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Table of content

SECTION BUSINESS AND MANAGEMENT

1. COMPANY'S ACTIVITIES TERMINATION BY TAX AUTHORITY
DECISION (SIMPLIFIED LIQUIDATION, LATVIA EXAMPLE) Mg. oec.,
Phd Student, Lecturer Laila Kelmere, Latvia 13
2. COMPETENCY MODEL OF THE MANAGER IN THE SITUATION OF
EXTRAORDINARY CRISIS EVENT Mgr. Martina Schneiderová, Ph.D.,
Phdr. Marek Schneider, Ph.D., Czech Republic..... 23
3. CONSUMER ATTITUDES ABOUT SUPERVISION AS A SERVICE Assoc.
Prof. Dr. Maija Zakrizevska, Latvia..... 33
4. CROWDSOURCING - A NEW PARADIGM OF ORGANISATIONAL
LEARNING OF PUBLIC ORGANISATIONS Dr Regina Lenart-
Gansiniec, Prof. Dr Hab. Łukasz Sułkowski, Poland..... 41
5. CRYPTOLIABILITY Dsc. Denis A. Pechegin, Russia 51
6. EMPIRICAL RESEARCH FOCUSING ON THE COMPETENCIES OF
HOTEL MANAGERS IN PRAGUE PhDr. Marek Merhaut, Ph.D. MBA,
Czech Republic..... 57
7. EMPLOYABILITY AMONG YOUNG WOMEN: DISCRIMINATION,
VIOLATION OF RIGHTS OR ERROR? AN ANALYSIS OF THE LABOR
MARKET FOR YOUNG WOMEN FROM ROMANIA Phd Student
Stefania Cristina Stanciu, Romania 73
8. HUMAN RESOURCE DEVELOPMENT IN EMERGING MARKETS: CASE
STUDY OF SOUTH KOREA Assistant Prof. Phd Olga A. Shvetsova,
South Korea 79
9. HUMAN RESOURCE MARKETING Assist. Prof. Dr. Katerina
Legnerova, Assist. Prof. Dr. Marek Stritesky, Czech Republic..... 87
10. NEW APPROACH TO INNOVATION PROJECTS Ing. Hana Krchová,
Slovakia 95
11. NOTES ON THE IMPORTANCE OF THE ENTREPRENEURIAL
ECOSYSTEM FOR SOCIAL AND SOLIDARITY ECONOMY (SSE): THE
ROLE OF INTERNATIONAL LABOR ORGANIZATION (ILO) Assoc.
Prof. Dr. Leandro Pereira Morais, Full Prof. Dr. Miguel Juan Bacic,
Senior Specialist Roberto Di Meglio, Brazil 103

12. ORGANIZATIONAL AGILITY LEVEL EVALUATION MODEL AND EMPIRICAL ASSESSMENT IN HIGH-GROWTH COMPANIES
Mindaugas Deksnys, Prof. Dr. Rima Žitkienė, Lithuania 111
13. RELATIONSHIPS BETWEEN ATTITUDES AND BEHAVIOR OF POLISH CONSUMERS TOWARDS CORPORATE SOCIAL RESPONSIBILITY (CSR) Prof. Dr. Łukasz Sułkowski, Dr. Rafał Tyszkiewicz, Poland 125
14. SOCIAL INNOVATION IN CLUSTERS AND SMART CITIES Phd. Cornelia Muraru-Ionel, Dipl. Ec. Christina Leucuta, Phd. Vergil-Marian Muraru, Phd. Student Sebastian-Lucian Muraru, Phd. Student Ec. Oana Diana Radu, Romania..... 133
15. THE PUBLIC-PRIVATE PARTNERSHIP MARKET IN POLAND IN 2009-2017 COMPARED WITH OTHER EUROPEAN PUBLIC-PRIVATE PARTNERSHIP MARKETS Assoc. Prof. Dr. Hab. Dagmara Hajdys, Poland 143
16. THE TRADE UNION MOVEMENT IN POLAND DURING 1918-1939
Dr. Adam Laska, Poland 151
17. WORK VALUES OF Y AND Z GENERATIONS AND THEIR ADAPTATION IN NEW WORKPLACES IN THE SERVICES SECTOR IN LATVIA Assist. Prof. Dr. Psych. Solveiga Blumberga, Ludmila Muzicuka, Latvia 161

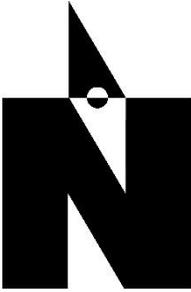
Section ECONOMICS AND TOURISM _____

18. DIGITALIZATION AS A COMPONENT OF THE WORLD ECONOMY
Phd Elena Klochkova, Dr. Natalia Sadovnikova, Dr. Mikhail Karmanov, Phd Student Aleksandra Samotsvetova, Russia..... 175
19. ECONOMIC FACTORS OF PROSPECTING AND EXPLORATION DEVELOPMENT ON THE RUSSIAN ARCTIC SHELF Assoc. Prof. Dr. Elena Katysheva, Russia..... 183
20. INTERREGIONAL LOGISTIC CENTERS IN THE MODERN REGIONAL DEVELOPMENT: AN ESTIMATION OF NEEDS AND PROSPECTS (ON THE EXAMPLE OF THE SVIYAZHISK INTERREGIONAL MULTIMODAL LOGISTICS CENTER) Assoc. Prof. Anatoly Shikhalev, Assist. Prof. Dmitry Vorontsov, Assoc. Prof. Oksana Rozhko, Rufia Mingafina, Veronika Yalalina, Russia..... 191
21. MEDIA CONVERGENCE IN PUBLIC BROADCASTING COMPANIES IN EUROPE. DELPHI STUDY Dr. Susanne Weichselbaumer, Hungary..201
22. MILLENNIUM TRAVELERS TOURISM CHOICES IN AN ERA OF GLOBAL THREATS OF TERRORIST ATTACKS – A CASE STUDY OF

	POLAND AND LITHUANIA Assoc. Prof. Rafal Nagaj, Prof. Brigita Zuromskaite, Poland.....	213
23.	MODELING AND FORECASTING OF INDICATORS OF THE HIDDEN BANKRUPTCY OF THE ENTERPRISES Dr. Natalia Sadovnikova, PhD Ekaterina Darda, PhD Olga Makhova, PhD Student Elena Erina, Russia	225
24.	OPTIMAL STRUCTURE OF PENSION SYSTEM - PENSION ENTITLEMENTS WITH FOCUS ON REPLACEMENT RATE Ing. Katarína Švejnová Hoesová, Czech Republic	233
25.	PRODUCTIVITY IMPROVEMENT IN A MANUFACTURING COMPANY – CONCEPTS, METHODS AND TECHNIQUES Dr. Inż. Renata Piętowska-Laska, Poland.....	239
26.	THE ATTRACTIVENESS OF ECONOMIC SYSTEMS AS THE ASSESSMENT BASIS OF THEIR COMPETITIVENESS Prof. Dr. Anna Plekhanova, PhD Kirill Kolesov, PhD Alexey Ivanov, PhD Nadezhda Ivanova, Russia.....	249

Section FINANCE

27.	REVITALIZATION OF URBAN GREEN AREAS AS AN ELEMENT OF THE PROCESS OF THE CITY REGENERATION AS EXEMPLIFIED BY THE EXPO HORTICULTURAL 2024 IN ŁÓDŹ PhD Magdalena Ślebocka, Poland.....	261
28.	THE SOCIAL COSTS IN INTERMODAL TRANSPORT BASED ON THE EXAMPLE OF THE EUROPEAN UNION Assoc. Professor Dr Eng. Robert Walasek, Assoc. Professor Dr Eng. Grzegorz Zimon, Poland	271
29.	VALUE ADDED AS THE BASIS FOR MEASURING LABOUR PRODUCTIVITY Ph. D., M.Sc. Eng. Anna Kijewska, Poland.....	279



Section BUSINESS AND MANAGEMENT

BUSINESS AND MANAGEMENT

The section covers papers relating to business, including management and organizational studies, business law and business ethics

COMPANY'S ACTIVITIES TERMINATION BY TAX AUTHORITY DECISION (SIMPLIFIED LIQUIDATION, LATVIA EXAMPLE)

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ABSTRACT

This paper analyzed the government role to stimulate and to control the entrepreneurship environment. During the crisis, several taxes were amended to slightly mitigate the effects of the crisis, and in 2010 the Micro-enterprise Tax Law was developed and adopted. Started from 1996 the State Revenue Service has the right to suspend the taxpayer's economic activities (natural and legal person) due to infringements of laws and regulations. Due to low tax morale after financial crises in and taxpayer's reluctance to pay taxes in 2011 in the structure of the State Revenue Service was created of a new unit - the Tax Accounts Administration. In 2012 marked out that a part of the merchants, effectively terminating their business, are not legally dissolved and are not excluded from the Commercial Register, therefore, in 2012 essential amendments were made in the Commercial Law and in the law On Taxes and Duties – the requirements of both regulatory enactments were aligned and come into force the company's simplified liquidation. The statistical data confirms that State Revenue Service and the government role in organizing the business environment are significant.

The research aim is to analyze the government's role to stimulate and control entrepreneurship by amendments in enactments and the State Revenue Service right to suspend and restore the taxpayer's economic activities in Latvia. Based on the aim, the following research tasks were set: to analyze the registration and exclusion dynamics of companies; to analyze the development of enactments and amendments in them due to taxpayers activities an how work the special instrument for the State Revenue Service – terminate the company's activities due not to cooperate with the State Revenue Service; to analyze the taxpayers simplified liquidation and exclusion from the Register of Enterprises on the bases of a decision of the tax authority.

Materials and methods. The principal materials used for the studies are as follows: various enactments, amendments, various sources of institution reports and statistics. The following qualitative and quantitative methods were employed: the monographic method, logical analysis and synthesis, statistical methods, i.e. statistical observation, compilation and grouping of information, calculation of statistical data etc.

Keywords: business environment, government role, tax administration, entrepreneurship

INTRODUCTION

In Latvia, the registration and exclusion of companies from Register of Enterprises are very dynamic during 2006 – 2017. One reason is entities insolvency after economic crises in 2007, but from 2012 the State Revenue Service (hereinafter – SRS) has a significant role in excluding entities from Register of Enterprises. During the crisis, several taxes were amended to slightly mitigate the effects of the crisis, and in 2010 the Micro-enterprise Tax Law was developed and adopted.

Started from 1996 the SRS has the right to suspend the taxpayer's economic activities (natural and legal person) due to infringements of laws and regulations. Started from 2008 the SRS must inform the Register of Enterprises about the suspension of economic activity of taxpayer if the taxpayer is registered in the Register of Enterprises. Due to low tax morale after financial crises in and taxpayer's reluctance to pay taxes in 2011 in the structure of the State Revenue Service was created of a new unit - the Tax Accounts Administration. In 2012 marked out that a part of the merchants, effectively terminating their business, are not legally dissolved and are not excluded from the Commercial Register, therefore, in 2012 essential amendments were made in the Commercial Law and in the law On Taxes and Duties – the requirements of both regulatory enactments were aligned and come into force the company's simplified liquidation. The statistical data confirms that State Revenue Service and the government role in organizing the business environment are significant.

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Research results and discussion

At any time, the role of the government in organizing and developing the business environment is significant.

In the National Development Plan of Latvia for 2007-2013, the government determined that the basis of the national economy is the successful development of a business based on free market principles and it is, therefore, necessary to stimulate the creation of new and new high added value enterprises [1].

To motivate individuals to engage in entrepreneurship in Latvia in 2010:

- 1) essential amendments were made in the Commercial Law;
- 2) was developed and adopted the Micro-enterprise Tax Law.

Started from 1 May 2010 the initial registered and paid-in equity capital for a limited liability company (hereinafter - LLS) could be 1.42 EUR (1 LVL) and after Latvia's accession to the European Union – 1 EUR. Before these changes, if founding an LLC, an equity capital of 2845.74 *euros* (2000 LVL) had to be paid in before applying to the Register of Enterprises. [2]

Started from 1 September 2010 the Micro-enterprise Tax Law takes effect. The micro-enterprise tax rate was set at 9% of the calendar year's turnover (till 2012) and the status of a micro-enterprise could be obtained voluntarily by an individual merchant, an individual undertaking, a farm or fishing enterprise, as well as a natural person registered with the State Revenue Service as a performer of economic activity or a limited liability company which meets the following criteria:

- 1) the participants (if any) are natural persons, members of the board of directors of a limited liability company may only be employees of the micro-enterprise,
- 2) the turnover does not exceed 99 601 *euros* (70 000 LVL) in a calendar year,
- 3) the number of employees does not exceed five at any time and the remuneration for work at a micro enterprise does not exceed 711.44 *euros* (500 LVL) per month [3].

Šneidere R., Būmane I. welcomes the changes made to the Commercial Law, which allows the creation of new ones LLC with a minimum share capital of 1 EUR. As per their research for the first four years, 66.3% of all start-up companies have benefited from the Commercial Law, while their share has declined to 60.7% in the last year, but it also shows the high activity of entrepreneurs, as 30% of founders are newcomers who have not been involved in business as officials or members. [4]

And Leibus I. thinks that the micro-enterprise tax is a successful fiscal instrument to support small business during the economic crisis, particularly in the countries with high labour costs. Although the influence of the micro-enterprise tax on the economy is small, its introduction was a successful strategy. It has encouraged the legalization of business activities that are especially important in the situation of high unemployment. Besides the micro-enterprise tax legalized many physical persons that are now registered as micro-enterprise employees, but previously they were not entered in the taxpayers' data basis.[5]

By creating micro-enterprise tax and reducing the registered and paid-up share capital for LLC government achieved its goal – activating entrepreneurship and increasing the number of entrepreneurs (Table 1).

Table 1 *Registration and removal dynamics per year by Latvia's Register of Enterprises in the period from 2006-2017*

Year	Number of registered entities	Chain increase, %	Number of excluded entities	Chain increase, %
2006	13404	–	3274	–
2007	14208	6	11185	242
2008	11347	-20	4765	-57
2009	9228	-19	5715	20
2010	13422	45	8834	55
2011	18044	34	3920	-56
2012	16891	-6	4308	10
2013	16365	-3	4156	-4
2014	14965	-9	6402	54
2015	13484	-10	10070	57
2016	11206	-17	12229	21
2017	10210	-9	16480	35

Source: author’s calculations based on statistical data of the Register of Enterprises of the Republic of Latvia [6]

Although the increase in the number of registered companies and taxpayers has also resulted in an increase in tax revenues over the period from, however, the crisis has had a significant impact on the ability of the SRS to collect taxes according to declared information by entities (tax declarations).

In 2011, following the recommendation of the International Monetary Fund on improving the work of the SRS in the field of tax debt recovery, in the structure of the SRS was created of a new unit - the Tax Accounts Administration with 272 posts [7].

The author concludes that new employees have not been taken up by creating a new unit and creation of this unit was the result of an internal reorganization, as the number of actual employees at the beginning of 2011 was 4176, but by the end of 2011 - 4147, and the actual total number of employees in this year has decreased by 29 employees.

Started from 5 July 1996 the SRS has the right to suspend the taxpayer's economic activities due to infringements of laws and regulations. From 4 March 2008 in this case the SRS must send information on the suspension of economic activity of the taxpayer to the Register of Enterprises if the economic activity of the taxpayer registered in the register of the Enterprise Register or Commercial Register is suspended and also send the information on reinstating of the taxpayer's economic activity if SRS renewing the suspended economic activity of a taxpayer.

Therefore In 2012 essential amendments were made in the Commercial Law and in the law On Taxes and Duties – the requirements of both regulatory enactments were aligned:

1) the law On Taxes and Duties strengthened SRS power to suspend and to renew the economic activity of a taxpayer due to infringements of laws and regulations

2) and in the Commercial Law was included regulation about the termination of activities of the company on the basis of a decision of the Commercial Register Office or Tax Authority.

The SRS has the right to suspend the economic activity of the taxpayer (or its structural unit in which infringement has occurred) if at least one of the following infringements is identified:

1) if the taxpayer employs persons without concluding employment contracts with them, and the proportion of such persons is 50 per cent or more however not less than three persons of the persons employed in the object which is audited (territories and premises owned or used by the taxpayer in which economic activity is performed or which are related to deriving of income in the territory of premises owned or used by other natural or legal person);

2) the taxpayer has evaded taxes or fees;

3) the taxpayer uses a cash register, hybrid cash register, cash-office system, dedicated device and equipment software or accounting information computer system, the software of which has been changed or other activities have been carried out thereby creating an opportunity to conceal or reduce the taxable base on which taxes and duties are levied;

4) the taxpayer disburses income which is not recorded in the accounting registers and in the report on mandatory national social security contributions, personal income tax levied on earnings of employees and State fee of the business risk for the reporting month submitted to the SRS to the person employed, or employs more than one person without concluding employment contracts;

5) the taxpayer has not eliminated the infringements which caused its removal from the register of value added tax payers of the SRS;

6) the taxpayer has not settled late tax payments subject to recovery based on a decision regarding recovery of late tax payments and a statement regarding the impossibility of recovery is at the disposal of the SRS. [9]

The author compiled statistics about suspension and renewing the economic activities of taxpayers per year by SRS (Table 2).

Table 2 Suspension and renewing economic activity of taxpayers per year by the State Revenue Service of the Republic of Latvia in the period from 2012-2017

Year	The number of taxpayers to whom SRS has			
	Suspend economic activity	Chain increase, %	Renewing economic activity	Chain increase, %
2012	637	–	14	–
2013	10351	1525	231	1550
2014	10897	5	508	120
2015	12533	15	686	35
2016	10480	-16	715	4
2017	5457	-48	328	-54
Total:	50355		2482	

Source: author’s calculations based on statistical data of the State Revenue Service of the Republic of Latvia [8]

The number of taxpayers includes both – the natural persons registered with the SRS as a performer of economic activity and the taxpayers registered in the register of the Enterprise Register, like LLC. Due to a large amount of data, the author did not analyse the distribution of natural and legal persons in the number of taxpayers to whom SRS has suspend their economic activity in this paper. The author will do it in one of the following papers in order to more accurately calculate the impact of the SRS decisions on the liquidation of capital companies.

According to the statistical data (Table 2) author concludes that SRS is very active to put the business environment in order and it affects on the number of excluded entities from Latvia’s Registers of Enterprises too (Table 1). During 2012 – 2017 were registered 83121 entities and excluded 53645 entities in the Register of Enterprises. In the same time, SRS suspended 50335 taxpayer’s economic activities but renewing the economic activities only 4.93% of them.

In 2012 marked out that a part of the merchants, effectively terminating their business, are not legally dissolved and are not excluded from the Commercial Register, therefore, the information in the Commercial Register is available about them, which in turn may mislead third parties as to the existence of these entities. Neither members of the company nor the creditors take actions to ensure the liquidation of these entities, including the distribution of property and satisfaction of creditors' claims, therefore, these entities are not active in liquidation or insolvency proceedings. The existence of such legally existing but actually non-existent entities contributes to uncertainty in the Commercial law.

Activities of the company may be terminated on the basis of a decision of the tax authority if:

- 1) the company has not submitted an annual report within one month after administrative punishment was imposed and at least six months have passed since the violation was committed;

2) the company has not submitted the declarations for the time period of six months, provided for in tax laws, within one month after administrative punishment was imposed;

3) activities of the company have been suspended on the basis of a decision of the tax authority, and the company has not rectified the indicated deficiency within three months after activities thereof were suspended. [2]

And by this started simplified liquidation of the company – liquidation without court intermediation and without the active involvement of the founders of the company.

The author compiled statistics about the taxpayers, registered in the register of the Enterprise Register, simplified liquidation and exclusion from the Register of Enterprises on the bases of a decision of the tax authority in 2012 – 2017 (Table 3).

Table 3 The taxpayers simplified liquidation and exclusion from the Register of Enterprises per year on the bases of a decision of the State Revenue Service of the Republic of Latvia in the period from 2012-2017

Year	Decision on the suspension of economic activity	Exclusion from Register of Enterprises after suspension of economic activity	Decision on termination	Exclusion from Register of Enterprises after decision on termination
2012	49	0	0	0
2013	1510	12	0	0
2014	1667	217	1812	200
2015	419	487	718	354
2016	134	900	299	752
2017	23	2186	106	1629
Total:	3802	3802	2935	2935

Source: author's calculations based on unpublished statistical data of the Register of Enterprises of the Republic of Latvia

According to the statistics (Table 3) in 6737 cases the activities of the companies were terminated on the basis of a decision of the tax authority in the period from 2012 – 2017 and it is about 13% from the total number of excluded entities from the Enterprise Register.

It confirms that SRS and the government role in organizing the business environment are significant.

The author believes that entrepreneurs do not seek to restore the company's business activities if it has been suspended by the SRS but is waiting for statutory deadlines and expects the company to apply simplified liquidation. It can be

assumed that it is easier to register a new company and start a new business than to rebuild an existing one. In the simplified liquidation, the founders do not need to appoint a liquidator. In essence, the company's simplified liquidation is free of charge to the founders of the company. The author believes that the impact of such a liquidation on the business environment has to be assessed - it is positive that empty businesses are excluded but are only empty businesses and fraudulent companies are excluded need to be explored. The simplified liquidation also can be used as an avoidance of insolvency proceedings.

CONCLUSION

1. By creating micro-enterprise tax and reducing the registered and paid-up share capital for LLC government achieved its goal – activating entrepreneurship and increasing the number of entrepreneurs.

2. Although the increase in the number of registered companies and taxpayers has also resulted in an increase in tax revenues over the period from, however, the crisis has had a significant impact on the ability of the SRS to collect taxes according to declared information by entities (tax declarations).

3. The SRS has the right to suspend the taxpayer's economic activities due to infringements of laws and regulations and renew it.

4. During 2012 – 2017 SRS suspended 50335 taxpayer's economic activities but renewing the economic activities only 4.93% of them.

5. In 2012 marked out that a part of the merchants, effectively terminating their business, are not legally dissolved and are not excluded from the Commercial Register, therefore, the information in the Commercial Register is available about them, which in turn may mislead third parties as to the existence of these entities.

