: none"> + Great talent pool + Quality and quantity of local higher education + Quality of life attracting highly skilled immigrants + Low labour costs, especially in non-technical jobs + Successful local companies (Techland) + Culture focused on problem solving + Over a decade of cluster development 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> - Pollution, especially during winter - Polish law not adjusted to startup needs - Local entrepreneurs and employees leaving for other clusters thanks to easy access - Relatively small VC activity in the region - Limited government support for cluster - No significant local events connected to the industry
EXTERNAL	<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> + Utilizing cost advantage thanks to low-cost non-technical workforce + Local initiatives to promote formation and development of the cluster + Numerous attractive niches still with no winning cluster in the vicinity + Industry adequate for telecommuting + Industry attracting highly entrepreneurial and highly motivated enthusiasts 	<p>THREATS</p> <ul style="list-style-type: none"> - Surrounding cities performing well in stimulation of their clusters - Only one star company in the cluster - Other clusters attracting local entrepreneurs - Deteriorating condition of air pollution might lead to worsening of perceived quality of life rating - Growing Asian market might result in strong global competition in near future

Figure 3. Wroclaw video game cluster SWOT analysis

Source: Author's own elaboration

The SWOT analysis clearly points out to the relative infancy of the cluster despite more than a decade of development. This might be the result of the city focusing on attracting foreign companies to utilize the local talent pool and neglecting stimulation of the cluster. The Wroclaw cluster possesses all the qualities necessary for regional and global competition in niches that do not have a clear dominating cluster yet. This opens opportunities for specializing in promising new technologies: perhaps AR or VR, mainly because of the many accomplishments of Wroclaw University of Technology and its strong position in the region.

Studies have shown that video game clusters emerge where a concentration of human creativity in arts and in technology is a significant economic localization factor, but cross-fertilization of sectors and public policy also contributes to understanding the emergence of clusters in certain urban regions (Pilon, Tremblay 2013). Wroclaw has the potential to develop a globally competitive video game cluster because of its high quality of education and good talent pool, but has to address its main weakness – the lack of venture capital and stimulation for startups. Moreover, implementing solutions to improve air quality and addressing traffic problems are efforts that need to be made in order to avoid a decrease in the quality

of life. Video game clusters work as networks, both having complex inter-network connections, as well as connecting to other clusters and industries, as single entities. Depending on the network rent, a network as a whole can be considered to be on certain level of development (Organa, Niemczyk 2017).

The author chose to include only selected elements in the network, only sometimes going deeper into the interconnectivity of the network, in order to keep the connections clear and easily distinguishable. The visualization shows some interesting connections and possibilities, like the possibility of cooperating with LG, which manufactures LCD screens in Wrocław, but as a whole is tightly connected to the smartphone and Asian markets. LG along with the Katowice cluster are closely connected with e-sports and the Seoul Digital Media City, which might produce cooperation, or competition in the future.

Network analysis is meant to show most of all the numerous 'second level' connections for Wrocław's video game cluster: connections that can be relatively easily expanded and brought to the first level if effort in this direction is taken. An example is a connection through LG's and Katowice's e-sports cluster to Korea – one of two (after Japan) Asian market leaders in the supply of video games, and an exemplar e-sports cluster and potentially a 'bridge' to the Asian market. In network analysis, interwoven factors can be visualized and assessed. This is of course only a partial, low resolution analysis as the number of factors, players, markets and connections can be virtually endless if a sufficient level of detail is undertaken. The author decided on low resolution for clarity of the connections, limiting the network to only the most important and strongest connections. The Wrocław video game cluster was made a central and determining factor for the inclusion of other nodes, which in this analysis have a subservient role.

Figure 4 clearly shows the global character of the industry, with high levels of connections between different regions and illustrates that prominent links in regions correlate with the market size and level of development. Africa and Latin America remain relatively scarcely connected to the network, both because of small market penetration and because of no prominent video game clusters.

Conclusions

The Wrocław video game industry cluster is relatively underdeveloped on the global scale, but thanks to the proximity to other clusters and easily accessible network connections with video game industry clusters around the world, as well as some natural advantages – mainly the high level of local university education and relatively low cost of living, has the potential to become competitive on the global market. Formal actions need to be taken in order to realize that potential, with the activities of the Krakow Technology Park serving as a benchmark and proof that applying this approach in the Polish environment can bring substantial results. Steering towards an attractive niche and leveraging the city's advantages seems like an obvious strategy in this case. If developed, the Wrocław video game industry cluster can bring substantial prosperity to the region and become globally competitive for decades to come.

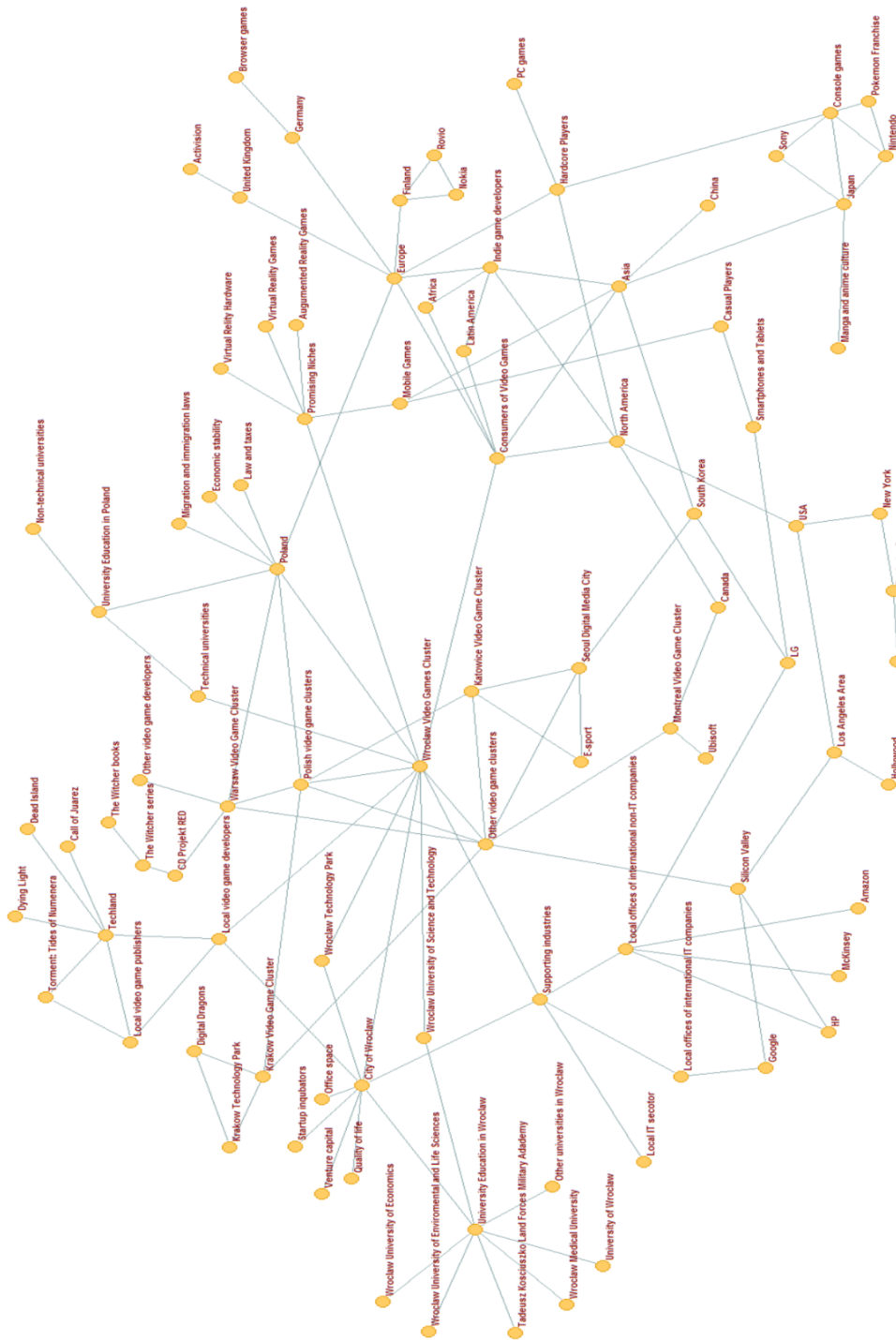


Figure 4. Wroclaw video game cluster network analysis

Source: Author's own elaboration

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GLOBALNIE KONKURENCYJNY LOKALNY KLASTER: ANALIZA BRANŻY GIER WIDEO WE WROCŁAWIU (POLSKA)

Streszczenie: W artykule przedstawiono analizę konkurencyjności klastra branży gier wideo we Wrocławiu (Polska), przy użyciu metody diamentu Portera, analizy SWOT, analizy sieciowej oraz benchmarkingu klastrów, w celu naświetlenia lokalnych charakterystyk i możliwości rozwoju globalnie konkurencyjnego klastra gier wideo. Analizę poprzedzono przedstawieniem perspektywy globalnego rynku gier wideo z naświetleniem możliwości, zwłaszcza wzrostu rynku, a szczególnie pod kątem urządzeń wykorzystywanych do gier wideo oraz przez pryzmat geograficznego charakteru rozwoju rynku.

Słowa kluczowe: analiza klastrów, azjatycki rynek mobilnych gier wideo, branża gier wideo, Wrocław, e-sport, gry wideo, rzeczywistość rozszerzona, rzeczywistość wirtualna



RISK DETERMINANTS IN E-COMMERCE ENTERPRISE OPONEO.PL SA

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Abstract: Today, active management of risk is becoming an inseparable element of activities in many enterprises. Risk management is a multi-stage process that begins with specifying the objectives of a given process and identifying the risk determinants. Proper identification enables effective execution of the subsequent stages of the given process, which determines its effectiveness. Recognizing the sources of risk makes it possible to protect the enterprise against the negative events that may be generated by them. The e-commerce industry, due to the character of its activity, should pay particular attention to risk management issues. The aim of this publication is to identify the determinants of risk to which the company Openeo.pl SA was exposed in 2017. Implementation of the research objective was based on analysis of the management board's report on operations for 2017 of this company.

Keywords: e-commerce industry, risk, enterprise management, risk management

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Introduction

Since the beginning of time, risk management has accompanied every human activity. Entities that encounter risk along their way manage it in a more or less conscious way in order to achieve the greatest possible gains or avoid undesirable events. The process of risk management, i.e. a set of activities aimed at the achieving an acceptable risk level, begins with defining the aims of the whole process and identifying the risk determinants. It is thus not difficult to guess that this identification plays a considerable role in the whole process of risk management, as it influences the effectiveness of the subsequent stages. However, it is worth bearing in mind that identifying all the risk factors is practically impossible as there will always be unidentified determinants in the entity's environment. Having said that, striving to discover as many risk factors as possible will certainly have a positive impact on the whole process of risk management and will maximise its effectiveness. Identifying such factors will enable them to be assessed and appropriate methods as part of risk management can be selected.

As modern enterprises function in a changeable and competitive environment, active risk management is gaining popularity among them. Active risk management means that it is implemented in all the areas of the organisation (Adamska 2009, pp. 15-16). The e-commerce industry is currently one of the fastest growing spheres

of the economy, both in Poland and worldwide. People increasingly more often shop online, leading to an increased number of e-stores. Online traders face many threats on a daily basis, which requires them to actively manage risk. The risk factors in the e-commerce sector are not merely generated by engagement in business activity, but also by the fact that the transactions are performed online.

The aim of this publication is to identify the determinants of risk to which the company Oponeo.pl SA was exposed in 2017 based on analysis of the management board's report on the company's activities for 2017.

What is risk

Risk is a term that does not have a uniform definition. The Dictionary of the Polish Language defines risk as the possibility that something adverse will happen and as an undertaking with uncertain outcomes (<https://sjp.pwn.pl/...>). Given the etymology of the word *risk*, one can quickly conclude that it is perceived in a rather negative way. The English *risk* and *hazard* mean a dangerous situation, the possibility that an unfortunate event will occur. The French *risque* is understood as danger, as is the German *das Risiko*. The Greek *rhiza* refers, in turn, to a sharp rock, whereas the Italian *risico* - to a reef that should be avoided. A positive attitude to risk is presented by Middle East countries, where the Arabic *risp* is interpreted as dispensation of providence, and the Persian *rizik* refers to a day's pay or bread (Korombel 2013, p. 15). Nations often equate the notion of risk with uncertainty, which is a major mistake, as risk is characterised by measurability, whereas uncertainty cannot be measured. If it is possible to measure uncertainty, then it means that it is risk (Korombel, Bitkowska, Moczyłowska 2016, pp. 10-11). This relationship shows that uncertainty and risk are inseparably connected to each other, but should not be equated.

Risk is a subject of research in numerous scientific fields, including management studies. Modern managers attach an increasing importance to risk in an organisation, and strive to manage it effectively. Examples of the types of risk that accompany an enterprise's activity include (Kucia 2017, p. 91):

- liquidity risk,
- foreign exchange risk,
- competition risk,
- risk of price fluctuation of goods,
- risk of dependence on contractors,
- human resources risk,
- legal risk,
- risk of reputation loss,
- risk associated with buildings and constructions owned by an entity,
- risk of IT system dependence,
- credit risk,
- risk of change in interest rate,
- market risk.

In terms of the time horizon of an organisation's activities, the following risks are distinguished (Redziak 2015, p. 19):

- operational risk (which refers to routine operations considered at low levels of management),
- tactical risk (for the time perspective of around 1 year, considered at medium levels of management),
- strategic risk (connected with strategic operations, considered by top management).

According to the classification in terms of assessing the outcomes of risk occurrence, there is (Radomska 2017, p. 29):

- pure risk, i.e. one that only leads to loss,
- and speculative risk, i.e. one whose outcomes may be gain or loss.

From the point of view of enterprise management, risk is defined as "an event that may have an (inhibiting, strengthening or doubt generating) impact on the mission, strategy, projects, routine operations, goals, main processes, key relationships and/or the meeting of shareholders' expectations" (Hopkin 2012, p. 12). The current Risk Management Standard defines risk as a combination of the likelihood of an event occurrence and its outcomes (Risk Management Standard 2011, p. 3). The Committee of Sponsoring Organizations of the Treadway Commission (COSO) propagates a pejorative attitude to risk, stating that "an event is a situation caused by internal or external factors that impacts the achievement of objectives. Events may have positive or negative outcomes, or both at the same time. Events with negative outcomes are risk. Risk is the likelihood that an event will occur and will have a negative impact on the achievement of objectives" (*Zarządzanie ryzykiem...* 2007, p. 25). According to the International Organization for Standardization (ISO), risk is dual in nature, which is manifested in its definition saying that risk is "the impact of uncertainty on objectives. This impact is a positive and/or negative deviation from the defined expectations. Risk is expressed as a combination of the consequences and the likelihood of the occurrence of a potential event" (ISO 2009, p. 1-2).

The e-commerce industry is burdened with its own specific threats due to the specific operational conditions. These threats are generated by sources of risk such as (Jelonek 2006, p. 71):

- data resources,
- transmission of data,
- technical tools,
- payment technology and behavior of buyers and sellers,
- legal norms,
- company activities (production, financial and commercial).

The threats in the sphere of data resources relate mainly to the loss of their confidentiality and truthfulness. The risk associated with the transfer of data entails the risk of their failure to transmit or use illegally. Another risk associated with information technology concerns its tools and may be related to their theft, damage and blocking. An important area seems to be the payment technology and behavior

of customers and sellers. The uncertainties and distortions in this sphere are one of the most common sources of misunderstanding between contractors in the e-commerce sector. Another type of risk that accompanies the industry is the legal conditions on which entrepreneurs have no influence and are not always beneficial. The last specified source of risk may be the cause of various threats related to, among others (Jelonek 2006, p. 71):

- continuous technological progress,
- impact on the natural environment,
- product quality,
- the level of prices and their fluctuations,
- demand and supply for products,
- currency rates,
- competitive environment,
- customs,
- taxes,
- financial liquidity.

Risk management in a modern organisation

Nowadays, risk management is a determinant and integral part of organisational culture in many economic entities, and thus translated into operational, tactical and strategic objectives (Wróblewski 2015, p. 26). Risk management is a multi-stage process that is mostly aimed at achieving an acceptable level of risk (Jajuga 2008, p. 15). The stages that are often mentioned in the literature include (Tripp et al. 2004, p. 16):

- defining overarching objectives,
- identifying risk determinants, assessing and measuring risk,
- selecting implementing methods to handle the existing risk, monitoring risk,
- controlling the effects.

This process is also often presented as encompassing four stages such as (Kaczmarek 2008, p. 85): identifying risk, classifying and assessing risk,

- defining risk response,
- controlling the effectiveness.

A quick analysis of the two above-presented views of this process shows that there are little differences between them. The first classification of the stages includes defining overarching objectives and monitoring risk, which the second one lacks. Indeed, both of these sets of activities are focused on achieving the same goal, i.e. a maximally effective system of risk management. It is worth bearing in mind that the priority in managing any process is appropriate integration of all of its stages. This is because only integrated risk management will give satisfactory results of its activities.

As the first division of risk management stages shows, the process starts with defining the main objectives of the undertaking. In order to define the overarching objectives of risk management in an enterprise, it is necessary to take into account

the character of the business, its financial situation, mission, vision and strategy. As already mentioned, risk management focuses on an entity achieving an acceptable level of risk. In order to establish the level of this acceptability, it is worth analysing the overall situation of the enterprise. For that purpose, strategic analysis methods can be used.

The next stage of the process, i.e. identifying the risk factors, enables identification of the threats existing in a company's micro- and macro-environment. The risk determinants in an external environment usually refer to issues connected with the (Redziak 2015, pp. 40-41):

- economic aspect,
- social aspect,
- international aspect,
- political and legal aspect,
- technical aspect,
- international aspect.

The determinants in an internal environment, in turn, are related to (Redziak 2015, p. 41):

- market competition,
- customers,
- suppliers,
- regulators (bodies that regulate and affect business activity),
- strategic allies,
- enterprise owner,
- management board,
- staff,
- working environment.

It is important to note that identifying all the risk factors is practically impossible. This is due to the fact that several factors are difficult to trace, leading in many cases to the occurrence of unpredicted undesired events. Unawareness of the existence of risk factors makes it impossible to assess them and choose how to handle them, which undoubtedly reduces the effectiveness of the whole system of risk management in an organisation.

In order to identify risk, entities use a variety of methods and tools. The most popular include (Zawarska 2012, p. 68):

- Delphi method,
- brainstorming,
- analysis of past events, nominal group technique,
- analysis of processes,
- check lists,
- risk review request.

The next stage of the risk management process is risk assessment and measurement. The aim of such activities is to determine risk volume based on the likelihood and negative outcome of identified threats. Risk is assessed with the

objective to estimate the level of its acceptability. Two types of risk assessment methods are distinguished (Redziak 2015, pp. 158-159):

- quantitative methods, which are based on hard figures,
- qualitative methods, which rely on general data, often experience-based assumptions.

The most popular ways assessing risk that are implemented in modern enterprises include (Redziak 2015, p. 191):

- benchmarking,
- probabilistic techniques (value-at-risk analysis, revenues-at-risk analysis and financial flows, etc.),
- non-probabilistic techniques (sensitivity test, scenario analysis, stress test, etc.),
- interviews and workshops.

The next activity carried out as part of the risk management process is selecting and implementing methods to handle existing risk. The steps taken at this stage are mainly determined by conclusions drawn in the previous phases. When implementing new solutions, an enterprise should remember to maintain flexibility with respect to the environment in which it functions. It is important to have a number of scenarios of actions in place to be able to quickly change the approach in case of unpredicted events.

The next phase of risk management, i.e. monitoring risk, is designed to enable an effective reaction in case of unexpected complications. A proper monitoring system may in many cases turn out to be an excellent protection and success determinant in risk management.

The last step of the process under discussion is controlling the results of the whole undertaking. An essential element of this control is comparing the achieved effects against the intended effects (Domański 2014, p. 70). It is worth mentioning that these effects usually differ from each other to a lesser or greater degree, which is not necessarily a negative phenomenon for an enterprise. Quite often, the results of undertaken activities turn out to be better than those set at the beginning of the risk management process.

E-commerce sector in Poland

As the Internet is constantly developing worldwide, people increasingly purchase products and services on the e-commerce market. E-commerce is defined by the World Trade Organisation as producing, advertising, selling and distributing goods via ICT networks. A more simplified definition states that it is purchasing and selling products and/or services through the Internet (Szewczyk 2007, p. 79).

E-commerce is one of the most important areas of e-economy, which handles such spheres as (Wallis 2017, pp. 79-80):

- B2B (business to business),
- B2C (business to consumer),
- B2P (business to public),
- C2P (consumer to public),

- C2C (consumer to consumer),
- B2E (business to employee),
- B2G (business to government),
- P2P (public to public).

As data published in the specialised magazine Interaktywnie.com shows, in January 2018 the value of sales on the e-commerce market in Poland was 40 billion PLN, an increase of 7 billion compared to January 2016. It is estimated that by the end of 2018 this value will have exceeded PLN 45 billion (Interaktywnie.com 2018, p. 17) The factors that encourage Poles to shop online include mainly (Gemius 2017, p. 66):

- access to a shop's offer at any time,
- possibility of shopping without leaving home,
- unlimited time to make a choice,
- lower prices compared to traditional shops,
- possibility of quick comparison of goods.

Among the most popular e-commerce companies in Poland there are (Gemius 2017, pp. 14-16):

- Allegro,
- Olx,
- Zalando,
- ebay,
- Ceneo.
- Aliexpress,
- Amazon,
- Empik.

Products that are most often purchased on the e-commerce market include (Gemius 2017, p. 139):

- clothes, accessories and add-ons,
- books and CDs,
- household appliances and home electronics,
- smartphones and GSM accessories,
- cinema or theatre tickets,
- footwear,
- cosmetics and perfume.

Characteristics of the company Oponeo.pl

Oponeo.pl is a Polish shop that sells automotive products, including in particular tyres and wheels. What distinguishes Oponeo.pl from among other enterprises in its industry is that it mainly uses direct channels of distribution such as a call centre or Internet commerce. The company started its business activity in 2003 under the name Opony.com Sp. z o.o.

In 2007, it changed its legal form to a joint-stock company, and made its debut on the Warsaw Stock Exchange. Since 2008, Oponeo.pl has been a clear leader in the automotive industry category, according to a ranking of e-commerce stores published by Oponeo.pl. Currently, the company's products can be purchased in 13 European countries: Belgium, the Czech Republic, Germany, Ireland, Spain, France, Italy, Holland, Austria, Slovakia, Turkey and Great Britain. The company also operates e-stores in the United States. Its business strategy is based on a clearly defined vision, which is to:

- set new trends in the e-commerce sector,
- anticipate market requirements,
- strengthen its leadership in the retail trade in tyres via the Internet in Poland, and achieve leadership in Europe.

The mission of Oponeo.pl is focused on achieving the following objectives:

- exceeding customers' expectations by providing the highest quality consultancy in selecting products,
- ensuring customer satisfaction by continuously extending the range of products to include a first-class assortment, ensuring transaction safety and on-time delivery,
- improving and creating modern technical solutions, enabling full functionality of practical applications and effective customer relations management control.

The range of products offered by Oponeo.pl includes tyres and wheels. Purchasers of the products can have them fitted in a garage of their choice. Across Poland, the company guarantees this service in over 1100 fitting stations. The products offered by Oponeo.pl come in a variety of brands and prices. The company sells premium, medium class and low-end tyres from a range of manufacturers. Thanks to its extensive offer, the company has customers from various segments of the market. The revenues generated by particular assortment groups are presented in *Table 1*.

Table 1. Revenues of Oponeo.pl in 2017

	Income in PLN	Share in revenue
Tyres for passenger cars	634 710	93.20%
Rims	27 931	4.10%
Motorbike tyres	15 601	2.30%
Services	14395	2.10%
Truck tyres	1 565	0.23%
Others	1 276	0.18%
Total revenue	681 083	100.00%

Source: Author's own compilation based on (Oponeo 2018)

The flagship product of the company is tyres for passenger cars, which contributed to 93.2% of the company's revenues in 2017. Rims appeared in second place in the statement, but the revenue generated by them is significantly lower than in the case of passenger car tyres and constitutes 4.1% of the total revenue.

Risk determinants in Oponeo.pl in 2017

All enterprises operating on the market are affected by risk factors existing both in their internal and external environments. Oponeo.pl, as a large enterprise listed on a stock exchange, pays particular attention to identifying risk determinants, which is one of the important elements of risk management in this entity.

Table 2. Risk determinants in Oponeo.pl in 2017

<i>Risk determinant</i>	<i>Determinant description from the perspective of Oponeo.pl</i>
Currency fluctuations	As the company conducts its business in a number of countries, it is largely dependent on the level of currency fluctuations. In order to protect itself against foreign exchange risk, the company uses forward contracts. Another precaution is defining the volume of currency purchases a month earlier.
Interest rate change	Oponeo.pl uses lines of credit with variable interest rates. However, it has not implemented any measures to protect itself against the negative effects of this risk factor.
Contractors' payment situation	Unfavourable macroeconomic conditions may contribute to deterioration of the contractors' payment situation. However, this risk is not very significant as the company usually collects payments on delivery of the goods to the customer.
Financial liquidity	The company systematically monitors due dates of receivables and payables. In order to maintain financial balance, it uses various sources of financing. A threat to Oponeo.pl may be posed by changes in credit policy, which will reduce the chances to secure external financing.
Macroeconomic situation in the country and abroad	The company's financial situation depends on the economic situation in Poland and worldwide. The most important issues include: <ul style="list-style-type: none"> – pace of economic growth, – contribution of consumption to GDP generation, – monetary policy, – exchange rates, – prices of raw materials, – overproduction of tyres, – development of competition in the sector.
Fast development of the e-commerce industry	If the pace of the development of e-commerce is faster than expected, the processes responsible for sales may not be adapted to higher market needs, leading to Oponeo.pl losing its leadership.
Technological innovations	Cutting-edge production technologies or the use of drones to deliver products may require implementing fast and costly changes to avoid losing customers to competitors.

Changes in customer preferences	Customers may change their preferences at any time. For instance, they may resign from possessing their own car, and use public transport instead.
Maintenance of IT systems	IT risk in the company is mainly connected with ensuring continuity of the operation of applications and with the possibility of the system being hacked. In order to reduce threats in these areas, Oponeo.pl uses modern, the highest quality IT equipment, implements full multiplication of equipment and software, hires data security staff and uses advanced security systems.
Customer service logistics	The company is exposed to problems with availability of goods in the warehouse, proper packaging, collection by and relations with couriers. This factor is typical of every entity in the e-commerce sector.
Inventory planning	Incorrect assessment of conditions, e.g. weather conditions, may lead to a problem of overstocking. Overstocking means additional costs to maintain stocks, with a reduced quality of goods as a result of long storage in the warehouse.
Staff changes	Loss of qualified staff may result in an increase in the number of incorrectly processed orders.
Legal requirements	The company's business activity is largely dependent on legal modifications in such spheres as: <ul style="list-style-type: none"> – tax system, – labour and social insurance laws, – telecommunication market law, – environmental protection.

Source: Author's own elaboration based on (Oponeo 2018)

In 2017, Oponeo.pl operated in conditions generating a number of risk factors (*Table 2*). The determinants of the most severe risk are those connected with financial risk, as they originate from the enterprise's external environment and can impact it directly. In order to minimise financial risk, the company uses a variety of protection tools such as forward contracts, collection of payment for goods on delivery and diversification of financing sources. Another risk factor that is important for the company is the macroeconomic situation, with a special role played by the development of competition in the sector. One more determinant worth paying attention to is the fast development of e-commerce, which may both pose a threat and offer a chance to the company. The factor that to a large extent depends on the company's activities is maintenance of the IT systems. In contrast to the previous determinants, this factor comes from within the organisation, therefore effective protection against its negative consequences depends to a large extent on the company's precautions. Another important determinant is customer service logistics, which is due to online sale. High on-time delivery and correctness rates for order fulfilment are especially important on the e-commerce market. All the listed risk factors are presented in model in *Figure 1*.