6. In 2012 the Commercial Law and in the law On Taxes and Duties requirements were aligned:

6.1. the law On Taxes and Duties strengthened SRS power to suspend and to renew the economic activity of a taxpayer due to infringements of laws and regulations

6.2. and in the Commercial Law was included regulation about the termination of activities of the company on the basis of a decision of the Commercial Register Office or Tax Authority;

7. In 6737 cases the activities of the companies were terminated on the basis of a decision of the tax authority in the period from 2012 – 2017 and it is about 13% from the total number of excluded entities from the Enterprise Register.

8. SRS and the government role in organizing the business environment are significant.

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COMPETENCY MODEL OF THE MANAGER IN THE SITUATION OF EXTRAORDINARY CRISIS EVENT

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ABSTRACT

The world's trends of development show the growing importance of the value of effective management and decision making. Managerial competencies need to be increased especially in situations that are referred to as crisis situations. Primarily, it is a situation endangering the lives of people, causing extensive material damage and, eventually, disposal of affected organizations. In such situations it is necessary to replace the routine management strategies with the managerial command.

The competency model serves as a basis for the creation of individual assessment of personal and professional prerequisites method. Managerial command requires the ability of key and specific competencies, which are activated and used to greater extent, especially in crisis situations. Some managerial competencies which are needed in common practice are not desirable in this case.

The identification of priority psychological, professional, physical and social factors in the decision-making situations of the unexpected crisis was solved by qualitative and quantitative analyzes of the Panel of Experts outputs. Based on the analysis of the expert panel outputs, six core competences were selected: Communication and Interaction, Information Processing, Authority (Personality), Stress, Self-Management and Management. Specific expertise and their required level were determined by experts and include the necessary knowledge of fire protection, occupational safety, traumatology and basic knowledge of human rescue, emergency rights (evacuation, etc.) and crisis management.

Core competencies are divided, depending on their capability, the possibilities for further development. Hard competencies relate to personal assumptions with limited scope for development. Soft competencies relate to general and specific skills and can be developed.

Each competence is defined by sub-competencies that are crucial for the successful operation of the manager-commander in a situation of extraordinary crisis event. In these parameters above-average skills and abilities are required. Within each competence, risk factors that are objectionable for the manager-commander are further defined. These variables must be kept under control or suppressed. The criteria for the assessment of sub-competencies were also set in the framework of the competence model.

Keywords: Competence, Competency Model, Soft Competencies, Hard Competencies, Managerial Command

INTRODUCTION

We define the managerial command in extraordinary crisis situations as a specific way of managing extraordinary events that replaces the usual management strategy with a centralized way of management and coordination. It is situational decision-making in times of distress with many threatening factors and with high demands on the overall resistance of an individual, decision making which besides solving the current situation determines also the severity and extent of the consequential damages.

The management of the organization is also responsible for dealing with emergencies and it is therefore necessary to have managers with the prerequisites for managerial command in the management structures of the organization. Managerial Command is current in a situation of imminent threat and leads to the elimination of the crisis as opposed to risk management as a systematic activity with the clear aim of identifying potential risks and preventively limiting the possibility of their occurrence or possibly reducing their impact which is the task of a specialized risk manager or part of the work of individual managers. From a risk management point of view, it is the so-called crisis management, the management phase or the mitigation of risks - in this case the extraordinary risks. The risks and management of the crisis situations, together with the consequences of the identified decisions, must be identified, analyzed and evaluated in a very short time span [4].

The competency model serves as a basis for the creation of individual assessment of personal and professional prerequisites method. Competencies in this model are conceived as ability, capacity, skill, efficiency, not as the scope of a certain scope, activity, authority, and duty [5].

METHODOLOGY

The Panel of Experts was conducted as a two-round investigation for project purposes, especially with regards to time and financial possibilities. Within a simple efficient selection, a group of thirteen "experts" was approached, which could provide a "view" to managers - commanders. The addressed group of people has been recruited from the following areas: HR consultant in the field of automotive, fire brigade commanders, Czech police and army, security managers of petrochemical distribution and production companies, psychologist in fire brigade, the executive director (environmental and waste management), the manufacturing engineering CEO, the automotive maintenance manager, the quality control manager of the company involved in the production of electronic equipment.

The first round of panel of experts through electronic brainwriting provided a set of open answers to the question of what the manager - commander should be, respectively which competencies are key for him/her. With the data obtained, we worked by the Grounded Theory method of the authors Glaser and Strauss. The theory is inductively derived from the process of examining the phenomenon that it represents, is created and temporarily verified by systematically collecting data on the phenomenon under investigation and analyzing them. Phases of data collection, analysis, and theory itself complement each other [1], [2].

In the second round of the expert panel, a questionnaire with an alphabetical list of subcompetencies was presented to experts who evaluated the importance of particular items for the successful performance of the manager-commander. Based on this data, axial coding was also performed [3]. The data obtained from the questionnaire survey was statistically processed. The average saturation value of individual subcategories and the average deviation from this value allowed us to allocate a set of subcategories with above-standard (required subcompetencies) and under-standard (risk factors) modality.

COMPETENCY MODEL

A) Hard competencies

- **AUTHORITY** - Required Optimum

Responsibility: Ability to take responsibility for the situation and other people, even if there is no guarantee of success. The power to influence the situation in accordance with the required values (the principle). He/she can share responsibility with other people.

Natural authority: It is the authority whose opinions, attitudes or decisions are usually accepted and followed with other members of the group. The ability to persuade, to make people believe him/her, there is no need to justify and explain his/her demands, there is no need to exert pressure.

Decision-making: Ability to decide, to choose a procedure that is the best of all possible at that moment. Decision-making not only after a quick analysis of the problem, but also intuitively. In decision-making he/she is not influenced by other people.

Self-confidence: The ability to trust in him/herself with no unnecessary fears. Confidence in him/herself is unshakable, he/she is not doubted (he/she is aware of the fact other people are influenced by uncertainty in crisis situations).

Activity: High activity, need for things to be in motion, to keep doing something. However, it is not without thinking, all activities are expedient. He/she cares about what he/she does.

RISK FACTORS - Acceptable Risk Level

Arrogance: Manifesting his/her dominance in an appropriate way - authoritatively, assertively.

Pessimism: Remaining responsive to risks but does not fall through a pessimistic approach. He/she does not want to increase tension and uncertainty, demotivate other people.

Submissivity: In crisis situations, he/she is dominant with ability to command, but in specific situations (e.g. after the arrival of the Integrated Rescue System) ability to subordinate. He/she respects the management hierarchy in common situations.

Egocentrism: He/she likes to be promoted, but he/she is not an egocentric and individualist, it is not just for his/her own benefit.

- **INFORMATION PROCESSING** - Required Optimum

Operational Thinking: Thinking is quick, flexible. Ideas and practices follow on - the ability to apply them to other situations.

Practical Thinking: Interest in information that can be used in practice, endeavoring to practice the knowledge.

Strategic Thinking: Strategic, long-term considerations but in terms of conditions. System approach, thinking in context, trying to align goals with procedures and resources. The ability to think hypothetically, to set the right prerequisites for the solution. Intuition is also involved.

Divergent Thinking: Reasoning to width, creativity, search for multiple solution options (not one way).

Global Thinking: Orientation in the structure of the problem, overlook. Comprehensive assessment of everything what is related to the solved problem.

Analytical Thinking: Recognizing partial details and choosing those that are essential to the solution. Orientation in the problem based on accurate analysis, rational justification of selected details and choice of the right procedure.

RISK FACTORS - Acceptable Risk Level

Stereotype: Stereotypes - repeated procedures and thinking patterns in a level helping to suppress uncertainty and concern. Good estimation of using the best practices (automated activities) and options for a different procedure (not rigidity).

Search for change: He/she does not try to be original in all circumstances, keeping insight even in a confusing situation, ability to orientate. Chaos does not matter, on the contrary it is stimulating (chaos under control).

Interest in theory: The interest in new knowledge, does not underestimate the data analysis, but he/she is rather practical.

- **STRESS** - Required Optimum

Stress resistance: Managing long-lasting heavy loads better than others, well tolerates stressful situations, can cope with obstacles.

Balanced Personality: A balanced person, usually coping with problems quickly.

Coping by Workload: An energetic person, work activity does not burden him/her, but he/she charges.

RISK FACTORS - Acceptable Risk Level

Fear and worry: Not suffer from unnecessary worries, ability to deal with them (if he/she feels some fear or worry).

Feelings of helplessness and hopelessness: Feelings of helplessness and hopelessness are not typical or do not show up in performance.

Abandon: Risk counting but does not go into action without thinking.

Psychological Vulnerability: He/she does not worry with the trifles, easy coping with failures ("does not break him / her").

Affection: Ability to keep emotions under control in a tense situation and respond appropriately to the situation (assertively).

Impulsiveness: He/she is not impulsive, hasty but rationally, factually, keeping his/her reaction under control.

Moodiness: He/she is not moody, usually able to handle it. His/her behavior is consistent, people know what they can expect from him/her.

Apathy: Apathy and inertia are very rare as result of great fatigue.

Internal Tension: The increased stress that accompanies the experience of extraordinary situations does not lead to undesirable reactions.

- SELF-REGULATION - Required Optimum

Quick Decision-Making: The speed of decision-making has no negative effect on the correctness of the decision. Ability to make quick decisions even under pressure.

Self-Determination: Strong will, he/she can endure even if he/she is not successful at that moment. He/she is not discouraged by partial failures. Ability to deal with things that are not pleasant or that are difficult.

Purposefulness: Usually reaches what he/she has set up.

Sense of Duty: He/she respects set standards, prefers the duty to personal interests.

RISK FACTORS - Acceptable Risk Level

Need to Apply: Self-realization (applying) is motivating. However, in crisis situations, this action is not intended to attract attention to him/herself.

Need to Succeed: Being successful is important and motivating. However, in a critical situation the effort to manage the action successfully prevails over the need for personal success clearly.

Competitiveness: Competitiveness does not change in rivalry in tense situation.

Restraint: Ability to control emotions even in a tense situation, to maintain the necessary distance, but not close him/herself. Because of this it is possible to solve conflicting situations or to make quick choices (restraint does not seem like hesitation).

Motivation by Material Welfare: Material evaluation is an important but not a prime motive. Risk is not undergone to obtain material rewards.

Motivation by Power and Promotion: Crisis management is not an opportunity to gain a position that gives power and influence. It is not act in a busy way.

Gullibility: He/she is aware that people in crisis can act unusually, they can fail. He/she continuously checks people who overcome the crisis situations.

B) Soft competencies

- COMMUNICATION AND INTERACTION - Required Optimum

Ability to Argue: Ability to communicate objective data, facts that clarify or rebut anything, and persuade others about the truth of what is said. Arguments can be based on practice or theory, but they are clear and precise.

Ability to Communicate Clearly and Specifically: Facts are communicated clearly and comprehensibly, he/she can explain them in relation to the situation or specific examples. He/she chooses the right words, has good vocabulary.

RISK FACTORS - Acceptable Risk Level

Suspiciousness: At the beginning of the relationship, he is not immediately open and trustworthy, he monitors what he can expect from people, but he is not directly suspicious.

Reserve: He/she keeps a healthy distance from people, allowing him/her an objective view of others. In crisis situations, he/she does not stop communicating with others.

Criticism: Accessing people with a certain amount of criticism, but he does not need to ventilate his critical views in all circumstances. He/she gives unambiguous rational feedback.

Compassion: He/she can be compassionate with other people, but it does not influence decision making. He/she maintains a reasonable distance.

Altruism: He/she has interest in people and their good, but it is not the main criterion for his/her actions. He/she can also behave hard if necessary.

Affiliation: He/she can behave friendly to others, but in a crisis situation this does not prevent the command. He/she is not dependent on positive feedback from other people.

Empathy: A certain degree of empathy is expected, helping to estimate the others and their responses. In crisis situations that requires speed, vigor and hardness, he/she must be suppressed, so that identification with others does not influence manager's decision-making.

Collegiality: In common conditions, he is acting as a collegial individual, depending on the people he/she works with. However, collegiality has the limits, it

is not permissible to prefer someone just because it is a colleague, it is necessary to take other criteria into account.

Conflict: He/she does not avoid conflicting situations, knows it cannot be avoided, but it can be prevented. He/she acts assertively in conflict situations.

- MANAGEMENT - Required Optimum

Willingness to Lead Others: Taking the initiative, manifesting him/herself as a leader in situations where the leadership of a group is needed.

Operational Management and Organizational Skills: Excellent organizer, can transfer the assigned tasks to executable activities, with very good time management.

Ability to Control and Evaluate: Assessment and control are a natural part of work and management. He/she can clearly determine when and what to control, he/she can evaluate the performance of him/herself and others.

Ability to Motivate Others: Ability to affect people, activating them, motivating them appropriately, being able to individually choose diverse motivational means.

Ability to Make Decisions: He/she can orient him/herself in offering more options and choose the right solution. The situations which must be decided are not stressful.

Skills to Set Goals: High efficiency in setting and achieving goals. While working, he/she maintains a set direction and usually achieves the desired results.

Skills to Coordinate Activities: Very good coordinator. He/she can allocate partial activities to people so that they complement each other, assign tasks according to the assumptions of individuals, he/she can delegate.

RISK FACTORS - Acceptable Risk Level

Partnership: In common situations, he/she favors partnering, he/she is able to assert unambiguous authority in crisis situations.

Democratic Approach: Interest in Power: In common situations, he/she prefers a democratic style of management. In the crisis situations, when it is necessary to act from the position of authority, he/she can command.

Expansiveness: Ability to divide the power appropriately, knows what he/she can do. He/she does not underestimate his/her options, but he/she does not even overrate them.

Liberal Approach: The liberal approach is applied only to people who are very well-tested – manager knows that they are capable, reliable and trustworthy. This approach is replaced by command in crisis situations.

- SPECIFIC EXPERTISE - KNOWLEDGE COMPETENCE

These competences are among so-called soft competencies - they can be developed. Specific competencies (knowledge component) and their rate have been

determined by experts-co-investigators of the project and include the necessary knowledge of:

- Behavior and decision-making in case of fire and spread of smoke
- Behavior and decision-making in leakage of chemicals and explosive gases
- Traumatology and basic knowledge of saving human life
- Law in extraordinary situations (evacuation, etc.)
- Management and Managerial Command

CONCLUSION

Based on the analysis of the expert panel outputs, six core competencies were selected: Communication and Interaction, Information Processing, Authority (Personality), Stress, Self-Management and Management. Specific expertise and their required level were determined by experts and include the necessary knowledge of fire protection, occupational safety, traumatology and basic knowledge of human rescue, emergency rights (evacuation, etc.) and crisis management [5].

Manager-commander competencies are defined by the optimum required (high) level of subcompetencies. Furthermore, there are risk factors within each of the competencies. The characteristics of the risk factors define the optimum, it means an acceptable level of risk. Based on this competency model it is possible to evaluate and select managers able to take responsibility for dealing with serious events that interfere with the stability of the system with potential threats to its security and existence, and to govern their further professional development. Applying the competency model of the manager in the situation of extraordinary crisis event can also be applied in (pre)university studies.

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CONSUMER ATTITUDES ABOUT SUPERVISION AS A SERVICE

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ABSTRACT

Nowadays, supervision as a service has become part of professional practice and also education in many professions. Nevertheless, organisations are short of information about it, and this explains the rationale of this research. When hearing the words “supervision, supervisor”, the employees of the organisations have different emotionally evaluating attitudes, and, for many of them, these may associate with in-service training, monitoring, and mentoring. Depending on the knowledge of consumers and their attitudes towards supervision, the demand for it will develop in future. This why a study was conducted to research the attitudes of consumers towards supervision as a service. A survey developed by the author and containing three dimensions (cognitive, affective, behavioural) was used in the study for finding out the attitude of consumers towards supervision as a service. 173 respondents participated in the survey. The survey was attended by 32% of respondents who are managers and 68% of respondents who are not managers, who have previous experience in supervision (49%) and those without experience in supervision (51%). The results of the study show that the attitude of consumers towards supervision is positive and that there are statistically significant differences between managers and non-managers and between those who have participated in supervision, and who are not only in the cognitive dimension. It may be concluded that managers and those who have participated in supervision have more knowledge about supervision and more positive attitudes towards it.

Keywords: attitudes, supervision as service, customers

INTRODUCTION

In our days when lifelong education is a matter of course, supervision has become an important component of professional activities in a number of professions, in particular those aimed at provision of aid. For a number of professionals, such as psychotherapists, psychologists and art therapists, it has become an integral part of the acquisition and maintenance of their professional status, including certification and re-certification.

The Latvian Association of Supervision is admitting more and more members every year. In 2018, website of the Latvian Association of Supervision counts already 89 members, compared to 66 members in the beginning of 2016; such increase indicates to rapid growth of popularity of supervision service [10].

The concept of attitude is popular; it is widely studied and described in scientific literature, described by different interpretations and definitions. Studies of attitude are taking place not only in social psychology but also in marketing, in particular event marketing [5], or the attitude of Latvian consumers towards genetically modified bodies [1]. Studies of attitude are also present in business science, for example, the impact of situation on consumers' attitudes and behavior [2]; the study of consumers' attitude towards plastic money [4].

According to the theory, attitude forms from three ingredients that can be defined as three components or dimensions of attitude; they present the ample spectrum of expression of attitudes [7], called the ABC model in modern marketing theories [9].

There are countless studies into possibilities for changing attitudes. Studies into attitudes date back to the fifties of the last century and their popularity has been increasing ever since. The EconPapers.org database of scientific publications contains information about thousands of scientific studies into attitudes and changing them, and also publications dating back to 1940. During the last few years, several research studies into the attitudes of various groups of consumers towards supervision have been conducted in Latvia as well [11] [12]. Although the consumer studies show that the attitude towards supervision is positive, consumers are still not ready to purchase the service themselves and expect active involvement and financial support from their organisations. This may be indicative of the changing nature of attitudes and shortage of information about supervision as a service.

Already in the middle of the last century, a team of scientists created a model of attitude change [3] after long-term research, paying attention to the components of the process of communication: who, to whom, what, when. According to this model, the change of the attitude of an individual may be influenced if information is provided to the target group (to whom) via a communication channel (how) it uses during the provision of the information (when), and the information is provided by a person who is an authority among the target group (who).

However, attitude can be changed most successfully by a person who is considered to be an expert, reliable, popular and personable. Conveying a message may become even more efficient if it is not perceived as a direct attempt of influence, if the message creates fear or if the message is more likely an evaluation, not a fact [6]. It is important to note that, in order to convey a comparatively simple message and to influence people, it is better to use a video, but a more complex material should be provided to the individual/consumer in writing. Another theory of changing attitude explains the reasons why positive attitudes do not turn into behaviour. For instance, consumers have positive attitudes towards supervision, but there is no demand for the service, and the consumer is not ready to pay for it.

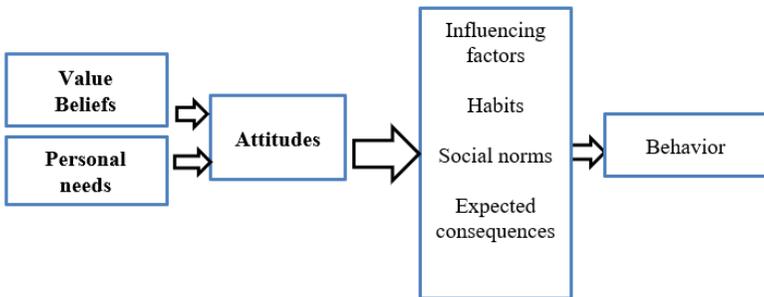


Figure 1. Factors which influence attitude [8]

People have links between convictions, values and attitudes. Attitudes are created by the personal needs. The factors which influence attitudes are habits, social norms and the expected consequences of behaviour. In order to change attitudes, it is necessary to create a need for the consumer by changing their convictions and values [8] (see Figure 1). A reason for negative attitudes is frequently shortage of information, and it is therefore essential to provide consumers with information by questioning individual views and values. This may be carried out in a group or individually as well as by involving experts in the group. Communication and types of communication are essential, as they assure positive attitudes among the beneficiaries. Creation of new needs and expectations by justifying it with the benefits to be achieved, assuring an understanding that change of attitudes may change the current environment. Also, to change the attitudes of consumers, it is necessary to understand the individual influencing factors. Change of attitudes may be used to popularise supervision.

The purpose of this study is determining the consumers' attitude towards supervision as a service.

Three research questions have been formulated for the purposes of this study: What is the attitude of consumers towards supervision? Whether or not statistically significant relations exist on the scales of attitude towards supervision? Are there statistically significant differences in attitudes towards supervisors for consumers who hold leading positions and those who hold subordinate positions? Are there statistically significant differences in attitudes towards supervision for consumers with supervisory experience and consumers who do not have experience in supervising?

Depending on the knowledge of customers and their attitudes towards supervision as a service, the demand for it will develop in future. Therefore, it is important to conduct research in this field in order to find out the attitudes of managers who make decisions in organizations to purchase supervision as a service.

RESEARCH METHODS AND RESPONDENTS

It was used data collection method: the author made survey consisted of 23 statements which were evaluated on a Likert-type scale with four value (Likert-type scales). All three dimensions of attitude towards supervision are compared in the study: emotional, cognitive and behavioural, the links between each of them. Thus, it is possible to find out the attitude towards supervision, what the knowledge of both research samples about supervision is, and what behaviours in association with supervision each of the research samples has, simultaneously finding out whether there are any differences between the results of both samples and what these differences are. 207 questionnaires were obtained in total, of which 173 questionnaires were suitable for data processing. The survey was attended by 32% of respondents who are managers (n = 55) and 68% of respondents who are not managers (n = 118), who have previous experience in supervision (n = 84) and those without experience in supervision (n = 88).

RESEARCH RESULTS

The author has conducted the study by opting for the quantitative research study strategy and, within it, using a survey regarding the attitudes of consumers towards supervision via collection and analysis of primary data. The conceptual model of the research study is provided in Figure 2.

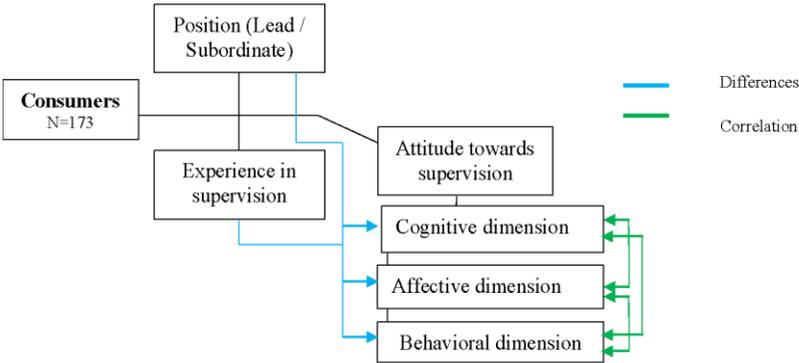


Figure 2. The conceptual model of the research (developed by the author)

Analysis of the results of attitudes towards supervision

To verify the credibility of the designed questionnaire regarding supervision, the Cronbach’s Alpha (or the Consistency Coefficient) was calculated. It shows whether the statements are adequately and mutually consistent within each particular scale and within the entire survey (see Table 1).

Table 1. The Cronbach’s coefficient alpha for the questionnaire regarding attitude towards supervision (developed by the author)

Scale	Cronbach’s alpha	Number of statements
Affective dimension	0.618	6
Cognitive dimension	0.754	11
Behavioral dimension	0.708	6

The Pearson correlation factor was calculated to determine whether or not statistically significant correlation exists between attitude scales because, in spite of the fact that the data deviate from the normal distribution, all three scales in which the correlation factor is calculated are within the interval scale.

Table 2. Pearson Correlation coefficients in the attitudes dimensions (developed by the author)

		Cognitive dimension	Emotional dimension	Behavioural dimension
Cognitive dimension	Correlation coefficient		0.355**	0.482**
	Sig.	---	0.000	0.000
	N		173	173
Affective dimension	Correlation coefficient	0.355**		0.713**
	Sig.	.000	---	.000
	N	173		173
Behavioral dimension	Correlation coefficient	0.482**	0.713**	
	Sig.	.000	.000	---
	N	173	173	

According to the Pearson correlation factors, statistically significant correlations exist between all three attitude scales. The strongest correlation is observed between behavioral and affective scales (0.713) and the weakest one – in cognitive scale; the Pearson correlation factor between cognitive and affective scales is 0.355, and 0.482 between cognitive and behavioral scales respectively (see Table 2).

To answer the research questions about whether there are statistically significant differences in attitudes towards supervision between consumers representing various groups (managers, consumers with experience in supervision), the author has conducted a study of differences. Since, generally, the attitude scales do not correspond to the normal distribution, non-parametric methods have been used to determine the differences, by determining the Mann-Whitney U test values.

Table 3. Mann-Whitney U test values for consumers who hold managerial offices and consumers with subordinate job positions (developed by the author)

Attitude dimensions	Manna-Whitney U Test	Significance
Cognitive dimension	2645.00	0.050
Affective dimension	2765.00	0.114
Behavioral dimension	3015.00	0.449

There are statistically significant differences between the consumers who hold managerial offices and the consumers who hold subordinate job positions on only

one of the three scales, i.e., on the cognitive scale where the significance (p) is less than or equal to 0.05 (see Table 3).

Table 4. Mann-Whitney U test values for consumers with and without experience in supervision (developed by the author)

Attitude dimensions	Manna-Whitney U Test	Significance
Cognitive dimension	2203.50	0.000
Affective dimension	3622.50	0.820
Behavioral dimension	3690.50	0.986

In the determination of the differences between the consumers with and without experience in supervision, the results of the Mann-Whitney U test show statistically significant differences on the cognitive scale (significance = 0.000). The median range indicators in this test show that the consumers with experience in supervision have higher scores on the cognitive scale, i.e., the attitude differs based specifically on this scale. Also, for these samples, the Mann-Whitney U test shows no statistically significant differences on other attitude scales (see Table 4).

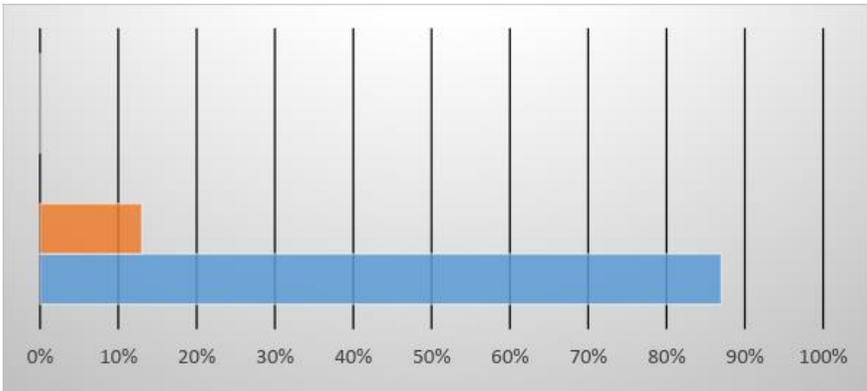


Figure 3. Attitude towards supervision (developed by the author)

Summary of responses to the statement “I have positive attitude towards supervision” regarding the attitude towards supervision service, affirmative responses have been made by 87% of respondents or major part or them. Though the statement is express, examination of the results shows that the respondents have made similar responses to negatively formulated statements, and therefore the responses can be considered credible (see Figure 3).

CONCLUSIONS

What is the attitude of consumers towards supervision? Most of the respondents have positive emotionally estimating attitude towards supervision and positive experience of it. Still, there are consumers (13%) with a negative

emotionally evaluating attitude towards supervision, which is suggestive of certain negative experience or obscurity with regard to supervision.

Whether or not statistically significant correlation exists in attitude towards supervision? Statistically significant correlation exists in all attitude scales, and therefore the formation of attitude comprises closely related awareness, emotions and behavior. The given correlation would mean that, the more favorable is the consumers' emotionally estimating attitude, the higher is their willingness to apply for supervision. On the other hand, favorable attitude towards supervision would indicate to understanding and awareness of supervision as a useful service among respondents from different areas, both in managerial and non-managerial positions.

Are there statistically significant differences in attitudes towards supervisors for consumers who hold leading positions and those who hold subordinate positions?

Statistically significant differences exist only in the cognitive dimension. This suggests that managers have more knowledge about supervision than those who do not hold managerial job positions.

Are there statistically significant differences in attitudes towards supervision for consumers with supervisory experience and consumers who do not have experience in supervising?

Statistically significant differences exist only in the cognitive dimension. Experience in supervising the formation of knowledge about supervision. This suggests presence of knowledge about supervision in those who have participated in supervision.

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CROWDSOURCING - A NEW PARADIGM OF ORGANISATIONAL LEARNING OF PUBLIC ORGANISATIONS

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ABSTRACT

Crowdsourcing is one of the new themes that has appeared in the last decade. It is perceived as an innovative method that can be used for problem solving, improving business processes, creating open innovations, building a competitive advantage, and increasing transparency and openness of the organisation. The importance of crowdsourcing for organisational learning is seen as one of the key themes in the latest literature in the field of crowdsourcing. This article is a response to the recommendations in the subject literature, which states that crowdsourcing in public organisations is a new and exciting research area. The aim of the article is to present a new paradigm that combines crowdsourcing levels with the levels of learning. This article presents a cross-sectional study of four Polish municipal offices that use four types of crowdsourcing, according to the division by J. Howe. Semi-structured interviews were conducted with the management personnel of those municipal offices. The research results show that crowdsourcing is a new and rapidly developing organisational learning paradigm.

Keywords: crowdsourcing, organisational learning, paradigm, organisational learning paradigm

INTRODUCTION

Crowdsourcing is one of the new themes that has appeared in the last decade. The importance of crowdsourcing for organisational learning is seen as one of the key themes in the latest literature in the field of crowdsourcing [14]. Crowdsourcing is no longer just a paradigm of online problem solving, open design, computer networks, knowledge management, and participation. However, in the context of public organisations crowdsourcing is perceived mainly as a way to generate information, co-produce services, create new solutions and public policies [11]. This means that public organisations, by means of using crowdsourcing, obtain information from citizens to improve public services and their shaping. The issue of organisational learning using crowdsourcing is overlooked. Various types of crowdsourcing have been identified in the literature [7]. Until now, scientists focused primarily on collective intelligence [2] and crowd voting [14]. However, illustrative cases of crowdsourcing suggest that the use of different types of crowdsourcing may be useful for improving innovation. Interestingly, the literature suggests a positive relationship between crowdsourcing and organisational learning, but there is no empirical evidence in the literature, in particular in the

context of the various types of crowdsourcing used by public organisations. As part of previous research, it was verified how crowdsourcing is linked to organisational learning. However, these studies were conducted in mature and innovative organisations, and only one type of crowdsourcing was considered - the conclusions were generalized to all types of crowdsourcing [14]. That is why, the aim of our study is to present a new paradigm that combines crowdsourcing with organisational learning, including four types of crowdsourcing, according to the division by Howe: collective intelligence, crowd creation, crowd voting, and crowdfunding. Bearing in mind the above, four free-form interviews were conducted with the management staff of municipal offices that make use of each of the distinguished types of crowdsourcing. Secondary sources in the form of strategy analysis and reports posted on the websites of municipal offices complement the research. A review of the current state of knowledge on crowdsourcing suggests conducting future research in public organisations [2], especially in the municipal offices. We believe that our research will contribute to a better understanding of crowdsourcing in the context of organisational learning and it will allow us to postulate that crowdsourcing is a new and rapidly evolving organisational learning paradigm. The research is of an interpretive nature, which will allow us to look at the significance of the phenomena and understand the activities and relations taking place in crowdsourcing. It will also contribute to managerial practice because it will reveal the structure of crowdsourcing with a specification of its types, which may be a decision criterion for decision-makers deciding on its implementation.

1. THEORETICAL BACKGROUND

1.1. Crowdsourcing

Crowdsourcing, as defined by Howe [6], is the act of taking a job traditionally performed by a designated employee and outsourcing it to an undefined, generally large group of people in the form of an open call. Crowdsourcing is one of the most important factors affecting the time of launching a product and improving its quality. In addition, the previous literature on crowdsourcing focused mainly on the benefits of access to creativity, openness, and various solutions. Crowdsourcing has been proven to improve business processes, creating open innovations [2], building competitive advantage, creating innovation and organisational efficiency. It has also been mentioned that it contributes to organisational learning.

Crowdsourcing is the source of organisational learning also in public organisations. Its specificity is related to the characteristics of public organisations and the context of their operation. First of all, the public sector operates on the basis of a stakeholder model, which should help engage in crowdsourcing due to the participatory modus of activity. On the other hand, however, there are clear organisational, technological, social and cultural limitations stemming from the context of the functioning of this type of organisation [12]. Public organisations, in comparison with commercial organisations, often have a greater degree of formalization and bureaucratization, as well as resistance to change, which may hinder the development of crowdsourcing. Also, the absorption of new IT technologies may be slower in competitiveness-neutral activities. The use of crowdsourcing for organisational learning is also shaped by the level of social capital and the dominant configurations of cultural values [9]. The low level of

social capital limits the possibilities of using crowdsourcing. Similar significant dependencies can be found at the level of identity and organisational cultures.

1.2. Organisational learning – a 4I perspective

Organisational learning is a process in which organisations learn in a quickly changing environment. Organisational learning is therefore "the process of change in individual and shared thought and action, which is affected by and embedded in the institutions of the organisation" [5]. The multilevel concept of organisational learning by Crossan, Lane and White recognises them as a dynamic process in which changes in knowledge and behaviours occur and the results of earlier learning in individual actions are implemented, which means a flow of learning between all levels. Considering the purpose of this study, organisational learning will be perceived through the prism of the approach of Crossan and her colleagues. According to it, the learning process takes four forms that flow seamlessly into one another, i.e. intuition, interpretation, integration, and institutionalization. Intuition and interpretation occur on an individual level. These processes take place in the heads of individual organisational units and rely on modifying or generating individual knowledge based on individual experience and knowledge. At the team level, there are interactions between individual units. Through interpretation and integration, and more specifically joint decision-making, actions or conversations, are followed by common understanding, which allows new knowledge to emerge. At the organisational level, through institutionalization, the learning outcomes of individuals and the team are defined, consolidated and disseminated. The knowledge of individuals and the team is consolidated in processes, structures, strategies, systems and culture. They form a whole and are adapted to the requirements of the environment.

2. EMPIRICAL RESEARCH DESIGN

2.1. Case selection and characterisation

The selection of the research subject was carried out using the funnel method. First, the search for appropriate public organisations was narrowed down to the municipal offices. Previous research has concerned crowdsourcing in ministries, governments and government agencies, and healthcare. The aspect of municipal offices has been overlooked. The literature indicates that crowdsourcing should be included in city strategies and that it is helpful during spatial planning. Thus, cities are becoming the centres and engines for the development and improvement of the innovative economy. This determines reaching for modern technologies that enable residents to solve problems and create innovative solutions. Secondly, the choice of the municipal offices has been limited to those that make use crowdsourcing. Thirdly, during the selection of the study subjects, it was considered that to present a complete picture of crowdsourcing, municipal offices that use one of the types of crowdsourcing, according to the division by Howe should be identified. Taking into account all of the above premises, the research was carried out in the following four selected municipal offices, which make use of crowdsourcing. In the further part of the article, the municipal offices examined will be referred to as cases 1 to 4 - to facilitate the discussion. The number of offices subject to detailed exploration meets the requirements for case studies.

Case 1. City of Lublin Municipal Office (an example of collective intelligence)

Lublin is a city with district rights located in the eastern part of Poland. "Lubelskie Dobre Pomysły" is a crowdsourcing platform that was initiated and implemented in 2014 at the City of Lublin Municipal Office. Its main goal is to reach the largest group of inhabitants of the Lublin Province, who want to participate in the life of the city and have a real impact on shaping its image and development directions.

Case 2. Capital City of Warsaw Municipal Office (an example of crowd creation)

Warsaw is a city located in the central-eastern part of the Mazovia Province. "Otwarta Warszawa" is a crowdsourcing internet platform that was implemented from 4 May 2014 to 31 July 2015 by the City of Warsaw Municipal Office. For this initiative, the then deputy director of the Social Communication Center, the unit responsible for "Otwarta Warszawa", received in 2014 the international award: "C4F Davos Awards (Communication for Future Davos Awards)" in the "Image of the Future" category.

Case 3. Municipal Office in Dąbrowa Górnicza (an example of crowd voting)

Dąbrowa Górnicza is a city with district rights located in southern Poland. Since 2013 the Municipal Office in Dąbrowa Górnicza implements crowdsourcing through the "NaprawyTo.pl" platform. Thanks to the portal, residents can report defects or problems in the following categories: infrastructure, security, buildings, nature, and others. The people making the notifications can then follow the execution status of a given alert.

Case 4. City of Krakow Municipal Office (an example of crowdfunding)

Krakow is a city with district rights located in southern Poland. In 2017, the City Green Board, a municipal organisational unit of the City of Krakow Municipal Office, joined the students' project of the Jagiellonian University called "At the corner of Dekerta Street", which assumed the creation of a pocket park and butterfly garden on the corner of Dekerta and Wałowa streets. To this end, a fundraiser was launched through the crowdfunding platform PolakPotrafi.pl (<https://polakpotrafi.pl/projekt/na-rogu-dekerta>).

2.2. Data selection and measurement

Two research methods were used in the research: the interview method and the method for examining documents. Data triangulation allowed for ensuring an adequate level of reliability and reduce the level of inference errors and to achieve the level of saturation of the theory. As presented in the table, the research was based on primary and secondary data sources: a) free interviews with representatives of the municipal offices; b) studies and reports on crowdsourcing, websites of crowdsourcing initiatives, press articles dedicated to these initiatives and strategies of the municipal offices under study (table 1).

Table 1. Overview of data collected

Data sources	Case 1	Case 2	Case 3	Case 4
Primary data: They were used to grasp, understand the experiences of the offices studied in learning by using crowdsourcing	1 interview: R1: Secretary	3 interviews: R2: Vice-Mayor R3: Vice-Director R4: Chief Specialist	2 interviews: R5: Deputy Head R6: Chief Specialist	2 interviews: R7: Director R8: Manager
Secondary data: They constituted the basis for research construction	The office and crowdsourcing initiative websites, development strategy, 5 articles in the press	The office and crowdsourcing initiative websites, development strategy, 10 articles, 2 internal reports	The office and crowdsourcing initiative websites, development strategy, 5 articles	The office and crowdsourcing initiative websites, development strategy, 10 articles

Source: own elaboration.

The data collection process was carried out from January to April 2018. In general, eight free-form interviews were conducted during the research. The respondents participating in the research were representatives of the top management of the city office and persons coordinating the given crowdsourcing platform. All these people were involved in the crowdsourcing initiative in the municipal offices under examination. Interviews were carried out at the offices of cities and lasted from 60 to 120 minutes. With the consent of the interviewees, all interviews were recorded. Subsequently, they were transcribed.

2.3. Data analysis

The basis for data analysis is the interpretation approach. Its choice was the desire to discover and understand organisational learning using crowdsourcing from the perspective of key actors involved in the process. Such an approach requires comparability and detailed descriptions, which is consistent with the desire to understand experiences in the field of organisational learning using crowdsourcing. For this purpose, a narrative analysis was used, which is a systematic analysis of personal experiences and meanings that the active participants of a given event built. Narrative analysis is an interpretive technique that focuses on stories and narratives where people talk about their experiences. Its purpose is not to check whether their experiences are real, but to try to answer the question of how and why they create a narrative.

3. ANALYSIS AND RESULTS

Case 1 – collective intelligence

In the municipal office that uses collective intelligence, the idea of using crowdsourcing resulted from the desire to try and experiment. In the interview, the respondent said: "In our activity we have participated in certain programs related to, for example, the examination of administration functions in general, the implementation of administrative processes by the municipality, and the creation of

certain management models in these areas" (C1.R1). The above statement indicates that in the case of collective intelligence, intuition is associated with a desire to imitate and reach for new solutions tested and used by others. This goes in line with the conceptualization by Crossan et al. (1999), where intuition is the process of an earlier recognition of models. The next process, interpretation is a conscious explanation, expression and discussion of ideas and insights with other members of the organisation. We are talking about collective activities, dialogue, discussions, meetings or other means of communication. Common knowledge is the basis for joint action: "(...) this idea was created to show it to some extent and outside, to create areas in which not only office employees can be located, but also to use this social activity in in a sense, aggregate and try to use all the data that is there" (C1.R1). The basic feature of integration is the mutual understanding of members in a group [5]. It focuses on updating ideas through collective actions and common practices. Communication and cooperation are of key importance here. Communication not only allows learning, but also allows to retain what is the result of the learning process and pass on the knowledge thus obtained [5]: "Here, with over a dozen years of activity, we have worked out together in the office some reliable mechanisms of social participation, participative management, participation of inhabitants in specific activities, suggestions, and solutions. And we are trying to develop these models more and more, of course with a dose of humbleness, whether we take into account to find a formula and the form of reaching the largest group of people, because we also noticed at some point that a certain group of people participate in the consultative meetings, also a certain group of people responds to certain information and expectations of the local community" (C1.R1). Institutionalization, the last process in the 4I model, refers to embedding in organisational systems and procedures what has been worked out during learning. This allows the organisation to root knowledge, regulating its activities and using what the organisation has learned so far: "(...) these tools were used to modify, monitor, develop or modify and change the procedures that are still alive, which are constantly adapted to the needs" (C1.R1).

Case 2 – crowd creation

Intuition as a process is most often triggered by external stimuli. It may be important to have the competence and personal experience of employees that will allow the implementation of new solutions. This means that the organisation should want and be able to redefine its current course of action, discover hidden problems, using its past and employees' competences. Which is consistent with the findings of Murray and Donegan [10], [13]. This gives an opportunity to reflect on the organisation's past, which is key to the way it will act in the future. Expanding knowledge about problems allows the interested parties to cover hidden problems and link them to previously unresolved issues. As part of intuition, language and creating cognitive maps are also important: "first of all, he made us realize how important conversation is and creating forums for conversations with the residents and their inclusion" (C2.R4). In the case of interpretation, crowd creation for the office is not "art for art's sake", but it is "an interesting mechanism for working on some processes of discussing a local plan, budget, or greenery" (C2.R2). The Office states that "the administration at every level is established to act for the residents and citizens. To act for them (...). Therefore, the administration of every level, aware

of such a functioning of the human mind, should strive for the widest possible publicizing of information at the earliest possible stage of each project, trying to make the decision-making process as transparent as possible (...). Thanks to this, we will gain substantive knowledge reflecting real needs and real problems (www.konsultacje.um.warszawa.pl). As part of a crowdsourcing initiative, city offices included other entities to collaborate, among others the municipal office's auxiliary units, but also academic circles: There were voices that after implementing crowdsourcing, the willingness to collaborate increased: "establishing new quality contacts with employees from offices and municipal units on other, innovative, full of openness and special kindness and subsidiarity level compared to routine work. We now know who to call, for example, with a request for advice on new ideas and simply support the substantive work" (C2.R4). As it has already been mentioned, institutionalization takes place when new activities become part of the organisational routine and systems [5]. The surveyed office is of the opinion that crowdsourcing has not contributed to major changes in the municipal office and is rather the result of changes: "it's hard to say that something has changed dramatically through crowdsourcing. It can be said that the consequence of the fact that the city is changing, was that at some point we reached for crowdsourcing"(C2.R2).

Case 3 – crowd voting

In the third case, the desire to implement crowdsourcing resulted from the previous experience of the office connected with involving the residents in co-deciding and co-managing the city: "it practically started here in 2008, when the agreement was created named Together for the City (...). We wanted to involve the residents in long-term co-decision (...) the mayor had always wanted to listen, he wanted to talk to the inhabitants" (C3.R5). The units share intuition with others and engage in collective interpretation, which facilitates collective understanding. The case examined included broadly understood stakeholders: "(...) the basis was to obtain information about problems occurring in public space. The next thing is expectations, we know what the residents want, what they care about. They will tell us what we should do. This does not mean that the residents get what they want. Thanks to that we have knowledge about security. People want to inform us about what is happening in the city" (C3.R6). In the studied case of the crowd voting, the basis for integration was understanding: "We wanted to develop certain rules. We developed a way of communicating with the residents and including them in matters that concern them. Together, we understood that it would not be easier for us to act according to common, clear and accepted principles" (C3.R5).