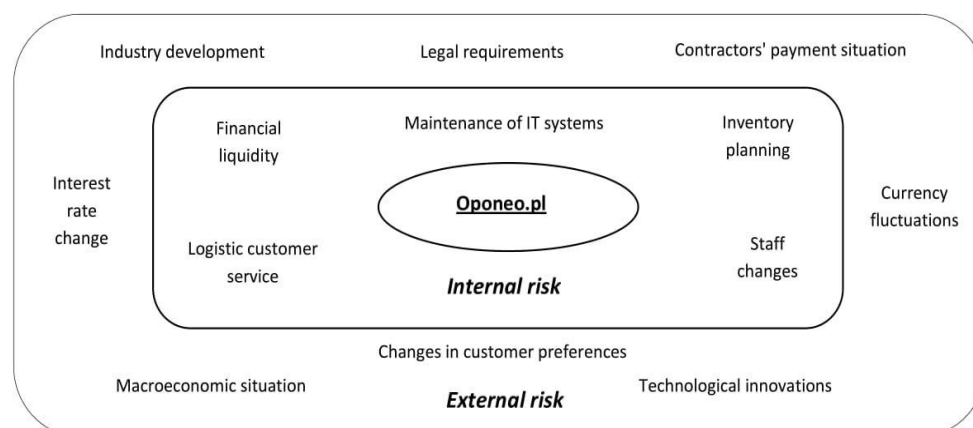


Figure 1. Determinants of risk in environment of Oponeo.pl

Source: O Author's own elaboration based on (Oponeo 2018)

Analyzing the above model, it can be immediately noticed that the external determinants are more numerous than the internal determinants. It is worth bearing in mind, however, that the risk factors disclosed by the company's Board of Directors are probably not all that they have to deal with. Full identification of the risk determinants is considered impossible due to the variability and unpredictability of the environment. Examples of determinants that have not been specified in the Management Board Report, and may be accompanied by activities include, e.g. brand reputation, flows in supply chains, seasonality of sales, quality of management, employee relations, availability of relevant staff on the labor market or the natural environment.

Conclusions

Proper identification of risk determinants enables effective protection against possible threats, and seems to be decisive in risk management in a modern organisation. The joint-stock company Oponeo.pl is a large enterprise operating not only in the e-commerce sector, but also in the tyre industry, which means that the risk factors typical of both these sectors apply to it. The demand on the tyre market is mainly determined by the situation of the automotive industry, which increases the importance of the macroeconomic situation for Oponeo.pl. The company conducts its business activity on the e-commerce market, and as such, it is exposed to risk factors specific of this sphere such as the maintenance of IT systems or the fast development of e-commerce. It is worth noting that the risk determinants mainly come from outside the organisation, which means that the company is unable to control their existence. Given Oponeo.pl's significant market power, it can be concluded that the company does well in risk management, which undoubtedly has to do with proper identification of risk factors.

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DETERMINANTY RYZYKA W PRZEDSIĘBIORSTWIE BRANŻY E-COMMERCE OPONEO.PL SA

Streszczenie: W dzisiejszych czasach aktywne zarządzanie ryzykiem staje się nieodłącznym elementem działań w wielu przedsiębiorstwach. Zarządzanie ryzykiem jest procesem kilkietapowym, rozpoczynającym się sprecyzowaniem celów danego procesu oraz identyfikacją determinantów ryzyka. Właściwa identyfikacja umożliwia efektywne przeprowadzenie kolejnych etapów danego procesu, co decyduje o jego skuteczności. Rozpoznanie źródeł ryzyka pozwala na zabezpieczenie przed negatywnymi zdarzeniami, do których mogą one prowadzić. Branża e-commerce z racji charakteru swojej działalności powinna zwrócić szczególną uwagę na kwestie związane z zarządzaniem ryzykiem. Celem niniejszej publikacji jest identyfikacja determinantów ryzyka, na jakie była narażona spółka Oponeo.pl SA w roku 2017. Realizacja celu badawczego odbyła się w oparciu o analizę *Sprawozdania Zarządu z działalności za rok 2017* niniejszej spółki.

Słowa kluczowe: branża e-commerce, ryzyko, zarządzanie przedsiębiorstwem, zarządzanie ryzykiem



PARTICIPATION IN CLUSTERS AND BUSINESS INTERNATIONALIZATION

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Abstract: In the paper an attempt has been made to discuss two economic issues, seemingly loosely related to each other: the concept of cluster and the process of internationalization. The cluster is a modern form of responding to the changing competitive conditions. In many cases, it is an effective form of development. The decision on selecting a business internationalization strategy is accompanied by similar motivations. Internationalization is undertaken by enterprises also in order to increase the effectiveness of operations and to achieve a favorable competitive position. It should be emphasized that internationalization can be regarded both at the level of individual enterprises operating within cluster as well as the whole cluster.

The objective of the paper is to identify the benefits of and opportunities for simultaneous implementation of activities by companies within the cluster as well as strategies for the internationalization of business operations. In the paper, the subject literature available to the authors and the research results in the field of the functioning of clusters in Poland have been used. The methods typical for such cases of literature studies as well as analysis and synthesis methods have been applied. The most important conclusion coming from the paper is the observation that the combination of the activity within the cluster structure along with simultaneous implementation of internationalization strategy may contribute to a synergy effect.

Keywords: cluster, internationalization, management, strategy

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Introduction

The concept of the cluster as an effective form of business activity organization is gaining popularity. In the simplest terms, a cluster is understood as a flexible form of cooperation, particularly between three groups of entities: enterprises, scientific-research units and public authorities. These structures create a specific environment characterized by favorable conditions for cooperation and other types of interaction, being a type of a catalyzer of technological and social innovation. At the same time, they contribute to the development of the region and thus to the whole domestic economy.

The most important characteristics of clusters include the existence of internal relationships and ties, which have a systemic nature and the simultaneous occurrence of both cooperation and competition between individual entities, which is defined as *coopetition* in the economic literature (Cygler 2009). This type of

relationships can be understood as a common strategy for value creation and competition while sharing this value in conditions of partial convergence of objectives and changing structure of the positive-sum game (Dagnino et al. 2008).

The cluster research results indicate a range of resulting benefits. The most important ones are: the creation of specialized production factor markets (knowledge and high quality human capital), scientific infrastructure development, stimulation of the flow of knowledge, emergence of new enterprises, an increase in location attractiveness for investments and the creation of an attractive labor market. Obviously, the functioning of clusters may also be associated with potential negative effects, such as the possibility of clusters transforming into cartels, a negative impact on the natural environment, which results from a high concentration of production companies, the danger of the emergence of an economic monoculture resulting in perception of the region through the prism of a specific business profile.

The reason for approaching the topic of the paper is the assumption that effectively operating clusters may positively affect the competitive position of the enterprises that are a part of them, in particular the ones from the sector of small and medium-sized enterprises (SMEs). These entities, connected in clusters, have easier access to essential production factors, modern knowledge and sales markets with a high level of concentration.

The cluster in the modern economy

The concept of the cluster is not a new phenomenon, though, not until recently was it recognized as a formalized, clearly understood economic category. The oldest known cluster comes from the period of 4000-3500 BC. It was located in the area of modern Southern Iraq. The cluster included Sumerian cities along the valley between the Euphrates and Tigris rivers. There were some districts which had specifically defined business areas and specialized markets (Morosini 2003).

The first research into clusters, understood in the way adopted contemporarily in the subject literature, is attributed to A. Marshall, who proposed the concept of an *industrial district*, which was the result of the tendency of production companies to locate and focus their activity near their competitors, suppliers and customers (Rudzka, Góralski 2012). Consequently, the so-called *external economies of scale* (Grycuk 2003, p. 8) came into being, which resulted from the presence of a group of suppliers and customers in a specific area, development of the local labor market and flows between enterprises.

In the economic literature, the concept of cluster was used for the first time and popularized by M.E. Porter. His definition is the following: "A cluster is a geographical proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and externalities" (Porter 2009, pp. 226-227). In his opinion, clusters provide the economy with a range of benefits since they:

- increase the productivity of enterprises operating within the cluster,
- contribute to an increase in the level of innovativeness of enterprises,

- create favorable conditions for the emergence of new companies. The cluster means a new way of thinking about creating the competitiveness of the economy (Porter 2001). It is a unique creation; on the one hand, it enables and fosters cooperation, and on the other, by maintaining full autonomy and independence, allows competitive actions.

Due to the complexity of the phenomenon, there are many definitions of the cluster (Brodzicki, Szultka 2002). Some of them focus on specific areas of interdependent enterprises operating in the same or related sectors (Rosenfeld 1997; OECD 2000). In contrast, Doeringer and Terkla (1995) emphasize the interactions and functional links between enterprises and cross-sectoral dimension of the cluster. In turn, Jacobs and de Man (1996) highlight the significance of the social and cultural factors essential for the efficient transfer of information within the cluster.

Clusters emerge practically in all sectors of the economy, obviously differing in terms of the level of innovativeness, technological advancement and development strategies. In different types of clusters different competences are required. Anderson, Schwaag-Serger, Sorvik and Hansson underline (2004, p. 106) that in the area of services, interpersonal skills and the ability to operate in complex ambiguous conditions are becoming particularly important.

An effective cluster translates into increased productivity of local enterprises, which results from relatively easy access to specialized production factors. On the other hand, the presence of other entities stimulates the innovativeness of enterprises. Clusters prevent the isolation of enterprises (Ffowcs-Williams 2000, p. 8). They also require redefining the ways of managing risk (Gorzeń-Mitka 2018). In addition to the listed benefits, M. Enright and I. Ffowcs-Williams (2000, p. 3) highlight the possibility of using the advantages of a small company, while benefiting from economies of scale (due to cooperation).

A growing number of studies concerning clusters indicates a range of potential benefits for the economy at the local, regional and even national level. It includes primarily: increasing the competitiveness of the participating enterprises, creating innovative environments (Sipa 2015), creating conditions for the diffusion of knowledge as well as conditions for the emergence of social capital (Skibiński 2017). In the Polish economy, clusters are a relatively new phenomenon as several years ago they did not actually exist. The first clusters began to come into being in 2003, although their actual development began in 2007.

General characteristics of clusters in Poland

In Poland, systematic research into clusters using the benchmarking method has been conducted by the Polish Agency for Enterprise Development (PARP) since 2005. PARP independently for the first time carried out an inventory of clusters operating in Poland in 2015. Generally, 134 entities were identified, which in line with the adopted definitions and research assumptions, can be called clusters. 106 entities possessing the characteristics which allow them to be referred to as *potential clusters* were also distinguished. The research results are included in *Table 1*.

Table 1. Number of clusters and entities creating clusters by region

No.	Voivodeship	Number of clusters	Percentage of clusters (%)	Number of entities in clusters	Percentage of entities (%)
1.	Śląskie	28	20.90	1190	20.28
2.	Mazowieckie	13	9.70	608	10.36
3.	Podkarpackie	12	8.96	488	8.32
4.	Wielkopolskie	12	8.96	499	8.50
5.	Dolnośląskie	11	8.21	554	9.44
6.	Lubelskie	11	8.21	443	7.55
7.	Małopolskie	10	7.46	354	6.03
8.	Podlaskie	8	5.97	272	4.64
9.	Zachodniopomorskie	6	4.48	359	6.12
10.	Pomorskie	5	3.73	427	7.28
11.	Kujawsko-Pomorskie	4	2.99	125	2.13
12.	Lubuskie	4	2.99	82	1.40
13.	Świętokrzyskie	4	2.99	190	3.24
14.	Łódzkie	3	2.24	120	2.04
15.	Warmińsko-Mazurskie	2	1.49	137	2.33
16.	Opolskie	1	0.75	20	0.34
Total:		134	100.00	5868	100.00

Source: Based on (PARP 2016)

There is a total of 5868 entities operating in the surveyed population. The number of entities in a cluster ranges from 8 to 171, on average, there are 44 entities. The largest number of clusters is in the Śląskie Voivodeship - over 20% of all the clusters in Poland. This voivodeship is also characterized by the largest number of entities in clusters (1190), which amounts to more than 20% of all the entities.

The structure of clusters in Poland consists of enterprises, business environment units, scientific units and other entities. The most numerous group is enterprises - 4578 entities, which amounts to 78% of all the participants. Almost half - 47% of all the cluster participants is microenterprises, small enterprises - 27%, medium-sized enterprises - 18% and large enterprises - 8%. Most clusters operate in the ICT sector - 19%, the energy and renewable energy sources sector - 16%, construction - 12%, medical sector - 10% and tourism - 10%.

The number of clusters in Poland remains on an average level. The clusters operating in Poland are small structures and they belong to the smallest concentrations of this type in Europe. In Poland there are 44 entities per cluster co-creating it. It is just like in Sweden, Spain and Norway (respectively: 40, 50 and 60 entities). Nevertheless, in Germany and Denmark, it is already 100 on average, in France – 170, in Austria – 220, and in Finland – as many as 260 entities (Müller et al. 2012, p. 17).

Business and cluster internationalization

The ongoing process of globalization of the world economy has changed the face of competition once and for all. Nowadays, all enterprises, irrespective of the scale of their activity, even microenterprises, are forced to operate in the conditions of global competition. Even if the company does not plan expansion abroad, it comes across foreign competitors in its own domestic market. The enterprise is forced to compete for scarce resources and shrinking markets with rapidly growing and increasingly stronger foreign competitors. Paradoxically, in addition to risks and limitations, globalization is associated with specific opportunities. This is primarily access to a larger market of resources, in particular exclusive technological and organizational knowledge, as well as a huge sales market (Brzozowska et al. 2017).

Along with the ongoing globalization, it is becoming increasingly difficult to achieve the desired competitive position. The concept of clusters has brought a new way of creating the competitiveness of enterprises and entire national economies, as clusters are an effective way to search for the synergy effects arising from cooperation of the entities being a part of the triple helix, i.e. entrepreneurs, scientific institutions and public authorities.

The strongest cooperation and most interactions take place between the participants of clusters at the regional level. However, the globalization process forces cluster participants to behave in a manner so as to internationalize their operations. This is encouraged by favorable conditions for the free movement of resources and increasing specialization of the value chain. Moreover, clusters have the potential to attract foreign capital since they create investment attractiveness of the specific location.

Cluster structure and internationalization

Internationalization understood in the simplest way means going with one's own operations beyond the borders of one's own home country in order to gain better opportunities for development. Jankowska (2010, p. 19) proposes understanding internationalization in a similar way – as building ties with foreign partners or markets. Since internationalization is a complex and multidimensional process, including economic aspects as well as sociological, cultural and political ones, referring to one, generally accepted definition is not possible. Depending on the research needs, this concept is defined through the prism of different categories and approaches.

Internationalization can be considered at the level of enterprises creating clusters or at the level of entire clusters. Przybylska (2005, p. 73) defines cluster internationalization as:

- the process of increasing the involvement of the cluster in operations at the international level, including both active forms (export, contractual cooperation, foreign direct investments - FDI) and passive ones (import, purchase of licenses, foreign cooperation),
- the process of cluster reorientation from national to international,
- a gradual increase in the involvement of the company in foreign markets.

The basic reasons for cluster internationalization include the willingness to strengthen the significance and recognition of the organization at the international level, bypassing the barriers to access to target markets and gaining *know-how* from foreign partners.

According to Jankowska (2010, p. 23), the activities fostering cluster internationalization include:

- creation of formal and informal forms of cooperation with foreign partners,
- selective relocation,
- replicative relocation,
- common R+D projects with foreign partners,
- organization of joint purchases and distribution,
- cooperation with foreign partners in the field of subcontracting.

If cluster members are foreign entities, they can be a good source of information. This affects a reduction in the costs of obtaining information on the functioning of foreign markets and allows the mutual sharing of experiences in the field of expansion, managerial skills and distribution channels (Kinas 2013, pp. 134-137). In cluster structures, mutual trust is very important since it contributes to a reduction in operational risk. It is particularly significant in the international competitive environment, which is characterized by great variation and uncertainty of the operating conditions.

A challenge for enterprises operating in clusters is reorientation of the knowledge distribution system. It is necessary to direct its flow not only to the inside of the organization but also outside it (Brojakowska-Trząska 2016, p. 41).

Internationalization of clusters operating in Poland

The benchmarking cluster studies conducted in Poland by PARP (2012; 2014; 2016) indicated that internationalization is a very important area of the functioning of clusters. In accordance with the research results published in 2014, internationalization occupied the second position in terms of strategic goals in the group of examined enterprises (being a part of 35 clusters). The rise from the sixth position in 2012 may prove the increasing orientation of clusters towards internationalization and anticipating the increasing benefits from international cooperation (Lis, Romanowska 2016).

The cluster research in Poland was carried out on the basis of three main indicators: the number of supported foreign markets, share of export in sales, and the number of formal cooperation agreements with foreign entities. According to the research results, most clusters are moderately internationalized. Better results were achieved by large clusters and the ones in which an active role in the process of coordinating activities was played by universities and research and development units. However, the conclusions from the research included the statement that clusters represent a lower level of internationalization than is possible since not all the clusters fully exploit the opportunities provided by the environment.

The most recognizable Polish cluster at the international level is the "Aviation Valley" cluster, which is located in south-eastern Poland. It was established in

2003 and it comprises 120 members now. Its mission is to strengthen the role of the region as one of the most important regions of the aviation industry in Europe, to create an efficient and reliable network of sub-supplies and a cost-effective supply chain (Bembenek 2014, p. 45). Decision makers take numerous actions aimed at cluster internationalization. They may include (Hołub 2012, p. 51):

- cluster members actively searching for appropriate partners from among foreign companies,
- systematic organization of *face-to-face* business meetings with foreign companies, foreign clusters, embassies, industry associations for cluster members,
- setting up a cluster cooperation network, currently associating more than thirty aviation clusters under the name of EACP - European Aerospace Clusters Partnership,
- building wide cooperation with aviation clusters from different countries, among others with Aero Montreal (Canada), AsTech (France), Hegan (Spain), the Hungarian Aerospace Cluster (Hungary), BBAA (Germany) and ClusterAvatik (Switzerland),
- periodically organized participation of cluster members in international events: study visits, training, conferences etc.,
- organization of international fairs “Aviation Valley Expo Day & B2B Meetings”,
- publications in the world economic and trade press (Financial Times, Flight, Aviation Week),
- participation in the prestigious project - 7 PR. CARE-Clean Aerospace Regions,
- effective cooperation with foreign scientists in different prestigious projects.

Intensification of the cluster internationalization process is significantly affected by reputable and recognized transnational corporations, e.g. the American United Technologies Corporation and Sikorsky Aircraft Corp., the French Hispano-Suiza, the German MTU Aero Engines, the Canadian Vac Aero, and the Italian-British Augusta Westland. These companies, through direct investments, contribute to the building of cluster relationships with foreign partners and they strengthen the effect of technological and knowledge spillovers to the inside of the cluster.

Conclusions

The ongoing process of globalization has changed the face of competition once and for all. The barriers to capital flow and also to access to foreign production factor markets and sales markets have been significantly reduced. These circumstances have made each enterprise a participant of the processes of internationalization and globalization of the economy, if not an active one then at least a passive one. The changing competitive environment requires reorientation of the classic paradigm of enterprise management.

The response to these changes can be the organization of enterprises into clusters. Cluster structures have many advantages. They allow an increase in the

productivity of enterprises operating within it, contribute to an increase in the innovativeness of enterprises, and create favorable conditions for the emergence of new companies. These effects can be significantly intensified through the internationalization of activities of enterprises functioning within the cluster or the internationalization of entire clusters, which translates into benefits coming from this process to individual cluster members.

The main motivation for business internationalization is the willingness to make use of broadly understood foreign production factor markets, both tangible and intangible, particularly taking into account knowledge, technology and know-how as well as foreign sales markets.

The present paper is an attempt to logically link the concept of the cluster with the concept of internationalization. The result is the conclusion that it is possible in this case to obtain a synergy effect. Since cluster structures are increasingly represented in the economy, and the level of internationalization of enterprises operating in clusters as well as entire clusters is increasing, one may hope that further research in this field will be intentional, significant and necessary.

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UCZESTNICTWO W KLASTRACH A INTERNACJONALIZACJA DZIAŁALNOŚCI GOSPODARCZEJ

Streszczenie: W artykule podjęto próbę dyskusji nad dwoma problemami ekonomicznymi, pozornie luźno ze sobą powiązanymi: koncepcją klastra oraz procesu internacjonalizacji. Klastery stanowią współczesną formę odpowiedzi na zmieniające się warunki konkurencji. W wielu przypadkach jest to skuteczna forma rozwoju. Podobne motywacje towarzyszą decyzji o wyborze strategii internacjonalizacji działalności. Internacjonalizacja podejmowana jest przez przedsiębiorstwa również w celu zwiększenia efektywności działań i uzyskania korzystnej pozycji konkurencyjnej. Należy podkreślić, że internacjonalizację można rozpatrywać zarówno na poziomie poszczególnych przedsiębiorstw działających w ramach klastra, jak i całego klastra.

Celem pracy jest identyfikacja korzyści oraz możliwości jednoczesnej realizacji przez przedsiębiorstwo działalności w ramach klastra oraz strategii internacjonalizacji działalności gospodarczej.

W pracy wykorzystano dostępną autorom literaturę przedmiotu oraz wyniki badań w zakresie funkcjonowania klastrów w Polsce. Zastosowano typowe dla takich przypadków metody studiów literaturowych, a także metodę analizy oraz metodę syntezy.

Najważniejszym wnioskiem płynącym z pracy jest konstatacja, że połączenie działalności w ramach struktury klastrowej z jednoczesnym realizowaniem strategii internacjonalizacji może przyczynić się do powstania efektu synergii.

Słowa kluczowe: klaster, internacjonalizacja, zarządzanie, strategia



CORPORATE SOCIAL RESPONSIBILITY AND CORPORATE FINANCIAL PERFORMANCE CASE OF LISTED VIETNAMESE COMPANIES

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Abstract: Social responsibility has begun to draw attention in Vietnam in recent years. Corporate Social Responsibility (CSR) is still a very new concept and pioneers, both researchers and practitioners, in this area are facing numerous challenges in executing CSR programs in Vietnam. For the purpose of studying the impact of CSR on the financial performance of the firm, we studied a sample of 30 listed Vietnamese firms in the food industry over the period of 2013-2015. We used archival data as the input data for the quantitative research method to produce regression models and examine the relationship between CSR and corporate financial performance (CFP) in Vietnam. The results show that there is no significant relation between the two factors. On the basis of the findings, some suggestions are made for rational directions to improve the social responsibility of enterprises in Vietnam.

Keywords: CSR, corporate financial performance, CSR measurement, Vietnamese listed firms

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Introduction

Social Responsibility is a field of research which investigates processes and solutions in order to guarantee a strategic balance between economic growth and social development at both the macro level (international, regional, national, local) and micro level (level of enterprises). Corporate Social Responsibility (CSR) is a field of research aimed at defining what the essence of a socially responsible business is and what a business has to do to become socially responsible. It is related to a whole range of practical issues, such as business ethics programs, corporate governance, social policy, fair trade practice, socially responsible investment and production, etc. (Nguyen Hoang Tien 2015). Generally, CSR is a continuous commitment of an enterprise to contribute to its economic development, while enhancing the quality of life of the workforce as well as of the community, society and environment. CSR is a growing organizational phenomenon with many broad implications for practitioners, scholars and society at large (Kot 2014). A similar concept, that is the concept of community involvement, was born earlier (1960s and 70s) in developed countries. The development of this concept was made possible by changing the perception and

understanding of the business environment of companies and understanding the role they play in the society of different countries (Herbuś, Ślusarczyk 2012). CSR is currently a very popular management concept worldwide and now it is being imported to Vietnam. Vietnamese business including the food industry is beginning to respect CSR rules and regulations, behavioral standards and norms due to growing pressure from the multinational corporations of developed countries operating in the Vietnamese market. Until now, it has been regarded that businesses in Vietnam do not practice social responsibility to an adequate extent. According to a CSR survey conducted by Social Responsibility Initiatives Vietnam, 90% of the respondents misunderstood the idea of CSR and related issues. Not many studies have been carried out on CSR issues in the context of Vietnam. The aim of the article is to strive to find a theoretical framework to study the relationship between CSR and corporate financial performance (CFP), thereby contributing significantly to further research.

Literature review

Corporate social responsibility in developing countries

In the literature of business and management there are many definitions of CSR. It can be argued that the sphere of influence of CSR is not confined within the enterprise itself. It has a great influence on many different parts of society, especially in relation to the role of the state in the economy (Davis 1973; Carroll 1999; Matten, Moon 2005). Both large corporations and small organizations also have obligations to the society, which are above that of creating value for shareholders. Corporations should be managed for the benefit of all those who are interested in those organizations (managers, owners, suppliers, employees, local communities) (Man, Macris 2015). Consequently, the concept of CSR is constantly changing depending on the spatial and temporal sphere of the scientific and practical debate. Today, the definition of CSR from the World Business Council for Sustainable Development is widely used, which is considered complete and clear: “Corporate Social Responsibility is the constant commitment of the business to business ethics and to contribute to economic growth, while improving the quality of life of workers and their families, as well as of the community and society” (WBC 1998).

As all of the above mentioned definitions and understandings were sketched out and constructed to suit the characteristics of the European and American market (the highly developed world), however, it is also of great importance to recognise the scope and agenda of CSR in developing countries apart from its typical manifestation in developed economies. Visser (2008) argued that developing countries feature specific CSR drivers, both internal and external, which make the local settings different (*Table 1*).

Table 1. CSR drivers in developing countries

Internal drivers	External drivers
<ul style="list-style-type: none"> – Political reform – Crisis response – Cultural tradition – Socio-economic priorities – Governance gap 	<ul style="list-style-type: none"> – International standardization – Investment incentives – Stakeholder activism

Source: (Visser 2008)

The literature suggests that different countries have varying economic, political, social, and cultural settings where corporations operate and relate to their stakeholders (Visser 2008; Lindgreen, Swaen, Campbell 2009). The specificities of developing countries change the circumstances in which companies face business and social concerns (Muthuri, Gilbert 2011). In developing countries, CSR topics do not follow a specific theme or country pattern. The literature review reveals a lack of interest in understanding conceptual foundations, focusing instead on a description of CSR practices in developing countries (Ite 2004; Chapple, Moon 2005; Eweje 2006; Arya, Bassi 2009; Wiig, Kolstad 2010). This tendency to understand what companies are doing is related to the type of methodology that most papers used. Case studies and interviews are used to find the answers to 'why' and 'how' questions, as well as to offset the lack of previous findings in the literature (Rubin, Rubin 2005; Yin 2009). Thus, the prevailing research design of these studies suggests that they are the first steps taken to understand the drivers underlying CSR practices in developing countries. The vast preference for qualitative research methods may indicate both the difficulty of conducting empirical research in developing countries (Husted, Allen 2006; Jamali, Mirshak 2007) and the need to explore new research grounds (Jamali 2010; Wiig, Kolstad 2010).

While the application of CSR philosophy in business for the purpose of sustainable development is becoming a popular trend in developed countries, this issue is considered relatively new to developing countries, particularly in the case of Vietnam. In addition, the CSR studies conducted in Vietnam remain very scarce. Nguyen Dinh Cung & Luu Minh Duc (2008) discussed some basic theoretical issues, international experiences and present several CSR practices in Vietnam. The study is aimed at analyzing the current understanding of CSR among Vietnamese companies and the administrative role of government in supporting CSR practices. Other research revealed CSR in the philosophy and actions of Vietnam's garment and textile industry. The case of the Dap Cau joint stock company (Nguyen Phuong Mai 2013), makes some suggestions to promote sustainable CSR practices. Other authors (Tran Thi Minh Hoa, Nguyen Thi Hong Ngoc 2014) conducted a similar study of CSR towards employees, the environment and the community in the case of Sofitel Legend Metropole and Ha Noi Sofitel Plaza in Vietnam. This study examines the parties involved, who are the owners, customers, employees, communities and management agencies, and then proposes solutions to enhance CSR. However, almost no research has been conducted in

Vietnam that relates to the relationship between CSR and financial performance. CSR has basically dealt with the same thing. Besides the development benefits for each enterprise in accordance with current laws, CSR must link enterprises with common development benefits for the community through social cooperation and interaction (Tran Anh Phuong 2009).

Measuring corporate financial performance

There are many indicators that measure corporate financial performance (CFP), but the most commonly used indicators in CSR research studies can be divided into two main categories: i) book value indicators; and ii) market value indicators.

(i) Book value indicators, also known as financial indicators, are created using numerical values derived from financial statements in order to obtain significant information about the company. Profitability is one of the most commonly used. The most commonly used profit indicators are ROA and Return on Equity (ROE). To calculate these two indices, Li, Sun & Zou (2009); Tian & Estrin (2008) simply use net profit. Others use net profit plus interest (before or after tax) as Shah, Butt & Saeed (2011); Thomsen & Pedersen (2000). Meanwhile, studies have suggested that pre-tax profit, interest, depreciation and amortization (EBITDA) should be used. Even so, profit before tax and interest (EBIT) have been chosen by researchers to calculate these two factors (Hu, Izumida 2008; Le, Buck 2011; Wang, Xiao 2011). In addition to the different financial implications, the reasons for such different calculations may be due to database constraints. In many cases, incompleteness of the database will force some researchers to carry out different calculations.