Case 4 - crowdfunding

For the office under study, the aim of the crowdfunding endeavour is, above all, commitment and to involve residents: "(...) because if we want, for example, good quality projects in the civic budget, we must show them projects from around the world that they did not hear as laymen and in Poland they have no way of seeing them, so that they could have such a nice project, for example a playground for adults submitted to the budget" (C4.R8). In addition, attention is paid to the encouragement and inclusion of the young generation to and in action and the use of its potential and willingness to act: "The younger generation is much more aware

of this in terms of thinking, I am also responsible for what is around. And it's cool, you just have to support them" (C4.R8). Analysing the experience of the examined office, it can be concluded that cooperation with widely understood partners is comfortable for them. Often, without cooperation with other organisations, they would not be able to start a crowdsourcing initiative: "(...) from the point of our knowledge, it is not possible for the institutions themselves to apply for these funds, as if in a sense they initiated crowdfunding campaigns. There is no way we can initiate crowdfunding as an institution ourselves and also apply for funds" (C4.R8). Crowdsourcing has enabled the office to meet the expectations of residents, draw conclusions, and make improvements to activities performed in the future: "thanks to the fact that they show the office employees what they expect, what they would like to improve and what to correct – the employees can modify their way of working and functioning" (C4.R8).

CONCLUSION

This article is a voice in an important discussion on a new paradigm that combines crowdsourcing with organisational learning. It is intriguing and at the same time important from the point of view of creating the theory and practice of managing public organisations. Based on the assumptions of the theory of scientific revolutions [8], the paradigm is characterized by the fact that it leads to the solution of the problem and constitutes a historically variable *consensus* omnium of the community of researchers of a particular discipline [15]. Organisational learning is recognized in the literature as an "alternative paradigm by which systems can change" [4]. In addition, organisational learning offers an alternative paradigm by which systems can change, thus permitting us to redefine the economy and society. Our research shows crowdsourcing as the basis for the emergence of a scientific concept, and hence the organisational learning paradigm. The results show that regardless of the type, crowdsourcing is perceived as an adaptation to changes in the environment and a contribution to changes in practices. First of all, the idea of crowdsourcing was created out of the desire to imitate (in the case of collective intelligence) as well as the openness and experience of managers (in the case of crowd creation, crowd voting, and crowdfunding). This is identical with the findings of Crossan et al. (1999). It boils down to the fact that the expert origin of intuition is a process of prior model recognition. Secondly, interpretation is the process of organisational learning, in which individuals verbalise or implement their own observations and engage in collective understanding, in particular: the inclusion of stakeholders (collective intelligence), establishing cooperation of all departments (crowd creation), joint action (crowd voting), and the development of the society's potential (crowdfunding). Thirdly, integration comes down to a common understanding of members in a group [5], [1] and involves a change in collective understanding at group and organisation level. The municipal offices studied declare that knowledge acquired from virtual communities using crowdsourcing is useful and possible to use in everyday work (collective intelligence). Fourthly, institutionalization comes down to taking routine actions and embedding them in organisational systems, structures, procedures, and practices. The surveyed offices declare that the knowledge acquired from crowdsourcing has contributed to the modification of organisational procedures (collective intelligence), increased crowd satisfaction, technological improvements

(crowd voting) and openness to improvements (crowdfunding). In this way, the obtained results of empirical research give rise to the recognition of crowdsourcing as a new, emerging paradigm of organisational learning, regardless of its type. Summing up, crowdsourcing in the learning process of public organisations is a completely new approach [3], which, due to the development of information technologies, the social media, and the stakeholder model, will probably gain on significance and may become a new paradigm of organisational learning in the future.

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CRYPTOLIABILITY

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ABSTRACT

Funds are the core of the financial system of any modern state. Initially, the money comes from private funds; however, development of the economy and other factors at the time led to the abandonment of private money and the establishment of a unified monetary system in most countries. Despite this, the development of Internet technologies and trading techniques in real time has led to the revival of the idea of private money.

In accordance with official forecasts of the development of the domestic economy (development Concept and security Strategy), the imbalance in world trade and capital movements will continue and may increase in the coming years, which will contribute to changes in the exchange rates of world currencies.

The topic is crucial today, because no one in the whole world wants to consider the question of liability in the cryptosphere. Thus, the draft Federal law "On amendments to the Federal law "On the development of small and medium-sized businesses in the Russian Federation" and the draft Federal Law "On amendments to the Federal Law "On digital financial assets" provides for the formation of special platforms (crypto exchange, operators, etc.). However, they do not regulate the liability of professional participants of the emerging new crypto market.

This paper is prepared on the basis of a legal and technical analysis of legal norms, as well as comparative legal and formal-logical methods; i.e., the method of systemic analysis. The goal of this paper is to consider this problem and to suggest possible solutions, including in the field of criminal, tax and budget legislation.

Keywords: cryptocurrency, cryptosphere, liability, cryptocurrency exchange market, cryptorisks.

INTRODUCTION

Currently, both professional and non-professional market participants are increasingly discussing various aspects of the use of cryptocurrency in a particular country [12]. There are draft laws on regulation in the cryptosphere, organised lectures, and conferences. Meanwhile, in pursuit of "new thrills," we've forgotten about the flip side of the coin. It is necessary to understand clearly who will be responsible for illegal activity in the area under consideration.

The unregularised status of cryptocurrencies; the lack of a uniform international practice [5] and judicial protection of the issue being analysed; the instability of pricing in the cryptosphere; and so on. – Collectively, this comprises the core facts that today constitutes a threat to national security [5].

DISCUSSION

Russian judicial practice on this highlighted issue is based on the fact that until the due legal settlement of all key issues in the cryptosphere is achieved, neither individual persons nor legal entities will be able to find protection in the face of governmental enforcement authorities.

The lack of clarity among approaches in law enforcement practice prevails among foreign jurisdictions. So, according to one court US decision, bitcoin is recognised as legal tender (<http://cdn.arstechnica.net/wp-content/uploads/2016/09/murgio-order.pdf>). Relying on the principle that, in the absence of regulation a contractual term is to be understood in its literal sense, one US court concluded that bitcoin is a form of money, since it acts as a universal monetary equivalent and is used to acquire things. In another decision, bitcoin was not recognised as money (<https://forklog.com/sudya-iz-majami-otkazalas-priznat-bitkoin-dengami/>).

This latter decision contradicts other judicial acts of 2013 and 2014 on similar issues (<https://forklog.com/sudya-iz-majami-otkazalas-priznat-bitkoin-dengami/>). Moreover, in the US, the Federal tax service's interpretation is that cryptocurrency is property, whereas FinCEN's interpretation is to recognise cryptocurrency as a form of currency [8].

It seems that one should not impose full responsibility for the commission of various divergent actions in the cryptosphere on the user – an ordinary citizen who, in the current world economic situation, sees in virtual currency the sole real opportunity for garnering income without using banking services that would be, in his opinion, unnecessary.

Although, in comparison with 'fiat' money, cryptocurrency is used for criminal purposes less often [7], nevertheless, according to Positive Technologies (<https://www.kommersant.ru/doc/3566894>), fraudsters stole USD300 million through ICO's in 2017. At the same time, in the vast majority of cases, the attackers sought to gain control of the platform itself in order to replace the address of the organizers' cryptocoin cache with their own [13]. Another example is development by the cyber criminals of miners' programs [3], which deliberately blocks other miners' programs that were installed on that computer [2].

However, more "classical" (*mala in se*) crimes are also committed in the cryptosphere [14]. For instance, very commonly encountered of late is a scheme whereby a seller of cryptocurrency meets with a buyer in a restaurant to exchange digital for fiat money. The buyer shows the seller the money and the seller transfers the cryptocurrency. But at this point, powerful people show up who claim that the seller did not receive any money, because the buyer must first come to terms with them.

The above-indicated situation emphasizes the urgency of introducing liability (including even criminal) in the cryptosphere. In one manner or another, those market participants who decide on an ICO (financing recipients) seek to raise money through special websites or crypto-exchanges. It would seem that establishing the responsibility of such a platform (exchange) for information provided thereon to market participants as well as the responsibility of financing

recipients would significantly reduce the number of potential fraudulent actions in this area and ensure greater stability at the national level. At a minimum, such a platform should analyse the activity of one legal entity against the activity of another legal entity, in arbitration and civil proceedings to which it is a party, on net profits (not information about assets) for the previous year, and so on. There are ways out of this situation.

Option 1: The recipient of financing must maintain a separate account with the bank, provide data on expenses therefrom in a restricted access mode (login, password) to financing participants, and agree that the bank shall have the right at any time to freeze funds on this account until certain specific circumstances are clarified; in any situation where funds from such an account are spent not in accordance with the stated goals of the legal entity's fund raising by way of the ICO, such information is placed on the fund raising platform, with simultaneous notification of the Internet platform (crypto-exchange).

Option 2: The activity described at Option 1 is carried out by the Internet platform itself (crypto exchange). In other words, the financing recipient does not receive any "hard cash;" rather, it is all located on a digital account opened with the crypto exchange. At the same time, information about the expenditure of funds is provided by the Internet platform (crypto-exchange) to financing participants in closed access mode (login, password).

Then the system will be able to provide financing participants with a certain level of guarantee, which will increase the attractiveness of this new sphere and attract new investors, including from abroad.

Possible objections to this proposed approach are understandable. Neither the companies, nor the crypto-exchanges, nor the banks today would choose to conduct their activities under such "strict" regulation because of their desire to obtain easy and fast profits. On the other hand, if a financing recipient behaves in good faith and achieves its goal as the result (honest implementation) of the project, then what should it be afraid of?

It is quite possible to build a new system within the existing legal framework, as evidenced by the experience of several countries – in particular, the Republic of Belarus. Foreign companies can form subsidiaries in the Hi-Tech Park of the Republic of Belarus [1].

According to the statement of V. Zuercher, the main problem of cryptocurrencies is that, in the vast majority of cases, no one can take the proceeds from the sale of a cryptocurrency at an increased exchange rate (compared with the exchange rate when purchasing crypto-currencies) as money to the Bank.

In our opinion, a way out of this situation (given, also, the goal of preserving the current financial system and the proper order for monetary circulation) would be to exchange cryptocurrencies for 'fiat' money by reference to crypto-exchanges accredited by the state and functioning with large (reputable) banks, whose activities would be subject to compulsory insurance (crypto insurance).

In other words, cryptoexchanges would act as a kind of filter in this new sphere of activity for national governments, which would minimise the risks in

constructing a new financial turnover algorithm, thereby ensuring consensus among all market participants.

A system thus described, in our opinion, would serve to minimise cases of improperly granting legal rights of possession, use and disposal of money or other property acquired by persons as the result of their commission of crimes, including by means of transactions or financial operations with such money or other property. In this regard, it would be possible to adjust the scope of articles of criminal law on money laundering, since under contemporary circumstances these acts can be committed not only through transactions or financial operations, but also by other means [6]. An example would be the experience of Switzerland, which intends to regulate cryptocurrency operations with existing legislation. In particular, it is envisaged that all tokens would be classified into payment, utility (affording access to the resources of special crypto-platform) and asset tokens.

Accordingly, it might be assumed that utility tokens should not fall under the legislation on the anti-money laundering of funds due to the fact that such tokens only provide access to the relevant resources (<https://crypto.whenspeak.ru/rooms/3840/>). However, this approach cannot be deemed successful, since utility tokens can in fact be transferred to other persons or exchanged for other tokens – including payment tokens – exchanged for currency, and so on. Therefore, the risk of the use of tokens in the Swiss jurisdiction for purposes of money laundering cannot be considered adequately mitigated.

It is noteworthy that the idea of creating a national cryptoexchange has already been raised in China. Wang Pengjie has suggested that the People's Bank of China, in cooperation with the China Securities Regulatory Commission, can create its own platform for authentic blockchain technology with a special system of verification and a national cryptoexchange (<http://bitcom.blog/member-chinas-main-political-advisory-proposes-national-crypto-trading-platform/?i=3>).

It is rather easy to envision a crypto-exchange more tangibly if we consider official applications for modern smartphones that allow downloading and installing of programs and games (AppStore and Google PlayMarket). Yes, you can download a program from the Internet to your phone (especially easily, as this can be done on any phone with the Android platform); but in this case, you will not be immune from fraudsters and cyber criminals, who insert special scripts into "free" software that is hosted on the Internet allowing them to download information from your phone; to send SMS messages; to identify the level of your savings in the bank; to steal money; or to install a permanent task in your phone to engage in undetected mining of the Monero cryptocurrency, etc. [15]. Similarly, today, with the independent purchase of cryptocurrency, no one is immune from phishing sites, scam sites, mirror sites of official foreign exchanges, etc. It seems that the accredited crypto-exchanges would minimise the risks currently existing in the crypto-sphere.

Such an approach would also help to build a system in which the state, along with the "classic" budget, would be able to formulate in tandem a crypto-budget. In science, for example, it is proposed to introduce an elective tax on anonymity for a transaction in which at least one party is known [10]. In Brazil, a capital gains tax of 15% is payable to the state at the time of the sale of cryptocurrency, and the

holder of the cryptocurrency worth more than 1,000 reais must declare such information in his declaration [9].

After all, the financial resources of the country are different flows (municipal, public finance, household finance), which are not separated by an impenetrable wall, but rather interconnected [4]. In this case, the state, according to some forecasts, would also be able to transfer the accumulated cryptocurrency to fiat currency and replenish the "classic" budget; and the level of the country's budget would always be above 100%.

CONCLUSION

This study shows how it would be possible to integrate the latest developments in the field of Finance in the legal sphere of monetary circulation.

A way out of this situation (given, also, the goal of preserving the current financial system and the proper order for monetary circulation) would be to exchange cryptocurrencies for 'fiat' money by reference to crypto-exchanges accredited by the state and functioning with large (reputable) banks, whose activities would be subject to compulsory insurance (crypto insurance).

This would minimise the risks in constructing a new financial turnover algorithm, thereby ensuring consensus among all market participants.

In this case the state would be also able to create its own cryptobudget and the level of the country's budget would always be above 100%. In addition, by applying to the crypto-exchange, the courts would be able to impose a penalty on the cryptocurrency of citizens and law firms, etc.

A private citizen should not have fear that a transfer of funds to an Internet platform (whether *de jure* or *de facto*) would be equated with their unconditional loss. Financial security should correspond to the real development of monetary relations and be adapted to modern conditions; and the state's monetary system should be flexible in relation to new challenges and threats.

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EMPIRICAL RESEARCH FOCUSING ON THE COMPETENCIES OF HOTEL MANAGERS IN PRAGUE

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ABSTRACT

The main aim of the study is to determine, assess and compare three different viewpoints of hotel managers in Prague, educators and bachelor students from IHM and evaluate their expectations and perceptions concerning crucial competencies necessary for hotel entry-level managerial positions [2]. Surveys were compiled in order to collect data from hotel managers and students. In addition, the survey prepared for students examined their perceptions regarding contribution of hospitality management (HM) program at IHM to development of such important competencies. A total of thirty-two hotel managers and twenty-six students participated in this study and revealed their expectations. The results of this study indicated some discrepancies between current expectations of hotel industry and expectations of educators at IHM. Findings of the study may be possibly valid and applicable to other hospitality management programs [17] in Czech Republic or further close countries and to other graduate students since expectations of Czech hotel industry may be comparable to them. Survey research method was used in order to identify expectations of hotel industry managers and bachelor students. The study besides seeks to find out whether curriculum [11], of IHM hospitality management program is able to meet the current demands of hospitality industry and its hotel managers in Prague and to satisfy and enhance prospects of students. Moreover, the study should be of value to all aforementioned stakeholders.

Keywords: competency, competency model, management, hotel management

INTRODUCTION

The identification of necessary managerial competencies needed by hospitality graduates has received increased attention in recent years and has been well documented for example by Tas (1988), Sandwith (1993), Kay and Russette (2000), Nelson and Dopson (2001) [13]. According to World Travel and Tourism Council (WTTC) [26], travel and tourism industry is exceedingly progressive and is expected to generate \$ 851 billion in revenue with 16.1 million jobs by 2017 [14]. Hence, without a doubt travel and tourism has become very prospective and attractive sector that lures many students to work and develop their career right in this industry. This fact has created or increased interest of institutions and universities to develop hospitality management programs [15]. As a result, the number of hospitality management programs has increased significantly over the past 85 years since the first hotel administration program appeared at Cornell University (Guide to College Programs, 2004), [21]. Many institutions with hospitality programs realize that in order to increase successfulness and career prospects of their students it is significant to develop curricula that will respond and meet industry's expectations and demands. Gehrels [5] have identified that industry professionals perceive that many hospitality education programs provide students with outdated information with little effort to increase cooperation between them

and industry representatives [14]. Therefore, the greater is the necessity to thoroughly analyze expectations and demands of hotel industry. There have been numerous studies conducted that sought to determine expectations of hotel managers, educators or students, some of them had even identified expectations of these three different viewpoints simultaneously by Chung- Herrera, Enz and Lankau, 2003 [2]. Certainly, detecting and identifying expectations of hotel representatives create various benefits not just for educators and institutions with hospitality management programs [9], who can adjust curricula accordingly but also for students who can develop or enhance essential competencies necessary for hotel managerial positions based on industry's demands.

Methodology

The main purpose of the Introduction section was to explain the overall aim of the study research and to give explanation of rationale for undertaking this study. The literature review provided appropriate literature background available that support and clarifies aims of the research [22]. Methodology chapter explicates what has to be done in order to achieve the aim of the research and provides information on what procedures had to be undertaken to come up with the research results [4]. The Methodology part will also provide an explanation of research aim and clarify the methods for data collection and analysis [12]. The aim of this study is to determine and compare expectations of Prague hotel managers regarding essential competencies necessary for managerial positions, expectations of educators from Institute of Hospitality Management in Prague (IHM) that are reflected in the hospitality curriculum [11] and expectations of IHM students and their perceptions on how hospitality management program at IHM contribute to development of such important competencies [6]. This chapter describes how the research was designed and carried out and encompasses following sub-sections: research instrument, population, sample selection, data collection, and data analysis and response rate. Research approach used in this study is deductive, since it tests existing theory and tries to determine research results based on existing competency model of Chung-Herrera, Enz and Lankau [3] and quantitative since it generates numerical data. Survey research was used as research strategy with 110 surveys successfully sent to hotel managers in Prague, 25 to graduate students at IHM of hospitality management program in English and 35 surveys were sent to IHM graduate students of hospitality management program with instructions in Czech [15]. The reasons why survey research was used as research strategy are following: enough contacts of representative sample were obtainable, previous well-elaborated studies were available that used this method and also using of survey method represents benefits in terms of processing statistical data [25]. As a research strategy of this study can be also deemed comparative research strategy, since the study research seeks to discover discrepancies and explain possible differences between expectations of hotel managers, hospitality students and educators from IHM [9].

Research Questions

Research question is an organizing element that narrows topic area and guides every aspect of the research project including the literature research, the design of the study, data collection, data analysis and interpretation of results in Santiago, 2009th. This study addresses and answers following research questions:

What are the expectations of hotel managers in Prague regarding essential competencies necessary for future graduates aspiring for hotel managerial positions?

Are there any gaps and discrepancies between expectations of hotel managers in Prague and expectations of educators at IHM? If yes, which specifically?

How and to what extent does IHM hospitality program in English contribute to development of such important competencies?

Research Objectives

The following research objectives were formulated in order to answer the research questions and thus achieve the aim of this study:

1. Describe demographic profile of hospitality leaders (hotel directors and managers) of four and five star hotels in Prague including: gender, age, level of education, position at the hotel, department of performance, length of hotel experience and classification of the hotel of performance.

2. Determine and assess Prague hotel manager's expectations regarding essential competencies and qualifications that ought to possess future graduates with the intention of becoming successful "entry-level" managers.

3. Analyze curriculum of hospitality program at IHM and determine what is being taught. Determine expectations of educators from IHM who are compiling curriculum.

4. Ascertain whether there are any discrepancies and gaps between current expectations and demands of hotel industry and expectations of IHM.

5. Describe demographic profile of bachelor students in hospitality management program at IHM including: gender, age, academic performance, current employment at the hotel and work experiences in hotel industry.

6. Detect student's point of view and find out which particular competencies do they find most important.

7. Define whether bachelor students of hospitality management program at IHM consider this study program as contributing and assisting in achieving essential competencies currently expected by hotels managers in Prague.

Significance of Study

The significance of this study is that it will create several benefits and values for different stakeholders of this study (educators, students and hotels). Principally, findings may generate advantages for students, especially in Prague. By knowing current expectations of hotel industry regarding essential competencies for "entry-level" managers, graduates can enhance their preparedness and focus on competencies that they are lacking behind. Graduates become more desirable and sought-after due to possession of exact skills and competencies necessary for today's successful penetration into hotel industry [24].

Secondly, educational institutions and universities with hospitality programs may reap the benefits too. Based on the findings educators may adjust and improve

curricula according to industry's expectations and enhance the potential for their students' success [22]. Readjusted curricula may meet needs of graduates and demands of markets they are entering [11]. Results show essential competencies necessary for graduates who want to hold managerial positions at the hotel expected by hotel managers. In addition, students reveal how they perceive the hospitality management program at IHM contributes to the development of such significant competencies. Thirdly, hotel managers may benefit as well, by revealing current expectations hotels can anticipate well-prepared graduates which can certainly increase quality of hotel services.

The survey was sent to managers from different departments: Executive Office, Human Resource and Training, Finance and Accounting, Marketing and Sales, Rooms Division, Revenue Department or Reservation Department [19]. The reasons why solely four and five star hotel managers were chosen as appropriate sample are following:

- Representative number of email addresses was available specifically from managers from luxury and first class hotels,
- For students may be more beneficial and attractive to be aware of expectations of managers who work in four and five star hotel, since their expectations may be higher and it is better to be prepared for the highest criteria,
- Students equipped with necessary competencies expected by luxury and first-class hotels can more easily satisfied needs and demands of hotel recruiters from other lodging facilities (one, two, three star hotels...).

Secondly, the target population for this study was bachelor students of Hospitality Management program taught in English and in Czech language at IHM. The survey prepared for students was sent via email through IS (IHM's Information system) to all 25 students studying Hospitality Management in English. Another target sample for this study was bachelor students studying hospitality management in Czech, from all 176 (N = 176) students, the survey was sent via email through IS to 35 students selected based on systematic random strategy where each fifth person was chosen. Due to the sample technique used, the results should be representative within the population of IHM students. The reasons for distributing survey to two different groups of students studying the same program, but instructed in two different languages (English and Czech) are following:

- The results may provide valuable comparison and beneficial feedback to IHM on which program is more successful regarding providing and developing essential competencies to students, which program do students perceive to be more effective and helpful or whether there are some differences in perceptions of Czech and English program students,
- Since the bachelor students attending hospitality management program taught in English study the pilot program, it is essential to determine how their perceptions differ from perceptions of Czech students.

- **Data Collection**

Demographic profile of hotel managers included following characteristics: gender, age, level of education, type of hotel position, type of hotel department where respondents work, length of working experience at the hotel and classification of the hotel where respondents work [23]. Demographic profile of students included information about gender, age, employment at the hotel and length of working experience in the hotel industry, if any. Demographic profile revealed some useful and interesting findings such as: the most frequent level of education that managers acquired (beneficial for students to know if hotel industry prefer candidates with bachelor or master degree), compare it to length of necessary working experience, the average age information and so forth.

The second part of survey consists of list of competencies based on leadership-competency model developed by Chung-Herrera, Enz and Lankau [3], have modified the competency model, based on the feedback from the pilot study, which reflects hospitality- specific behavior [22]. These authors have created final competency model that consists of 8 overarching factors, 29 dimensions and 99 specific behavioral competencies. The competency model used in this study was adjusted and reduced relevantly and just 29 specific behavioral competencies were chosen, each standing for one dimension (see Table 1).

Table 1 List of Competencies Used in this Study

Essential competencies:
1. Follow continual learning and self development
2. Be able to adapt to changing circumstances
3. Consider customer needs when making decisions
4. Establish strong relationship with stakeholders
5. Anticipate obstacles and develop contingency plans
6. Monitor progress of others
7. Perform re-engineering when necessary
8. Encourage others to express their views and opinions
9. Listen carefully to others
10. Take a stand when resolving important issues
11. Select leadership style most appropriate for the situation
12. Promote quality of company's goods and services
13. Address and work through conflicts
14. Write comprehensively and effectively
15. Promote respect among employees
16. Consider a broad range of factors (internal, external and trends) when solving problems and making decisions

17. Give other the authority necessary to accomplish their objectives
18. Act in ethical manner
19. Manage time to ensure productivity
20. Build networks with people inside and outside the hotel
21. Present ideas in convincing manner
22. Take risks when appropriate
23. Examine and monitor trends in the hotel industry
24. Get other interested and involved in the change process
25. Know the strengths and weaknesses of competitors
26. Promote teamwork among groups
27. Support community activities
28. Train others in skill development
29. Recognize and take advantage from strategic opportunities

Source: Adjusted list of competencies based on leadership competency model (Chung-Herrea, Enz and Lankau, 2003).

The “language” of competency model- its particular names of competencies was also simplified in order to facilitate understanding of competencies for hotel managers who are not native speakers [7]. The tailor-made list of competencies was selected based on own perception of relevance regarding the most essential lodging competencies. The list of competencies was adjusted and shortened in order to develop the survey that is less time consuming for managers who would be more willing to respond and thus increase the response rate. The hotel managers were asked to rank important competencies and reveal how essential these competencies are for hotel graduates with the intention of becoming successful hotel “entry-level” managers.

A seven-point Likert-type scale with the following response choices was used in the questionnaire:

- 1 = mostly unimportant,
- 2 = somewhat important,
- 3 = unimportant,
- 4 = neither important nor unimportant,
- 5 = important,
- 6 = somewhat important,
- 7 = mostly important.

A seven-point scale was used instead of five-point scale because it is more precise and it provides more insights about the perceptions. The second part of survey prepared for students comprises from two questions: first part inquired students to rank 8 competency factors (self-management, strategic positioning, critical thinking, implementation, communication leadership, industry knowledge and interpersonal skills) from Chung-Herrera et al. competency model [3].

Students supposed to rank these competencies according to seven-point Likert-type scale where:

- 1 = mostly disagree,
- 2 = somewhat disagree,
- 3 = disagree,
- 4 = neither agree nor disagree,
- 5 = agree,
- 6 = somewhat agree,
- 7 = mostly agree.

The graduates ought to evaluate whether hospitality management program at VSH contributes to the development of these essential competencies. Simply, the questionnaire tried to determine whether they agree or disagree that they have acquired through the hospitality management program these competencies [20]. The second question tried to determine the student's own opinions. Graduates should again rank 8 aforementioned competency factors according to seven-point Likert-type scale and state how important these essential competencies are for future graduates with the intention of becoming successful hotel "entry-level" managers. The scale in this section was constructed in the following way:

- 1 = mostly unimportant,
- 2 = somewhat important,
- 3 = unimportant,
- 4 = neither important nor unimportant,
- 5 = important,
- 6 = somewhat important and,
- 7 = mostly important.

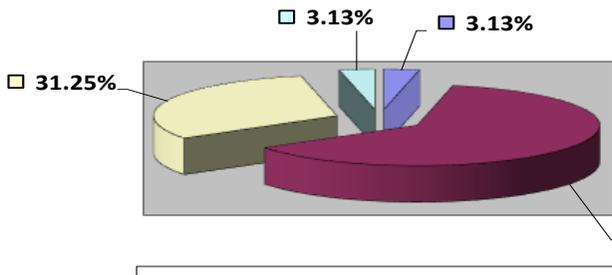
The survey was prepared in English and Czech language and sent via the email. The results may bring interesting findings regarding two possibly different perceptions of Czech and English students.

Table 2: Distribution of Hotel Managers by Sex and Age (N = 32)

<i>Characteristic</i> %	F
<i>Sex Distribution</i>	
Male 53.13	17
Female 46.88	15
<i>Age</i>	
18-24 3.13	1
25-34 62.50	20
35-44 31.25	10
45-54 3.13	1

Source: Author

Chart 1 Age Characteristics of Hotel Managers



Source: Author

Table 3 Other Characteristics of Hotel Managers (N = 32)

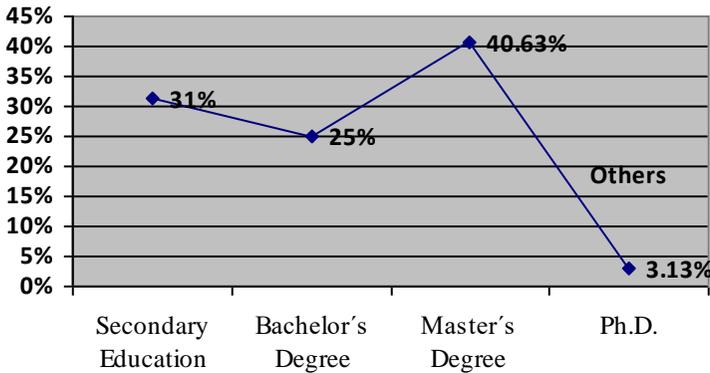
Characteristic	F
%	
Level of Education	
Secondary Education 31,25%	10
Bachelor's Degree 25,00%	8
Master's Degree 40,63%	13
Ph.D. 3,13%	1
Hotel Position	
Director 28,13%	9
Manager 68,75%	22
Others 3,13%	1
Department of Performance	
Executive Office 12,50%	4
Human Resource & Training 3,13%	1
Food & Beverage 15,63%	5
Marketing & Sales 28,13%	9
Rooms Division Department 15,63%	5
Revenue Department 3,13%	1
Reservation Department 9,38%	3

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Others 12,50%	4
<i>Length of Working Experience in the Hotel Industry</i>	
Less than 1 year 3,13%	1
1 to 5 years 12,50%	4
More than 5 years 84,38%	27
<i>Classification of the Hotel</i>	
4 star 18,75%	6
5 star 78,13%	25
Others 3,13%	1

Source: Author

Chart 2 Level of Education of Hotel Managers



Source: Author

Chart 3 Hotel Managers by Department



Resource: Author

Table 4 Demographic Profile of English Program Students (N = 16)

<i>Characteristic</i> %	F
<i>Sex Distribution</i>	
Male 40,00	4
Female 60,00	6
<i>Age</i>	
20 - 25 100,00	10
<i>Current Employment at the Hotel</i>	
Full-time Employment 10,00	1
Part-time Employment 30,00	3
No Employment 60,00	6

<i>Work Experience in Hotel Industry</i>	
Less than 1 year 10,00	1
1 to 5 years 50,00	5
More than 5 years 20,00	2
No Working Experience 20,00	2

Source: Author

THEORY / LITERATURE REVIEW

The main aim of this study was to determine and compare expectations of hotel managers in Prague, educators and students from IHM regarding to essential competencies necessary for hotel managerial positions [18]. Although, there have been already few studies devoted to revelation of expectations of hotel managers, educators and students just minimum of studies can be effectively applicable within Czech hotel industry. Thus, in order to provide exact data regarding expectations of Czech hotel managers it was necessary to conduct tailored study. Several studies have been already investigating and focusing on expectancies from the perspective of all three stakeholders within one study. Enz, Renaghan and Geller as cited [14] have surveyed graduate students, faculty and industry representatives in order to identify essential skills for successful hospitality careers. It was one of few studies that examined expectations regarding hospitality competencies from viewpoint of three different stakeholders simultaneously. Another study, which also served as an inspiration for this thesis, was developed by Cheung, Law and He [2]. The authors have scrutinized point of view of three different stakeholders: expectations of Hong Kong hotel managers and educators regarding essential competencies and students’ assessment of contribution made by their hospitality management program to development of such competencies [24]. The number of hospitality education programs has grown significantly over the past 85 years since the first appearance of the first hotel administration program at Cornell University (guide to College Programs, 2004), [23]. Indeed, over the past 30 years the number of hospitality degree granting programs has increased from just 41 in 1974, to over 170 in 2004 (Guide to College), as cited [21] “Hospitality schools have not only popped up at universities around the nation, but they have also thrived, as the hospitality industry has evolved into a bigger, more encompassing business, the educational programs at hospitality schools have progressed with it” Len Vermillion, 2010 [9]. On the other hand, such a great increase in hospitality education programs may cause wide variations among curricula styles and thus results in criticism from industry recruiters who hire graduates from these institutions [9].

CONCLUSION

Research approach used in this study was deductive and quantitative. The population for this study were hotel managers working in four and five star hotels in Prague (N = 32), students from English program (N = 16) and students from Czech program (N = 10). Regarding to sample selection sample subjects were selected based on purposive sampling strategy. The instrument used in this study was the survey (see Appendix A and B), surveys were sent via the email to hotel managers and students. **First part** of the survey consisted of demographic profile including demographic characteristics such as gender, age, level of education or department of performance for hotel managers and length of working experience in hotel industry or information about current employment at the hotel for students [17]. **Second part** of the survey consisted of list of competencies based on competency model of Chung-Herrera, Enz and Lankau [3]. The list of competencies used in the survey was adjusted in order to comply with hotel managers and students and increase the response rate. There were two different competency models compiled to accomplish aims of this thesis. List of competencies for hotel managers encompassed 29 competencies and students received list of competencies consisted just of eight main competency factors [16]. Each survey was sent via the email and each question within the survey was marked with answered required symbol in order to eliminate non-response issue. Regarding to data analysis, results were analyzed partially by the eSurveysPro.com (the Survey Software) that provided frequencies and percentage representation of all data [4]. Moreover, available results were processed by the author and weighted averages were provided as essential statistical means that helped to understand and compare data. The **third** objective was to describe demographic profile of bachelor students studying in English and Czech HM program at IHM in Prague. The survey revealed that most of the respondents were primarily between 20-25 years, all of them were studying full-time HM program and most of them had already some working experience within the field. Thus, they were considered to be able to provide solid feedback on the survey [12]. The results are shown in tables seven and eight in chapter four. The **fourth** objective was to define whether students at IHM consider its HM program as assisting in achieving essential competencies expected by hotel industry in Prague. The results collected through survey showed that students in general neither agreed nor disagreed that they have acquired through the program such competencies [17]. Students in both programs identified “industry knowledge” as competency most developed by HM program.

DISCUSSION/RECOMENDATION

The findings investigated throughout this study may be of value for hotel managers, students and schools with Hospitality Management programs in Prague [19]. Educators who are compiling curricula of HM program may consider adjusting and improving them according to current expectations of hotel industry [10]. Hotel managers have revealed that competencies such as “self-management”, “communication” or “leadership” are appreciated within the industry [18]. However, students at IHM do not perceive that these competencies are developed by their HM program. Educators believe mostly “industry knowledge” or “critical thinking” are essential competencies for graduates since these competencies are

mostly incorporated in the IHM curriculum. There can be recognized several discrepancies that should be in the interest of IHM to reduce. In general, educators who communicate and collaborate with industry's representatives pursue industry's demands and expectations boost chances and career prospects of their students [15]. This section seeks to investigate possible suggestions that can increase cooperation between hotels and universities with hospitality management programs or propose ideas that can help hospitality education programs improve curriculums and courses that can meet demands of hotel industry [8]. Firstly, educators should realize the importance of cooperation between them and hotel representatives. The benefits should be recognized in order to increase motivation of mutual cooperation which creates remuneration for all people involved. There are several ways how educators and hotel industry can cooperate [1]. Educators may cooperate with hotel industry directly through their students and arrange internships for them with hotel managers who will present their expectations during the internship cooperation [20]. Educators should focus on competency-based education (CBE) that is according to Millar, Mao and Moreo [14]: "an institutional process that moves education from focusing on what academics believes graduates need to know (teacher-focused) to what students need to know and be able to do in varying and complex situations (student or workplace focused)."[14].

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EMPLOYABILITY AMONG YOUNG WOMEN: DISCRIMINATION, VIOLATION OF RIGHTS OR ERROR? AN ANALYSIS OF THE LABOR MARKET FOR YOUNG WOMEN FROM ROMANIA

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ABSTRACT

Employability among young women raises many problems on the labor market for these - from their employment discrimination, the wage inequality, to the demands not only of the necessary knowledge and abilities but also of the physical aspect. The labor market in this area has many hidden hindrances behind false job advertisements and companies with slogans that sound nice and motivating. This target group, made up of young women, students, or fresh graduates of postgraduate and higher education, is the target of some defective labor market mechanisms. These mechanisms should operate in accordance with legal rules, with their rights, without discrimination for any reason.

Why is not that the case? Because the intervention levers of the state are not adapted to the increasingly developed problems in this field, the regulatory mechanisms of public institutions with skills in the field are insufficient for such a large market and are not strictly focused on this target group, or at least on the major target group - women able to work and control levers for the private environment are aimed at solving other issues in this field or in the public sector. These include combating corruption, tax evasion, increasing collaboration with the private sector to reduce youth unemployment, implementing public programs and policies to boost youth entrepreneurship, but not just.

The present paper aims to analyze the problems among young women in employment when they enter the labor market and to identify the reasons behind them. Also, the evaluation of job offers for young women and the gaps in them are another objective of the paper.

As a research method, I will consider the sociological survey based on the questionnaire, the semi-structured interview, an analysis of the offers and working conditions for young women and the analysis of the legislation in the field.

Keywords: young women, labor market, discrimination, rights inequality, questionnaire, interview

INTRODUCTION

At present, there are inequities in Romania regarding equal treatment and the prohibition of discrimination in labor relations, with Romanian women being the most disadvantaged in this respect, along with Roma citizens. [1] It is worth noting that the rules adopted by OIM produce effects for states that ratify and transpose into national law. Freedom, security and justice are essential values as major components of the European society model and are among the cornerstones of the European integration model, with the priority being to place the citizen in this project. [2]

In international law, the principle of equal treatment evolves in time for each category of workers on the labor market. The most important conventions on equal treatment in labor relations are: O.I.M. no. 100 on Equal Remuneration of the Workforce, which establishes a number of principles regarding equal pay for male and female workers, O.I.M. Convention no. 111 on discrimination in the field of employment and the exercise of the profession.[3]

On a national level, the Labor Code stands for the principle of equal treatment for all employees and employers in labor relations and prohibits any discrimination against an employee, both direct and indirect, on one of the criteria relating to sexual orientation, origin, genetic characteristics, age, ethnicity, religion, trade union activity.[4]

The purpose of face research is to identify the employment problems of young women. The main objectives of the present paper are to identify the problems faced by women in the workplace, the degree of discrimination encountered in them, and to analyze the job advertisements for this target group in order to identify the correspondence between the realities of jobs and the of job advertisements.

Both quantitative methods such as sociological inquiry based on questionnaires and qualitative methods such as: semi-structured interview, an analysis of offers and working conditions for young women and the analysis of legislation in the field were used as research methods.

The questionnaire was applied to a sample of 1500 female females from Bucharest, aged 20-25, students, or fresh graduates of postgraduate and higher education who were at least one time in search of a job and participated at least one interview for a possible engagement.

Also, for this research, 200 interviews were conducted between February 2017 and January 2018. For the analysis of job offers for this target group, 2200 announcements made public on the job vacancy systems were considered.

RESULTS

Interpretation of questionnaire results and interviews

From the questionnaires, it is concluded that over 80% of young people felt discriminated against in interviews, salary and work. 65% of them had at least one requirement for a certain outfit in the interviews and in the workplaces, and 54% had situations where the announcement made public did not correspond to the actual posts, which were actually ads with sexual tentative. 45% of the girls who responded to the questionnaire had other suggestions with sexual temptation from their superiors to obtain benefits related to promotion or wage growth, although these rights were stipulated in the labor contract, and among the other employees these benefits were obtained after the annual evaluation and the fulfillment of the responsibilities successfully.

From the interviews the conclusions are:

1) the targeted target group is one that supports certain discrimination, gender-based workplace rights violations, and sexually suggestive proposals from superiors,

2) a large number of jobs for this group are false, real jobs targeting other aspects with sexual temptation,

3) Physical appearance and clothing requirements for this target group are higher than for men or for other age groups,[5]

4) Workplace responsibility requirements are different from those in the job sheet, there are many, and wage rights are lower compared to those,

5) there is no national legislation that protects women's employment rights, legislation that refers to this issue with strict reference to equality of rights and the prohibition of any discrimination at work. But this is not enough as long as there are no sanctions and there is no control of job offers, and their concordance with reality and special control for potential employers.[6]

Interpretation results analysis of legacy and employment announcements

Taking into account the national and international legislation which Romania has complied with, I conclude the following:

Although there is a national and international law that prohibits discrimination at work, the protection of women's rights at work, there are no sanctions to the extent that they can combat discrimination in this area. There is no legislation sanctioning employers who publish false job advertisements and no institution with skills in the field who can carry out specialized control.

The analysis of the employment announcements concluded and the above mentioned: over 43% of the targeted target group's ads were false, for sexually explicit jobs, over 35% predicted that physical and style requirements clothing, without describing, even indirectly, the other required skills or studies in the field, and 25% of them did not disclose the name of the employing company.

In this case, it is necessary to respect the following form of collaboration between the public and private environment to combat these problems:

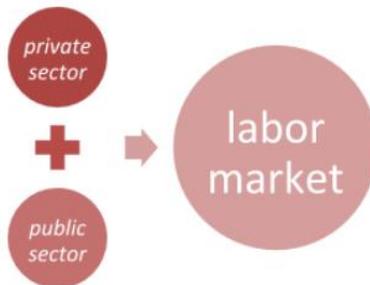


Figure 1: The relationship between the private sector and the public sector

CONCLUSIONS

All of the methods used to identify young women's employment problems to the extent that their rights are respected have concluded that there are large discrepancies between their rights, responsibilities at work, job advertisements and realities of jobs available. A major problem in the labor market for young women is that of gender discrimination. To protect women's rights at work and to combat gender discrimination, it is recommended to strengthen legislation in the field and to implement new policies for this target group.

Following the results, we recommend the following:

More harsh control by public institutions with job abilities in the field of job offers and sanctioning companies that publish false job ads that do not meet the job requirements refer to gender discrimination or sexual tentative,

Creating a blacklist by institutions with industry skills with these companies and publishing it so that it can be accessed by all people looking for a job,

Strengthening legislation that provides women's workplace rights, employment and combating gender discrimination in this market. This may increase the sanctions for those who violate the legal norms in the field,

Another recommendation is to increase the collaboration between the public and the private environment, to support the harmonious development of the private environment by the public environment and to respect the legal norms imposed by the public institutions by private companies and institutions.

Thus, the link between the two would be reciprocal, partnership-friendly, and would thus reduce the private-sector problems of respecting the law, the rights and freedoms of employees, reducing discrimination of any kind by supporting a partnership between the institutions public-as an actor who imposes certain legal norms in the field and draws some lines to follow and companies-as employers-who will commit themselves to observing these norms and respecting the already marked path without any overthrow on their part, whether financially, social or even culture. In this case, the middle pillar will be the employee, regardless of gender, who will enjoy the results of this partnership, and indirectly the socio-economic environment at the national level.

Although international and even national attempts to respect women's rights and the equalization of women's rights with men's rights are increasing, we believe that these attempts for Romania are insufficient and there is still room for new policies and measures in the field, especially on the private market.

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HUMAN RESOURCE DEVELOPMENT IN EMERGING MARKETS: CASE STUDY OF SOUTH KOREA

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ABSTRACT

The research referees to modern trends and approaches in human resource management in emerging markets. The article considers modern approaches to the development of key competencies of engineering personnel based on electronic applications. The advantages and disadvantages of using such applications in fast and dynamically developing economic systems are analyzed. The case of the use of modern teaching technologies and applications in Korean practice is given.

Author discuss industrial competence model in South Korea and human resource development methods within 4th Industrial Revolution. Different approaches and concepts are discussed. University-Industry cooperation applications and strategies are discussed; author analyzes competence assessment, creation and development systems in Korean Universities and high-tech industries.

Special case of competence development in growth economy is discussed; example is based on Korean companies' experience. Author shows aligning human resource development with labor demand and Korean model of factory-school-shelter cooperation. Different types of education are discussed, for example vocational education, lifelong trainings, training consortium for small and medium size entrepreneurship.

Keywords: human resource development, South Korea, competence model, emerging economy

INTRODUCTION

Processes of globalization set for modern accounting entities a task of key positions forming. The most important objectives of global industrial companies are increasing their own resources for creation an effective competitive source in global environment. In particular, personnel policy of the company is the instrument of preserving personnel capacity of the organization, and it shall be reviewed from a line item of competence-based approach. New competitive advantages are based on core competencies and help global industrial companies to improve their economic relations; they also form the information society and integrate industrial companies into world economic space [1].