(ii) For the market value indicators, the Marris and Tobin's Q ratios are very popular as good tools to assess CFP. Tobin's Q ratio was devised by James Tobin of Yale University, Nobel laureate in economics. This ratio is measured by the market value of a company divided by the replacement value of the firm's assets, which reflects the financial market forecasts of future growth and potential profitability of a firm. Unlike Tobin's Q ratio, the Marris ratio is the ratio of the bank market capitalization to equity at the book value, and is itself an indicator that reflects the opportunities for growth. When this ratio is greater than 1, the bank creates value; otherwise, it would destroy it (Marris' hypothesis).

In summary, the CFP of joint-stock companies can be assessed by means of two combined groups, of which the four most important are ROA, ROE, the Marris and Tobin's Q ratios. The combination of these indicators can be given to the managers, business leaders, shareholders and the market as a basis for decision making purposes. ROA and ROE are effective indicators for current business performance and reflect the profitability that the firm has achieved in the past accounting periods. Nevertheless, there may be different calculations, mainly due to the way the profit is calculated. Meanwhile, the Marris and Tobin's Q ratios can indicate the company's future performance because they reflect the market's assessment of the potential for future profitability, in terms of the stock market price.

Relationship between corporate social responsibility and corporate financial performance

The agency theory explains the asymmetric information problem between the owners and the managers of an enterprise, and is quickly becoming a theory for researching social responsibility and corporate governance issues. The theory applies to matters relating to the representation contract between them. Therefore, when the enterprise develops its social responsibility, it must be placed in the balance of interests between the representative's corporate governance decisions and the interests of the owners. CSR expenditures are not a form of corporate charity nor do they improve future financial performance. Firms rather undertake CSR expenditures in the current period when they anticipate a stronger future financial performance (Lys, Naughton, Wang 2015). The study carried out by Herremans, Akathaporn and McInnes (1993) shows that large U.S. manufacturing companies with better reputations for social responsibility outperformed companies with poorer reputations in the period 1982-1987, and provided investors better stock market returns at a lower risk. According to tens of American, European and Japanese business managers, the future belongs to those who create a dynamic and integrated organization that is capable of achieving specific effects and capable of being socially responsible (Mizera 2008).

In addition the stakeholder theory explains more clearly the corporate goal of achieving the ability to balance the conflict of different stakeholders (Cooper, Owen 2007; Darnall, Seol, Sarkis 2009). We highlight the CEO's role in influencing the entire decision process (Gao, Lisic, Zhang 2014). Stakeholders include: shareholders (Roberts 1992; Haniffa, Cooke 2005), creditors, employees, customers, suppliers, community and government. The stakeholder theory has in many ways become an inseparable companion of CSR. Freeman (1984) divided the development of stakeholder concepts into corporate policy models, business plans, and managers' social responsibility models

Moser and Martin (2012), suggest the significance of CSR costs that are related to the costs of the parties involved. Accordingly, the decision usefulness theory refers to establishing criteria in the CSR model related to the cost benefit principle. Business policy and business plans are used to guarantee the financial effect of the business.

Recent studies have focused on the effects of CSR on financial performance. Dhaliwal et al. (2014) discovered that a negative association exists between CSR disclosure and the cost of equity capital. This relationship is more pronounced in stakeholder oriented countries. Abdelkbir and Faiçal (2015) analyze the influence of CSR on the financial performance measured by several indicators. Ilinitich et al. (1998) present a case study based on detailed analysis of the environmental performance of 15 firms in the chemical sector. In the same perspective, Wiseman (1982) selects a sample of 26 of the largest companies in the steel, oil, and paper industries for the study. In order to investigate the differences between the top performing group and the bottom performing group in terms of environmental disclosure quality, further analysis also confirms that there is a positive relationship between the quantity and quality of environmental disclosure.

Methodology

Research method

This study uses archival research methodology to summarize studies published inside and outside Vietnam. In addition, this study uses interpretive research methodology to analyze and evaluate its purposefulness. Then we use the quantitative method to test the relationship between the CSR and CFP of Vietnamese enterprises.

The interview and survey methods used to explain CSR issues that are intensively investigated abroad need some adaptive changes to fit in the current Vietnamese economic, social and cultural context.

Research data

The data were collected from audited financial statements of 30 listed food industry companies on the Ho Chi Minh Stock Exchange throughout the period of 2013-2015.

Research models

On the shareholder level, the most important ratio is return on equity (ROE). This ratio is designed to measure profitability per common share capital. ROE is the best measure of a company's ability to maximize profits from each of its capital investments. The clearest explanation of it is the rule: the higher a company's ROE is, the more competitive the company is and the better its sense of social responsibility is.

CSR is a multidimensional concept that is often measured using diverse indicators. Composite indices can aggregate single indicators into one measurement. (Haniffa, Cooke 2005; Abdelkbir, Faiçal 2015) (*Table 2*).

Table 2. Corporate Social Responsibility measurement

Source	CSR measurement indexes
Haniffa, Cooke (2005), "The impact of culture and governance on corporate social reporting"	$CSDI_j = \frac{\sum_{i=1}^{n_j} X_{ij}}{n_j}$ <p>Where</p> <p>$CSDI_j$ = corporate social disclosure index</p> <p>n_j = number of items expected for jth firm, $n_j \leq 41$</p> <p>X_{ij} = 1 if ith item is disclosed 0 if ith item is not disclosed</p>

Source	CSR measurement indexes	
Cho, Lee, Pfeiffer (2013), "Corporate social responsibility performance and information asymmetry"	CSRALL _{it}	Standardized sum of strengths and concerns scores (i.e., CSRSTR + CSRTCON) for firm <i>i</i> in the fiscal year <i>t</i>
	CSRSTR _{it}	Standardized CSR strengths score for firm <i>i</i> in fiscal year <i>t</i>
	CSRCON _{it}	Standardized CSR concerns score for firm <i>i</i> in fiscal year <i>t</i>
Abdelkbir & Faïçal (2015), "Corporate social responsibility and financial performance"	CSR	Corporate social responsibility Dichotomous variable that takes the value 1 if the firm holds a label issued by MEGC, and 0 if it is not labelled

Source: (Haniffa, Cooke 2005; Cho, Lee, Pfeiffer 2013; Abdelkbir, Faïçal 2015)

Abdelkbir E. and Faical Z. (2015) found relationships between CSR disclosure and CFP. In this study, the model which reflects the impact of CSR on CFP is measured by stock market indicators (the Marris ratio and Tobin's Q), book value indicators (ROE, ROA) and control variables including size (the size of the firm), risk (the risk linked to the activity of the firm), LF (the financial lever). These indicators have been widely employed in empirical studies to deal with the association between CSR and CFP. According to the study, there are four models to measure CSR: ROA, ROE, Tobin's Q and the Marris ratio. However, the research objective is CSR which is correlated with financial performance in measuring profitability. Moreover, according experts interviewed in the study, the ROE method is appropriate for the context of Vietnam. In Vietnam, CSR has developed in recent years. Therefore, we add the variable "age" to the model in order to observe the formation and development of CSR in companies according to the "Age" variable. Currently, most of the business enterprises in Vietnam are medium and small-sized, not listed on the securities market. Hence, the control variable 'risk' is difficult to measure reasonably. In this case, it is possible to exclude the risk variable in the model. Therefore we have the specification of following econometric model:

$$ROE_{it} = \alpha_0 + \alpha_1 CSR_{it} + \gamma_2 Size_{it} + \gamma_3 LF_{it} + \gamma_4 Age_{it} + \varepsilon_{it}$$

Table 3. Variable description

Variables	Description	Measurement	Data Source
Dependent variables			
ROE	Profitability of one's own capital (return on equity)	ROE = ratio between net income and equity	Audited financial statements of 30 listed food industry companies on Ho Chi Minh Stock Exchange

Variables	Description	Measurement	Data Source
Explanatory variable			
CSR	Corporate social responsibility	Dichotomous variable that takes the value of 1 if the firm holds a label issued by the sustainable development report ^(*) , and 0 if it is not labelled	Sustainable Development Report published by the Business Council for Sustainable Development (VBCSD)
Control variables			
Size	Size of the firm	Size = Ln (Total Assets) Audited financial statements of 30 listed food industry companies on Ho Chi Minh Stock Exchange	
LF	The financial lever	LF = Total debt/ divided by own capital Audited financial statements of 30 listed food industry companies on Ho Chi Minh Stock Exchange	
Age	Number of financial years	Year of operation Audited financial statements of 30 listed food industry companies on Ho Chi Minh Stock Exchange	

Source: (Ho Chi Minh Stock Exchange 2013-2015)

Notes:

()The sustainable development report will help investors (shareholders) and staff access information on the development strategies and operations of firms in the aspect of sustainable development in the economy, society, environment, thus investors and staff can gather information from firms fully and comprehensively*

Research results

Table 4 presents a summary of the data collected for the above mentioned companies in the food industry.

Table 4. Summary

Variable	O bs	Mean	Std. Dev.	Min	Max
Code	0				
Age	0	24.93333	13.4989	8	63
Year_obs	90	2014	.8210708	2013	2015
roe	90	.1029456	.4736007	-3.674	1.4148
size	90	1.692032	2.206606	.1548	16.6705
lf	90	1.692032	2.206606	.1548	16.6705
crs	90	1.188889	.3936132	1	2

Source: Data processing by author 2016

The fixed-effects model and random-effects model are used to estimate the panel data. The research was estimated by 2 of these models. If the result shows that there is statistical significance and relevance between CSR and CFP, the better model will be chosen. The results are as below:

Table 5. Random-effects Generalized Least Square regression results

Random-effects GLS regression		Number of obs = 90				
Group variable: mactyl		Number of groups = 30				
R-sq: within = 0.6091		obs per group: min = 3				
Between = 0.6379		avg = 3.0				
overall = 0.5080		max = 3				
corr(u _i , x) = 0 (assumed)		Wald chi2(4) = 87.06				
		Pro > chi2 = 0.0000				
roe	Coef.	Std. Err	z	P> z	[95% Conf. Interval]	
crs	-.0325728	.1073922	-0.30	0.762	-.2430576	.1779119
Size	-.0288483	.0231473	-1.25	0.213	-.0742162	.0165196
Lf	-.1658886	.0180249	-9.20	0.000	-.2012168	-.1305603
Age	-.0038294	.0028671	-1.34	0.182	-.0094488	.00179
_cons	1.302651	.6090064	2.14	0.032	.1090209	2.496282
sigma_u	.07125273					
sigma_e	.27746426					
rho	.06186624	(fraction of variance due to u _i)				

Source: Data processing author 2016

Table 6. Fixed-effects regression results

Fixed-effects (within) regression		Number of obs = 90				
Group variable: mactyl		Number of groups = 30				
R-sq: within = 0.6797		obs per group: min = 3				
between = 0.0117		avg = 3.0				
overall = 0.0326		max = 3				
		F(4, 56) = 29.71				
corr(u _i , Xb) = -0.9729		Pro > F = 0.0000				
roe	Coef.	Std. Err	t	P> t	[95% Conf. Interval]	
crs	-.1230248	.206246	-0.60	0.553	-.5361852	.2901355
size	-.1569672	.0982693	-1.60	0.116	-.3538242	.0398898
lf	-.2865879	.0283035	-10.13	0.000	-.3432866	-.2298891
Age	.122275	.0376828	3.24	0.002	.0467872	.1977628
_cons	1.955662	2.678486	0.73	0.468	-3.409989	7.321314
sigma_u	1.7943693					
sigma_e	.27746426					
rho	.97664777	(fraction of variance due to u _i)				
F test that all u _i =0:		F(29, 56) = 2.57 Prob>F=0.0012				

Source: Data processing author 2016

The summarized results from *Table 5* and *Table 6* show that the independent variable CSR does not correlate with the dependent variable ROE in the R random-effects GLS regression model ($P>[z] = 0.762 > 0.05$) and in the fixed effects regression model ($P>[t] = 0.553 > 0.05$). In other words, there is no statistical significance or relevance between CSR and CFP in terms of ROE.

Discussion

As the following test results show, there is no correlation between CSR and ROE. This result is consistent with the adoption of CSR ideas and concepts which are considered relatively new for developing countries, especially in Vietnam. CSR is relatively new in Vietnam and so far the implementation of CSR is still limited. The barriers and challenges for implementing CSR include:

- Limited awareness of CSR ideas and concepts, the understanding of CSR by businesses is not enough.
- Many enterprises lack financial and technical resources to implement CSR standards, especially for the small and medium-sized enterprises sector, while most Vietnamese enterprises are small and medium-sized enterprises.
- The legal status of assessing CSR implementation in Vietnam is limited and inadequate. In practice, it is regulated by the code of conduct and other management practices and standards, such as SA8000, WRAP, ISO 14000, GRI etc., but it is not a government agreement or international treaty.
- The emergence of a series of events related to dangerous agricultural products, food safety and hygiene standards violations are recent manifestations of a lack of social responsibility, lack of ethics and culture in production and business activities of many enterprises.
- Environmental pollution from the production and processing of products has reached an alarming level, reflecting the real concerns for social responsibility of businesses in general, especially in terms of safety, health and environmental protection.

Large companies in Vietnam are beginning to be interested in CSR activities, meaning that future research may find a link between the practice and disclosure of CSR among Vietnamese companies. CSR is introduced in Vietnam through the appearance and operation of multinational companies. The concept of CSR is not new, but businesses treat it mostly as charitable activities.

Recently, the relationships between the CSR and performance of a company, especially the CFP continue to be an important research subject in the field of management in general and accounting in particular. Vietnam's Ministry of Finance issued Circular No. 155/2015 / TT-BTC (in short: Circular 155) dated 6 October 2015 guiding the disclosure of information on the stock market and requiring public companies to disclose information related to sustainable development, compliance with environmental protection legislation and the way they manage environmental impacts and risks. Regulations on publicizing environmental and social information have marked Vietnam's most important step towards sustainable financial markets and attracted international investors.

In the process of global economic integration, CSR has become one of the requirements for Vietnamese enterprises. If enterprises fail to comply with CSR standards, they will not be able to access the world market.

CSR will certainly increase the credibility of businesses and entrepreneurs, bringing many economic and socio-political benefits to them. Currently, businesses are actively involved in philanthropic and charitable activities, while at the same time breaking the law, violating sustainable development of the community such as discharging toxic substances into the sea and rivers, polluting the environment. The industrial zones and other places in the country are also in such a state. To date, no authority exists that assesses the scale and number of enterprises lacking social responsibility, business culture and ethics. Therefore, demands for self-awareness are urgent; not only is self-awareness needed in the perception and operation of each enterprise, but also of the legal framework of CSR, to regulate such burning social and environmental issues.

These research findings are expected to make Vietnamese companies better aware of CSR issues as well as the importance of disclosing CSR and conforming to its international standards.

Implications

CSR is still a hotly debated issue regarding the relationship and influence of CSR on business. There are already many studies on CSR and its business impact in the world, but not so many of them have integrated into certain theoretical frameworks. In our view, CSR and CFP have a certain correlative relationship and this topic should be further investigated, both profoundly and extensively, regarding the Vietnamese social and business context, in order to achieve interesting findings.

Theoretical implications

This article has contributed to changing the concept of CSR. There are different definitions and understandings of CSR. Each organization, company, government recognizes and sees CSR from their own perspective and view, depending on the conditions, characteristics and level of socio-economic development. Davis (1973) suggests a broader CSR concept and role, while Carrol (1999) argues that CSR is overarching today's global business. Organizations that want to survive in the market in the long run must adopt strategy embracing the economic, social and ecological dimension. To achieve a sustainable level of development of an organization, it is necessary to apply business strategies that meet the organization's and stakeholders' needs while protecting, strengthening and enhancing the human and natural resources that will be needed in the future (Bakanauskiene, Staniuliene, Zirgutis 2016). For business activities to be economically valuable, and at the same time socially and environmentally responsible, this strategy should result from social dialogues with all interested parties (Mizera 2008). This paper analyzes the importance of CSR in terms of its four important aspects proposed by Carrol (1999): economic, legal, ethical, and charitable obligations.

The role of CSR has been studied by a number of researchers since 1982 (Benston 1982). Several of studies have provided CSR theory but have not been thoroughly analyzed (Herremans, Akathaporn, McInnes 1993; Lys, Naughton, Wang 2015). This paper adds to the CSR framework by integrating research in social and economic fields to examine the relationship between CSR and CFP.

The mixed evidence suggests that CSR is not only present in business, but also influences other stakeholders in the society (Cooper, Owen 2007; Moser, Martin 2012). The results of this paper confirm that firms in the same industrial group have the same tendency to affect CSR, for example: the steel, oil, paper (Wiseman 1982), and chemical industries (Ilinitch, Soderstromb, Thomas 1998).

This article presents the extent to which CSR information is disclosed, and various factors, by means of research data from all over the world: Wiseman (1982); Patten (1990); Roberts (1992); Haniffa and Cooke (2005); Gao, Lisic, Zhang (2014); Dhaliwal et al. (2014). Nevertheless, the literature review shows that there is not enough research to systematically evaluate the theoretical framework for the relationship between CSR and CFP.

This article outlines models needed to measure CSR, analyze and evaluate models that can be applied in Vietnam. It provides real CSR measurement for further investigative studies in Vietnam.

Administrative implication

In addition to the theoretical implications, this article also provides an administrative implication for business managers. The research results show that the understanding of CSR is still insufficient, and the leader's awareness of CSR issues is now of great importance for a business to perish or prosper. Therefore, companies should implement the above mentioned Circular 155 of the Vietnamese Ministry of Finance that guides the disclosure of information on the stock market. To balance the benefits and costs, businesses should invest in solving the problem of financial disclosure as well as non-financial disclosure, including information on CSR activities. Many theoretical and empirical data have proven that there is indeed a strong relationship between CSR and CFP in the world, and firms in Vietnam are not out of this global trend or direction.

Conclusions

From previous studies conducted abroad and in Vietnam, this article has been synthesized, analyzed and evaluated in the current context of Vietnam. This article has contributed a framework for CSR related to CFP, including: background theory, literature reviews, models and scales used to test the correlation between the CSR and CFP of the company, contributing a new theoretical framework for state agencies, researchers, business leaders, etc., so that they can conduct further research.

Despite important theoretical and empirical contributions, this article still has some limitations. First, the dependent variable in the model is ROE. ROE is

measured by the book value indicator from companies listed on the Ho Chi Minh City Stock Exchange. Further research needs to be expanded with other indicators in the group of book value and market value indicators. Secondly, we combined quantitative research and collected data from interview questions, but the questionnaire (survey) was not developed during the study to measure the increase in implementing CSR and the increase in CFP that businesses gain. We believe that further studies with the same purpose of research can continue our work and overcome the limitations of this study.

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WYNIKI FINANSOWE A SPOŁECZNA ODPOWIEDZIALNOŚĆ PRZEDSIĘBIORSTW. PRZYPADEK WIETNAMSKICH SPÓŁEK GIEŁDOWYCH W BRANŻY SPOŻYWCZEJ

Streszczenie: W ostatnich latach w Wietnamie coraz bardziej zaczęto zwracać uwagę na problematykę społecznej odpowiedzialności. Społeczna odpowiedzialność biznesu (CSR – *Corporate Social Responsibility*) jest wciąż bardzo nową koncepcją, a pionierzy, zarówno badacze, jak i praktycy w tej dziedzinie, stoją przed wieloma wyzwaniami związanymi z praktyczną realizacją programów CSR. W celu zbadania wpływu CSR na wyniki finansowe firmy przeprowadzono badanie na próbie 30 wietnamskich firm notowanych na giełdach działających w branży spożywczej w latach 2013-2015. Wykorzystano dane archiwalne jako dane wejściowe do badań ilościowych w celu tworzenia modeli regresji potrzebnej do zweryfikowania relacji między CSR a wynikami finansowymi przedsiębiorstw (CFP – *Corporate Financial Performance*) w Wietnamie. Wyniki pokazują, że nie ma istotnej zależności między tymi dwoma czynnikami. Na podstawie tych ustaleń poczyniono pewne sugestie dotyczące racjonalnych kierunków poprawy społecznej odpowiedzialności przedsiębiorstw w Wietnamie.

Słowa kluczowe: społeczna odpowiedzialność przedsiębiorstw, wyniki finansowe przedsiębiorstw, pomiary, spółki giełdowe



ELEMENTS OF SOCIAL RESPONSIBILITY MANAGEMENT IN LOCAL GOVERNMENT UNITS

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Abstract: The aim of the considerations in the article (the authors intend to deepen the analysis in subsequent studies on the role of the social responsibility in the management processes of the local government unit and identify the most important international standards of social responsibility) is to present the phenomenon of social responsibility reporting of local government units and the conclusions resulting from the management of these units. The examined issues focus on determining whether it is possible to adapt the concept of the scope of corporate social responsibility (CSR) in local government units and the ways of including it in the management strategies of local government units.

Keywords: corporate social responsibility, social responsibility management, local government units

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Introduction

The concept of corporate social responsibility (CSR) is one of the most widely discussed issues related to business in recent decades. However, rarely (or almost never) are these issues addressed in the analysis of the functioning of local government units (LGUs). It seems to the authors of the article that despite many voices of opposition, the concept of social responsibility in local government units should be broadly discussed by the managers of these units because it involves three strong processes:

- globalization,
- development of the information society - which is associated with an increase in the awareness of residents within the organizational self-government and administrative division,
- an increase in the importance of image and reputation - due to the limited resources and established strategic goals, non-financial factors are becoming increasingly important.

Genesis and development of the idea of social responsibility

The idea of corporate social responsibility developed along with the free market economy. As one of the first authors, the idea of corporate social responsibility was raised by A. Carnegie, an American magnate, engaged in charity, who wrote: "Yes, it is the duty of a wealthy man to live a modest and not ostentatious life", and only

after fulfilling these conditions should profits from its activities be allocated to activities that "will bring the greatest benefits to local communities". A. Carnegie's ideas focused on using the surplus wealth of private individuals to meet the needs of other individuals and groups of people. Thanks to this, it was possible to achieve additional benefits from the entrepreneur's activity for the entire focused community. This idea, despite the fact that it concerns business, though based mainly on private benefits, is in its nature close to the basis of the functioning of local government units - satisfying the needs of the community.

An important period in the development of the idea of corporate social responsibility was the time of the "Great Depression", which forced governments and private entrepreneurs to their change attitudes towards employees, stakeholders and local communities. Further development of the concept of corporate social responsibility began after the end of World War II. In modern terms, the concept of social responsibility appeared in the United States in the 1960s. However, this appearance was accompanied by a trend of thinking that opposed the broad interpretation of corporate social responsibility. An example of a different approach is the thought of M. Friedman who he expressed the view that a corporation as a legal entity has no social liabilities other than profit and that the allocation of enterprise resources to socially useful purposes is a form of taxation and an attack on the independence of the enterprise in the area of deciding how to spend generated profits (Friedman 1970, p. 120). This view still has many supporters today, but other approaches are becoming increasingly more popular, in which reference is made to the thesis which was formulated in 1932 by E.M. Dodd, talking about the goals of modern business in the form of both bringing income to owners and acting in the public interest (Dodd 1932, p. 1145-1163).

An important stage related to the development of the concept of corporate social responsibility was the Caux Round Table in 1994. The document contains seven principles related to responsible business conduct corresponding to social responsibility¹:

- business responsibility: from responsibility to shareholders towards the concept of responsibility towards stakeholders - business should play a role in improving the living conditions of customers, employees and shareholders by sharing with them the goods created and in local self-government units of all the members of society, through activities in the adopted socio-economic plans,
- economic and social impact of business: towards innovation, justice and the global community - a business should contribute to economic and social development not only in the countries in which it operates, but also to the development of the entire global community, through the effective and prudent use of natural resources, and in local government entities all actions should aim at a systematic increase in the pace and effectiveness of socio-economic development,

¹ Business rules adopted during the Caux Round Table debates published in 1994 ([www.cauxroundtable.org/...](http://www.cauxroundtable.org/)).

- business behavior: going beyond the letter of law to a spirit of trust - a business should recognize that honesty, openness, truthfulness, keeping promises and transparency of its activities not only contribute to its credibility and stability, but also alleviate tensions between companies, and in the local government unit e.g. not only accountability to the councils at a given level, but also to local communities,
- respect for legal rules - in order to avoid tensions and to promote freedom of trade and production, equal conditions of competition as well as fair and impartial treatment of all the participants, a business should respect both international and local law, and in local government units, e.g. not only the rule of law connected with local government or accounting regulations, public financial law but also the norms and rules of conduct resulting from the local conditions and habits,
- support for multilateral trade and production - businesses should support multilateral trade agreements concluded by GATT / World Trade Organization and similar international agreements, and in self-government units, e.g. resulting from local or partner agreements,
- respect for the environment - businesses should protect and, wherever possible, contribute to improvement of the environment, promote sustainable development and prevent waste of natural resources, and in local government units, for example, support eco-development, avoid illegal activities - businesses should not allow bribery, money laundering or other corrupt practices, and in the local government, for example, the development of cooperation under (public-private partnership) PPP.

The main emphasis of the social responsibility of the local government unit seems to be focused on activities aimed at stimulating the professional activity of citizens - members of the broadly understood community.

Definition of corporate social responsibility and the possibility of its application in local government units

As indicated by numerous authors, there is currently lack of a single and coherent definition of corporate social responsibility in literature, especially one that could apply to the specifics of local government units. Let us assume that corporate social responsibility is considered to be "a business philosophy of taking into account and reconciling the interests of the owners of capital / community with a wide range of different stakeholders.

It is worth presenting here the concept of R.E. Freeman and S.R. Velamuri presented in the article: A New Approach to CSR: Company Stakeholder Responsibility, where it was suggested that the phrase "Corporate Social Responsibility" (CSR) should be replaced by the term "Company Stakeholder Responsibility" (CSR) (Freeman 2006). The concept is not only about a lexical change in the wording, but about a new approach to understanding responsibility and taking a broader view of the functioning of entities, taking into account the needs of other stakeholders. So is the concept of social responsibility to be only

"corporate", that is, for entities operating in business and profit-oriented? Of course not, and as this article tries to demonstrate, it is not "business" that is the primary source of the need for accountability, only entities appointed to meet the needs of stakeholders, that is, among others, local government units. Social responsibility can be regarded intuitively as an immemorial characteristic inscribed in the decision criteria of local government units. This does not mean, however, that this feature is implemented in a way natural and desirable from the point of view of accepted criteria. And here comes the concept, and one of the basic assumptions of these considerations, that the tools of implementing social responsibility developed within the framework of the recently developed CSR concept can be applied to the functioning of local government units.

The basic assumption of social responsibility is to base the success of the individual (but not only the formal strategic plan) on its long-term, sustainable development resulting from the inclusion of three dimensions in its activity: economic, ecological and social. In this definition, therefore, emphasis is placed on the "participatory" role of subjects and objects in the communities. In documents of the European Communities (EC): "Corporate social responsibility is a concept in which capital owners voluntarily decide to cooperate for the benefit of society and a cleaner environment". Paradoxically, therefore, with such an approach, the issue of social responsibility is by its nature much closer to self-governments than to traditional economic activity. Thus, it may seem that the methods of the corporate social responsibility system could be transferred and successfully used in local government units as their goals are very close to those stated for corporations. The level of advancement of management methods in corporations is by definition much higher than that in local government units. It results mainly from higher expenditures and larger control requirements in corporations. From here it can be assumed that the tools used in corporations in the area of social responsibility are more advanced. What is more, since the "business" and "self-government" approaches are convergent in this respect (in terms of taking into account the needs of the community), the question arises of the possibility of using these tools in local government units.

The approach of the authors of the article is close to the Anglo-Saxon concept of social responsibility of local government units, in which the definitions of social responsibility are built on the basis of aggregation of individual elements of the activities of members of the local government community. These approaches emphasize:

- acquiring and effective spending of (from the point of view of socio-economic goals), subsidies,
- compliance with applicable legal norms,
- implementation of ethical standards in its activities, determined by stakeholders,
- carrying out activities in accordance with the expectations of the society.

The approach to social responsibility can, therefore, be considered using shared values as an element of building an increase in efficiency, effectiveness and social satisfaction, through the separation of four levels of responsibility: economic, legal, ethical and ecological.