EMERGING MARKETS AND ECONOMIC GROWTH OF SOUTH KOREA

For the last 20 years South Korea built an innovative ecosystem with a high share of high-technology sectors and small enterprises. According to administration of small and medium business of the Republic of Korea, in 2015 in the country there were about 3 million small and medium-sized companies, 99, 5% of total number

of the entities. These companies — the most important source of workplaces, 87% of the active population of the country are engaged in them. In 2015 small and medium business provided a half of GDP and 43% of South Korean export. And a share of small business in general structure — 97% [1], [2].

Activities of the Korean incubators began in 1991 (on the basis of experience of technological incubators of Israel) and were initiated by the Korean institute of technologies. First private incubator (Jungbu Industrial Consulting Inc.) was created in 1993. In the same time the first national incubator (Ansan Business Incubator) opened. The majority of incubators were initiated by the government, and, despite crisis of 1997, promoted revival of national economies and development of national innovative system. Further for development of the regional industry and technology and successful revival of regional economies the Korean Association of science and technology parks as governing body of innovative processes in operation was created. The main programs became at this time: programs of a construction of infrastructure for a start-up of the companies founded on high technologies; special programs for laboratory a start-up of the companies; development programs of the ideas; future development programs of the entrepreneurship based on technologies [3].

According to the report of a research institute of Hyundai rates of potential growth of economy of Korea over the last 10 years decreased from 3.9% to 3,2%. So potential growth rates national of production decreased to 4, 4% in comparison with 8, 9% in 1991, 7, 9% in 2000 and 5,8% in 2010. Decline in production and rates of a surplus of high technology production from 6.0% in 2006, to 4.3% in 2010 and to 2, 1% in 2016 is noted. Decreases as well performance in service trade from 7, 8% in 1991 to 2, 9% in 2011 [4]. The actual growth rates of SK economy also decreased, according to data of the World Bank in 2015 growth rates of GDP of SK were reduced to 2,6% (figure 1).

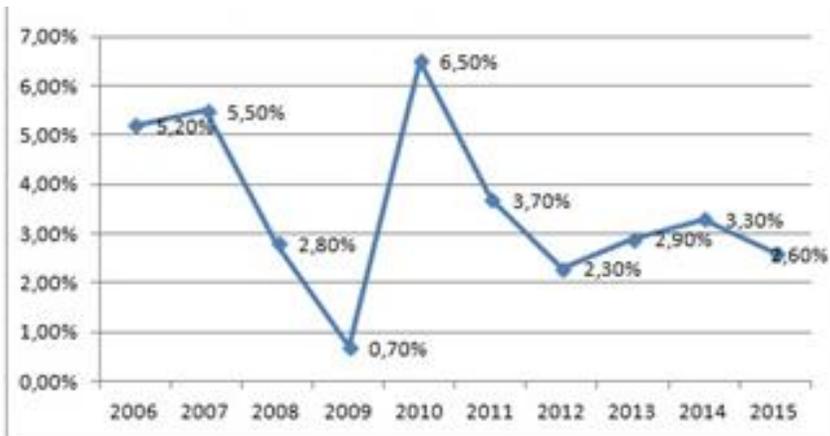


Fig. 1 Growth rates of SK GDP as a percentage

Source: The World Bank [9]

Today in South Korea many universities departed from the traditional functions to gain only knowledge. Most of them deal with issues of commercialization,

intensively developing innovative business. In this sphere also began to show activity and many research institutes. Development of these processes attracted interest and of various financial organizations and the consulting companies connected to processes of commercialization of results of Research and Development. As a result in South Korea constantly increase both expenses on science, and their share from GDP. For example, in 2004 they constituted 2, 64% of GDP that it was higher, than in many developed countries. At the same time the share of a public sector constituted 24, 5% of total amount. Expenses of a private sector and foreign investments – 75, 1% and 0,4% respectively. The share of an external source of the funds allocated to South Korea for Research and Development is at very low level (0,4%) that is much lower, than at France (7,2%), Great Britain (20,5%) having the similar sizes of the income on research activities [5].

HUMAN RESOURCE DEVELOPMENT TRENDS IN SOUTH KOREA

It is necessary to take into account unique feature of the Korean management, which is to find the golden mean between two extremes: "a strong collectivism, all for the benefit of society, individuality is nothing" - a principle inherent in the eastern management models, such as Japan. And the other extreme - "absolute individualism, only personal goals, only personal growth," a vivid representative of this principle is America [6], [7]. Korean the management pays great attention to the corporate spirit, encourages loyalty to the company, but at the same time appreciated the professionalism and personal qualities of employees, which allows us to develop within and for the benefit of the organization talent. Most of human resource development programs are focus on 4th Industrial Revolution, so technical and smart competencies are required.

The adoption of the program "Intellectual (Smart) Korea" was is caused by a wave of rapid spread in South Korea smartphones (smart devices) and smartphones in 2010, the so-called "Smart Fever" ("Smart Fever"). The state strategy of the "smart country" (Smart Country Strategy) implies the development of mobile Internet, creation of "smart" (smart) networks, and building on the basis of these networks of a new intellectual society [8].

One of the components of the South Korean strategy is The Smart Society is a Smart Work, paradise is of great interest to both companies and individuals, young people. Unified temporary construction of the working day in the country from 9:00 to 18:00 ceased to exist along with the spread mobile offices (Mobile Offices) and their conglomerates, work in the is carried out through smart devices. Most A typical form of organization of such work is collective software (software) "Group" (Gropware) [9].

COMPETENCE-BASED APPROACH AND GLOBAL COMPETITION OF KOREAM COMPANIES

Modern researchers distinguish following classification in considering the professional competence:

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- 1) Simple (basic) competence – it is seen in certain types of activity, formed on the basis of knowledge, skills, abilities, easily fixed;
- 2) The core competence – it is extremely difficult to account for it, it is storage of measurement, it can appear in all activities, and it reflects the attitude of the individual person and meets the global environment [10].

The process of organizational competence formation is an integral part of building a competitive strategy, so it is a basic step in the formation of core competence model. The main objective in the step of forming the organizational competence is definition of key organizational competence which forms the main competitive advantages (Porter's Model) [11]. In practice managers find a lot of problems using competence management in innovative companies. These problems are:

- The complexity of specialist involvement in other project. Usually the holder of the key competences does not want to share his core skills with other specialist;
- The indispensability of a highly qualified specialist and, therefore, control the complexity of competence is failed;
- A degree of lack of personnel interest is high, because it is long period to transfer knowledge in the project and format the key competencies.

The most acute problem faced with innovative organization, which performs complex design. One of the features of innovative companies is excessive requirements to the competence profile of key employees. This is due, no doubt, with the uniqueness of the products (and / or services), which are produced in the group projects. It is known fact that the "smart" company has a greater extent than the other players in the market. It depends on the professionalism of its key personnel and the effectiveness of their core (and hidden) competencies. It is possible (with some modifications) to use the special indicator to share the total costs in wage fund with the cost of the project or service, and it can be a criteria of a relationship.

The problem to determine organizational competencies as a source benefits is a compound of core competencies with individual. With this statement I can agree, because, for example, resource-institutional theory creates competitive advantage of the organization increasing using core competencies, which improve the level of values. Thus, the key competence is a special category of organizational competence. It helps innovative organizations to create and maintain a sustainable strategic competitive advantage. The main property of the key competence is to establish the usefulness of the product which is produced. If managers want to treat the core competence, they should provide a set of skills which must meet four criteria:

1. Producing value for internal and external users (customers). The customer for the innovative organization is the chief referee, who determines what a key competence is considered.
2. Skills must be unique and individual. There are differences between forced and distinctive competencies. A key competence is organizational value, so, to the

opinion of managers and key specialists of the company, the resources for its development should be found. For example, the innovative organization can dramatically improve the quality of customer service; make it above its average level in the industry with making its core competence.

3. Core competencies should ensure a competitive advantage during the long period. In defining key competencies process managers need to move away from the outer parameters of the product and consider how you can use the competence to produce innovation in this product.

4. Key competence should be long-term and unique.

To build a competence model of key employees for organization it is necessary to organize an algorithm of control system, for example, managers can implement role-playing instructions and establish competency cards. Usually, the guide role contains the following sections: a set of core competencies, responsibility (responsible for individual sections of the project and co-executor in any stage of the project), and the project targets (figure 2).



Fig. 2 Samsung's activity matrix

Source: www.samsung.com [15]

What is designing competence? Managers should find the moment when designing competence comes to the areas in which innovative organization must possess all possible resources or skills and create them from existing. Strengthening competence is adequately when innovative organization finds additional market segments and it is used with its existing capacities [12].

The change in the ratio of policies directly depends on the macroeconomic environment of organization, as well as it depends on the strategic orientation of the design organizations. Their willingness to sacrifice short-term income in exchange for a higher and more long-term period is important.

It is necessary to identify a number of factors that determine the choice of strategy. These factors are:

1. the level of development and the basic forms of market competition,
2. the ratio of the increase rate in the staff cost,

3. the active part of fixed assets,
4. respectively, replacing living labor,
5. the time factor,
6. the rate of inflation,
7. the structure of the consumer basket,
8. asset portfolio of innovative organizations,
9. government regulation economy and transport industry,
10. the priorities of industrial policy,
11. the provision of cross-sectorial ne-redistribution of capital and labor,
12. the development of innovative activities.

G. Hamel and Prahalad A. introduced new term "strategic architecture" to denote a competitive strategy [13]. Using the strategic architecture company can find the opportunities that it should increase immediately, for example, new channels, which you need to study today, new development priorities to be pursued at the moment. It will help managers to seize the future and market initiative. Thus, the strategic organizational architecture addresses issues that need to be taken today; it will help to prepare for the mastery of a significant share of future earnings in the arena of emerging opportunities. As a result, this approach is called "the concept of a market space" [13].

E-TRAINING SYSTEMS IN KOREAN UNIVERSITY-INDUSTRY COOPERATION

Today, South Korea is a country of high technology; therefore automation of the distance education process is at a high level here. The experience of South Korea's educational system is classical. Currently, South Korea stands at one of the first places in the world in terms of the number of students among the population. South Korea uses an e-learning system in 80% of universities [14].

In South Korea, a country in which every second has a smartphone with access to the Internet, actively create and develop various new disciplines. Starting from cyber sport and ending with real cyber-universities. Every year, students in cyber-universities are more and more. And this is understandable, writing off everything for accessibility. For example, so people from a remote Jeju island can receive assignments, lessons and comments from skilled workers from the capital of Seoul. And if you move away from the beautiful "cyber-universities" sounding, you can turn to special companies, of which there are more than seven hundred in South Korea. The government actively supports e-learning, so the Ministry of Economy supports the development of the industry, and the Ministry of Education supports the e-learning program in regular education (Figure 3).

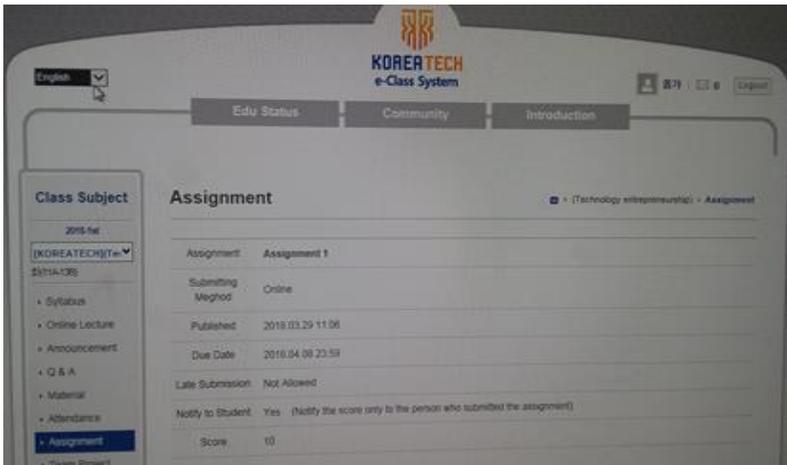


Fig. 3 Example of the electronic system of training (KOREATECH University, South Korea).

Source: author

Advantages of using electronic applications in South Korean universities:

1. Adaptability to rapid changes in industries;
2. High dynamism of competences;
3. Independence from territories and regions;
4. High demand from listeners and students.
5. Disadvantages of using electronic resources:
6. High development costs;
7. Threats to cyber-attacks;
8. High requirements for the professional competence of teachers.

Such opportunities are usually attributed to: the implementation of immediate feedback (interactive learning), visualization of educational information, the possibility of processing information using modern information technology, the possibility of organizing virtual laboratories, the ability to model complex, expensive or dangerous real experiments, the possibility of using a computer modelling (analytical and simulation), the ability to present training content with varying degrees of detail and different levels of cognitive complexity, depending on the current level of mental development of the student, the choice of individual pace of work, the choice of the way information is reproduced depending on the type of dominant perceptual modality of the learner, the possibility of self-diagnosis of educational achievements and self-control and others.

CONCLUSION

Rapid economic growth and effective investments in education and human resource development help Korea to found unique style of management and personnel development.

The profile of the key competencies in industrial organizations endorses the program of training and develops the key staff. Company must provide the trainees

with necessary handouts and an opportunity to try out the standards of behaviour which are required in the development process. This means that development activities should provide the opportunity to apply the techniques which are studied in a variety of work situations. According to this task, the development activity should include a range of techniques, such as workplace training and special courses with the assistance of mentors.

Electronic applications allow dynamically developing missing competencies and meet industry standards, but they require considerable skills and costs in the development and operation.

It is thanks to state support and huge investments that South Korea is the absolute leader in the development of e-learning.

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HUMAN RESOURCE MARKETING

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ABSTRACT

The aim of the paper is the analysis of HR marketing tools in the Czech business environment and its comparison with the expectations of university students. Companies are currently facing many challenges. One of the biggest challenges is to get the talented and skilled employees with good knowledge, experience, and motivation for the job. The role of HR and line managers is to retain the talented people maintaining or increasing their performance and motivation. The term HR marketing combines personnel management and marketing tools. These tools are used to obtain the company's good reputation in the labor market, not only to ensure enough talented candidates, but also the interest of existing employees to stay in the company. According to Mosley [12] the HR marketing is an adoption of new forms of thinking. As well as the company tries to attract customers by unique products and services; it must attract also potential or existing employees. Employee value propositions [11] are the main values that the company creates and why the employees stay with the company. De Chernatony [4] considered the company values as a substantial idea of the employer brand and stressed its communication internally and externally. It is necessary to search the main factors that symbolize and personifies the company. The aim of the quantitative research was to analyze the expectation of Czech university students towards the potential employer. The research was conducted in 2017 among 180 students. Respondents stated the main criteria for selection of the employer. The most important factors for the students as potential employees were fair behavior, career growth and good working environment. Work – life balance was also mentioned as one of the most important factors. The output was compared with the existing HR marketing tools among and was formulated recommendations for the employers to make the brand more attractive for this group of candidates.

Keywords: HR marketing, employer brand, employee value proposition

INTRODUCTION

The aim of this article on the theoretical basis of personnel marketing to analyze the requirements of university students and recent graduates to employers in search of employment; and to bring recommendations for employers interested in this target group.

The companies faces in the resent area many challenges. One of the biggest is the lack of talented employees. The unemployment rate in the Czech Republic is on the lowest level since 1989. The companies put stress on the methods and sources for attracting employees with high motivation, skilled and experienced. The orientation towards graduates increases significantly. This paper examines the importance of a good employer brand as a marketing tool towards potential candidates. Not only the attraction plays the significant role but also employees'

retention is crucial. Personnel marketing as a new tool for employee engagement uses many companies [6].

PERSONNEL MARKETING

The term personnel marketing involves two tools such as marketing and personnel management. According to Kotler [10] the personnel marketing tools serves for getting a good company reputation and creation of a good brand. Good brand then attracts more of the talented employees and increases the motivation and engagement of existing employees.

Many authors describe marketing from a different view. Kotler [10] describes marketing as an entrepreneurship function that identifies the unfilled needs and desires. IT is valid for customers as for employees. Mosley [12] found out that companies are looking for gifted people with the aim to get their interest. He also says that it is important to know that the talented people decide themselves for which company they would like to work or to stay. They are aware of their value and knows the conditions in concurrence. The excellent company culture, corporate culture, and values can create the unique quality of the employer. As the company tries to get interested from their customers, so it has to impose the existing, and potential employees. The excellent employer brand can help. The shared values, company ethics, and behavior support the competitive advantage. The well-set company culture supports motivation, loyalty, and performance.

The goal of personnel marketing is to wake up in existing employers' proud, loyalty and engagement that can help to speed up the development and increase the attractiveness of the company. Mosley [12] considers as a necessity to establish the advantages of the company consistently, truthful and in alliance with the experience of the employees and other stakeholders. The harmony of the promises and real experience support the real brand of the company that will attract the talented candidates. Personnel marketing represents the new way of thinking that the companies have to use and develop more intensely.

People decided according to their actual needs. It depends on the stage of career, age, interests, and beliefs. If the company wants to attract the right candidates, it needs to understand the customers, in this case, the candidates. The company has to be able to empathize with the market and to offer the best option. The targeted communication towards candidates is necessary. The basis for the targeted communication is to create a so-called persona. Persona [8], in addition to demographic information also display the behavior of targeted people, show what they believe in, and especially know their motivation and intentions. Understanding, empathy, behavior in certain situations support the direct communication. To describe the persona is needed to find out what they think, do and what they feel, so to be able to understand their emotions and motives. Based on this knowledge the possible opportunities for the targeted communication. The purpose of the value proposition is to attract future employees whose values are closely aligned with the organization values [7].

The reputation of a company affects not only the total employer attraction and relationships to their employees but also the severe relationships with customers. Customer relationship should not be purely based on a transactional level when a

customer orders goods/services and the company delivers them. Between these bodies should take place a vivid communication leading to a closer relationship. This communication should be interactive and long-term [3]. De Chernatony [4] argues that the interaction between an employee and a customer is highly essential. It leads to the necessity of employee satisfaction and engagement. Heger [9] describes employee engagement as the intellectual and emotional attachment that an employee has to his or her work and organization. The engaged employee believes in the brand of the company. The company brand according to Mosley [12] is based on the company mission, quality, and uniqueness. The employer brand covers the package of economic, psychological and functional benefits associated with working for that company. A useful way to think about these benefits is to separate them out into two groups: functional attributes such as salary, benefits, health care coverage and leave allowances; and symbolic attributes like work culture, career development opportunities and the prestige of working for a well-known company [5].

The company culture plays the substantial role in employee engagement. The aim and object of shared and robust company culture is also an exceptional level of management motivation, loyalty, and performance. Also, a clear focus on the essential personal characteristics, such as simplicity, creativity, and agility, can provide the business skills that will ensure a significant advantage over the competition. The combination of these capabilities and differentiated identity helps to keep current employees, to arouse in them a proper pride and determination and, not least, it helps to attract the necessary talented candidates. All of this ensures a supply of unique services and products that the company offers to its customers [12].

Employer branding is fast emerging as a long-term human resource (HR) strategy to attract and retain talented workforce [14]. The attributes of the employer brand bear the fundamental nature of the brand and emphasize its physical and moral aspects. These attributes create the employer brand identity. Individual attributes of a strong brand of the employer according to the Management study guide (2017) are described below.

The first attribute is the relevance. It must meet the expectations of people and fulfill the expectations of candidates and existing employees. It is desirable to persuade stakeholders of the employers' qualities, to encourage interest in the company, as opposed to the other competitors.

Another attribute is the consistency that ensures communications between potential and existing employees in a way that does not deviate from the core and fundamental beliefs of the brand. It also ensures consistency in building trust and loyalty.

The third attribute of the strong employer brand is correct positioning or location. A strong brand should be positioned so that it has become the choice number one of the target group of people who will prefer over other brands. Some companies do not employ graduates and are therefore not the place to focus our marketing tactics on them. It is therefore desirable to have clearly defined employer brand positioning towards the desired target group.

Sustainability is the fourth significant attribute that makes the strong brand competitive in the future. Sustainable brand leads the company to innovate, which leads to the subsequent success.

Another attribute of the brand is employers' credibility. A strong brand should be based on reality and fulfillment of their promises. The non-fulfillment of promises leads to severe disruption of the trust and the collapse of the entire built brand.

The sixth attribute that a strong employer brand needs are unique. The employer brand has to carry difference and uniqueness to distinguish it from the competitors.

A strong employer brand must also be inspiring. The company inspires their surroundings. If the brand is inspirational and innovative, has a high potential to become successful.

The attraction is the latest and one of the most important attributes of a strong employer brand. The brand should be exciting and engaging. Potential and existing employees attract the commitment, which the company undertakes and the value it delivers [2].

Companies need to manage the employer brand actively because it assists in the creation of a company's service brand. In doing this, it is essential to deliver value to employees that enhance the level of employee satisfaction. It results in their identification with the employer, which may in turn positively influence customers' experiences in the employee-customer interaction [13].

Leslie de Chernatony [4] considers as a substantial the brand identity and its communication on the outside. It is necessary to search everything, what symbolizes and personifies the company how it acts to their customers and employees.

In the foreground is a vision of the brand, which gives a specific direction to the company in the future. Along with the vision is in the foreground the corporate culture that has the task of carrying a shared mental model and facilitate the dissemination and sharing of corporate values. It is, therefore, necessary to develop and support the mental model to develop the strategic positions on the market.

The total value of the employer brand can be converted into employee value proposition (EVP). EVP represents a set of associations and deals provided by the company in exchange for specific abilities, skills, and experiences that bring the employee to the organization. This term defines the basic menus, on which stands the building of employers' brand. This approach targets people in the company and their engagement and retention. The correct formation of the EVP enhances and maintains the key talents. This contribution but applies only in the case that EVP corresponds to reality and individual aspects of the value of their employers' brand and are not fictitious or exaggerated. The employees, therefore, must recognize and believe in the critical quality defined by EVP. If the EVP of the realistic, the employer can count on the committed and motivated staff who will treat their work as meaningful and be fulfilling [11].

Employer brand consists primarily of emotional and functional values, but the functional value is elementary to be imitated by competitions. The emotional area

of the brand cannot be copied, and so becomes the corporate culture an essential point for the differentiation of the employer brand [4].

The research examined the young generation, it means Generation Y. Their expectation from the future employer differs from the previous generations. The employers that decided to attract these young employees take into consideration their different approach to work and working environment. According to Barford [1] Generation Y views responsibilities as much less important than the previous generations, the same is valid for the importance of

Compensation. On the other hand the free time and career development is very important for them.

RESEARCH

The research uses the quantitative method using the structured questionnaire using the Likert scale. The year of research was in 2017, the number of respondents 256. The research sample represents students and fresh graduates from five of the most prominent Czech universities. The research aimed to analyze the most important criteria for choosing the potential employer and suggest the approach to personnel marketing.

Research sample

The age structure of the respondents was 20 – 28 years. 25 % of the respondents are in the age of 25. According to the gender, the women represented 69 % of respondents, men 31 %.

In the questionnaire, there was also included the question about the idea of their future employer. 52 % of respondents did not decide their future employer. It means that the companies can target their personnel marketing towards this group of candidates. For the companies that are interested in the employment of fresh graduates. Two third of them prefer working in the profit sector, 10 % in the public sector and only 5 % plan to establish their own company.

Main findings

The individual criteria used in the research:

- Distance from home
- Working environment
- Career growth
- The possibility of further education
- Diversity of work
- Fair treatment
- Interpersonal relations
- Work-life balance
- Attractive benefits

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- Financial remuneration
- Business ethics
- Company image and reputation of the company.

The results describe the table 1. The table shows the average results for each criterion according to the importance for the respondents using five points of Likerts' scale. The final number represents the average of the respondents' answers.

Tab. 1

Criteria	
Fair treatment	4.7
Working environment	4.6
Career growth	4.6
Interpersonal relations	4.5
Work life balance	4.5
Possibility of further education	4.4
Diversity of work	4.2
Company image and reputation	4.2
Financial remuneration	4.0
Business ethics	3.9
Attractive benefits	3.7
Distance from home	3.5

Source: own research

The most important criterion for the students and fresh graduates is the fair treatment. They expect recognition for their work and the sense of work. It corresponds with the new way of creating the employer brand and personnel marketing. The mission of the company and the added value for the stakeholders in crucial for their decision of their future employer.

Working environment influences the decision of accepting the job offer very significantly. Flexible working areas, well-equipped offices, possibility to break the work using fitness center of enjoying healthy lunch give positive points to the future employer.

Career growth is connected with more responsibility and more influence and freedom. These are the factors influencing fresh graduates and students. The employer, who can offer career growth is more popular than the competitors. It corresponds to the fact that the respondents in this sample prefer working in profit privately own companies. In corporations is more opportunities to career grow.

Respondents prefer further learning. It connects education and development with possibility the career growth.

Interpersonal relations play an essential role in the motivation of students and fresh graduates. They would like to work in the friendly environment surrounded by friends not only coworkers.

The respondents are not willing to devote their lives to work. They expect to have more free time than previous generations. It can cause misunderstanding and tense between generations at work.

The expectation that financial rewards are not as substantial as the other factors were also confirmed. The same we found with the range of offered benefits.

Knowing the Czech market the unexpected results came from the importance of the distance from home. The Czech people are resistant to changing their region of live. The research showed shift in this area. Young people involved in the research confirmed that the distance from home is less important than the other factors.

Discussion

Based on the research findings were created the main recommendations towards the potential employer by the creation of employer brand and personnel marketing.

The employer brand represents the primary values and mission of the company. The company brand should involve fair treatment, friendly working environment, and relationships. The values could be a part of the company ethical codex. The respondents pay the most prominent attention to the recommendation of the current employees. It means that the company should not only present their values, but they have live by them.

More stress in promotion should be put on the possibility of development and career growth than on financial reward and benefits.

Presentation of the company should be understandable, truthful, in line with the strategy of personnel marketing, while something surprising and of very high interest. The important thing is to focus the attention on the potential of the Internet for the presentation of employer brand. 89 % of respondents search for information through this channel.

Limitation of the research

The research was conducted only among university students and fresh graduates. The results can be applied only for the positions that are suitable for this type of candidates. The region was limited to the Czech Republic. There is a space to compare similar researches in different countries and recommend the approach to the graduates in multinational companies.

CONCLUSION

The goal of the research was the analysis of the expectation of university students and fresh graduates towards the future employer using the quantitative approach. The primary goal of the research was to analyze the expectation of the university students and fresh graduates towards the future employer.

The expectation of different motivation factors of young generations was confirmed. The respondents prefer fair treatment, good working environment, and friendly atmosphere to financial reward and benefits. Even that Career growth supported by further education is also an essential factor. Based on the researched expectations were recommended steps towards creating employer brand and plan of personnel marketing.

Competitive advantage on the job market will bring a new form of thinking shaped by values, beliefs, and behavior of the company. The organizations must determine their quality, the essence of the working environment and atmosphere, and uniqueness by forming their employer brand. The important thing, however, is that the company is in its beliefs and subsequent behavior consistent.

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NEW APPROACH TO INNOVATION PROJECTS

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ABSTRACT

Innovation projects are important for long-term development of companies. New approaches join basic conditions enabling realization of projects, using basic strategy. This strategy uses the right culture, proper cooperation and sufficient abilities optimally covered by capital investment. This article would like to focus on importance of psychological safety of teams, who realize innovation projects.

Keywords: Innovation, Project, Capital, Culture, Cooperation

INTRODUCTION

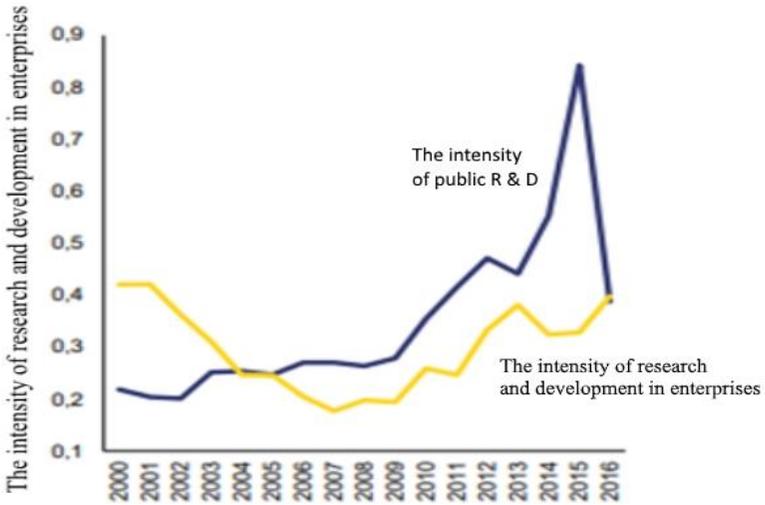
Being innovative is now a basic condition for existence of businesses on the global market. An organization's ability to innovate is therefore essential for success in today's complex and dynamic environment. In recent years, researchers in Knowledge Management and Innovation have used different approaches to explain how knowledge creation can contribute to better innovation performance. The main result of this research is the conclusion that product and process innovation is the result of a continuous learning process [7], [2].

The innovation process itself is a knowledge-intensive activity that is based on two interconnected processes of creating new knowledge and using it. As some authors emphasize, the superior ability of an organization to build and manage system knowledge can support the success of innovation processes [7].

Innovation is considered a political priority at both European Union and Member State level. Various measures and support activities are implemented there. Their diversity reflects the diversity of specific conditions, cultural preferences and political priorities in the individual Member States. These innovative policies, however, in its most important principles coincide. This is evidence that innovation policy is increasingly being realized as the real task of the whole of Europe. The disparities between the Member States, despite significant interventions, are very large.

Slovakia's ability to innovate may still be regarded as inadequate in comparison with other European countries. The country faces many challenges, including the low efficiency of the public system, development, and innovation. Furthermore, there is a strong need to support innovation in SMEs and targeted incentives for technology transfer.

According to Eurostat data, Slovakia's spending on research and development fell by one-third last year. While they accounted for 1.18 percent of GDP in 2015, they were only 0.79 percent last year. Slovakia has joined the end of the EU when countries like Croatia or Serbia have overtaken it.



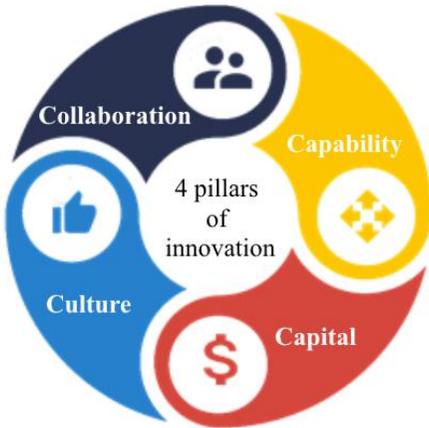
Source: European committee, 2018

Figure 1 Investment in research, development, and innovation by sector R & D intensity (R & D expenditure as% of GDP)

One of the main reasons for this is the extremely slow take-up of EU funds for research and development. While projects funded from the old challenges have ended, new projects have not broken out. At present, companies are only pursuing development activities within their own perspective, which are limited by their own resources. As the data from Eurostat shows, corporate R & D in Slovakia grew moderately in 2016, but government spending declined.

4 pillars of innovation

There are many different theories of what they need for the proper functioning of innovative projects in the organization [2]. Some theories show the issue of innovative projects as a complex and intangible system. However, the aim is to simplify this view. Very interesting is the approach presented by Scott Thomson from Google at the DevOps Talks Conference 2017 conference hold in Melbourne, Australia. As part of his presentation showed four key pillars necessary of innovations. These basic pillars are interrelated. The first pillar can be described culture specifically pro-innovation culture. Within such a culture combines the openness of the company and receive new ideas to established processes functioning in the company. The second pillar is cooperation. The goal of adequate co-operation is to create working people capable of producing innovations. The third pillar is the collaboration. Collaboration to implement these innovative projects not only on the technical (professional) but also on the organizational side. The fourth pillar is the capital. Capital and ways to obtain enough resources to successfully implement innovation. The whole approach can be shown in the figure below.



Source: the author

Figure 2 4 pillars of innovation

First pillar - Culture

The introduction of a pro-innovation culture is key to the good functioning of innovation projects. Reaching culture is crucial for processes that are important for product and service development to be successful in a competitive business environment. Unfortunately, many senior executives continue to focus on it to achieve its performance goals instead of progress. Many companies would like to create the right culture for innovation. This is one that encourages flexibility, creativity and risk-taking support [10], [9]. It is also because the most frequently mentioned barrier of ideas and innovation in an organization include inappropriate corporate culture. Among the elements of a pro-innovative corporate culture are: high tolerance risks, support for new ideas, joy and sense of work, and a sufficient number of innovative challenges [11]. The pro-innovative corporate culture we consider way interaction and communication of people who support changes constantly. The right pro-innovation culture manifests itself:

- increased work engagement,
- independence,
- creativity,
- a sense of belonging to the company.

To create a sustainable culture of innovation is also cooperation with external partners, suppliers or networks needed.

Second pillar - Collaboration

For proper cooperation, it is necessary to set the conditions for the compilation of individual project teams, but also to ensure their adaptation to the functionality. For proper cooperation, it is necessary to set the conditions so that the innovation project teams can work together perfectly. In the context of Google Aristotle project, which began in 2012 and lasted five years, Google is trying to figure out

how to create the perfect team and understand the effectiveness of a properly functioning team. In this project, they were collected and reviewed data on 180 Google teams. It is interesting that there was no correlation why one team was successful and the other not. And Google is inexorable in its conclusions. Conclusions build on hard data and thorough research work. They came from Google's internal data, but also from 50 years of psychological research in this area. The original goal was to find the ideal combination of personality types, people with different abilities and personal history, or the ideal combination of age, gender, and possibly sexual and racial diversity [6]. However, they have found that the only thing that demonstrates the effectiveness of the team is - the atmosphere and the mood in the team - psychological safety. Psychological security serves to make individual innovation projects truly effective. If we manage the company properly implement psychological safety achieved significant successes. When working with individual teams, we will greatly improve the probability that innovative projects will be successful. Also, we increase the number of team members who start to learn from mistakes and achieve significantly increased employee involvement.

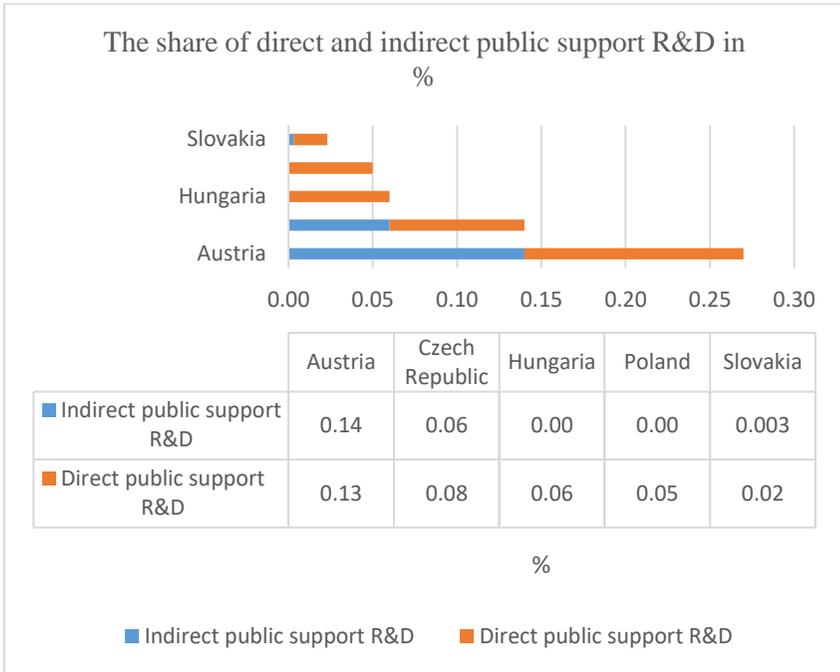
Third Pillar - Capability

It is not just about skills in the sense of technical skills, but above all the organizational skills in terms of implementing innovative projects. Necessity is the proper use of project management tools. Typical innovation projects are a specific group of projects. These are projects that can be very difficult implemented entirely using traditional project management. In the case of innovative projects, it is starting to use agile project management. Agile project management is used mainly in IT until 2016 and now beginning to appear in other innovation areas. It is important to realize that to be able to adequately implement agile innovation projects, for example, using Agile-Stage-Gate [5], must be implemented the agile culture in the organization. It is not possible to perform agile projects without consistently established agile culture. Bernard Marr [8], as part of their inquiry dealt with the failure of projects. He found that 25 percent of innovative projects failed completely. 20 to 25 percent do not show the return on investment, and up to 50 percent need the massive redesign. He dealt with the question of why so many innovative projects failed and found that in fact 54% of project failures could be attributed to poor management - while only 3% were due to technological problems. Now thoroughly examined the benefits of agile development methods in the software world. These are primarily the flexibility, productivity, and speed. These properties of agile methods have been thoroughly studied and documented [1], [4], [3].

The fourth pillar - Capital

The last pillar is capital. Capital considered as a source for financing innovative projects. Innovative projects are very costly. Very often, companies do not have enough own funds to finance them. Slovakia uses several tools to support innovations. On the one hand, it is purposeful support aimed at supporting specific projects and grants. Businesses can also obtain from the state a so-called indirect support when it is not a financial contribution, but a tax on income tax on own innovation projects. For comparison, the average share of R & D expenditure was 2,03% of GDP in the EU in 2016. Above the EU average, eight countries were

located: Belgium, Denmark, Finland, France, Germany, Austria, Slovenia, and Sweden. The share of research and development spending was higher than 3% of GDP in Denmark, Austria, and Sweden. In Slovakia, the share of R & D spending in Slovakia was only 1.18% of GDP. The following figure shows the share of direct and indirect public support for Slovakia and neighboring countries.



Source: OECD, 2018

Figure 3 the share of direct and indirect public support for Slovakia and neighboring countries

One of the other possibilities of supporting the financing of corporate research and development was the introduction in 2015 of a so-called "super discount" at the height of 25%. It should be one of the main tools to motivate businesses to invest in research and development. After two years, for which data are available concerning the use of "super discount", however, it shows that the interest of companies is unexpectedly low. Real use lags behind the government's expectations by more than half. According to the CRIF - Slovak Credit Bureau's analysis in 2015, the supercomputing amount reached only 9.2 million euros and in 2016 only 16.4 million euros. The government counted up to 24 million euros. The amendment from 2018 brings several changes to the supercomputer system. The most significant is a fourfold increase in the supercomputer: from the current 25% to 100% of the tax-deductible expenses.

CONCLUSION

The issue of implementing innovative business projects can be considered complicated. It is mainly because of innovation projects are determined by a high

degree of uncertainty. It is always a step into the "unknown". For this reason, it is not advisable to manage them as standard "waterfall" projects.

Practice shows that the implementation of elements of agile projects into innovative projects is the right way. It is, however, important to note that agile projects can be implemented without an agile culture. For successful implementation of innovation projects is also to be considered a pillar called cooperation. Innovation projects are always realized in innovation teams which are professionally specialized. Efficiency good teamwork goes without saying. What it is necessary to recall the need for psychological security of these teams.

The question is whether our Slovak companies are prepared and able to create such a psychologically safe environment for their innovation teams. The last part of the four innovation pillars as a closed framework for innovation is capital. Without obtaining sufficient capital innovations cannot be efficiently developed. How we presented the results of innovation support from the Slovak Republic are not good. It is a question of whether the current situation will improve the new "super-discount" for R&D companies that is in place since 2018.

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NOTES ON THE IMPORTANCE OF THE ENTREPRENEURIAL ECOSYSTEM FOR SOCIAL AND SOLIDARITY ECONOMY (SSE): THE ROLE OF INTERNATIONAL LABOR ORGANIZATION (ILO)

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ABSTRACT

Currently, the Social and Solidarity Economy (SSE) is a phenomenon that has gained increasing economic, social and political visibility. However, these experiences are marked by challenges associated to the modus operandi that make its continuity or advances impossible or difficult, in many cases. Such challenges exist due to several economic aspects, such as administrative and management, political, social, educational, scientific, technological, environmental, legal and also those related to accounting. Besides, there are many restrictions in what concerns the need to advance in matters such as the regulation framework of public policies of SSE, of its institutionalization and financing. These restrictions put obstacles to the advancement of SSE. An “entrepreneurial ecosystem” is a community within a region of interdependent actors with diverse roles that interact, determining the performance of the ecosystem and eventually the entire economy of a region. As a result of the performance of the ecosystem, it is expected that, in addition to the results obtained by companies and organizations components (in terms of performance and learning), the lightweight interaction generating new businesses. The SSE cannot be restricted to the development of simple and disjointed activities of local productive. For this it is necessary to think the articulation of the SSE with other social enterprises and public and private institutions in local productive. In this sense, this article intends to discuss the newest developments in the construction of the entrepreneurial ecosystem for SSE and the role of the International Labor Organization (ILO).

Keywords: Social and Solidarity Economy, Ecosystem, Emancipation

INTRODUCTION

One of the biggest challenges for the creation, maintenance and strengthening of Social and Solidarity Economy Enterprises (SSEE) is the establishment of an entrepreneurial ecosystem for SSE. We understand that the establishment of an entrepreneurial ecosystem for SSE is a fundamental instrument for the emancipation of SSEE [1].

It has been observed that one of the major problems of SSEE is the need for skills and resources for the construction of the "emancipatory space" or the "autonomy space" which are not available to most of the people who participate in self-managed groups. Such statement does not mean that we defend the idea of a seamless movement from the situations that involve the entrepreneurial ecosystem of traditional enterprises to the SSE, since these have characteristics that are inherent to their modus operandi with socioeconomic, political and cultural implications in their territories.

On the other hand, we can see, in the case of some SSEE, a bit of resistance – real, symbolic or even ideological – to discussing topics that are strictly economic and financial, such as costs of production, costs of loans, market strategies, productive surplus etc.

According to Gaiger (2008), even intellectuals who discuss the SSEE might also demonstrate these resistances to discussing topics related to the functioning of the company, efficiency and entrepreneurship, considering that they are ideologically contaminated and that they would lead to thinking strictly within the framework of a capitalist rationale. The author does not agree with this view and considers it a "refractory attitude", taking into account that it is not possible to think of a society in which there are no relationships of exchange nor economic activity. He also defends the need to rescue the term "entrepreneurship" within the context of SSE, besides understanding the complexity of the entrepreneurial process and its adequacy to the needs of an "associative entrepreneurship", typical of the SEE, in which some of the necessary ingredients are: cooperation in work activities, collective decisions, exchange of information and a collective project [2].

In this sense, this article intends to discuss the newest developments in the construction of the entrepreneurial ecosystem for SSE and the role of the ILO. In order to do it, the article is structured in the following way: topic 1 presents the idea of the "triple helix" and discusses its limitations, supporting the concept of ecosystem. Next, topic 2 will address elements that could be of interest in the construction of entrepreneurial ecosystems in some countries. And in topic 3, the article will show us the role of ILO in this perspective.

This work will be carried out, fundamentally, based on up-to-date bibliographic review on the theme and presentation of some actions and projects developed by the ILO.

1. INNOVATION POLICIES: THE "TRIPLE HELIX" APPROACH ON ENTREPRENEURIAL ECOSYSTEM

The concept of "triple helix" became dominant in literature and is used to show the importance of the articulation of enterprises, which would be responsible for the generation of wealth; the universities, that would be responsible for the production of new knowledge; and the government, which would have the role of creating and maintaining the regulatory environment. [3]

The reasons to use this vision are: i) the triple helix approach combines economy with a strong sociological perspective of the systems of innovation, which would be a distinctive characteristic within this perspective; ii) the approach of the triple

helix is intended for application in public policies and their management in research institutions, in universities and in international organisms; iii) such approach works as a facilitator of planning, management and performance, in processes of decision making and in evaluations of these policies.

Nevertheless, according to Brännback et al. (2008) the triple helix model presents a problem: it has a top-down vision and does not consider the elements within the micro sphere that lead to the emergence of entrepreneurs and their enterprises. According to this study, the concept of triple helix tends to overestimate the value of the institutional actors at expenses of main actors, who are the entrepreneurs and the researchers interested in innovating. For these authors, the systems of innovation must be treated considering the autonomy of the entrepreneurs and researchers interested in innovating. For this, we must think of assets that can be mobilized. They consider that there are three relevant assets for the development of the entrepreneurial ecosystem: a) assets directed towards innovative activities; b) assets for entrepreneur actions and c) bridge-assets, which would be formed by people and mechanisms responsible for the induction and coordination of the interaction among the entrepreneurs and knowledge without taking on a bureaucratic character [4].