Social responsibility as an element of management strategy

Defining the genesis and the exact scope of the term "social responsibility of territorial self-government units" makes it possible to analyze the possibilities of integrating social responsibility into local government management strategies, i.e. through levels of responsibility, strategy creation principles, potential benefits, and socially responsible investment.

The social responsibility of territorial self-government units as a management strategy can be present in various spheres of their activity and at various levels. The principles of creating a strategy of social responsibility in the local government can be traced to three main stages traditionally used in the "business" approach (see: Porter, Kramer 2007):

Stage I - determining the key points of interaction between the local government and the community. This stage is based on searching for answers to the questions about how the local government unit influences the local community and how this community affects the self-government unit as an organization. As part of it, the objectives and expectations, the impact of activities on the environment are analyzed, but also norms and incentives that affect social activities and the possibility of supporting activities by local entities are analyzed.

Stage II - defining which social problems should be reacted to. It is very important when defining the problems to classify them because it allows the social and economic issues that have the greatest impact on assessment of the activities of the local government to be identified.

Stage III - creating a schedule of social activities. LGU should undertake a limited number of initiatives (the principle of rational management in two varieties), which will bring benefits to stakeholders. This will allow the best results to be achieved and will enable competitive advantages to be created over other local government units.

Therefore, creating a strategy of social responsibility for self-government is, to a large extent, related to analysis of the feedback impact within the self-government-society relationship. The strategic approach to CSR in territorial self-government units therefore takes into account the outside-in and inside-out impacts. The following benefits can be identified:

- improving the image and reputation,
- reducing the number of unforeseen events related to the impact on the environment,
- greater activity of the local community,
- reducing the costs of LGU functioning,
- attracting and keeping the best employees and actively functioning councilors, activists, volunteers, etc.,
- higher efficiency of the performed tasks,
- lower risk of unforeseen threats,
- stable increase of inflows,
- greater opportunities to attract capital, minimized investment risk.

Local government units applying the principles of social responsibility can therefore achieve a range of benefits in various aspects of their activities. These benefits may manifest themselves in the sphere of perception, attractiveness, operational expenses or greater local activity. At the same time, it should be remembered that the costs related to implementing the principles of social responsibility appear immediately, while the benefits may appear only after some time.

The integration of social responsibility into the strategies of local government units is also accompanied by a growing awareness of stakeholders in this area - this concept is known as socially responsible investing. When defining socially responsible investments, it should be noted that the term combines financial hopes (e.g. the expected, maximum rate of return in achieving socio-economic goals from the obtained sources of financing, with their social expectations and needs). This concept was widely disseminated in the 1980s in connection with political and social events and the necessity to adapt investment strategies to new realities.

The trend of socially responsible investment owes its development to the following factors:

- efficiency - stakeholder-investors realize that social responsibility creates synergies with their results in achieving their goals,
- the quality of available information - stakeholder-investors are able to easily verify which local government units operate socially responsibly and which do not,
- accessibility through globalization processes, including the speed of information flow,
- increasing the position of women in the local community,
- corruption scandals.

Therefore, it should be assumed that the local government unit invests socially responsible when:

- investments are screened (by examining policies and behaviors and their impact on the achieved qualitative and quantitative results - more extensive reporting),
- there is the influence of socially aware stakeholders on the LGU strategy (to examine whether an LGU directs its operations so as to improve the situation of all its stakeholders),
- invests in the local community (e.g. through financial support for local social services).

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ELEMENTY SPOŁECZNEJ ODPOWIEDZIALNOŚCI BIZNESU WYKORZYSTYWANE W JEDNOSTKACH SAMORZĄDU TERYTORIALNEGO

Streszczenie: Celem rozważań prowadzonych w artykule (autorzy zamierzają pogłębić analizę w kolejnych badaniach nad rolą społecznej odpowiedzialności w procesach zarządzania jednostką samorządu terytorialnego i identyfikacją najważniejszych międzynarodowych standardów społecznej odpowiedzialności) jest prezentacja zjawiska raportowania odpowiedzialności społecznej jednostek samorządu terytorialnego oraz wniosków wynikających z zarządzania tymi jednostkami. Analizowane kwestie koncentrują się na ustaleniu, czy w jednostkach samorządu terytorialnego możliwe jest dostosowanie koncepcji zakresu społecznej odpowiedzialności biznesu (CSR) i sposobów jej włączenia do strategii zarządzania jednostkami samorządu terytorialnego.

Słowa kluczowe: społeczna odpowiedzialność biznesu, zarządzanie odpowiedzialnością społeczną, jednostki samorządu terytorialnego



USE OF BUSINESS INTELLIGENCE TOOL IN HEALTH PROTECTION ENTITIES

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Abstract: The paper aims to present the rationale for the introduction of Business Intelligence (BI) Systems into a health protection units and to show the benefits of such systems, e.g. better time-keeping and quality of input data to the decision-making process. The paper points out also that implementation of these systems helps to understand what kind of unused possibilities are still available in the organization concerning the state of knowledge, trends and tendencies in the markets and in the environment in which the organization operates and competes. It is also emphasized that computerisation, automation and implementation of analytic tools in the administrative (“grey”) and medical (“white”) part of the hospital is obvious in the constantly developing health protection sector. The scope of study comprises business intelligence systems which combine operational data with analytic tools in order to present them to decision-makers and enable them to make informed decisions based on hard data. This paper also stresses the importance of unstructured and structured data and discusses the potential and necessity of developing BI tools for data extraction, integration, cleansing, search, analysis and provision in pursuance of the adopted objectives. The research and methodology presented in this paper is based on source literature, analysis of author’s own research based on documents from several medical facilities in the Silesia province, conducted in-depth uncategorized oral interviews (overt or covert) with experts in the field of health policy and author’s own observation of changes taking place in the health protection sector. The paper demonstrates that creation of data warehouses as data repositories, progress in data cleansing, increased hardware and software capacities and emergence of Internet architecture – all of these tools combined together create a more abundant BI environment than the one available earlier in the particular health protection entity, which consequently improves the quality of medical services provided in those entities.

Keywords: Business Intelligence, decision-making processes, management systems, data analysis, data warehouses, computerisation, health protection

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Introduction

The development of technology, computerization and management methods providing managers with simple and quick access to reliable and comprehensive management information¹ constitute the basis for making the right managerial

¹ However, the availability of information alone is not a condition of progress in an organization. Having even huge information resources without the ability to use them often leads to chaos identical with disinformation and paralysis of the organization’s development. Drawing conclusions from the information available, leading to knowledge and making right decisions, is necessary for survival and development in the present times.

decisions. These types of activities are crucial for modern management and have a real impact on the organization's success. It is to eliminate the growing problem of the so-called excess knowledge and the ensuing information chaos, and thus, the impossibility of extracting significant and necessary messages from "unnecessary and redundant" information, which becomes more and more frequent. Also, a common obstacle is obtaining data from various sources (areas of company operations) and their unification, consolidation or interpretation. The antidote to the mentioned problems can be and is Business Intelligence (BI) class tools, which offer applications and technologies for collecting, analysing and sharing data in order to make better business and economic decisions (Krakowski 2016, p. 157).

A few years ago, only the largest and richest organizations could afford to implement BI tools in the organization. It was connected with a time-consuming, cost-intensive and labour-intensive implementation process. It also required significant investment outlays, including outlays for equipment and required licences. Today, the market situation is different. The BI systems start playing a pivotal role also in smaller enterprises.

In Poland, systemic changes in the field of health protection are introduced very slowly and are rather episodic, far from the long-term development model of this market sector. Management in the healthcare services sector has to face the increasing demands resulting from the ongoing changes. Thanks to the restructuring of the healthcare industry, new circumstances have arisen, in which one should look for other than in the past ways to manage organizations in this sector.

Effective implementation of the suitability strategy and assessment of the healthcare unit's management system requires a single and complete picture of the current economic and medical situation in this system. The amount and multiplicity of data, including the data of patients obtained from multiple sources and their considerable dispersion, make making the right decisions in the present conditions a complicated task. Possibilities of using the existing medical IT systems are significantly limited, as they are not compatible with each other, which makes analysing data much more difficult. The data is isolated from each other and contains information generally only in the structural form. Also in medical facilities where large amounts of medical data are used in the so-called unstructured form, i.e. in the form of paper documents, their use in decision-making processes is not optimal, mainly due to the lack of appropriate technological capabilities to process and use them. Only a small number of branches can boast of having comprehensive electronic data.

Introducing a managerial information system that collects, filters and processes data describing the current and past condition in various activity fields of the healthcare unit gives the possibility to satisfy information needs of the management staff in the healthcare sector. Electronic data processing facilitates using data in the decision making process at the management level and encourages regular reporting, which should lead to the elimination of decision errors (Jelonek 2018, pp. 13-15).

Therefore, it becomes necessary to apply such a management concept that will ensure effective implementation of business and medical goals with the effective use of actual information resources while maintaining the required and binding standards of the treatment process. The solution supporting these management processes can be business intelligence², which gives value to data and leads to their effective use in decision-making processes also in the aspect of supporting organization strategies, both in economic and medical areas. BI class tools are based on specialized registers, data warehouse (Chodkowska-Gyurics 2014) type and BI class analytical tools. The process of total or partial computerization covers almost all areas of their activity. BI systems combine data from all sources and on this basis they create a readable message. They provide a range of related opportunities, including shortening the waiting time for data, and instead of several reports, the manager receives one optimized report that is a compilation of all partial reports. The resulting combination can be analysed and data can be modified depending on the kind of information that is needed at the moment (Smok 2010).

Therefore, in the era of growing competition, in order to make better organizational and economic decisions, effective digitization and computerization of management processes is an asset that facilitates business success (Banaszak, Kłos, Mleczo 2011, p. 232-233). In addition to planning, communicating, collecting, filtering, securing data and presenting rational analytical and reporting solutions, BI can be a very useful instrument to observe the researching competition or benchmarking activities. The experience of the growing number of units in the private and public sectors shows that currently BI tools are becoming a more common and desirable solution used in management. Excess information flowing into the unit means that in order to maintain a competitive advantage on the market, organizations should support their operations with modern and optimized solutions on a regular basis. It can be said that without proper implementation and use of business intelligence tools, the organization is doomed to lose the fight against competition.

Business Intelligence – the meaning of the concept

As commonly understood, business intelligence is an information technology used to transform and process large amounts of data into information and then into knowledge – a term that means using the organization's data resources to make better decisions regarding its development, which is addressed primarily to decision makers. Thanks to the use of BI, information can be managed more effectively³.

² *Business Intelligence* – is a concept of solutions designed to integrate and process data in such a way as to use them in relatively easy way in the decision-making process. BI can be defined as a broad category covering technologies, applications and processes responsible for organizing access to collecting and storing, as well as analysing data. Business intelligence at the practical and individual level is an analytical and reporting tool that supports decision-makers in the enterprise (see more: Januszewski 2011, pp. 7-20).

³ According to the definition by A. Stabryła, *information management* – is a field of management aimed at controlling the flow of information processes and providing information to users with specific needs. Information management consists in controlling the acquisition, creation, modification and sharing of information (see more: Stabryła 2012, p. 359).

In turn, according to J. Kisielnicki, business intelligence is a broad category of applications and technologies used for collecting, gathering, analysing and providing data (Kisielnicki 2013, p. 294).

It should be noted that the management and consumption of information held in enterprises usually look as follows: data flow to the user from various sources that the user must systematize and group, select, analyse and later assess their usability. Unfortunately, this procedure is very time-consuming, especially in small and medium-sized enterprises, which employ fewer employees. With well-chosen BI tools, the employee can analyse the material in a much shorter time. First of all, information is collected faster and more efficiently, and reports are generated automatically ([http://www.sage.com.pl/...](http://www.sage.com.pl/)).

As in other areas of the economy and the services sector, the progressing process of computerization of healthcare is already a fact. Among other things, business intelligence systems support these processes.

Business intelligence systems are highly specialized tools that set drastic performance requirements focused on data warehouse technologies that support effective business management. They provide a number of possibilities related to shortening the waiting time for data by the unit's management. Data properly configured and tailored to the specific needs of a given healthcare unit support processes related to, among others, operational efficiency management, budget planning, controlling and profitability assessment, and finally the calculation of operating costs ([http://domdata.pl/...](http://domdata.pl/)).

Business intelligence tools enable data integration, which affects achieving a new dimension that will enable the unit to:

- find data;
- search for correlations between phenomena;
- understand these phenomena and draw conclusions.

Today's BI solutions are so "smart" that the system itself can recognize information that can be combined into tables or entire spreadsheets. In addition, the program can submit the data to initial selection and then to processing. A significant part of these operations is carried out automatically or is intuitive in use ([https://www.jcommerce.pl/...](https://www.jcommerce.pl/)).

Implementations of the BI system should be considered at two levels: IT (i.e. technical and technological) and business (i.e. organizational). Solutions at the IT level should result from the management of the healthcare unit and business goals. A proper selection and combination of technologies are important, and at the business level they are connected with the change in the organizational culture of the healthcare unit, consisting in the exchange of knowledge and information ([http://www.bi-pro.pl/...](http://www.bi-pro.pl/)).

It can, therefore, be concluded that business intelligence is an information management system of the third generation. According to J. Surma, this business decision support system (DSS) covers a comprehensive spectrum of technologies, mainly:

- OLAP tools⁴;
- data extrapolation tools;
- knowledge management tools (Surma 2009, p. 13).

In other words, business analytics, i.e. business intelligence, is a comprehensive concept – its scope includes such areas as cost optimization, improvement or efficiency and quality, building what-if scenarios⁵, or creating a comprehensive analysis of savings. Therefore, it should be stated that business intelligence is not only information technology, but a vision of the information system and the improvement in the management of a given healthcare unit, the more so as the underlying assumption of the business intelligence system is to democratize access to all information in the organization.

It is very important for ensuring proper knowledge management. It is essential that the current information is available to every participant in business processes, and not only to a small group of employees. The ultimate goal is to enable management to be decentralized, i.e. to increase the operational efficiency of each level of management as well as the entire organization through simple and quick access to information: coherent, current and of high-quality. In order for this vision to be fully carried out, the right combination of relevant information technologies is necessary⁶. Among them, one can list, for example, news portals, database management systems, OLAP technologies and Internet technologies.

Applications of Business Intelligence tools in healthcare units' management

In principle, the implemented business intelligence system should improve management in three areas in the healthcare unit:

1. Operational – (i.e. all activities directly related to the production of a product):
 - identifying cost reduction of medical services and administrative operations;
 - optimizing the use of all available resources;

⁴ OLAP (*OnLine Analytical Processing*) – in IT the part of the broader category of business intelligence, which also includes relational databases, reporting and the so-called *data mining* (exploration of data used for automated discovery of statistical dependencies and schemas in very large databases). OLAP is decision support software that allows the user to quickly analyse information contained in multidimensional views and hierarchies. OLAP tools are often used to perform sales trend analysis or financial analysis (warehouse data). They are also useful for pre-viewing the data set by the analyst in the preliminary phase of statistical analyses. In the healthcare sector, *OnLine Analytical Processing* tools are used most often to analyse treatment costs, maintenance costs of a healthcare unit, reimbursement, budget analysis of a facility, analysis of a physician profile (see: [https://mfiles.pl/...](https://mfiles.pl/)).

⁵ *What-if?* – scientific answers to hypothetical, but important questions that probably rarely come to people's minds.

⁶ The ubiquitous “gathering” of information is a huge challenge for analysts, with simultaneous lack of connection of systems and data among themselves. In everyday work, two, three or more tools and systems are often used that do not communicate with each other, but are involved in the implementation of one business process. In the long run, it causes problems in the performance of tasks, loss of control over the process, not to mention the lack of opportunities to improve the process and draw conclusions.

- assessing the effectiveness of white and grey parts;
 - ensuring transparency, completeness and correctness in the implementation of medical procedures;
 - conducting an assessment of the effectiveness and efficiency of the medical procedures used;
 - increasing the patient's sense of safety;
 - elimination of medical errors;
 - individualization of patient treatment/therapy;
 - shortening the waiting time for access to medical information;
 - comprehensive coordination of medical processes;
 - supporting the decision-making process in the field of hospitalization of patients in accordance with applicable standards;
 - the ability to analyse data to select and apply the best patient therapy;
 - the ability to analyse the effectiveness and efficiency of medical procedures;
 - data visualization;
 - effective communication between co-workers.
2. Tactical – at this level, the task of business intelligence systems is to provide information for making business decisions, e.g.:
- elimination of possible fraud and swindle in performing medical procedures;
 - reducing the risk of making wrong business decisions;
 - raising the quality of services provided;
 - providing services in accordance with applicable standards and norms;
 - shortening the time of making decisions;
 - increasing the level of patient satisfaction with medical services;
 - creating a complimentary patient data flow system;
 - creating the so-called managerial dashboards – used in making business and medical decisions;
 - shortening the period of generating economic analytical reports, as well as medical ones.
3. Strategic – at the strategic level, their task is to set goals and control their implementation. They give the opportunity to compare various historical results on the basis of which future scenarios can be predicted, i.e.:
- building an accessible and complementary description of businesses and medical processes implemented in a given organization.

Therefore, it can be said that BI mainly contributes to achieving better effects of healthcare institutions. Units that have implemented such analytical solutions in various areas of their operations will notice the measurable benefits of their implementation very quickly.

In summary, as in other areas of the economy, including healthcare, the use of BI in the management of healthcare facilities can be presented as in the diagram below.

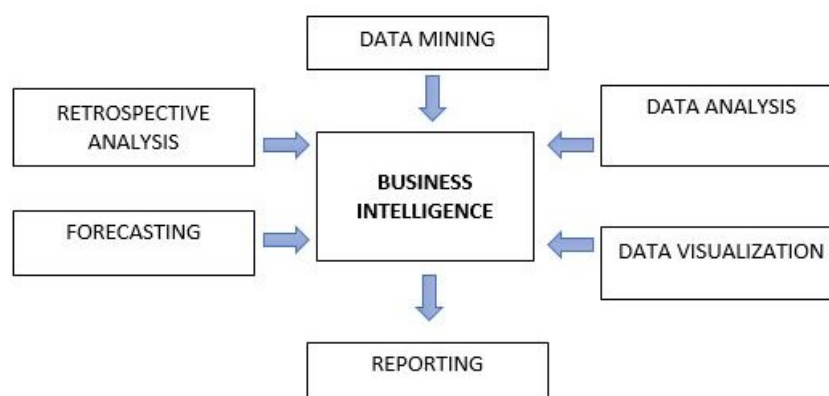


Figure 1. The use of the BI systems in healthcare facilities

Source: Own study

The basic analytical method that supports management decision making is *reporting*⁷. Then, the *ex-post retrospective analysis*⁸, as well as *forecasting*⁹, are used. *Data visualization* and *data mining* are equally common supporting techniques. Similarly, decisions and actions in the area of healthcare (in the medical field) are supported and implemented by the *ex-post* analysis, very often by pre-defined *reporting*¹⁰ and acquiring knowledge and forecasting from actual data (i.e. *data mining*)¹¹. In the areas mentioned above, analyses are primarily performed on the basis of a *spreadsheet*¹², and additionally, the *Statistica*¹³ program is used in the medical field.

⁷ *Reporting* – it converts data into information that helps to carry out analysis, budgeting and planning processes that support decision making. One of the key aspects of reporting is the visualization of information, both in terms of matching it to the right audience and its availability (see: [http://www.codec.pl/...](http://www.codec.pl/)).

⁸ *Ex post* (retrospective) analysis – otherwise known as the initial analysis, contains an assessment of the results of actions taken in the past. The known condition is the basis for taking the current and future goals.

⁹ *Forecasting* – it is a rational, scientific, predicting of future events, i.e. inference about unknown events based on known events.

¹⁰ *Pre-defined reporting* – ready, pre-defined report templates that can customize the reporting system to the user's needs.

¹¹ *Data mining* – (the term of data exploration, knowledge acquisition, extracting data, data extraction is also encountered), - one of the stages of knowledge discovery in databases (KDD). The idea of data exploration consists in using the speed of the computer to find regularities in data collected in data warehouses hidden for humans (due to the limited time possibilities) (see: [https://www.statsoft.pl/textbook/...](https://www.statsoft.pl/textbook/)).

¹² *Spreadsheet* – a computer program presenting data, mainly numerical, in the form of a set of large two-dimensional tables, allowing for automatic processing of these data and presenting them in various way. The most important spreadsheet tool are functions (mathematical, statistical, date and time, financial, database, logical), by means of which data entered into the spreadsheet is automatically processed. It is also possible to create various types of simulations. Using a spreadsheet, you can also visualize data by presenting it in the form of graphs (column, bar, pie, line, layers, etc.), which allow you to better understand mutual dependencies and tendencies (see: [https://sjp.pwn.pl/...](https://sjp.pwn.pl/)).

Conclusions

In the majority of healthcare facilities, the level of awareness of BI tools, their implementation and dissemination is observed to be relatively low. The main reasons can be the resistance of employees to progress, computerization and the implementation of analytical tools. Lack of training, expanding knowledge in this area is associated with the lack of awareness of the benefits resulting from its implementation and the lack of sufficient staff competence (Rostkowski 2012, p. 103). The reason for this is also the low level of organizational culture¹⁴. Another equally important factor is the lack of funds for the implementation of a particular type of system, as well as difficulties in determining the ROI (return on investment) from such an investment.

In summary, the main obstacles in the implementation of business intelligence in healthcare facilities are:

- lack of adequate resources to implement BI tools (among others, financial, HR);
- high complexity, heterogeneity, variety and diversity of IT systems used and the lack of solutions enabling their integration and ensuring high-quality data;
- the unstable economy resulting from frequent changes in legal regulations and in the field of health policy;
- low awareness of organizational culture;
- lack of knowledge and experience in the use of BI;
- lack of qualified staff ([http://www.hypatiaresearch.com/...](http://www.hypatiaresearch.com/)).

The most important benefits that any healthcare institution can achieve thanks to the implementation of BI tools is the increase in the level and efficiency of management, including shortening the waiting time for management data, budget planning, cost optimization, assessment of the profitability of medical procedures, and finally, calculation of the operating costs. It results in expanding and increasing the level of medical services leading to an increase in the level of patient satisfaction, as well as greater satisfaction with the work of the employed personnel, mainly medical staff.

In addition, the existing analytical BI systems can be used for a large number of existing (but not yet analysed) patient health data and related medical data to better understand the obtained information and results and to design optimal therapeutic clinical pathways.

In particular, the benefits of implementing BI systems in healthcare in *improving the quality of health services*, among others, may be as follows:

¹³ *Statistica* program – it is a universal system used for statistical data analysis, graphing, operating on databases, performing data transformation and creating applications. The system includes a comprehensive set of advanced analytical procedures used in science, business, technology and data mining. The program contains files with examples, thanks to which you can carry out various analyses (with many sample datasets to choose from) and create charts – see <https://www.statsoft.pl>.

¹⁴ Using traditional analytical systems, conducting any analysis usually turns out to be time-consuming, and once it is obtained, it often becomes obsolete. In static reporting, the manager usually receives a report at a high level of aggregation, without the ability to review its lower level. At this level of insight into data, there is not enough information to understand the cause of the phenomenon or follow it in time to find a solution.

- searching for more cost-effective and more medically effective methods of diagnosing and treating patients;
- the doctor's assessment of the treatment method he/she has chosen;
- predicting the occurrence of particular diseases;
- searching for trends that lead to the improvement of the health, quality and lifestyle of the society;
- analysing the genetic material contained in the basic set of chromosomes (i.e. the human genome), in order to introduce individual treatment (it will be possible to adapt the drugs and methods of treatment to the requirements of a given patient) (see more: [http://pmorawski.spoleczna.pl/...](http://pmorawski.spoleczna.pl/)).

In turn, in the field of *supporting the work of medical personnel*, the benefits may be as follows:

- detection of diseases at earlier stages, when they can be more easily and quickly cured;
- the ability to predict the occurrence of specific medical conditions or deterioration of the patient's test results;
- predicting the disease progression and its determinants, including risk assessment of complications;
- detecting epidemiological threats and improving the control of pathogenic outbreaks and the speed of reaction to the existing circumstances;
- doctor's comparison of the current medical case to historical cases (historical data) for better patient diagnosis and personalized treatment;
- analysis of patients' profiles in order to identify people for whom preventive treatment should be applied, including lifestyle change, i.e. preventive care;
- identification of patients at the highest risk of developing life-threatening diseases. Thanks to the data on the history of the most common diseases in people under treatment juxtaposed with the reports coming to insurance companies;
- receiving and analysing in real time large amounts of data from hospitals as well as home devices monitoring vital functions. The analysis is done to monitor safety and predict possible adverse events;
- detecting drug interactions, their side effects.

Also in the field of *supporting research and scientific activities*, the benefits may include the following:

- supporting work on clinical trials of new drugs, thanks to the possibility of analysing "all data" instead of choosing a sample for research (evidence-based medicine, EBM)¹⁵;
- selection and choice of a group of patients in the case of which the tested drug is likely to have the desired effect and no side effects occur;
- the use of modelling and predictive analysis for the design of better drugs and medical equipment and apparatus (see more: [http://rocznikikae.sgh.waw.pl/...](http://rocznikikae.sgh.waw.pl/)).

¹⁵ EBM – use of reliable scientific evidence in clinical proceedings regarding the effectiveness and safety of therapy. Such evidence is provided by test results based on observations and experiments.

Summing up, the implementation of business intelligence systems in security institutions may contribute, among others, to the improvement of patient service, designation and implementation of appropriate pathways (ways) of patient treatment, support of clinical treatment, monitoring of healthcare safety, creation of a complementary system of patient data flow, shortening the waiting time for access to medical information, optimizing the use of all available resources, shortening the period of generating economic and medical analytical resources, as well as creating management control systems. The introduction of these solutions will bring the health sector in Poland closer to the possibility of online monitoring the patient's status.

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WYKORZYSTANIE NARZĘDZI KLASY BUSINESS INTELLIGENCE W JEDNOSTKACH OCHRONY ZDROWIA

Streszczenie: Celem artykułu jest pokazanie zasadności wprowadzenia do jednostki ochrony zdrowia systemu Business Intelligence (BI) oraz zobrazowanie korzyści, jakie z tego płyną, np. poprawa terminowości i jakości danych wejściowych do procesu decyzyjnego. Ponadto treści zawarte w opracowaniu pokazują, że wdrożenie tych systemów pomaga zrozumieć, jakie jeszcze dana organizacja posiada niewykorzystane możliwości, dotyczące stanu wiedzy, trendów i tendencji występujących na rynkach oraz w otoczeniu, w którym ona funkcjonuje i konkuruje. W artykule podkreślono także, że informatyzacja, automatyzacja oraz implementacja narzędzi analitycznych do części „szarej” i „białej” szpitala ma charakter oczywisty w ciągle rozwijającym się sektorze ochrony zdrowia. Zakres badawczy artykułu obejmuje systemy BI, które łączą dane operacyjne z narzędziami analitycznymi, pozwalające przedstawić i umożliwić decyden-
tom podejmowanie świadomych decyzji na podstawie twardych danych. Niniejszy artykuł podkreśla również znaczenie danych niestrukturalnych oraz strukturalnych i omawia potencjał oraz potrzebę opracowania narzędzi BI do pozyskiwania, integracji, czyszczenia, wyszukiwania, analizy i dostarczania danych w dążeniu do osiągnięcia założonego celu. W artykule źródłem danych oraz zastosowaną metodyką ich pozyskiwania były informacje pochodzące z zebranej literatury dotyczącej wskazanej problematyki, analiza badań własnych opartych na dokumentach pochodzących z kilku placówek medycznych z terenu województwa śląskiego, przeprowadzone pogłębione nieskategoryzowane wywiady ustne (jawne bądź ukryte) z ekspertami z zakresu polityki zdrowotnej oraz obserwacja własna zmian zachodzących w obszarze sektora ochrony zdrowia. W publikacji wykazano, że powstanie hurtowni danych, jako repozytorium, postępy w oczyszczaniu danych, zwiększone możliwości sprzętu i oprogramowania oraz pojawienie się architektury internetowej – wszystkie razem tworzą bogatsze środowisko BI, niż było to wcześniej dostępne w danej jednostce służby zdrowia, co w konsekwencji podnosi jakość świadczonych usług medycznych w tych podmiotach.

Słowa kluczowe: Business Intelligence, hurtownie danych, informatyzacja, procesy decyzyjne, systemy zarządzania



THE IMPACT OF CHOSEN STRATEGIC OPTIONS ON THE OVERALL PROFITABILITY OF THE NEWCONNECT STOCK MARKET COMPANIES. THE EVIDENCE FROM IT SECTOR

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Abstract: The paper presents the verification of hypotheses relating to the significance of the impact of the selection of a specific strategic option on the economic context of the operation of modern enterprises. According to source literature, selecting a specific development path is of fundamental importance for the economic effects of the conducted activity. Managers, while formulating a development strategy, affect, according to theoretical assumptions, the overall profitability level of managed enterprises. The objective of the paper is to verify the hypotheses concerning the selection of a specific strategic option of the surveyed enterprises in relation to economic effects achieved by them – in a defined scope concerning the overall profitability ratio.

Keywords: strategy, development options, profitability, strategic choice

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Introduction

The decision-making process concerning a specific strategic option leads to the selection of a particular alternative, which is the basis for success or failure of each enterprise operating in turbulent, competitive and significantly globalizing markets (Shepherd, Rudd 2014; Wollmann, Steiner 2017). For this reason, the selection and then implementation of the selected strategic option in the established context of modern markets may often determine the survival and the ability to succeed by modern economic entities. Therefore, the quality of decisions relating to the selection of a specific strategy, a particular development path is of fundamental importance and decisions taken by managers have a critical impact on the operation of the organization.

The objective of the paper is to verify the hypotheses concerning the selection of a specific strategic option of the surveyed enterprises in relation to economic effects achieved by them – in a defined scope concerning the overall profitability ratio (ROE, ROA, ROI). The author's research was to investigate the impact of the strategic option chosen on the profitability ratio of surveyed NewConnect Stock Market Companies.

The process of selecting a strategic option

The decision-making process is recognizing and defining the essence of the decision-making situation, identifying alternative opportunities, selecting the best alternative and subsequently implementing in the organization (Griffin 2017; Takemura 2014). This process is also associated with the choice of a specific strategic option, which leads to certain effects. However, such decisions are taken with incomplete knowledge concerning the external situation, which obviously affects their effects (Bednarova et al. 2018, p. 60). Incompleteness of knowledge and fragmentation of information results in the fact that the decision-maker, while taking a decision, is not able to define how the future will affect company's operations. "At the micro-economic level, to analyze the behavior of entities, such as a consumer or a company, optimizing procedures are used with limiting conditions, which usually leads to explicit decisions, as long as the entity operates in the world of certainty (which, as we know, is a standard neoclassical assumption). If we adopt a more realistic assumption on uncertainty, at that time, company's decisions become blurry and ambiguous. The behavior of the entity at that time depends on the type of information constraints of the economic environment, willingness to take risk by the entity, amount of transaction costs, customs and social standards, formal and legal rules of the game, expectations of the entity concerning the behavior of other actors of the economic game, the way they take into account the passage of time and effects of irreversibility of the decisions taken" (Garbicz 2011).

In this context, the selection of a strategic option will be strongly correlated with the possibility of achieving economic gain or loss. The quality of the result of the selected option will depend on the authentication of the environment states and the characteristics (values) of the decision itself by the decision-maker. The decision-maker would like to choose a strategic option which is optimal for the specific (projected) state of the environment; however, assuming its uncertainty and volatility, the decision-maker would rather choose a strategic option which is burdened with the lowest risk concerning the smallest possible loss supposed. In turn, "the oldest rule for selection of an optimal decision in the conditions of uncertainty (whose idea just consists in bringing the model of decision-making in the conditions of uncertainty to a similar deterministic model) is the principle of maximizing the expected benefits (Skowron-Grabowska, Mesjasz-Lech 2016, p. 24). It consists in the fact that each possible decision is assigned the benefit equal to the expected benefit and then we select the decision which provides the maximum benefit expected" (Kochenderfer 2015; Sadowski 1977).

In this context – in "the theory of limited rationality, the principle of maximization, occurring while considering different types of analytical rationality, is replaced by the principle of satisfaction (Csiszárík-Kocsir 2017, p. 86). In accordance with the principle of satisfaction, the decision-maker, before making a choice, formulates the ranges of assessment satisfying them (pay-off), restricted by the so-called levels of reservation and aspiration, and subsequently stops at the first option considered whose assessment (pay-off) meets these constraints. In this way,

the need to indicate the auxiliary functions used for maximization and also to compare disproportionate criteria is eliminated (Ślusarczyk et al. 2017, p. 128). The use of such a model makes sense when traditional maximizing models fail” (Mandelbaum, Mazza, Burchell 2012; Szapiro 1993).

Therefore, the process of selecting a strategic option is an activity associated with the choice of one specific option (or their combination) from a particular set.

Choosing a strategic option in the enterprise is the need to get to know and explore opportunities related to the essence of strategic options and to determine methodological aspects of their formulation and selection (Lisiński, Szarucki 2011).

Decision-making is an element of planning in the organization. In this context, decision-making is designing and selecting the way of operation to solve the specific organizational problem. Each activity can be considered as a sequence of decision-making which can be understood as making a non-random selection in the course of operation. Decision-making is selecting a particular line of action. The implementation of the adopted strategic option requires compliance with the principles necessary to achieve the cost-effectiveness of the implemented actions (Smoleń 2012):

- the principle of economy, which is also known as the principle of rational management. The tool for the implementation of this principle is economic calculation, i.e., a specific meter of costs and benefits of economic activity. This principle is based on the use of resources made available in due time, in appropriate quantity and quality and at the best price. The principle of economy helps to precisely define the objectives, tasks, and configuration of resources necessary for their realization (implementation). While following the rules of this principle, there is formulated the optimal result of the activity in the existing (given) conditions with the determined exploitation (wear) of resources necessary to implement the assumed goals. It is closely linked with the assumed obtaining of relevant results assuming the spending of the lowest expenditures needed for their proper implementation. “As a consequence of such transformation of the nature of the political economy, it stops being an empirical science, relating to some real phenomena and becomes a formal “logic of choice” in which the test for the accuracy of statements, like in logic and mathematics, is only the consistency with the adopted axioms. Such “logic of choice” matched with the actual human economic activity is empirically true as long as the activity is the way of conduct compliant with the principle of economy” (Lange 1959).
- the principle of economic calculation, which forces managers to carry out the so-called optimization calculation, which precedes decision-making. Optimization calculation in the process of building value to determine the level of product quality which is the most beneficial for the enterprise. This benefit is manifested in profit maximization in the long term as well as in current profitability. The principle of economic calculation provides for some economic effects and creates specific solutions from the point of view of the goals and the

mission. This principle respects the search for achieving the best possible relationship between the results achieved and the resources involved.

- the principle of entrepreneurship, i.e., readiness to solve problems, exploit new opportunities, technologies, the ability to adapt to the changing environment, search for and grasp opportunities in order to meet the growing competition. This principle is aimed at posing new challenges enabling the most effective operation of the enterprise. It is a part of the company's development strategy, and it is to improve the market position and create better conditions for development. It includes long-term activities constituting a wide range of qualitative and structural changes in the enterprise. Following this principle should lead to the achievement of the assumed goals and intended results.

In this respect, effectiveness also entails desirability and efficiency of the actions taken. Teleological and systemic approaches can be distinguished. The first one is based on the assumption that the enterprise is created and appointed to achieve specific goals. In turn, the other one is based on the idea correlating efficiency with specific skills in the field of overcoming uncertainty coming from the environment, and also skills and competences of modeling the conditions and states of the environment so that they are favorable for the enterprise (Matwiejczuk 2006). The selection of a strategic option is, in this context, the most important task posed to managers regarding its type (Stys 2001).

A classic strategic option. Growth strategies

Referring to the classic theory of growth strategy, it can be noted that there are four specific strategic options relating to the directions of ventures in the product-market domain. It is the strategy of market penetration, market development, product development and diversification (Drażek, Niemczynowicz 2003). The traditional matrix by I. Ansoff is the system of present and future (new) markets and products. Four correlations determine the possible choice of strategy types. The first option is a market penetration strategy, i.e., searching for opportunities to increase sales of the existing products in the existing market. The strategy of market development consists in finding new markets for sales of the existing products. The third is a product development strategy, i.e., the introduction of new products into the existing markets. The most difficult strategic option is diversification, i.e., taking up a new activity by the company both in terms of the product and the market it is intended for (Ansoff 1965).

The classic strategy of market penetration (according to H.I. Ansoff's approach) "focuses on strengthening the position in the existing market and intensifying the sales of the existing product. It takes place through a flexible pricing policy, price reduction, improvement in the quality of services, sales activation, selection of the most favorable distribution channel and intensification of promotional activities" (Żukowska 2010).

In turn, in the case of the market development strategy, the company development results from offering the existing products and services to new customers. The company enters new markets; therefore, it is necessary to make

changes in the structure of target segments. In this context, the most frequent strategy is the reconfiguration of elements of the marketing message for the needs of the new target market of the company. “[...] The strategy of market development means entering geographically new markets through concentric expansion (transition from the local market through the regional one to the international and global market), selective expansion (assessment of markets and entering geographical areas where it is possible to obtain higher profits), insular expansion (the combination of the above two ways)” (Michalik, Pilarczyk, Mruk 2009).

The strategy of product development consists in investing in products and introducing product modifications and innovations. Such a strategic option assumes the concentration on expansion and diversification of the product (a range of products).

The diversification strategy consists in entering new markets with new products. Given the fact that the costs needed to simultaneously invest in new sectors and overcome the barriers to entry into new geographical markets are enormous, only large international corporations use this strategy.

The selection of a strategic option and the effect of the economic activity of the enterprise. Verification of the hypothesis

Decision-making is the least noticeable side of the policy conducted by the company; however, due to the decision-making mechanism, the ideas and visions of development change into strategic operations.

“Irrespective of what role is taken by the entrepreneur, their activities are always focused on searching for better solutions of problems arising on the way of the company’s expansion. Entrepreneurship is a type of alertness, which enables the identification of opportunities, i.e., an opportunity to expand the range of operations, to increase or maintain revenues, to access cheaper sources of production factors, scientific and technical information. Exploiting such opportunities may become the basis for success. On the other hand, entrepreneurship is also expressed in the identification of feasibility – since not always all the ideas or new solutions have the features of feasibility in the company. The role of the entrepreneur becomes, therefore, to recognize if new ideas have a chance to be implemented at the particular moment in current conditions. Knowledge and experience accumulated in entrepreneurs is the basis for searching for new ways of solving old and new problems” (Gruszevska 2010).

While referring to the objective of the paper assumed at the beginning – the following research hypothesis was formulated – the selection of the specific strategic option from the classic set of options of growth (development) strategies has an impact on the overall profitability level of the surveyed enterprises. The research included 36 companies belonging to the IT sector, present in the NewConnect market (the market mentioned was established with a view to dynamic companies in the case of whom capital injection will open up an opportunity to use the potential existing in innovativeness and thus provides an

opportunity for development rewarded with the promotion to a group of large and valuable Polish companies). Due to the specificity of issuers, the NewConnect market offers more liberal formal requirements and information obligations and consequently cheaper capital raising. NewConnect is also to constitute the beginning of the stock exchange career for enterprises listed therein) with the status of the organized market, which is guided by the Warsaw Stock Exchange outside the regulated market, in the form of the alternative trading system. In order to determine the selected option of development, the discourse analysis was carried out using the methodology of the content analysis of information documents as a technique allowing the location of explicit information on the development strategy of the company in the four-field matrix by *H.I. Ansoff* (see: *Table 1*).

Table 1. Identification of specific strategic options of the surveyed companies

Traditional strategic options in market-product terms	Number of enterprises distinguishing the specific strategic option
Strategy of penetration	21
Strategy of product development	23
Strategy of market development	23
Strategy of diversification	7

Source: Own study

In order to verify the formulated hypothesis as the analytical method, a series of linear regression analyses was used (Nowodziński 2013) (see: *Table 2*).

Table 2. The impact of the strategy selection on the overall profitability level of the surveyed companies

Model	Non-standardized coefficients		Standardized coefficients	t	significance
	B	Standard error	Beta		
(Intercept)	1.087	3.294		.330	.744
Penetration strategy	.177	.233	.158	.758	.454
Product development strategy	.062	.277	.051	.224	.824
Strategy of market development	.329	.311	.248	1.059	.298
Strategy of diversification	.097	.305	.071	.318	.752

Dependent variable: profitability in total

Source: Own study

The analysis of the presented hypothesis concerning the impact of the selection of a specific strategy on the overall profitability level of the surveyed enterprises did not indicate the impact of the selection of a specific strategic option on the overall profitability level $F(4.31) = 0.43$; $p = 0.786$. Therefore, the test did not confirm the formulated hypothesis among the enterprises of the surveyed sample.

Conclusions

The main aim of this study was to determine the overall profitability level of a company and to investigate the correlations between performance outcomes and selection of a specific strategy in the context of the traditional H.I. Ansoff's strategy formulation matrix. The traditional Ansoff's matrix is a useful tool for detecting the possibilities of intensive company development. First of all, the company strategy can be based on currently manufactured products to develop on the previously serviced markets (market penetration strategy). This one is based on intensifying activities in the field of sales through, e.g., densification of the distribution network, strengthening promotions, increasing unit packages – as well as increasing market share or increasing the scope of the use of product. Then, the possibility of finding or developing new markets for currently sold products (market development) is explored. Applying this strategy means both geographical expansion as well as generating new segments for an existing product. Next, the possibility of preparing new products that potentially would find interest in current markets (product development) is analyzed. The company uses this strategy by, e.g., extension of product features, programming new application possibilities of the product, better adaptation of the product to diversified market segments, improvement of the product's function. Finally, the company considers the possibilities of developing new products and offering them on new markets (diversification). Diversification can be made by the company by purchasing licenses, know-how, and finally by acquiring other companies or by mergers with them. Diversification can take place in three directions: vertical diversification, concentric diversification, and parallel diversification.

Limitations and suggestions for future research

In this study, research was conducted to classify companies concerning four generic strategies. Decisions taken by managers are inherently burdened with considerable uncertainty associated with the natural conditions of the decision-making process. As a result, future studies should be conducted – the test group will be considerably broadened.

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WPLYW WYBRANYCH OPCJI STRATEGICZNYCH NA POZIOM RENTOWNOŚCI SPÓŁEK NOTOWANYCH NA RYNKU NEWCONNECT NA PRZYKŁADZIE SEKTORA IT

Streszczenie: W artykule zaprezentowano weryfikację hipotez odnoszących się do istotności wpływu wyboru określonej opcji strategicznej na kontekst ekonomiczny funkcjonowania współczesnych przedsiębiorstw. Według studiów literaturowych wybór określonej ścieżki rozwojowej ma fundamentalne znaczenie dla efektów ekonomicznych prowadzonej działalności. Zarządzający, formułując strategię rozwoju, wpływają według założeń teoretycznych na ogólny poziom rentowności zarządzanych przedsiębiorstw.

Słowa kluczowe: strategia, opcje rozwojowe, rentowność, wybór strategiczny



CHANGES IN HOUSEHOLD SAVINGS IN 2005-2017

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Abstract: The key goal of the study is to present changes in the way households managed their money in 2005-2017. As a thesis, it was assumed that, as a result of positive changes in the economy, the propensity to save in households increases. On the basis of literature studies, technological analysis in this diagnosis, as well as at Barometr, ING Bank Śląski has proved this thesis. It was shown that the increase in savings in households is directly related to the reduction of the unemployment rate, the increase in average income, as well as the launch of social programs that positively affected household finances.

Keywords: household, savings, investments, allocation, saving behaviour

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Introduction

A household is one of the economic entities; it is one person and also several persons who live together and support one another. An absolute prerequisite for the functioning of a household is that its members earn money (at least one of them). Lone persons also form households, however, as single persons. The important role of the household in economic sciences is already indicated by the Greek etymology of the term "economy", which in its original meaning can be translated as "household science". Households perform the following functions: economic, educational, health care, consumption, reproduction and production. The priority of households is, first of all, to satisfy the needs of all members, as well as to improve their financial situation. In order to gain the means to live, members of the household perform work for gainful purposes, i.e. sell their own services, where they are treated by enterprises as so-called personal factors of production, that is human capital. For services rendered, household members receive a specific remuneration, which corresponds to their qualifications and is adequate to the degree of work performed. The household has to pay current expenses such as fees and bills, food, operating costs, clothes, and health services. It is only when the current expenses have been settled that the household can use its surplus income for savings, leisure, and entertainment. Households' financial behaviour focuses on managing finances, i.e. "[...] how financial resources are used in specific areas of personal finance and the relationship between those areas" (Musiał 2014a, pp. 839-840). The following areas of financial management are distinguished: income generation, spending, saving, investing, borrowing, risk management, retirement planning, tax planning, and asset transfer.

The basic task of households is to manage liquidity, i.e. the ability to pay current liabilities on time, which allows them to avoid additional burdens and maintain financial stability (Krasucka 2013, p. 175). J. Grotowska-Leder distinguishes three financial situations in which a household may find itself:

1. "incomes obtained in the household exceed its expenditure,
2. are in balance with the expenditure incurred or
3. are less than necessary" (Grotowska-Leder 2011, p. 183).

Financial stability (and especially the first of these situations) is a prerequisite for moving on to other areas of financial management, i.e. saving and investing. Within the areas indicated above – saving and investing – a subcategory of financial behaviour is implemented, which is most often referred to as saving behaviour. These behaviours are directly related to saving. This concept is broadly defined as the postponement of consumption by allocating part of the resources to an increase in assets and use for consumption in the future (Harasim 2007, p. 14). Saving, as a deliberate action, consists of various types of choices and decisions, such as the purpose of saving, the level and structure of savings or the form of accumulating them. Savings, on the other hand, are the set-aside part of funds which have not been used for current consumption or, in other words, the part of disposable income constituting the difference between income obtained and current consumption expenditure. The percentage of income set aside for savings is referred to as the savings rate. The concept of saving can be considered in a narrow and broad sense. Saving in the narrow sense refers only to the process of accumulating funds, and savings are unused financial assets. In a broad sense, the definition of saving includes saving in the strict sense and investing, whereas savings are the sum of financial and non-financial assets held at a given moment, often in the form of capital. In the conditions of modern financial markets, the saving process usually takes the form not only of postponement of consumption, but also of simultaneous assumption of multiplied resources, so the area of savings and investments is divided by a very thin boundary (Musiał 2014b, p. 18). However, it seems important to distinguish between the two concepts, at least in the definition layer, as in practice they will refer to the same area – saving behaviour.

Investing versus saving

The concept of investment is defined in the Accounting Act (Art. 3 section 1 item 17) as "assets held by an entity in order to obtain economic benefits resulting from the increase in the value of such assets, obtaining income in the form of interest, dividends (shares in profits) or other benefits, including those from a commercial transaction, in particular financial assets and these properties and intangible assets which are not used by the entity but are held by it in order to obtain such benefits". It follows from the above that the notion of investment covers not only financial assets but also non-financial assets. They include assets that an entity has acquired to obtain such benefits and the ones that it possesses to obtain benefits. In order for an object to be considered an asset of a given entity, it

is not necessary to be in its exclusive possession or as a joint property. In this case, the entity may exercise management control and receive benefits from it (Nowakowska-Grunt, Miciuła, Mastalerz 2017, p. 37). Unlike operating assets, investments are characterised by the fact that the benefit is derived from a particular investment component. Investments do not include activities which are to lead to the construction, extension, adaptation or modernization of specific components constituting a fixed asset. These investment activities are called fixed assets under construction. An entity's investment activities, costs and outcomes of this activity are reported in a manner that is consistent with the entity's policies:

- components of tangible fixed assets in the case of investments in tangible assets,
- components of long-term and short-term investments, in particular financial investments,
- operating costs of the entity, which refers to resources used for activities that are not treated as investments under the balance sheet law, as exemplified by the costs of research works (Caputa 2011, pp. 113-129).

In order to take into account the differences between saving and investing, the following conclusions can be drawn based on the literature of the subject:

- Saving means protecting capital against loss of value, and investing means increasing capital;
- In terms of dividing the financial strategies of households into passive and active ones, we will include saving in the first type of strategies, while investing in the second type;
- The forms of saving are usually safer, i.e. less risky than the forms of investment;
- The rate of return on savings is generally relatively lower than the rate of return on investment (Musiał 2014b, p. 22).

When analysing the relationship between the area of savings and investment, it can be said that "savings are a means of accumulating capital which can then be invested in order to multiply this accumulated capital". So saving and investing are closely linked processes and as such are most often discussed both theoretically and as part of research and analysis. Saving behaviour is a very important phenomenon that can be considered from both a micro-economic and a macro-economic point of view. "Household savings are an integral part of total savings in the economy, and therefore undoubtedly an important source of economic growth" (Anioła, Gołaś 2012, p. 47). A. Korzeniowska states that from the macroeconomic point of view savings of households require special attention, due to their fundamental importance for economic processes, including the fact that they constitute the main source of investment financing (Korzeniowska 2015, pp. 105-115). Variables such as the level, structure, form of accumulation, and the way of investing household savings are of great importance for financial stability and economic growth of countries. Greater willingness of the society to save and invest financial resources translates into greater investment opportunities, and thus the acceleration of growth for the whole economy in the form of an increased GDP rate. Stimulating,

strengthening, and supporting well-targeted household saving measures should, therefore, be an important element of government policy.

In microeconomic terms, savings are a way of ensuring the household's financial security, raising living standards, and avoiding many consequences of difficult life situations. They, therefore, play an important role in the life of a household. M. Krasucka points to the model of an active financial behaviour of households, in which a great deal of attention is paid to financial management by taking specific, well-thought-out measures and planning financial flows over a longer period of time. In this model, savings play a key role, which for the household means a higher level of security, independence, as well as the possibility of capital increase and enrichment. On the other hand, we have a reactive model characterised by an unreasonable approach to finance, where decisions are made spontaneously, often hastily. This model results in a lack of savings and thus a low level of financial security and often impoverishment of the household (Krasucka 2013, p. 181).

Determinants of saving behaviour

People decide to make savings for a variety of reasons. The reasons why households save can provide important information, as they are the basis for making specific decisions about the methods of saving. One of the first classifications of saving motives (also referred to as "money holding motives") is proposed by J.M. Keynes (1939) who describes them himself as "subjective motives" (Keynes 2003, pp. 97-98). Browning and Lusardi supplemented the list with an additional motive, defined as the prepayment motive while modifying some of the names proposed by Keynes (Swacha-Lech 2013, p. 431). In the literature, we also find the so-called "transactional motive" (Korenik 2003, p. 28). According to the Keynes' classification, modified and supplemented by the two aforementioned motives, we can list the following:

- Security (prevention) motive – saving is a way of protecting oneself against unforeseen, sudden expenses,
- Foresight (life cycle) motive – saving results from the willingness to adapt to the future, different than the current relationship between income and needs and expenditures in the future,
- Speculative motive (use of interest rate) – saving gives satisfaction of increasing the resources flowing from the interest obtained,
- Increasing prosperity (improvement) motive – saving gives satisfaction with the possibility of increasing expenditure and material resources over time,
- Independence motive – saving is a way to increase life independence, expanding the range of possible actions to be taken,
- Entrepreneurship motive – saving is motivated by the willingness to raise capital for investments or to start one's own business,
- Pride (inheritance) motive – saving results from the desire to leave the property to future generations,

- Greed motive – saving is a result of reluctance to spend and satisfaction from the very fact of having money,
- Prepayment motive – saving results from the desire to achieve a specific material goal, taking into account one's own contribution (e.g. purchase of a house, car),
- Transactional motive – saving allows a person to keep their transactions flowing thanks to constant access to cash.

It should be borne in mind that the above list is an attempt to systematize and isolate the motives for saving, which in practice rarely occur individually, but more commonly co-occur and are complementary. This applies both to the population as a whole at a given point in time and to an individual household over a longer period of time (Krupa, Walczak, Chojnacka 2012, p. 23).

A different classification of the motives, frequently used by contemporary researchers, was proposed by Cato (1975) (Swacha-Lech 2013, p. 431). It distinguishes saving motives as a criterion that takes into account the purpose:

- for sudden unforeseen circumstances,
- for creating a reserve for daily expenses,
- for retirement and old age,
- for the needs resulting from having children,
- for the purchase of a house and the goods of durable use,
- for holidays.

The issue of saving motives was later taken up by many other researchers, basing on the existing classifications and attempting to standardize or hierarchize them on the model of the Maslow's pyramid of needs, including, among others: Lindqvist (1981), Sturm (1983), Canova et al. (2005), Devaney (2007) (Anioła, Gołaś 2012, p. 12). One of the latest classifications, similar to the one proposed by Katon, was developed by Lee and Hanna (2011) on the basis of the concept of their predecessors, distinguishing 6 groups of saving motives:

- based on the needs,
- for unforeseen circumstances and safety,
- for retirement and security in the future,
- for love and social needs,
- to ensure respect for the need for luxury,
- for self-improvement (Swacha-Lech 2013, p. 432).

It is not difficult to notice that the classifications listed here, unlike those proposed by Keynes, refer directly to the purpose of saving, sometimes in a specific material form. Keynes' classification is therefore characterised by a greater focus on psychological factors. Saving behaviours include a range of preferences and measures taken in connection with saving. The first issue is the general propensity to save, which is the ability of the entity (household) to postpone consumption (Migdal 2001, p. 274). A commonly used measure of saving propensity is the "gross savings rate being the relationship of gross savings to gross disposable income, as well as the financial savings rate being the relationship of financial savings to gross disposable income" (Cudowska-Sojko 2006, p. 146).

However, this is not the only indicator of saving behaviour. In one of his papers, M. Musiał quotes an interesting typology of saving behaviours, based on three key features of saving:

- the level of savings, i.e. the amount of income not allocated to consumption (low, medium, high level of savings),
- the duration of saving, i.e. the duration of the safekeeping of the assets in the form of savings (short-, medium- and long-term),
- the liquidity of savings, i.e. the form in which savings are held, in terms of the ability to liquidate them within a specific period of time (very liquid, not very liquid) (Musiał 2014b, p. 34).

In the typology mentioned above, based on these characteristics, three types of saving behaviour are distinguished (Musiał 2014b, p. 36), which reflect the general level of propensity to make savings:

- type A saving behaviours (reflecting a low propensity to save) is characterised by a low level of savings, accumulated for short periods of time, in a very liquid form,
- type B saving behaviours (reflecting an average propensity to save) are characterised by the accumulation of more savings, for periods exceeding one year, in various forms in terms of the level of liquidity,
- type C saving behaviours (reflecting a high propensity to save) are characterised by accumulating savings at a high level, for periods longer than 3 years, in forms with a low level of liquidity.

The above classifications concerning saving motives and basic saving behaviours should be supplemented by one more, namely types of savings. In the literature on the subject, we can find different classifications. The most common saving criteria include also:

1. Voluntary nature of accumulation

- voluntary saving – the household makes its own choice about accumulating part of the funds in the form of savings, their purpose and the form of accumulating them,
- compulsory saving – may result from legal regulations (e.g. in the form of obligatory pension contributions) or economic issues (e.g. lack of goods on the market).

2. The form of accumulation

- cash savings – in the form of cash, collected outside financial institutions,
- non-cash savings – in a non-cash form, accumulated in financial institutions,
- non-financial savings – accumulated in the form of tangible capital goods (e.g. land, real estate). This category is strongly related to the liquidity of savings.

3. Duration of savings

- current savings – short-term savings, usually in cash or non-cash form, with a maturity below one year,
- savings for a defined period – with a maturity of more than one year. This category also relates to the liquidity of savings.

4. Intended use

- general savings – accumulated without a clearly defined purpose and most often spent on current, unexpected needs,
- targeted savings – accumulated for a specific purpose or purposes (housing, studies, retirement), are often of a long-term nature.

5. Method of collection

- institutionalised – collected through financial institutions,
- individual – collected on one's own, without the use of the services of financial institutions (Maciejasz-Świątkiewicz, Palmer 2009, p. 55).

In order to analyse the factors influencing saving behaviour, it is worth to first refer to the earlier considerations, i.e. the motives and objectives of saving. They clearly influence both the size of the savings and the specific saving decisions, related inter alia to the way capital is invested (Krupa, Walczak, Chojnacka 2012, p. 59). Nevertheless, the propensity of households to save, as well as the preference for capital allocation, depend on many different factors. They can be considered from a theoretical point of view as well as in a number of studies and analyses. Knowledge of the determinants of saving by households in practical terms serves as a basis for many analyses and forecasts, useful, above all, for modelling adequate programmes and instruments aimed at stimulating savings attitudes.

In the literature on the subject, one can find different classifications of the determinants of saving behaviours. An interesting solution for the analysis of factors influencing saving is assumed by B. Frączek. The author, taking into account the order, distinguishes three areas of saving decisions, which, although strongly interrelated, can be shaped by specific sets of factors:

1. Decisions in the area of making choices between consumption and saving, determining the willingness to save (level of savings, saving rate),
2. Decisions on the choices between safe surplus accumulation and risky investments,
3. Decisions concerning the choice of specific investment solutions (Frączek 2012, pp. 87-88).

There are a number of theories that can be used to explain saving behaviours:

1. Neoclassical theories – based on the assumption that households act rationally and forecast changes, among them the best known are the life cycle hypotheses by Ando and Modigliani, and the permanent income hypothesis by Friedman,
2. Psychological and sociological theories – rejecting the existence of permanent preferences based on well-defined variables, such as income levels, assuming the existence of a variety of factors influencing saving preferences. An example is the theory of relative income by J.S. Duesenberry,
3. Behavioural theories – based on the combination of economics and psychology, based on the search for deviations from the assumptions of the classical theories (Wildowicz 2006, p. 63-65).

A review of the theories explaining saving behaviours shows that saving is the result of many different factors. These factors are classified in different manners. A distinction is also made between external and internal determinants (Musiał

2014b, p. 67) as a relatively consistent, unambiguous classification, quoted most often:

A. Outer determinants

1. Macroeconomic: related to the level of development and the current situation of the whole country, in areas important from the perspective of the functioning of the household. In the first place, these are factors affecting the financial situation of households – the situation on the labour market, unemployment, inflation, the burden of taxes, and other compulsory charges, but also the development of markets and the attractiveness of financial instruments and interest rates.
2. Information and technology: related to the development of IT networks, facilitating education, reaching potential customers with information and creating new technological solutions in the area of savings and investments, supporting cash flows and monitoring of financial resources. These factors include the level, scope and form of advertising campaigns and other forms of promotion of saving behaviours, development of Internet offers, as well as innovativeness of investment products and tools.
3. Socio-cultural: related to the preferences specific to a given society with a historical and cultural background, determined by elements such as the prevailing value system, lifestyle, level of consumption, attitude to saving, inheritance traditions, level of uncertainty and trust in the state in key areas of life (health, education, work, old age).
4. Demographic: connected with the demographic structure of the population, e.g. an ageing population motivates savings for old age, the nuclear family model motivates investment in the future and independence of its children.

B. Internal factors

1. Economic – defining the general economic situation of a household, i.e. variables such as income, wealth, savings, and investments already possessed, and their forms.
2. Psychological – showing a specific for a given household set of views, motivations, attitudes, habits, as well as knowledge and skills in the area of financial management.
3. Socio-professional – determining the social, educational and professional activity of a household, such as professional activity and type of work performed, education and activity in the scope of education, non-business activity, way of spending free time, chosen lifestyle.
4. Demographic – defining the demographic composition and type of household, which involves assigning different meanings to particular savings targets (e.g. size, age, life phase of the household).

The above list shows a wide range of factors determining the propensity to make savings, having different strengths and directions of influence, manifesting themselves depending on the context, often coexisting or even dependent on each other. Some of them receive relatively more attention, as they are particularly

related to the area of savings and thus allow for a better understanding of the behaviour of households in this area.

Among the determinants of the propensity to save, income is indicated first, which is considered to be the most important determinant of the wealth of households and the factor mainly determining the level of consumption. The link between income and saving, therefore, seems obvious. Savings represent an "unconsumed" part of income, resulting from the decision to potentially increase the possibility of satisfying consumer needs, while at the same time accumulating savings. Income levels gain importance in the context of additional consumption, i.e. that which can be (at least partially) resigned from for saving purposes (Frączek 2012, pp. 87-88).

The relationship between income and the level of consumption and savings has been the subject of many theories or hypotheses. These theories arise mainly from the interest in the area of consumer behaviour of households, but they are also applied in explaining saving behaviour. It is assumed that savings are accumulated rationally over a long period of time and that changes in current income do not have a material impact on the saving rate.

The process of financialisation, banking-up of the population, and the development of financial markets in developed countries have resulted in the majority of household savings being invested in financial instruments, i.e. agreements based on financial obligations between economic entities. The most common financial instruments used by households to save and invest funds are cash and bank deposits, equity instruments (stocks, shares in business entities), debt instruments, including treasury bonds, insurance policies, and pension funds. The differences between the products and the assessment of their attractiveness are based on a number of characteristics, the most frequently taken into account being the rate of return, liquidity, level of risk, and availability (Rytłewska, Kłopocka 2010, pp. 57-80).

Analysis of household saving decisions

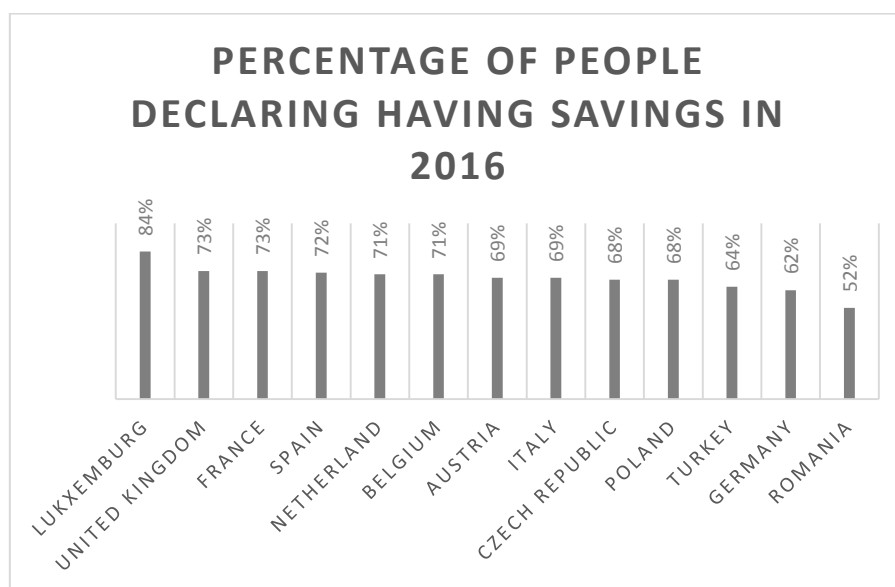
One important indicator of the level of savings made by households is the share of savings from such business entities in GDP. Information on this subject is provided by the "National Accounts by institutional sectors and sub-sectors" published annually by the Central Statistical Office (GUS). Analysis of data obtained from the Central Statistical Office (GUS), presented in *Table 1*, shows a clear upward trend in the share of savings of the enterprise sector in GDP. In the household sector, however, there have been large fluctuations over the last 10 years. The downward trend was observed before 2008, and this year it reached the lowest level of savings. After 2008, the share of household savings increases sharply, but already after 2009 we observe another decrease until 2011. In the period 2011-2014, the level of savings remained stable, but at a very low level.

Table 1. Savings to GDP ratio (in %) in institutional sectors in the years 2007-2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total	18.4	18.3	17.3	17.2	17.7	17.7	18.5	19.1	20.6	19.7
Corporate sector	9.1	10.7	12.7	14.0	16.0	15.6	16.4	16.4	16.9	14.8
Household sector	4.5	1.3	5.7	5.0	1.5	1.5	2.2	1.8	1.8	3.1
Government and local government institutions sector	2.5	1.3	-1.8	-2.8	-0.3	0.0	-0.7	0.2	1.1	0.8
Financial and insurance institutions sector	2.1	4.7	0.3	0.6	1.1	1.2	1.2	1.2	1.3	1.5
Non-commercial institutions sector	0.2	0.2	0.4	0.4	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5

Source: National accounts by institutional sectors and sub-sectors 2007-2010, 2011-2015, Statistical studies and analyses, Central Statistical Office (GUS), Warsaw, <http://www.stat.gov.pl> (no data for 2017)

These statistics clearly show that domestic capital in Poland is increasingly generated by the corporate sector and that household savings have been relatively less important over the last 10 years, especially since 2011. If we take into account the statistics from years before the period analysed here, we can see that before 2002 the trend was the opposite, i.e. household savings clearly dominated the overall share of savings in GDP.

**Figure 1. Percentage of people declaring having savings in 2016**

Source: (ING 2016)

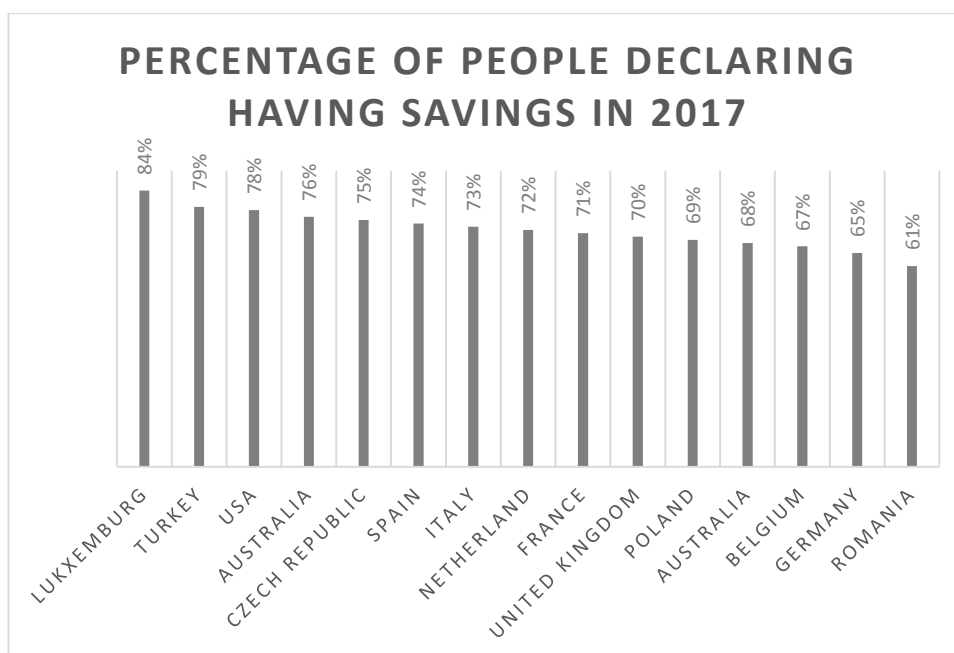


Figure 2. Percentage of people declaring having savings in 2017

Source: (ING 2017)

The improvement of the situation of households in the context of the last 4 years is indicated both by the increase in the percentage of households declaring savings, as well as by the fact that they have caught up with the indicators declared in Europe, which is included in the ING Barometer. According to the ING Bank study, in 2016 we reached the average European indicators, bearing in mind that in previous years Poland was below the average. The reasons for the sudden increase in the improvement of Poles' savings should be seen, on the one hand, in the general decrease in unemployment and the increase in the level of salaries, which clearly affected the level of wealth of Polish households. On the other hand, as most of the current analyses show, reducing the poverty sphere and increasing wealth, and thus increasing the possibility of postponing savings, is directly related to the launch of the 500+ programme. The ING studies included questions about the aid scheme in place for families with children, which showed that 16% of the respondents received 500+ and that it had an impact on both the decision to start saving and the increase in the level of savings that can be seen in the report. "The current edition of the ING Financial Barometer confirms that these intentions have been reflected in reality".

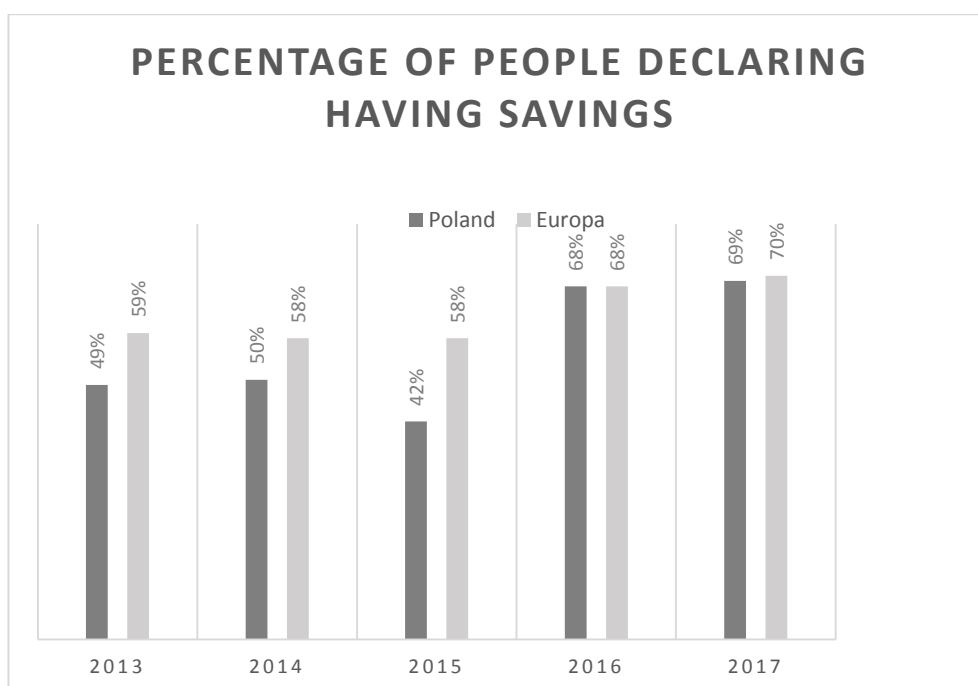


Figure 3. Percentage of people declaring having savings in Poland/Europe

Source: (ING 2017)

In addition to the propensity to save, the amount of savings held by households, measured by a multiple of monthly income, is important. On the basis of the data from the Social Diagnosis for the years 2005-2015, it is easy to notice that from 2006 to 2015 household savings grew steadily, from 22.2% of people declaring to have savings at the beginning of the analysed period to 45.1% in 2015. The most frequently declared amount of savings in all analysed years is the sum from more than one month up to 3 months of income. In the years to come, we can speak of an increase in the level of savings held in the two highest categories, i.e. a decrease in the number of people declaring savings at the level of 6-12 months' income in favour of an increase in the share of people having savings at the level of more than 12 times the monthly income. The trend concerns the amount of savings in the years 2005-2016. This is illustrated in the diagram below.

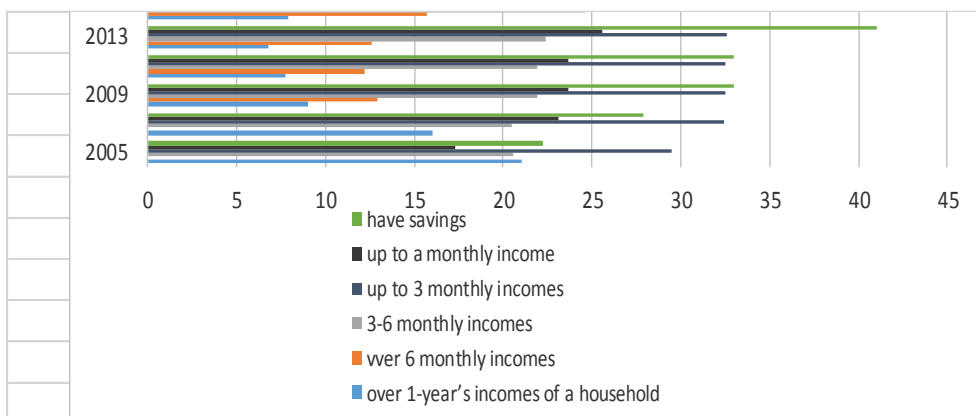


Figure 4. Amount of declared household savings

Source: Own study based on (Czapiński, Panek 2007, 2011, 2015, 2016)

Taking into account the results of ING's 2017 research, we can see a clear increase in the savings in the highest category in terms of the amount declared. As also highlighted in the Barometer, not only the propensity to save, but also the amount of savings held is increasingly close to the European averages. However, as many as 25% of respondents declare that they have made savings within the lower limits.

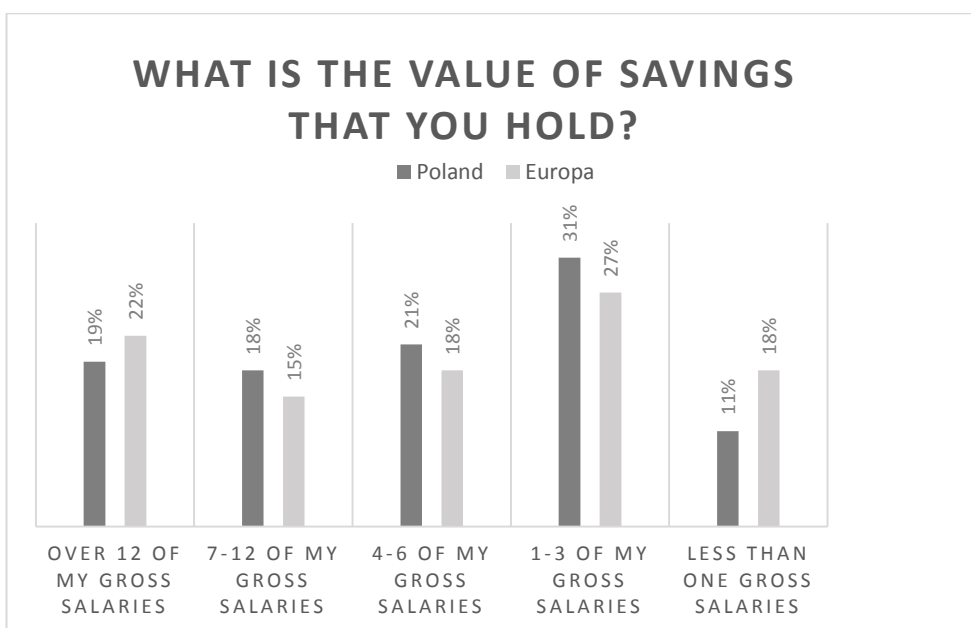


Figure 5. Value of savings held

Source: (ING 2016)

Conclusions

There is no doubt that the propensity to save should be assessed in positive terms, both from the microeconomic side – as a way of financial security of the household as well as macroeconomic – as a component of the stimulation of economic processes. Savings behaviors are determined by a number of various factors, often independent or superior to the decisions and actions of the farm itself. The influence on saving behavior is largely due to external factors that are associated with shaping wage policy and social policy, affecting the general wealth of society, and thus the propensity to save. The years 2006-2015 confirm the low tendency of Poles to save in relation to other European Union countries. In addition, compared to 2006, we can observe a clear drop in Poles' savings with an average relatively stable situation in EU countries. Over the years 2015-2017, we observe a clear, even abrupt improvement in the area of household savings, both from the percentage of people declaring having savings, their amount, as well as the place of Poles compared to other European countries, where we moved closer to the center in terms of saving rates and reached other countries regarding declaring having savings.

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ZMIANY W SPOSOBIE GOSPODAROWANIA ZASOBAMI PIENIĘŻNYMI GOSPODARSTW DOMOWYCH W LATACH 2005-2017

Streszczenie: Kluczowym celem opracowania jest prezentacja zmian zachodzących w sposobie gospodarowania zasobami pieniężnymi gospodarstw domowych w latach 2005-2017. Jako tezę przyjęto, że w następstwie pozytywnych zmian zachodzących w gospodarce rośnie skłonność gospodarstw domowych do oszczędzania. Na bazie studiów literaturowych, analiz materiałów branżowych, w tym diagnozy społecznej, a także Barometru ING Bank Śląski, teza ta została udowodniona. Wykazano, że wzrost oszczędności gospodarstw domowych pozostaje w bezpośrednim związku z obniżeniem stopy bezrobocia, podwyższeniem średnich dochodów, a także uruchomieniem programów socjalnych, które pozytywnie wpłynęły na finanse gospodarstw domowych.

Słowa kluczowe: gospodarstwo domowe, oszczędności, inwestycje, alokacja, zachowania oszczędnościowe



THE IMPACT OF LATEST TRENDS IN MARKETING ENVIRONMENT ON MARKETING AND ENTREPRENEURSHIP

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Abstract: Post-truth is an outcome of technological changes in the marketing environment. The post-truth phenomenon has a huge impact on the marketing activities of enterprises and on entrepreneurial attitudes. The objective of the study is to characterise the impact of the latest trends in the marketing environment on marketing and entrepreneurship in general. The article presents the results of research on the influence of post-truth on the marketing strategies of business organisations. The study is supplemented with examples. The study also makes use of research carried out on secondary sources obtained through the desk research method as well as the authors' own participant observations.

Keywords: creativity, entrepreneurship, marketing, post-truth

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Introduction

Post-truth is a trend currently observed in our surrounding reality. The term appears in the context of the increased impact of digital reality on consumer behaviour in the real world. Post-reality is when consumers buy subscriptions to have continuous access to products without having to deal with the distribution, storage or maintenance of real products, etc. Technological solutions enable the co-existence of digital and physical reality. For many users this is completely natural (for instance, numerous filters on Snapchat). The technological options of controlling acoustic reality are used in business practice to eliminate unwanted sounds (e.g. a baby's crying on an airplane). In medicine the scenarios of managing people's future by genetic control are becoming reality (*TrendBook*, p. 34).

The survey was carried out with the CAWI (Computer-Assisted Web Interview) method – responsive electronic questionnaires available through a website and email. The opinions of 1112 Internet users were collected. The survey was conducted from 3 to 9 March 2017. The structure of the sample consisting of Internet users was adjusted with an analytical weight and corresponded to the structure of Polish internauts aged 15 or more broken down by gender, age and size of their place of residence. Only complete questionnaires were used in the analysis. The survey was performed by the Mobile Institute (*TrendBook* 2017, p. 6).

The essence of creativity in marketing

Creativity is a very crucial characteristic of human capital. It can be defined as creating useful and valuable products, services, ideas, procedures or ideas by entities collaborating with each other. Creativity may also be an important feature of all the aspects of decision-making in business. It is the phenomenon of inspiring new thoughts, reformulating existing knowledge and analysing assumptions to express new theories and paradigms or raising awareness. This is a process which involves “identifying, selecting, exchanging and linking facts, ideas and skills” (Proctor 1998, p. 34). The world-famous psychologist M. Wertheimer described creativity as “division or reorganisation of thoughts on a given subject to obtain a new, deeper insight in its nature” (Wertheimer 1959, p. 49). In turn, T. Rickards defined creativity as “an escape from stagnation in thinking” (Rickards 1998, pp. 121-123), emphasising the role of creative thinking in decision-making and problem-solving (Proctor 1998, p. 36).

There is evidence to confirm a direct link between creative thinking and the effectiveness and productivity of organisations (The European Report, 2010, p. 45). A creative approach also makes it possible to solve organisational problems, encourages employees to introduce novel solutions, motivates them and helps them develop their skills, and also enhances team work (Lach 2014, p. 23).

Creativity is also very crucial in marketing and in designing the global operating strategies of businesses (Szopiński 2015, pp. 117-129). With the constant flow of ideas about new products and services and the concept of streamlining processes in an organisation, its competitive edge increases as well (Młyńska 2015, pp. 117-129). Contemporary enterprises increasingly often focus on activities having their source in human creativity, which not only gives rise to original ideas, novel solutions and variety, but also becomes a crucial economic development factor (Kadłubek et al. 2017, p. 9). Creativity is becoming a distinguishing factor between creative business and regular companies.

The contemporary image of entrepreneurship

The notion of entrepreneurship has been the subject of numerous disputes among researchers and society. It has been broadly discussed in the literature on the subject, where its meaning and essence has been considered. In the contemporary perspective, entrepreneurship can be defined as a combination of a number of characteristics and skills such as the ability to take up risks, innovative thinking, recognising needs and opportunities, creativity in action, flexibility and dynamism in decision-making, as a result of which business entities come into being and are able to develop. Entrepreneurship was first described by the French economist R. Cantillon, who defined it as hunting for opportunities everywhere there is a market imbalance which may bring extraordinary profit (Łochnicka 2016, p. 12). He also claimed that entrepreneurship is the ability to project into the future and to take risks (Łuczak 2003, p. 11). J.B. Say wrote about concentrating on emphasising the significance of work capital and entrepreneurial activity factors in “combining means of production” (Piecuch 2013, p. 162). A. Smith and D. Ricardo

attached lesser significance to entrepreneurship, claiming that entrepreneurs do not have an impact on the economy, which is governed by “the invisible hand of the market”, at the same time associating business people with greedy capitalists. According to J. Schumpeter, entrepreneurship and entrepreneurs are innovations that upset the market balance and enable it to reach a higher level of development (Skowron-Grabowska, Mesjasz-Lech 2016, p. 25). Through combining means of production, entrepreneurs create new products and technologies which they introduce in the economy regardless of their capital (Schumpeter 1983, p. 66). Contrary to the above theory, I. Kirzner claimed that entrepreneurs use the arbitration function on the market to adjust prices, thanks to which they contribute to market balance. They respond to the arising opportunities instead of creating them (Kirzner 1973, p. 73). A bridging theory between the two was presented by F. Knight, who considered the compensation for uncertainty and risk as the source of profit. Currently, a number of descriptions refer to the definition presented by P. Drucker (a follower of Schumpeter's line of thought), who presented entrepreneurship as purposeful and systematic work based on innovativeness, preceded by seeking change, responding to it by treating it as opportunities, and in consequence, all these activities should be reflected in a new economic activity. Innovation is regarded as an instrument which provides resources with a new ability to create wealth, new products and processes, the result of which a new market is created, generating demand and acquiring new customers (Drucker 2007, pp. 25-29). J. Siekierski supported these views, presenting entrepreneurship as the ability to get involved in a given process individually or as a team. In his opinion, the inseparable elements of entrepreneurship are innovativeness and creating new business endeavours, which require new creative approaches (Siekierski 2003, pp. 150-151). Furthermore, J. Timmons emphasised that money and access to resources are not a guarantee of success, and many undertakings do not require considerable outlays. Entrepreneurship is a creative act of the entrepreneur, who devotes his time and energy to create a company or organisation, not being limited to observing, describing and analysing it (Timmons 1990, p. 5). The interpretation of this definition may cause some controversies because it downplays the significance of resources which entrepreneurs may obtain thanks to their knowledge, skills and connections, i.e. intangible resources (Kwiatkowski 2000, pp. 87-89). The European Commission defined entrepreneurship as “[...] an individual's ability to turn ideas into action. The notion encompasses creativity, innovativeness and risk-taking, as well as the ability to plan and manage projects in order to meet objectives” (Kurczewska 2013, p. 32).

Currently start-ups are the most recognisable form of entrepreneurship, often associated with garage entrepreneurship. Garage entrepreneurship is the essence of entrepreneurial activities, with the innovative ideas, passion and dedication of business people, thanks to whom new business undertakings launched in garages develop dynamically and reach impressive sizes (Glinka, Gudkova 2011, p. 20). The characteristics of start-ups include innovativeness, creativity, high risk, originality, focus on the future, flexibility, dedication, resilience and resistance to failure. Examples of successful start-ups which have turned into real businesses are

Google, Amazon, PayPal, Facebook, Airbnb, and the relatively new Uber. They are enterprises which decided to create unique services. Before Google, the online advertising market was practically non-existent; the same applies to online sales (Amazon), online payments (Paypal), social media (Facebook), hospitality services (Airbnb) and Uber, which is a real competition for taxis. Steve Blank created the most recognisable definition of a start-up. According to him a start-up is an organisation which seeks a profitable, scalable and repeatable business model (Blank, Dorf 2012). Eric Ries describes start-ups as organisations which create products and services under conditions of extreme uncertainty (Ries 2012). Currently start-ups are associated with innovation, which is the main driver of the economy. This is evidenced in the presence of numerous national and local government institutions supporting innovativeness and the processes of creating and developing new enterprises (Daroń 2017, p. 98). An enterprise which has survived the difficult transformation period, after reaching the profitability threshold strives to enter the market (Nowakowska-Grunt, Chład, Sośniak 2017, p. 80). However, contemporary organisations are constantly competing. Extremely strong competition, excessive supply, the quick ageing of products and the necessity to immediately satisfy customer expectations are just a few reasons why traditional, established organisations are becoming a relic of the past (Maige, Muller 1995). In the ever-changing, dynamic surroundings with growing complexity and intensive competition, relying on proven solutions leads to the premature ageing of organisations (Probst, Raisch 2005, pp. 90-105). Therefore, in order to stay on the market, entrepreneurs must make use of marketing as a management tool. An effective market presence requires enterprises to become involved in marketing activities and to adjust to the needs, possibilities and requirements of their industry (Targalski, Francik 2009, p. 162). Marketing orientation necessitates the individual selection of organisational entities and creating a system of internal and external links (Sławińska, Urbanowska-Sojkin 1995, p. 99). Changes in the business environment indicate that marketing is becoming increasingly important for enterprises in the process of achieving their goals, which is why marketing should become the key factor in determining the strategic direction for enterprise development (Postuła, Glinka 2014, p. 14). The crucial role of marketing in creating the value of businesses is reflected in the new definition of marketing adopted by the American Marketing Association in 2013. Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large.

Research results

The phenomenon of sharing objectively false information online (post-truth) takes several forms, such as *clickbait*, *phishing* and *website spoofing*; however, in recent years *fake news* has become the most powerful carrier of post-truth.

Fake news blossomed during the US presidential campaign in 2016. False articles were produced on a mass scale, attracting significantly more readers than

information published by renowned media. Apart from that, today traditional media do not offer a guarantee of truthfulness. Early 2017 brought a new kind of fake news – *alternative facts*. Alternative facts are a linguistic construct coined by Kellyanne Conway, Counsellor to the US President, to explain the vast differences between measurable data and information released by the White House.

The phenomenon of post-truth is mostly connected with the media market. However, it has been observed that trust towards public institutions, NGOs, companies and brands is decreasing – the level of trust in each of these categories has never been so low (Edelman 2016, p. 68). Therefore, it is possible to state that the phenomenon of post-truth is a prelude to a major global crisis of trust.

One of the basic mechanisms determining the escalation of the post-truth phenomenon is social media (in particular Facebook and Twitter). The ease of sharing information, articles, films and animations leads to fake news appearing side by side with real information. Their verification is currently very difficult and often impossible.

However, political propaganda is not the only justification for such an abrupt development of the trend. Most clickbait articles (which attract readers with a misleading title and a miniature photo) are motivated by the profit generated by each display of AdSense ads on the website after opening it. Here the truth often loses with the number of clicks. Profit is the most frequent motivation for spammers, scammers and fake news creators. The owner and editor of one of the most influential websites disseminating fake news, Ovidiu Drobotă, runs a portal on American politics named EndingTheFed because in America it is possible to earn more for clicks than in Eastern Europe. Post-truth also develops because of human tendencies to reaffirm their views, to be malicious and envious. The impact of fake news is amplified by its enormous reach and the possibility of spreading information via social media, following and blocking specific sources and the progressing automatic personalisation of content, search results, etc. The effect is referred to as the *social echo chamber*.

Despite the fact that the presence of post-truth, fake news and alternative facts is the strongest in the media and politics, their impact is visible in a number of sectors. The yearly Edelman Trust Barometer report, carried out regularly since 2001, points to a global crisis of trust concerning not only governments and politicians but also institutions, private companies, NGOs, the media, and even friends and acquaintances.

The conclusions drawn from the report point to the required changes and the necessity to adapt the marketing strategies used by enterprises. In the congestion of false and manipulated information, people have lost their faith in authority – out of the 28 surveyed countries CEOs are perceived as unreliable (they are trusted by on average 37% of respondents). The most trustworthy spokespeople of enterprises are ordinary employees, whose reliability is assessed up to five times higher than that of the actual press spokespersons. Information published through official channels is also approached with reserve – those surveyed declared that their trust towards uncontrolled information leaks was almost twice as high. Interestingly, a

similar proportion was recorded for trust towards adverts (38%) in comparison to the reliability of announcements published in social media (62%).

The results point to the need for cooperation between brands and influencers – people who are closer to the customers, perceived as honest, spontaneous and uncorrupted. Unfortunately, the past months have brought a number of examples of influencers using methods typical for post-truth in their activities.

The media market requires particularly firm action – even esteemed media companies with a strong position recorded a 5% decrease in trust in 2017, reaching an unprecedentedly low global result of 43%. The average is lowered by, among others the US, where only 32% of the respondents trust the media, and the percentage is continuously dropping. The results of research carried out among Polish Internet users for TrendBook indicate a similar level of trust. Among traditional channels, television is considered the most reliable (22% of the respondents), while radio is trustworthy for 10% of those surveyed. Online news is trusted by 21% of the respondents, and social media content – by 17% (Hatalaska 2017, pp. 76-79).

Conclusions

Special attention should be drawn to educating children and adolescents in the critical analysis of information and its sources. The problem of differentiating between verifiable truth and manipulation is becoming increasingly difficult. It seems essential to develop data search skills to be able to support the information presented by the media.

One of the most effective weapons against fake news and declining trust seems to be transparency presented by enterprises and institutions, i.e. publishing real news about their operations. During a global crisis of trust and disillusionment with the current system, the younger generations expect brands to be transparent. This refers to the production process, to applying responsible environmental strategies, to employee attitudes and to the remuneration system, etc. Paradoxically, the remedy to the post-truth issue is very simple – it is the fairness and transparency of enterprises, organisations, brands and individuals.

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POSTPRAWDA – KREATYWNOŚĆ W MARKETINGU CZY NOWE OBLCICZE PRZEDSIĘBIORCZOŚCI?

Streszczenie: Postprawda jest efektem zmian technologicznych w otoczeniu marketingowym. Zjawisko postprawdy ma bardzo duży wpływ na działania marketingowe przedsiębiorstw oraz postawy przedsiębiorcze. Celem materiału jest charakterystyka wpływu najnowszych trendów w otoczeniu marketingowym na szeroko rozumiany marketing oraz przedsiębiorczość. W artykule przedstawiono wyniki badań wpływu postprawdy na strategie marketingowe przedsiębiorczych organizacji. Materiał zilustrowano przykładami. W opracowaniu wykorzystano także badania przeprowadzone na źródłach wtórnych uzyskanych metodą *desk research* oraz własne obserwacje uczestniczące.

Słowa kluczowe: kreatywność, marketing, postprawda, przedsiębiorczość



ANALYSIS OF PROBLEMS OF PUBLIC TRANSPORT FUNCTIONING IN 2017 AND 2018 ON THE EXAMPLE OF CZESTOCHOWA CITY

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Abstract: The article identifies the problems of public transport in Czestochowa. The authors' main goal was to investigate whether the importance of particular problems for public transport users has changed between the years 2017-2018. Implementation of the goal was possible thanks to the authors' own research using the diagnostic survey method and data analysis method. The results of the research indicate a growing interest in public transport, in particular bus communication. Popularizing public transport in Czestochowa, however, limits access to the transport infrastructure. Due to many conditions, development of the transport network in the city is difficult, sometimes impossible to implement. Nonetheless, there is a solution that can be introduced without having to incur significant financial costs - it is to increase the frequency of rolling stock on individual lines.

Keywords: transport, passenger transport, city, problems of public transport

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Introduction

Managing transport in cities is extremely difficult because individuals responsible for it must reconcile the often conflicting interests of different stakeholder groups. Despite these difficulties, we should strive to solve transport problems in cities as it is necessary for their proper functioning. In the authors' opinion, the most important problems in cities are the occurrence of traffic congestion on their streets. This phenomenon disrupts the delivery schedule of various types of raw materials, materials, semi-finished goods, goods and finished products necessary for the operation of manufacturing, trading and/or service enterprises. To a large extent, it also reduces the mobility of urban users. A solution to the first problem is seen, among others in consolidating goods streams. In turn, reducing individual vehicle traffic in cities may take place by increasing the frequency of using other, alternative means of transport, i.e. public transport, bicycles (including city bikes) or encouraging walking. In any case, however, it should be ensured that these alternative forms of transport are attractive to city dwellers. Then citizens will not need to be actively encouraged to use such solutions.

Management of sustainable transport in cities

In the transport policy of the European Union, much attention has been paid to developing transport in cities (Green Paper 2007; White Paper 2001; White Paper 2011; *Zrozumieć politykę...* 2014) to satisfy the current and future needs of their users (Kabus, Karolczyk 2017, p. 23). The development of transport in urban areas is to contribute to increasing the quality of life in the city, thus increasing its attractiveness as a potential place of settlement. This is to be achieved by limiting the negative impact of urban transport on the natural environment and human health (Brzustewicz 2013, p. 85). In this context, the priority objective of the implemented EU policy is to reduce emissions from transport. Due to the fact that 25% of the total transport emissions are generated in urban areas, cities are of key importance to mitigate the effects of climate change (*Zrozumieć politykę...* 2014, p. 8).

Recent changes (development of civilization, globalization, the information society, etc.) have contributed to the necessity of developing new concepts of transport systems. Cities that are places of high population concentrations in which many production, commercial and service companies operate, and face numerous transport problems that slow down or even hamper their development. Issues related to transport in Polish cities are the subject of many discussions (Krysiuk, Nowacki, Zakrzewski 2015, p. 7813). Transport management is thus one of the most important activities carried out at all levels of public administration. As a result, urban development strategies that take into account the prerequisites of the European transport policy, pay particular attention to the construction of sustainable passenger transport systems in urban areas (Grabińska 2017, p. 129). One of the priorities of the actions is to reduce the impact on the road transport environment, which as Skowron-Grabowska, Sukiennik, Szczepanik (2015) stated, enjoys unflagging popularity in both freight and passenger transport.

Transport and communication problems have been growing since the second half of the 20th century (Osyra, Nitkiewicz 2016, p. 185). In order to reduce their occurrence, city authorities implement sustainable models of cities (Kowalewski 2005; Mierzejewska 2010, as cited in: Kajdanek 2016, p. 142) taking into account the sustainable development of transport, which was stated by M. Konopka and M. Kozerska (2017, p. 1705) as "a long-lasting process of transport evolution, which results in increased transport efficiency by, for example, increasing mobility, accessibility or minimizing costs". Modern local government units are also trying to implement the basic principles of Corporate Social Responsibility (CSR) (Sukiennik, Herbuś 2017, p. 73) in transport development strategies. Including various concepts in the content of the strategy, as well as the need to reconcile the interests of many groups of stakeholders, makes the process of developing strategic documents challenging. As a rule, planned strategic activities in the area of transport focus on providing access to various types of consumer goods, as well as to resources (Nowakowska-Grunt, Chład, Sośniak 2017, p. 84). However, urban transport not only conveys goods, but also comprises a set of activities related to the movement of people, so-called passenger transport (Nowakowska-Grunt, Chład

2015, p. 133). Therefore, the planned strategic activities related to the development of transport in cities are to help augment the mobility of the society.

Taking into account the subject matter of the study, the issue of ensuring the smooth movement of people is of great importance (Nowakowska-Grunt, Chład, Sośniak 2017, p. 84). Therefore, in order to minimize the negative impact of transport on the environment in cities, while ensuring universal access to passenger transport services, it was noted that it is necessary to introduce measures to manage the transport behavior of the population (Osyra 2016, p. 221). These behaviors are studied by many foreign and Polish authors. The aim of this research is first of all to design activities that encourage city users to switch to greener means of transport, i.e. public transport, cycling and walking (Brzeziński, Rezwow 2007, p. 5; Koźlak 2009, p. 42). Therefore, planning the development of the transport system in the city in terms of technical, organizational and legal aspects should be preceded by a study of the communication behavior of the population (Sierpiński, Staniek, Celiński 2016, p. 1744). Understanding the factors that determine the choice of a means of transport is an important element in the design of transport processes in cities (Ferenc, Łamasz, Koreleska 2015, p. 497). In turn, as G. Sierpiński (2012, p. 95) stated, "proper identification of the reasons for the choice may allow shaping of these behaviors". Introducing innovative technologies makes this task much easier. One of the solutions is to conduct research aimed at understanding the transport habits of the society using smartphones or dedicated GPS devices (including Jariyasunant et al. 2011; Safi, Mesbah, Ferreira 2014; Rizzoli et al. 2014; Montini et al. 2015; Safi et al. 2015). The use of these research tools is much less costly compared to traditional tools. In addition, they allow one to conduct long term research. As a consequence, they contribute to better matching of transport services to the preferences and habits of their users. In addition, they can be an important tool to influence and induce users to change their communication behavior (Jariyasunant et al. 2011, p. 12).

Summing up, striving for sustainable development of transport in cities should become a priority. Therefore, city authorities should focus on introducing solutions that would ensure the sustainable development of urban areas with simultaneous social and economic development. Only this course of action can bring the expected results.

Study methodology

In the next part of the article the methodology of the authors' own research is presented, i.e. the aim of the research, the research problems, methods as well as techniques were specified. The research sample was also characterized here and the research schedule was presented.

Aim of research and research topics

The subject of the study presented in this article is the phenomenon of the use of public transport in passenger transport in the city of Czestochowa, while the research subject is a person (user) using this type of transport. The research was a

panel study. The selection of the research sample means that it cannot be considered as representative. The authors defined the following research problem: what are the basic problems of the functioning of public mass transport in Czestochowa and has the rank of these problems changed in the examined period? In this case, it was also necessary to propose actions to increase the attractiveness of this type of transport. Based on the main research problem, the following specific problems were raised:

1. What is the frequency of using public transport in Czestochowa?
2. What are the most important problems in the operation of this type of transport?
3. What actions should be taken for public transport in Czestochowa to become a viable alternative to individual vehicle transport?

The proposed research questions allowed the following research hypotheses to be defined:

- H₁ In 2018, compared to 2017, the share of people who very often use public transport has increased;
- H₂ In the analyzed years, users of the urban transport infrastructure were more willing to use bus and tram transport;
- H₃ In the respondents' opinion, limited access to the transport infrastructure is still an important problem restricting or preventing the use of public transport during public passenger transport;
- H₄ Increasing the quality of the rolling stock providing transport is still an issue that should be addressed in order to encourage citizens to use public transport.

Research methods and techniques

In order to obtain answers to the research questions and verify the set of hypotheses, two research methods were used. One of them was the method of a diagnostic survey, and the technique was a questionnaire. The second research method was the analysis of primary data. It allowed the authors to draw conclusions about differences in the results of their own research carried out in the individual years.

Research sample characteristics

The criterion to select the respondents was use of the services provided by the public transport operator in Czestochowa during the course of the study. In 2017, 51 respondents took part in the study, including 33 women (65%) and 18 men (35%). A year later, the questionnaire was completed by 47 respondents. 62% of the total number of respondents was women (29 respondents), 38% - men (18 respondents). As in the case of the previous year's survey, the largest group of people who answered the questions included in the research questionnaire were people aged 18 to 29 (*Figure 1* and *Figure 2*). Inference based on the chi-square test indicated that both during the research in 2017 and 2018, the age of respondents did not have a normal distribution.

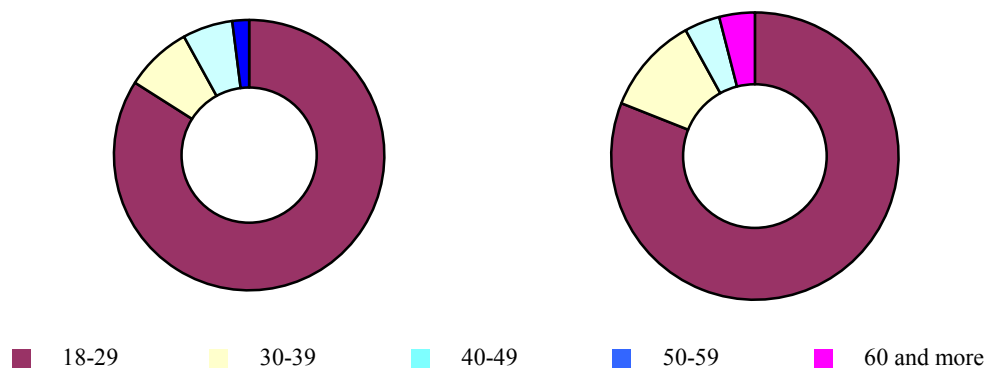


Figure 1. Age distribution of respondents (survey 2017) **Figure 2. Age distribution of respondents (survey 2018)**

Source: Authors' own compilation based on conducted studies

In the survey conducted in 2017, 68.6% of respondents were student pupils/students, 51% were professionally active people, while 2% were unemployed. A year later, 71% of the respondents were pupils/students, 29% professionally active people. It should be noted that 30 respondents admitted that they are only study learning or studying, while another 11 people stated that in addition to studying, they were also professionally active. 6 respondents indicated one answer - professionally active.

The survey questionnaire also included a question aimed at obtaining an answer to the question whether the participants in the survey possess category B driving licenses. The obtained research results revealed that a significant group of the respondents (83%) has a driver's license.

Organization and course of research

The study was preceded by a profound analysis of the research problem. Next, the research hypotheses were formulated by the authors. These hypotheses allowed us to develop the questionnaire (*Figure 3*).

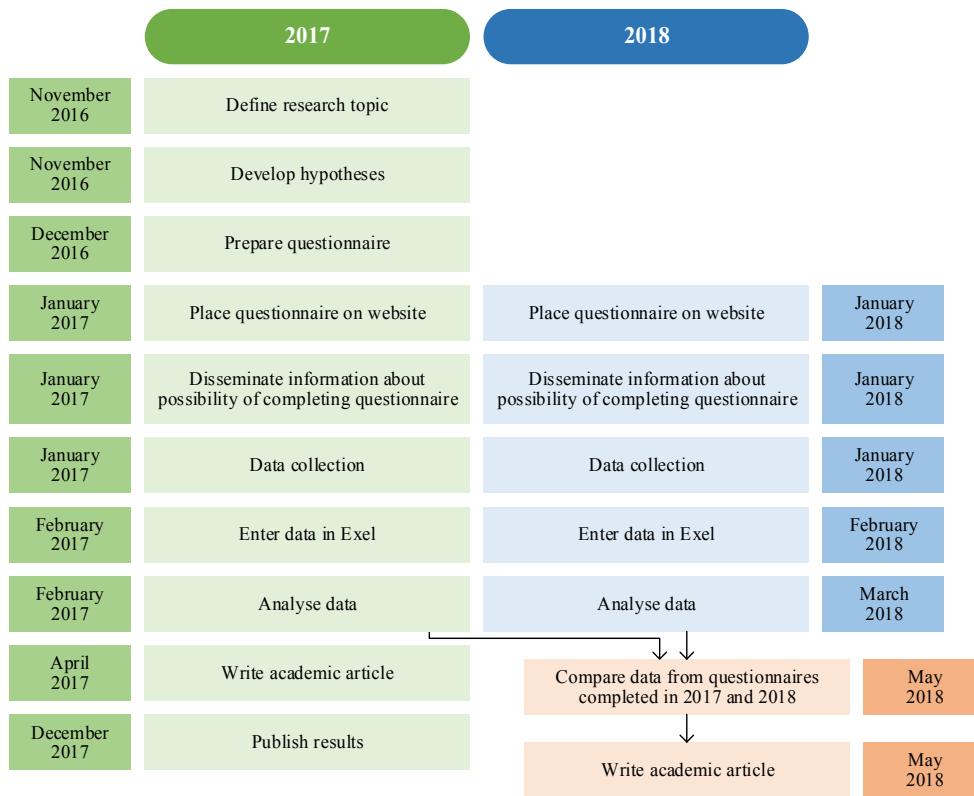


Figure 3. Research schedule

Source: Authors' own elaboration

In both studies, the same questionnaire was used. Each of the respondents answered four closed and one semi-open question. In addition, a legal notice was attached to the questionnaire. The survey could be completed by all persons who opened an appropriate link during the study. This link was distributed by e-mail and was made available on one of the social networks. The results of the research carried out in 2017 were collected, analyzed and then published in the Scientific Publications of the Faculty of Management at Czestochowa University of Technology (Strzelczyk, Chład, Kott 2017, pp. 147-160).

In January 2018, the survey link was sent to the respondents who participated in the survey the previous year. This allowed the authors to collect new original data on the subject of interest. Next, these data were analyzed so that later they could be compared with the results of the research collected a year earlier. Public transport use in Czestochowa – research results.

The survey questionnaire could only be completed by people using Czestochowa public transport. In both of the analyzed years, the majority of respondents travelled by public transport frequently (37.25% in 2017 and 42.55% in 2018). It should be noted that the number of indications of the answer "rarely"

decreased in 2018 compared to 2017 by 13.06%. In turn, 5.75% and 5.3% more users answered "very often" and "often". There was also a 2% increase in the number of persons selecting the "very rarely" response (*Figure 4*).

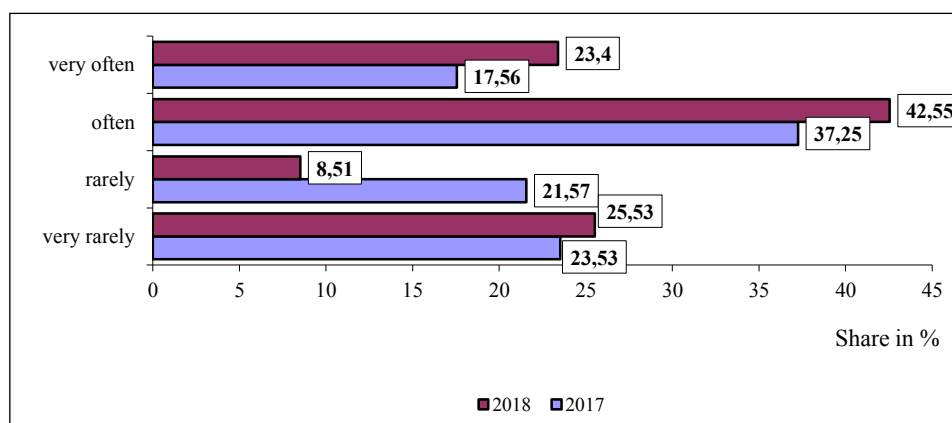


Figure 4. Frequency of using public transport by respondents in 2017 and 2018

Source: Authors' own compilation based on conducted studies

Therefore, it can be concluded that the respondents use the services provided by the public transport operator in Czestochowa much more willingly than they did a year earlier. It should be stressed that both in 2017 and 2018, more women than men used public transport services (*Table 1*).

Table 1. Cross tables for variables: sex of respondents and frequency of using public transport in 2017 and 2018

	2017			2018		
	women	men	total	women	men	total
very often	5	4	9	7	4	11
often	13	6	19	14	6	20
rarely	8	3	11	3	1	4
very rarely	7	5	12	5	7	12
total	33	18	51	29	18	47

Source: Authors' own compilation based on conducted studies

On the other hand, it is difficult to determine whether age has an influence on the frequency of using public transport. It is caused by the fact that mainly young persons took part in the study (i.e. at the age from 18 to 29). This means that the results of panel studies cannot be considered as representative.

As in the previous year, the respondents used the trams much more often than buses. It should be noted, however, that in 2018 the share of the "bus" response

increased by 11% compared to 2017. This proves the continuous interest in the tramway lines, but also an increase in the use of bus routes for journeys.

The respondents were also asked to indicate the time of the day they usually travel by public transport. In 2018, approximately 65.96% of all surveyed persons traveled by bus and/or tram in the morning, i.e. from 6⁰⁰-10⁰⁰, 63.83% afternoon (14⁰⁰-18⁰⁰). 40.43% of the total number of respondents most often used public transport from 18⁰⁰ to 22⁰⁰, 31.91% - in the hours 10⁰⁰-12⁰⁰, 29.97% - at noon, the least - 14.89% - at night (Figure 5).

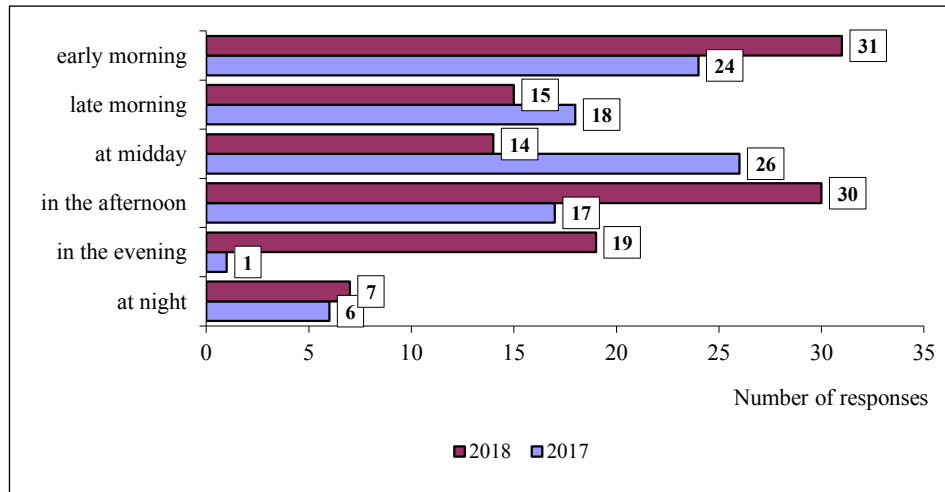


Figure 5. Time of day respondents most often take journeys by public transport in 2017 and 2018

Source: Authors' own compilation based on conducted studies

Comparing the collected data with those obtained in 2017, it can be concluded that the respondents in 2018 travelled much more frequently by public transport in the evening, afternoon and early morning hours, and at night. However, they were much less likely to travel at noon and before noon.

Directions of changes in public transport in Czestochowa - research results

The completed study carried out using the diagnostic survey method also allowed the authors to define the directions of priority changes in public transport in Czestochowa. To make this possible, it was necessary to identify the main problems in this area. For this purpose, the surveyed persons received a list of 11 factors, which to a lesser or greater extent determine the frequency of using public passenger transport. The task of the respondents was to rank these factors according to their opinions. The first items were supposed to present problems that, according to the respondents, were crucial, considering the operation of public transport in Czestochowa. The results of the research are presented in Table 2.

Table 2. Key problems of public transport in Czestochowa in 2017 and 2018

Problems Importance of the problem	2017	2018
limited accessibility to transport infrastructure	4.5	7.8
low level of comfort (crowded, no air conditioning, presence of homeless people, noise of the vehicles, etc.)	4.2	7.1
too long travel time (caused by e.g. traffic congestion)	3.7	7.1
low level of frequency of transport	3.3	7.0
unpunctual transport	3.0	7.1
poor technical condition of fleet	2.5	5.0
poor technical condition of stops and shelters	2.2	6.0
failure of fleet to meet the needs of people with mobility problems and mothers travelling with children in prams	1.8	4.8
excessively high ticket prices	1.3	4.4
low level of passenger safety inside bus/tram	1.3	4.5
low level of passenger safety during boarding and disembarking from bus/tram	1.0	4.9

Source: Authors' own compilation based on conducted studies

Limited access to the infrastructure is still a key problem of public transport in Czestochowa. The respondents in this case ranked this factor 1st or 3rd in the hierarchy. It should be noted that in 2018 the significance of this issue among the respondents increased. The respondents also indicated the importance of such problems as: too low level of travel comfort, too long travel time and unpunctual transport. On the other hand, the importance of the first problem for the respondents from the last year did not change (2nd position in the ranking), "too long travel time" and "unpunctual transport" changed the position in the ranking. "Too long travel time" changed from the 3rd to the 2nd position, while "unpunctuality of transport" - from the 5th position also to 2nd.

The four previously mentioned groups of problems were indicated by the respondents on a higher position than even the problems: low level of frequency of transport (3rd position), poor technical condition of bus stops and shelters (4th position), poor technical condition of the fleet (5th position), and low level of passenger safety when getting on and off the bus/tram (6th position). By analyzing the collected primary data, not adapting the rolling stock to the needs of people with mobility problems and mothers travelling with children in trolleys (7th position), low level of passenger safety inside the bus / tram (8th position) and too high ticket prices (9th position) can be considered issues of the least concern.

In addition, by comparing the data collected in 2018 to those obtained in 2017, it can be concluded that the problem related to ensuring passenger safety during boarding and disembarking from the bus/tram has taken on importance. The same applies to the next two problems which are the poor technical condition of the bus stops and shelters and unpunctuality of connections (a 3-place jump).

The last question in the questionnaire was created in order to find out the answer to the authors' question: what factors would encourage respondents to increase their use of public transport? (*Table 3*).

Table 3. Incentives to use public transport (survey results from 2017 and 2018)

Incentives to use public transport	Share of answers [%]	
	2017	2018
increase availability of public transport	37.3	46.8
increase frequency of transport times	37.3	59.6
ensure transport punctuality	43.1	42.6
reduce travel time	35.3	40.4
improve condition of stops and shelters	21.6	17.0
increase quality of rolling stock of public transport companies	52.9	31.9
improve passenger safety	33.3	23.4
adjust rolling stock to needs of people with mobility problems and mothers travelling with children in prams	23.5	27.7
lower price of public transport tickets	51.0	53.2
other, what?	3.9	2.1

Source: Authors' own compilation based on conducted studies

In the opinion of the respondents, the factor that could increase the use of public transport is primarily an increase in the frequency of transport (a year earlier - an increase in the quality of rolling stock carrying out transport). This proves that in the opinion of those surveyed, the quality of the public transport fleet is satisfactory. Economic considerations remain invariable to the respondents. In 2017 and 2018, the participants claimed that the ticket price is not a key issue of the operation of public transport in Czesochowa. Despite this, in the opinion of every second respondent, a reduction in the price of a ticket would increase the frequency of travelling by public transport. An increase in the availability of public transport is another factor that would encourage travelers to use the services of the Czesochowa operator. This answer was indicated by 46.81% of respondents. Ensuring transport punctuality and shortening the travel time is a priority factor successively for 42.6% and 40.4% of all the respondents. Increasing the quality of

the fleet performing transport is important for 31.9% of participants of the survey. The answers to adaptation of the rolling stock to the needs of people with mobility problems and mothers traveling with children in prams, improving passenger safety and improving the technical condition of bus stops and bus shelters were indicated successively by 27.7%, 23.4% and 17% of the respondents. One of the respondents also defined another factor that would increase interest in traveling by public transport. It was: raising the standard of the bus fleet. Due to the fact that one of the options was to choose the answer "increase the quality of the fleet carrying out transport", the respondent certainly wanted to emphasize the need to modernize the means of transport.

Conclusions

The results of our own research allowed the authors to solve the following research problem: what are the basic problems of the functioning of public transport in Czestochowa and has the rank of these problems changed in the examined period? It was also necessary for the authors to propose directions of activities, the implementation of which would make it possible to increase the attractiveness of this type of transport. Based on the main research topic and detailed issues, research hypotheses were developed. One of them was as follows: in 2018, compared to 2017, the share of people who very often use public transport has increased. In 2018, compared to the previous year, the percentage of responses of "very often" increased by 5.84%, "often" by 5.3% and "very rarely" by 2%, while the percentage of those choosing the "rare" option dropped. This decrease amounted to 13.06%. This may indicate an increase in interest in travelling by public transport in Czestochowa. The presented research results indicate that there are no grounds to reject the previously indicated research hypotheses.

Similar to 2017, the tram remains the means of transport that is most often used by passengers for their journeys. It should be noted, however, that the respondents are increasingly more willing to use the means of bus transport. Perhaps in the next year they will dominate in public transport. Nevertheless, there was no confirmation of another of the defined research hypotheses: in the analyzed years, the users of the urban transport infrastructure were more eager to use bus transport.

Another research hypothesis was defined by the Authors in the following way: in the respondents' opinion, limited access to the transport infrastructure is still an important problem limiting or preventing the use of public transport during public passenger transport. The results of our own research show that in both 2017 and 2018 this issue was a priority. Thus, the proposed research hypothesis has been confirmed. Therefore, increasing the quality of Czestochowa public transport should start by solving this problem. In the near future, introducing changes in other areas of bus and tram transport in the city should also be considered. We are talking about ensuring the punctuality of connections, limiting the occurrence of traffic congestion resulting in too long travel times and finally ensuring travel comfort. The respondents were also asked to answer the following question: what would encourage them to abandon individual means of transport in favour of

means of public transport? Analysis of the obtained responses allowed us to verify the research hypothesis: increasing the quality of the rolling stock providing transport is still a problem that should be eliminated in order to encourage citizens to use public mass transport. In the opinion of the respondents, such a factor is to increase the frequency of transport on routes. Therefore, the fourth research hypothesis did not find confirmation in the research results.

Comparing the data collected in year 2017 and 2018, it can be concluded that with such a small research sample it is difficult to determine whether the changes that were observed result from the noise or the error in collecting the samples. Because of that, the authors has carried out the Mann-Whitney U test allowing them to determine whether the obtained study results are real or random. It turned out that they are random. It means that the observed changes concerning the key issues of public transport and the factors whose aim are to encourage people to use public transport, cannot be regarded as relevant. From this, it follows that the presented study results should not constitute a final recommendation for changes introduced by local self-government units. The aim of these studies is only to draw attention to the main problems of the public transport in Czestochowa and/or constitute a starting point for further research.

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ANALIZA PROBLEMÓW FUNKCJONOWANIA PUBLICZNEGO TRANSPORTU ZBIOROWEGO W LATACH 2017 i 2018 NA PRZYKŁADZIE MIASTA CZĘSTOCHOWY

Streszczenie: W artykule wskazane zostały problemy funkcjonowania publicznego transportu zbiorowego w Częstochowie. Głównym celem autorki było zbadanie, czy znaczenie poszczególnych problemów dla użytkowników komunikacji miejskiej zmieniło się na przestrzeni lat 2017-2018. Realizacja celu była możliwa dzięki przeprowadzeniu badań własnych metodą sondażu diagnostycznego i metodą analizy danych. Wyniki badań wskazują na rosnące zainteresowanie komunikacją miejską, a w szczególności komunikacją autobusową. Popularyzację publicznego transportu zbiorowego w Częstochowie ogranicza jednak dostęp do infrastruktury transportowej. Ze względu na wiele uwarunkowań rozbudowa sieci transportowej w mieście jest trudna, czasem wręcz niemożliwa do zrealizowania. Istnieje jednak rozwiązanie, którego wprowadzenie jest możliwe bez konieczności poniesienia znacznych kosztów finansowych. Jest nim zwiększenie częstotliwości przejazdów taboru na poszczególnych liniach.

Słowa kluczowe: transport, transport pasażerski, miasto, problemy publicznego transportu zbiorowego



THE CONTRIBUTION OF EU FUNDS TO TRANSPORT DEVELOPMENT IN THE OPINION OF THE INHABITANTS OF THE SELECTED CITIES

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Abstract: The main objective of the paper was to discover whether the inhabitants of Katowice and Czestochowa know which transport investments in the years 2007-2013 were co-financed from EU funds. Moreover, the authors wished to know the opinion of the respondents on the legitimacy of spending funds raised by the local government bodies. The source of the data was primary in its nature. During the study, the method of diagnostic survey, technique - questionnaire survey, and tool - survey questionnaire were used. The inhabitants of the two cities located in the Silesian Voivodeship, i.e. Katowice and Czestochowa, answered the questions on the questionnaire. The results of the survey clearly indicate that the knowledge about the spending of EU funds among the inhabitants of the aforementioned cities is poor. In spite of the lack of knowledge concerning the indicated issue, the inhabitants of the cities notice the impact of non-reimbursable grants on the development of the urban transport infrastructure. Moreover, they are convinced that local government units very well or well seized the opportunity to develop transport, which was to obtain funds from the European Union. Therefore, the results of the conducted research is valuable guidance for local authorities who, in the current 2014-2020 programming period, strive to share the information on this issue with the largest possible number of people. On the other hand, the awareness of local government units that their actions have been noticed should become an important factor stimulating the process of implementing further changes in this field.

Keywords: city, transport infrastructure, city transport, EU funds, local government units

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Introduction

Modern cities are areas characterized by a significant concentration of the population, which contributes to the escalation of transport problems. Local government units have been trying to resolve these difficulties for many years, however, they are as different as the cities are in terms of the size of the occupied area, landform features or performed functions. Thus, not every solution which has been successfully introduced in one location will work in another. Therefore, conducting a thorough analysis of operations which are possible in cities is so important. On the one hand, this allows better adjustment of the solutions of transport problems to the nature of the urban center, whereas on the other, contributes to a reduction in costs of implementing unsuccessful investments.

Transport management in cities

In 2017, 60.13% of the total population of Poland lived in cities. In the Silesian Voivodeship, this indicator amounted to 76.87% (Local Data Bank 17.04.2018). These data should not be surprising as for many years, urban centers have been playing a significant role in social, economic and scientific-research terms (Krysiuk, Nowacki, Zakrzewski 2015, p. 7816). As a result, as noted by Szczucka-Lasota (2017, p. 158), cities are growing and people are increasingly willing to settle down in their area or in nearby locations. The significant population concentration in urban areas has made local government units strive to provide the highest quality of life in cities (Hebel 2017, p. 67; Ejaz et al. 2017, p. 84).

One of the factors determining the perception of the quality of life in cities is transport. It contributes to the local (Kabus, Nowakowska-Grunt 2016, p. 40; Grondys, Kott, Sukiennik 2017, p. 245), regional and national development both in social and economic terms (Skowron-Grabowska 2014, p. 37). Transport congestion, the growing number of road accidents and environmental pollution from transport significantly reduce the quality of life in cities (Kosobucki 2011 as cited in: Jagiełło 2017, p. 80; Taniguchi 2014, p. 310-311; Djahel et al. 2015, p. 125; Szczepanik, Besta 2018, p. 208-209). As observed by Kiba-Janiak (2015, p. 18), this is most evident in big cities since a growing urbanization rate contributes to an growth in interest in transport (Szczucka-Lasota 2017, p. 158) manifesting itself in an increase in the mobility of people, goods and information (Krysiuk, Nowacki 2014, p. 6144) caused by an rise in living standards (Hörl at al. 2016, p. 2776). Consequently, this contributes to the development and/or modernization of transport infrastructure. In many cases, however, development of the infrastructure does not solve all transport problems, thus posing a great challenge not only to local government units but also to experts from many fields, who are looking for solutions aimed at providing modern and efficient transport systems in cities (Krysiuk 2016, p. 48). Improving the quality of public transport services is also one of the methods whose aim is to prevent the use of cars in passenger transport (Wesołowski 2008 as cited in: Jagiełło 2017, p. 79; Bylinko 2017a, p. 108). Undoubtedly, the implementing infrastructure investments or ensuring efficient city transport contributes to a number of benefits (Krysiuk, Brdulak, Banak 2015, p. 887). These solutions are meant to “eliminate chaos, pathology of urban traffic and prevent transport paralysis” (Nowakowska-Grunt, Chład, Sośniak 2017, p. 80). Introducing these operations is unfortunately too cost-intensive (Brzozowska 2016, p. 97). In many cases, it is an important factor impeding the introduction of changes.

After the accession of Poland to the European Union on 1 May 2004, a chance appeared (Brzozowska, Szymczyk 2018, p. 378). It is associated with the possibility to benefit from grants which co-finance different operations conducted under specific priority areas in line with the policy of the European Union. One of them is exactly transport and granting projects related to it. One of the modern trends concerning ecology and environmental protection (Majchrzak 2007, p. 102;

Pabian 2017, p. 87), particularly promoted by the European Union is to ensure sustainable development (Miłaszewicz, Ostapowicz 2011 as cited in: Wójcik 2017, p. 144). Alonso, Monzón and Cascajo (2015, p. 578) concluded that the problems associated with sustainable development are global problems which must be solved locally (Kadłubek 2018, p. 415). Therefore, local government units have taken actions, the aim of which is to ensure the development of cities which would be sustainable (Herbuś, Ślusarczyk 2018, p. 7). Introducing changes in this area should be taken into account in the strategic development plans of cities using the available tools (Bylinko 2017b, p. 38). Therefore, the first positive effects of the changes will be visible after at least a few years (Szcucka-Lasota 2017, p. 160). Nonetheless, it should not arouse resentment against the implementation of positive changes. As stated by Malasek (2016, p. 30), strategic operations in the coming years should be directed to creating smart cities using modern information and communication techniques, the aim of which, as noted by Smółka-Franke (2017, p. 394), is to constantly improve the quality of life. Moreover, it is equally important to ensure eco-mobility in cities and to prolong the utility of transport infrastructure and vehicles.

Research methodology

In the empirical part of the paper, the purpose of the conducted research has been presented in detail. Its accomplishment aimed at obtaining the answers to the research questions bothering the authors. Knowing the purpose and the research questions, the authors formulated four hypotheses. Their verification was possible due to analysis of the results of the research carried out in 2016.

Research purpose, research questions and hypotheses

The primary objective of the paper is to know the opinion of the dwellers of two Polish cities on the spending of EU funds co-financing investments in the field of transport development. The author sought to obtain the answers to two burning questions. One of them is: do the city inhabitants know which of the investments aimed at city transport development were financed with EU funds? The other research question was defined in the following way: do the city dwellers think that the local government units made the most of the opportunity to develop transport which, in the years 2007-2013, was to obtain non-reimbursable grants from the European Union?

The presented purpose and research questions allowed the following research hypotheses to be defined:

- H1: The dwellers of the cities being researched have good knowledge of the EU funds available in the years 2007-2013 for the cities of Czestochowa and Katowice.
- H2: In the opinion of the surveyed inhabitants of Katowice and Czestochowa, it is difficult to say if the spending of EU funds contributed to the socio-economic development of the individual cities.

- H3: Over 50% of the respondents claim that the local government units made attempts aimed at obtaining EU funds, which, in the years 2007-2013, supported city transport development.
- H4: Over 50% of the respondents who have knowledge of the spending of EU funds in cities cannot indicate at least one investment in the field of transport which was implemented in years 2007-2013 and its result was transport development.

Research methodology and technique

In order to obtain the answers to the research questions and verify the research hypotheses, the diagnostic survey method was applied. In this case, it was a questionnaire survey, whereas the research tool was a survey questionnaire. The research conducted by the authors was anonymous and one-off. While carrying out the study there was direct contact of the researchers with the respondents. Conducting supervised research allowed the number of errors in the questionnaires to be reduced. The person having direct contact with the respondent was able to provide additional explanations in the case when a formulated question was unclear.

Characteristics of the research sample Selection of the research sample was random. Taking into account the number of inhabitants of each city (i.e. Czestochowa and Katowice) and assuming the fraction size of 0.5 and the maximum error of 5%, the size of the research sample was estimated. As a result, 768 questionnaires were collected, i.e. 384 for each of the cities. Due to errors, 26 questionnaires completed by the inhabitants of Katowice were found invalid by the authors. They amounted to 6.8% of all the questionnaires collected in this city. The study was carried out in 2016 and was directed to groups of the inhabitants of Czestochowa and Katowice who were in strategic locations of each city at the time of the conducted research. They were city centers, the surroundings of shopping centers as well as streets situated mostly along bus and tram stops, and railway stations. The average age of the respondents in Czestochowa was 35, the standard deviation of age - 17.54. On the other hand, in Katowice, the average age was 34.67 (two inhabitants of Katowice did not give their age), in turn, the standard deviation of age amounted to 16. In each case, more women than men took part in the study. In Czestochowa, 220 women and 164 men answered the questions included in the questionnaire and, in Katowice, the proportion was 190 women and 168 men.

The contribution of EU funds to the development of transport infrastructure in the opinion of the inhabitants of the selected cities – authors' own research results

EU funds undoubtedly contribute to the development of transport infrastructure both in Czestochowa and Katowice. Information on the investments co-financed by the European Union is widely available. It can be obtained on official websites -

the so-called European Funds Online Services. Moreover, the location of the project must be each time properly marked with information boards. Additional sources of information on ongoing and completed investments are also newspapers, the television or the radio. Therefore, it can be concluded that each citizen who wishes to acquire information about EU funds will have access to it. The research results indicate, however, that the knowledge of EU funds among the inhabitants of Katowice and Czestochowa is rather poor (*Figure 1*).

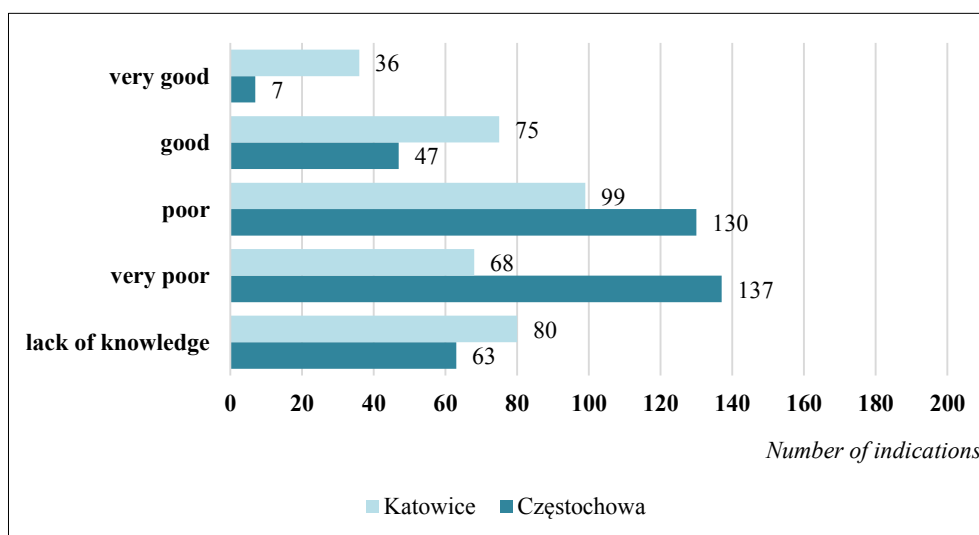


Figure 1. Level of knowledge of EU funds of Czestochowa and Katowice inhabitants

Source: Based on own study

130 inhabitants of Czestochowa admitted that their knowledge of EU funds is poor, 137 - that it is very poor, 47 - good and only 7 - very good. 63 respondents do not have any knowledge on the issue. In the research carried out in Katowice, the distribution of the responses is slightly different. More than in Czestochowa, 80 people admitted that they knew nothing about EU funds. In the case of the other responses, the number of indications for the options: "poor" and "very poor" is significantly lower than in the other studied city. The numbers respectively amounted to 99 and 68. As a result, the answers: "good" (75 indications) and "very good" (36 indications) were selected more often. Therefore, it can be concluded that the inhabitants of Katowice have better knowledge of EU funds than the inhabitants of Czestochowa.

The information on EU funds is obtained by the inhabitants of Katowice mostly from the Internet, the television or the radio. 26 of those questioned admitted that the knowledge comes from those three sources altogether. In Czestochowa, the television, the Internet and the radio as well are the media which the inhabitants gain their knowledge of EU funds from. All three presented options were chosen in as many as 63 questionnaires. This implies that the Internet, the television and the

radio are currently the media which the the information on various issues is gained from, including that associated with EU transport projects. The different levels of knowledge of EU funds did not significantly affect the opinion of the respondents concerning their contribution to the socio-economic development of the cities in the years 2007-2013 (*Figure 2*). It should be explained that the answers to this question, among the people who in the previous question indicated the response: “I have no knowledge”, were not collected.

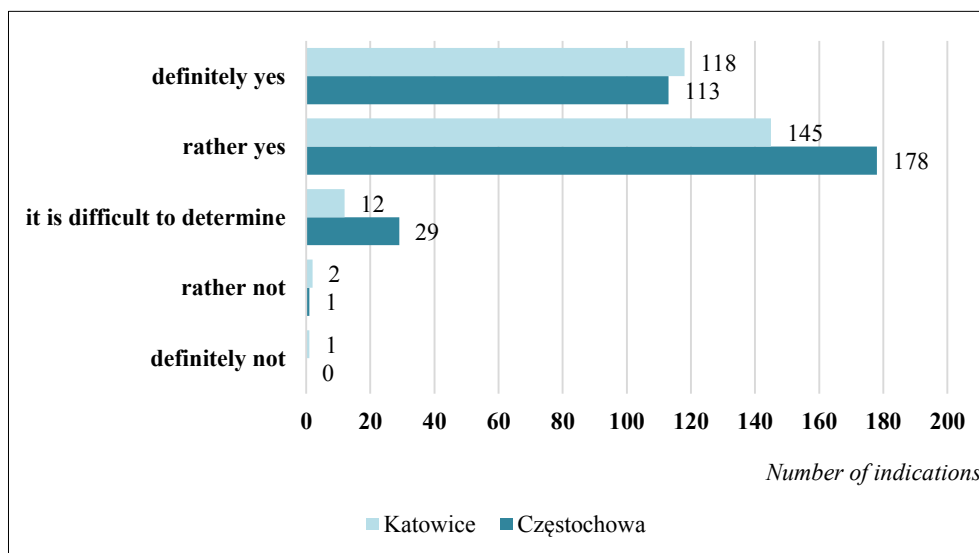


Figure 2. Distribution of answers to the question: In your opinion, did the use of EU funds contribute to the socio-economic development of the city of Katowice/Czestochowa in the years 2007-2013?

Source: Authors' own compilation based on study data

The data presented in *Figure 2* clearly indicate that most inhabitants of Katowice and Czestochowa claim that EU funds contributed to the socio-economic development of both cities. The respondents, despite their poor knowledge of the funds co-financing transport investments, can see their positive impact on the environment. Additionally, in the opinion of those questioned, the local authorities in Katowice and Czestochowa well (respectively 136 and 191 indications) or very well (respectively 64 and 74 indications) seized the opportunity to develop transport due to acquiring funds coming from the European Union (*Figure 3*).

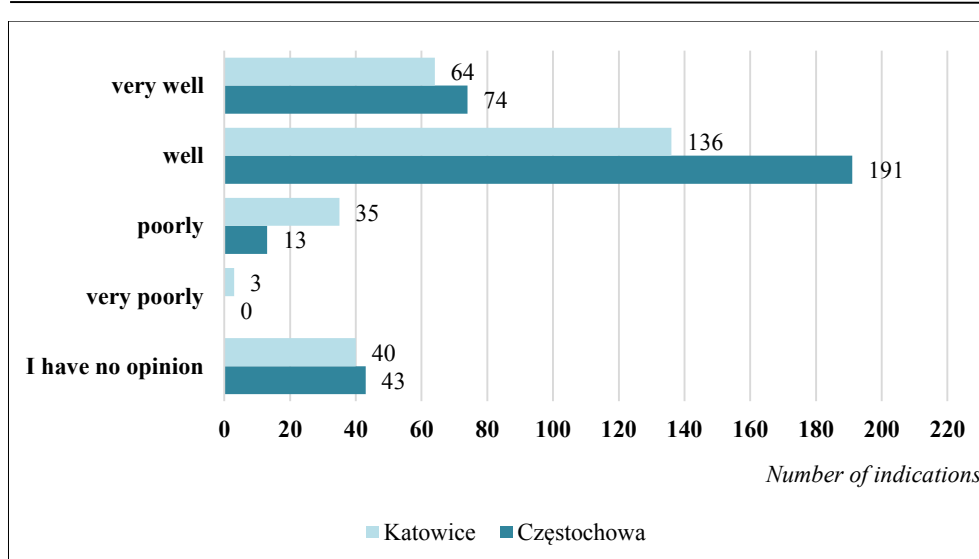


Figure 3. Distribution of answers to the question: How do you assess the degree of the use of EU funds for city transport development in years 2007-2013?

Source: Authors' own compilation based on study data

It should be emphasized that only 38 inhabitants of Katowice (14%) and 13 inhabitants of Częstochowa (5%) are not satisfied with the policy conducted by the local government units in the researched field. They ticked the answers “poorly” or “very poorly”. The majority of those people had very good or good knowledge of EU funds.

The population partaking in the study who had knowledge of EU funds were also asked to indicate at least one investment implemented thanks to the support from the European Union. In each case, more than half of the respondents (52% each) were not able to indicate at least one investment. Among the inhabitants of Częstochowa and Katowice who were able to list examples of such investments, they most often named the project which contributed to the purchase of the city transport fleet (buses, trams). In Częstochowa, this type of investments was indicated in 91 cases whereas, in Katowice, in 66 cases. Subsequently, the respondents listed the modernization and/or development of the linear infrastructure of road transport (roads, sidewalks, bike lanes). Among the inhabitants of Częstochowa, this answer was indicated 66 times and 38 times in Katowice. Subsequently, the respondents also paid attention to the investments which contributed to the development of the linear infrastructure of rail transport. In Częstochowa, this type of investment was indicated in 15 cases and in 20 cases in Katowice. Moreover, the inhabitants of Katowice also indicated the investments which, in the years 2007-2013, were directed to development of the nodal infrastructure of passenger transport - 9 times.

Conclusions

Transport plays a significant role on the national, regional or local level. Recently, issues related to city transport have become increasingly relevant since the city transport system must meet the reported demand. Along with an increase in the number of citizens, transport problems arise and accumulate, some of which cannot be solved without costly investments. The limited budget of local government units in many cases does not allow the expected changes to be introduced. In this case, EU funds come with help. Their spending, with the municipalities' simultaneous own contribution, enables the development and/or modernization of linear and nodal transport infrastructures as well as modernization of the public transport fleet. Undoubtedly, the contribution of EU funds to transport investments in many Polish cities is significant.

The study conducted by the authors allowed them to accomplish the research purpose and obtain the answers to the research questions as well as verify the suggested research hypotheses. One of the hypotheses was the following: the inhabitants of the studied cities have good knowledge of the EU funds available in the years 2007-2013 for the cities of Czestochowa and Katowice. Unfortunately, the research results clearly indicate that in most cases this knowledge is not good but rather poor or very poor. The respondents gain the information in this field mostly from the television, the Internet or the radio. The research hypothesis was therefore not confirmed by the results of the conducted study. The results of the survey may be a valuable indication for local government authorities on how to disseminate information about EU funds to reach as many people as possible.

The second research hypothesis was not confirmed, either. It was defined in the following way: in the opinion of the surveyed inhabitants of Katowice and Czestochowa, it is difficult to say if the spending of EU funds contributed to the socio-economic development of the individual cities. Most inhabitants of the cities of Katowice and Czestochowa claim that EU funds definitely contributed to the implementation of transport investments. The third research hypothesis was: over 50% of the respondents claim that the local government units made attempts aimed at obtaining EU funds, which, in years 2007-2013, supported city transport development. 72% of the inhabitants of Katowice and 83% of the inhabitants of Czestochowa stated that the local government units very well or well seized the opportunity to develop transport in the tested period which was to acquire funds from the European Union. At the same time, the third research hypothesis was confirmed as well as the fourth one. It was assumed that over 50% of the respondents who have knowledge of the spending of EU funds in the city cannot indicate at least one investment in the field of transport which was introduced in years 2007-2013 and its result was transport development. In each case, the share of these people in the total number of the respondents amounted to 52%. The other respondents mostly remembered the investments which were made to purchase a modern fleet of city transport, to construct and/or modernize the linear infrastructure of road and rail transport and also to modernize nodal infrastructure.

Summing up, the poor knowledge of EU funded projects of the inhabitants of the researched cities does not prevent them from perceiving the positive effects of the implemented changes. In their opinion, the local authorities attempt to use this source of funding in order to implement transport projects. This definitely contributes to the socio-economic development of the cities of Katowice and Czestochowa. The awareness of local government units that their actions have been noticed should become an important factor to stimulate the process of introducing further changes in this field.

At present, another program period for the years 2014-2020 is in force. Therefore, it would be reasonable to re-conduct the research described above. It would enable reflection upon the current situation and comparison of the obtained research results. However, in order to make the research useful, it is necessary to delay it (until the end of 2020). This is the only way to obtain some reliable results and compare them with the previously obtained findings.

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WKŁAD FUNDUSZY UNIJNYCH W ROZWÓJ TRANSPORTU W OPINII MIESZKAŃCÓW WYBRANYCH MIAST

Streszczenie: Głównym celem artykułu było zbadanie, czy katowiczanie i częstochowianie wiedzą, które inwestycje transportowe w latach 2007-2013 zostały współfinansowane z funduszy unijnych. Poza tym autorki chciały poznać opinię respondentów na temat zasadności wydatkowania pozyskanych środków finansowych przez organy samorządowe. Źródło danych miało charakter pierwotny. Podczas przeprowadzania badań wykorzystano metodę sondażu diagnostycznego, technikę – badanie ankietowe, narzędzie – kwestionariusz ankiety. Na pytania zamieszone w kwestionariuszu odpowiadali mieszkańcy dwóch miast zlokalizowanych w województwie śląskim, tj. Katowic i Częstochowy. Wyniki ankiety jednoznacznie wskazują, że wiedza na temat wydatkowania funduszy unijnych wśród mieszkańców ww. miast jest słaba. Pomimo braku wiedzy na wskazany temat mieszkańcy miast dostrzegają ingerencję bezzwrotnych dotacji w rozwój miejskiej infrastruktury transportowej. Co więcej, są oni przekonani, że jednostki samorządów terytorialnych bardzo dobrze lub dobrze wykorzystały szansę na rozwój transportu, jaką było pozyskanie funduszy pochodzących z Unii Europejskiej. Wyniki przeprowadzonych badań stanowią więc cenną wskazówkę dla władz samorządowych, które powinny w obecnym okresie programowania funduszy unijnych, przypadającym na lata 2014-2020, dążyć do tego, aby informacje na ich temat dotarły do jak największej liczby osób. Z drugiej strony świadomość jednostek samorządowych, że ich działania zostały dostrzeżone, powinny stać się ważnym czynnikiem stymulującym proces wprowadzania dalszych zmian w tym zakresie.

Słowa kluczowe: miasto, infrastruktura transportowa, transport miejski, fundusze unijne, jednostki samorządu terytorialnego