So, it is more adequate to think of a new approach to the ecosystem that: a) is focused on a “bottom-up model”, considering that the systems must be thought of in terms of the appreciation of relevant people and groups; b) understands the capacity of coordination as important (of cross-cutting nature), as a way to characterize the theoretical guidelines of this methodology; c) is supported on the ecological view of systems and networks which considers the interactions (ecological and evolutionary) that integrate the entire ecosystem, all the species and all the organisms of a certain habitat and its physical environment [5].

These premises lead to the idea of “co-evolution”, when organizations can interact with their ecosystems and their ecosystems interact with the organizations. Another fundamental element in the ecosystemic construction is the degree of interconnectivity, that is, the interdependence of all the components in the system have with each other.

2. THE ENTREPRENEURIAL ECOSYSTEMIC CONSTRUCT FOR THE SSE

According to what was shown before, we can see that the entrepreneurial ecosystemic construct constitutes a complex task, marked by several challenges. When we specifically deal with the entrepreneurial ecosystem for SSE, this complexity and other challenges are intensified, considering the inherent structural fragilities that characterize the SSE, as well as the field, which is still open for institutionalization of their policies.

However, there are already examples of some places in the world that can help to inspire us.

One of them refers to the construct of the ecosystem for social enterprises in the European Union. The study “Social enterprises and their ecosystems: developments in Europe” [6]. while recognizing the inherent complexity of the process of

constitution of the ecosystem for social enterprises, argues for the existence of two fundamental pillars: public policies of support and the self-organization capacity of civil society. This study, which has the elements described above as its core (public policies of support and self-organization capacity of the civil society), separately, suggests a structure to reach the ecosystem which includes: a) knowledge - political awareness and legal means of recognition of these policies and actions; b) access to the markets; c) public and fiscal support for start-ups of SSE; d) access to financial support; e) instruments of support to the network and mutual support; f) development of researches and capacity building in the area. According to the work of the European Commission, national reports confirm that, rather than depending upon one factor alone, the ecosystem is shaped by the interplay among all these factors.

Another interesting study is about the construction of the entrepreneurial ecosystem in Asia, from the example of South Korea, through the Local Social Economic Ecosystem Development Project (LSEEDP), created in order to guarantee the sustainability of the South Korean SSE. In the South Korean case, the structure that was developed includes the local governments (with their respective support policies), the networks of SSE (and their centers of cooperation) and civil society (consulted in its participatory instances). In this ecosystem, the “asset formation” (in topics of infrastructure, human resources and market expansion) is considered a fundamental element and the entire process leads to the “local strategic projects”, where projects of support to the incubation of the enterprises of SSE and of local development are conceived. Although integrated, the LSEEDP gives priority to the local development projects from the “ecosystem groups for boroughs” (a type of ecosystemic neighborhood group), which are supported for up to five years, until they reach levels of autonomy. This process is divided into two phases, while the first is of promotion of the skills of civil society (meaning selected “neighborhoods”) and the second, of assistance to economic, financial, legal and other topics of the potential enterprises that are initiated [7].

A third example refers to the Brazilian case in South America. In this case, the National Secretariat of Solidarity Economy (SENAES), which was created in 2003, developed programmes to support solidarity economy enterprises. Although it did not have clearly defined structure, just as the cases described above, in Brazil, the construction of the entrepreneurial ecosystem can be seen through some actions, projects and programmes. The analysis of the Brazilian case suggests that there are already “seeds” of this structure in the country, although it is not formalized. In general terms, from the point of view of public policy and civil society participation, the important initiatives were the Brazilian Forum of Solidarity Economy (FBES), the creation of SENAES in 2003 and their several projects and actions. Other “seeds” of ecosystem in the country are: a) the universities which, although they are going through difficult moments, are financially supported by the federal government (through public edits or projects), to act as incubators of enterprises of SSE through the Technological Incubators of Popular Cooperatives. Additionally, there are some municipality and state governments which present projects and actions in the area. Along this line, there is the Network of public incubators of solidarity enterprises; b) banks that act with microcredit and social currencies. These community banks are presently in some municipalities in the country and

they are responsible for a network of over 100 community banks (like the original one - Banco Palmas); c) financing through SENAES (although presently they are temporarily extremely restricted or even paralyzed) for specific projects like Networks Project (of promotion of networks of SSE – which ended in 2016 and is still waiting for renewal), projects for the network of recycling etc.; d) programmes to guarantee demand (access to the market) which were quoted in the chart, and are programmes that allow for public purchase of food from SSE, fundamentally, from small rural producers, without public auction; e) existence of networks of SEE, formal and informal as well as important institutions of support, discussion and political strength for the SSE, such as the FBES, mentioned above; f) wide and growing basis of studies about SSE in the universities (courses of Economics, Social Sciences etc.) in undergraduate and graduate courses, either in training courses in the area, or in course conclusion papers or graduate studies (specialization, Master's, Ph.D.).

Additionally, it is important to mention that we still need to complete a legal context for the SSE , such as, for example, the legislation regarding solidarity economy, as well as community banks, social currencies etc. Also, we need to improve the action of the actors in order to recognize the limitations and specificities of the SSE and design coherent policies to overcome them.

3.THE ROLE OF ILO

The ILO's role in contributing to the creation of an ecosystem internationally could include different types of activities ranging from knowledge generation on the SSE, contributing to advancing its definition, and promoting exchanges of experiences and methodologies. The ILO can contribute, as it already does, to raising the level of recognition of the SSE and the coordination of actions in its favour, through spaces such as the UN Task Force on Social and Solidarity Economy (UNTFSSSE), of which the ILO is a founding member, today counting over 25 members. The ILO can highlight, through studies and research, those economic sectors in which the SSE can contribute best in terms of creating decent work. Likewise, the ILO can raise awareness, thanks to its tripartite nature, on the importance of co-construction of public policies through social dialogue with policy makers of Member States and its social partners.

Through its SSE Academy, the ILO has addressed the issue of co-construction of public policies, specifically in the case of the Academies held in Korea and in Luxembourg. In this regard, it could be useful, for those wishing to deepen their knowledge and understanding of SSE, to visit the "Collective Brain" website www.sseacb.net. The ILO's aim of promoting international recognition and knowledge on the SSE has also been reflected in the production of country case studies on the state of public policies. The case studies of South Africa, South Korea, Costa Rica, Nicaragua, Brazil, Europe and the Philippines can be found on the Collective Brain.

Internationally, ILO also wants to promote the SSE in the context of the 2030 Agenda, in the framework of the previously mentioned UNTFSSSE and also in international meetings dedicated to the implementation of the Agenda. In particular, the ILO is involved in the World Forum on Local Economic Development, which has already held four biennial editions, in promoting the localization of Sustainable

Development Goals through the SSE. Most recently, the ILO participated in the 4th World Forum of Local Economic Development in Praia, Cabo Verde where, it coordinated a total of thirteen sessions on local development in fragile states, through south-south and triangular cooperation (SSTC) and SSE. A think piece on the role of SSE in Local Economic Development was also published, in collaboration with the European Research Institute on Cooperative and Social Enterprises (EURICSE). It seems to us that in addition to the involvement of the traditional ILO constituents that are national governments, in addition to the trade unions and employers' representatives, it is important to try to sensitize local governments and in this sense the mayors and municipal officials are also relevant stakeholders in the ILO's effort to contribute to the construction of a favourable ecosystem for SSE.

CONCLUSION

The concept of "triple helix" became relevant in literature and is used to show the importance of the articulation of enterprises, which would be responsible for the generation of wealth; the universities, that would be responsible for the production of new knowledge; and the government, which would have the role of creating and maintaining the regulatory environment. There are others reasons to use this "triple helix" approach, as: i) it combines economy with a strong sociological perspective of the systems of innovation; iii) it is intended for application in public policies and their management in research institutions, in universities and in international organisms; iii) it works as a facilitator of planning, management and performance, in processes of decision making and in evaluations of these policies.

However, the "triple helix" needs to operate within the ecosystem in a bottom-up way, and not overestimating only (or more than) the value of the institutional actors at expenses of main actors, who are the entrepreneurs and the researchers interested in innovating. Also, we need to consider the idea of "co-evolution".

In practical terms, we can see that the entrepreneurial ecosystemic construct constitutes a complex task, marked by several challenges. When we specifically deal with the entrepreneurial ecosystem for SSE, this complexity and other challenges are intensified, considering the inherent structural fragilities that characterize the SSE, as well as the field, which is still open for institutionalization of their policies. However, learned with some examples of places in the world that can help to inspire us.

In general, there are some elements who are important to structure the ecosystem that includes: a) knowledge - political awareness and legal means of recognition of these policies and actions; b) access to the markets; c) public and fiscal support for start-ups of SSE; d) access to financial support; e) instruments of support to the network and mutual support; f) development of researches and capacity building in the area.

The ILO's experience showed us that SSE organizations, through the pursuit of social, economic, and often environmental objectives are particular well-equipped to further incorporate sustainable development at all levels, integrating all three pillars of sustainable development, and recognizing the linkages and synergies that exist between them. The 2030 Agenda also highlights the need to work together

with local authorities and communities to promote cohesion, innovation and create employment. Particular emphasis is given to local communities, culture, knowledge, marginalized communities, and territorial planning in SDGs 6, 8, 11, 12, 13 and 15.

So, as we tried to show, one of the biggest challenges for the creation, maintenance and strengthening of SSE, is the establishment of an entrepreneurial ecosystem for SSE.

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ORGANIZATIONAL AGILITY LEVEL EVALUATION MODEL AND EMPIRICAL ASSESSMENT IN HIGH- GROWTH COMPANIES

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ABSTRACT

In ever-changing and increasingly competitive global environment organizations need to adapt faster to survive. In order to face market uncertainties organizations must become agile. Organizational agility is a complex and multidimensional concept. One of the main challenges in researching organizational agility is its measurement. The variety and combination of attributes, characteristics, capabilities, and practices make the measurement of organizational agility level highly complicated and subjective. The purpose of this article is to explore the organizational agility level measurement methods and present possible evaluation model. In the article authors propose organizational agility evaluation and assessment methodology. Presented model is empirically tested in the context of high-growth companies in Lithuania. These companies' agility level is evaluated using fuzzy numbers logic which allows more precise agility level evaluation in the organization. This article contributes to research by providing more unified concept, which can be adapted in studying organizational agility in a wide and global range of organizations, regardless of the industry they operate in.

Keywords: Organizational agility, organizational agility level, fuzzy agility evaluation framework

INTRODUCTION

In order to effectively compete in changing market environment, organizations have to be proactive and anticipate change. To achieve that, organizational structures should allow for greater agility, through flexibility and response. Practitioners need new organizational solutions, forms, and tools to embrace the changing environment and capture new opportunities. Successful adaptation to external forces requires agile organizational enablers, abilities, and practices. In order to control and improve agility level, organizations need to be able to measure agility level and identify which internal organizational factors affect it. Measurement, identification, and evaluation of factors affecting organizational agility level in highly volatile environment remain important questions for researchers and practitioners. This article aims to answer some of them.

Organizational agility is especially important in the context of fast-growing companies. Normal growth organizations adapt to changes in environment and adaptation is reactive to the environmental triggers (competition, change in technology or consumer tastes, etc.). If the environment is relatively static, an organization is not pressured to adapt quickly. However, in high-growth companies, in addition to external pressures, change and adaptation are also forced from within

the organization and agility becomes pro-active. Often led by success and growth in sales revenues, profits, and market share - fast-growing companies undergo considerable internal changes as well. Therefore, during high-growth periods, organizational agility is crucial in adapting to fast changes from both internal and external influence. Thus, making high-growth companies especially suitable context to study organizational agility.

METHODOLOGIES USED FOR MEASURING AGILITY LEVEL

There is no consensus on the organizational agility level measurement approach in scientific literature and researchers distinguish different components of agility [1]. Regardless, researchers seem to agree that organizational agility is one of the most important factors in ensuring organization's ability to adapt to changing the environment [2]–[4]. Organizational agility level measurement models have their shortcomings. There have been a number of attempts and different approaches to measuring organizational agility level in the past. Many organizational agility methodologies are too specific on one or another aspect of organization: some relate to specific business processes, such as software or product development; others concentrate on measuring agility level in supply chains; some only measure internal organizational factors while ignoring external influences. Such variety of methodologies make the concept of organizational agility diverse and vague. Many authors are concentrating only on specific industry of organizations, in particular – manufacturing sector, where they analyze what manufacturing organization can do to enhance their agility [5]–[7]. Others evaluate agility in a context of business process or area – e.g. supply chain agility [8]–[10], human resource agility [11], [12], information technologies [13]. Some of the research is only based on theoretical assumptions and not validated empirically [12], [14], [15]. Some measurement models can be applied to a wider range of organizations and are more holistic [6], [16].

Regardless of the number of attempts to measure and evaluate organizational agility magnitude, the lack of consensus still persists. Lack of precision regarding characteristics of the agile enterprise, limit the possibilities to measure the practices of agile enterprise. Therefore, constructing a comprehensive measuring tool for organizational agility level is a major issue from both practical and theoretical perspectives [17]. From a theoretical perspective, it encourages future research into organizational agility, while managerial perspective will gain insights into successful growth companies and provide an actionable model. Organizational agility is a complex and multidimensional concept. One of the main challenges in researching organizational agility is its measurement. The variety and combination of enablers, characteristics, capabilities, and practices make the measurement of organizational agility level highly complicated and subjective. This can be related to the vagueness and definition of agility, which differs from various organizations with their own unique sets of characteristics [18]. The different types of organizations over various industries complicate this task even further. One of the goals of this article is an attempt to move towards more comprehensive and holistic measurement process, which can be applied to different types of organizations.

FUZZY AGILITY INDEX METHOD FOR MEASURING AGILITY LEVEL

To overcome the problem of vagueness and imprecision authors of this article selected a fuzzy logic approach of evaluating the organizational agility level of the enterprise. To measure organizational agility level, set of criteria are selected and evaluated by experts. Experts can be high ranked decision makers in the organization (CEO, director, board member, etc.) or researchers who analyze this field. However, expert opinions are subjective and can be influenced by their character or experience. In order to reduce uncertainty authors of this article use the fuzzy logic method developed by Lin et al., (2006) to analyze responses of surveyed experts, and adapt it to purposes of this article. The fuzzy logic evaluation of organizational agility level is chosen due to several advantages [19]:

1. This method provides realistic and revealing information. It calculates Fuzzy Agility Index (FAI) expressed in a range of values, which allows seeing the overall organizational agility potential and ensures unbiased decision.
2. This method can be used as a self-assessment tool for evaluating organizational agility level. It allows to identify the weak factors and improve them.
3. It provides the rational structure to approach the vague, imprecise and ill-defined phenomena of organizational agility.

According to Lin et al. (2006), fuzzy agility evaluation (FAE) framework, is composed of two major parts. The first part evaluates the business operation environment (agility drivers) and identifies agility capabilities. Organization environment evaluation is needed to identify the agility drivers, which influence the organization to change and reconsider the company's structure, strategy, and process. Organizational agility capabilities are the important abilities that are required to make appropriate responses to changes and respond to the external environment. The second part of the framework evaluates agility capabilities and combine the ratings and the weights to obtain a Fuzzy Agility Index (FAI) of an agile enterprise. Authors of this article enhances Lin et al. (2006) organizational agility level measurement framework by adding two parameters from a conceptual model as discussed in preceding sections – agility enablers and agility practices. Steps of organizational agility level evaluation framework [19]:

1. *Select criteria for evaluation.* Based on analysis of theoretical aspects of organizational agility, the applicable organizational agility enablers, capabilities and practices are selected. Table 1 summarizes organizational agility attributes, which are used to evaluate organizational agility level in fast-growing companies. Each dimension consists of certain attributes, that are formed into groups. Dimensions, attribute groups, and attributes are coded, as presented in Table 1.

Table 1 Organizational agility dimensions and attributes

Dimension	Attribute group	Agility attribute
Enablers (AC ₁)	Structure and processes (AC ₁₁)	- Simple organizational culture and decision-making (AC ₁₁₁) - Easily changeable business process (AC ₁₁₂)

	Human resources (AC ₁₂)	<ul style="list-style-type: none"> - Qualified and competent personnel (AC₁₂₁) - Flexible and open to change employees (AC₁₂₂)
	Network (AC ₁₃)	<ul style="list-style-type: none"> - Easily accessible needed resources (finances, specialists, technologies, etc.) (AC₁₃₁) - Effective supplier, distributor, and business partner network (AC₁₃₂)
	Technology (AC ₁₄)	<ul style="list-style-type: none"> - Easily changeable technology and information system (AC₁₄₁)
Capabilities (AC ₂)	Awareness and competence (AC ₂₁)	<ul style="list-style-type: none"> - Ability to sense changes and identify new business opportunities (AC₂₁₁) - Ability to implement important changes in the organization (AC₂₁₂)
	Reconfiguration (AC ₂₂)	<ul style="list-style-type: none"> - Ability to change organizational resources (employees, equipment, assets, etc.) (AC₂₂₁)
	Learning (AC ₂₃)	<ul style="list-style-type: none"> - Ability to share knowledge and empower employees (AC₂₃₁)
	Coordination (AC ₂₄)	<ul style="list-style-type: none"> - Ability to quickly develop and introduce new products/services to the market (AC₂₄₁)
	Cooperation (AC ₂₅)	<ul style="list-style-type: none"> - Ability to outsource, expand and change business partner network (AC₂₅₁)
Practices (AC ₃)	Organizational (AC ₃₁)	<ul style="list-style-type: none"> - Constant search for new business and development opportunities (AC₃₁₁) - Constant analysis and adaptation to internal and external changes (AC₃₁₂)
	Employee empowerment (AC ₃₂)	<ul style="list-style-type: none"> - Continuously increasing employee competence and qualifications (AC₃₂₁) - Constant sharing of knowledge and information within organization (AC₃₂₂)
	Customer enrichment (AC ₃₃)	<ul style="list-style-type: none"> - Constant improvement of products/services based on customer needs (AC₃₃₁)
	Cooperation (AC ₃₄)	<ul style="list-style-type: none"> - Constant improvement of business network and its support (AC₃₄₁) - Constant monitoring of business partner quality and effectiveness (AC₃₄₂)

Source: author

2. *Determine the appropriate linguistic scale to assess the performance ratings and importance weights of the agility attributes.* Evaluation of importance and weight for a particular organizational agility attribute will be done by surveying experts – company directors. High-growth companies’ directors are selected as a primary data source, due to their deep knowledge of their particular organization - its processes, structure, network, employees, market environment, industry competition and other factors. The questionnaire is used for this article to obtain information from experts – company directors. In order to collect research data a telephone survey was used. The questionnaire used consisted of statements that were structured to reflect the selected agility attributes (Table 1) from 3 dimensions – enablers, capabilities, and practices.

Company directors' responses were used in assigning importance weight and performance rating for each agility attribute. However, it is impractical to determine the concrete value ("crisp number") of importance on one or another vague agility attribute. For example, assigning a specific value to 'employee empowerment' or 'flat organizational structure'. Therefore, authors of this article use 7-point Likert scale applying triangular fuzzy numbers for evaluating performance ratings of agility attributes: excellent (E), very good (VG), good (G), fair (F), poor (P), very poor (VP), worst (W) (Table 2). Importance weights of the agile attributes, they are evaluated using 7-point Likert scale applying triangular fuzzy numbers: very high (VH), high (H), fairly high (FH), medium (M), fairly low (FL), low (L), very low (VL) (Table 3).

3. *Measure the performance and importance of agility attributes using linguistic terms.* After the linguistic variables for evaluating performance rating and importance weights of agility attributes are defined (step 1), the experts use linguistic terms (step 2) to determine the ratings of the performance of various agility attributes. In addition, experts evaluate the importance weight of each agility attribute as it applies to their particular company and industry specifics. Fuzzy numbers are used to evaluate importance weights and performance rating of agility attributes.

Table 2 Linguistic variable for performance rating of the agility attributes

Linguistic variable	Code	Fuzzy number (\tilde{A})		
Worst	W	0,0	0,5	1,5
Very Poor	VP	1,0	2,0	3,0
Poor	P	2,0	3,5	5,0
Fair	F	3,0	5,0	7,0
Good	G	5,0	6,5	8,0
Very Good	VG	7,0	8,0	9,0
Excellent	E	8,5	9,5	10,0
No Opinion	NO	-	-	-

Source: adapted from Lin et al. (2006)

Table 3 Linguistic variable for importance weights of the agility attributes

Linguistic variable	Code	Fuzzy number (\tilde{A})		
Very Low	VL	0,00	0,05	0,15
Low	L	0,10	0,20	0,30
Fairly Low	FL	0,20	0,35	0,50
Medium	M	0,30	0,50	0,70
Fairly High	FH	0,50	0,65	0,80

High	H	0,70	0,80	0,90
Very High	VH	0,85	0,95	1,00
Do not Know	DN	-	-	-

Source: adapted from Lin et al. (2006)

4. *Approximate the linguistic terms by fuzzy numbers.* Applying approximate reasoning of fuzzy sets theory by the linguistic value can be approximated by a fuzzy number [20]. The approximation will be specific for the context of this article – high-growth companies. For example, linguistic variable for Worst (W) performance rating can have a fuzzy number of (0, 0.5, 1.5), where 0 and 1.5 are lower and upper bounds of the available area for the evaluation data. Applying the relation between linguistic terms and fuzzy numbers, linguistic terms are transferred into fuzzy numbers.

5. *Aggregate fuzzy ratings with fuzzy weights to obtain a Fuzzy Agility Index (FAI) of an enterprise.* Fuzzy Agility Index fuses information by combining fuzzy ratings and fuzzy weights of all the attributes that influence organizational agility level. Organizational agility level increases with increasing FAI; therefore, it represents overall agility of an organization. The Fuzzy Agility Index (FAI) of organization can be calculated using the Equation 1.

(1)

$$FAI = \frac{\sum_{k=1}^n (W_{ij} \times R_{ij})}{\sum_{k=1}^n W_{ij}}$$

where:

- FAI – organization’s Fuzzy Agility Index;
- W_{ij} - fuzzy importance weight of the agile attribute *ij*;
- R_{ij} - performance rating of the agile attribute *ij*.

6. *Match the FAI with an appropriate level.* Once FAI is established it can be matched with the linguistic label. Euclidean distance method is a most widely used method for matching the membership function with linguistic terms [21]. It is used in fuzzy numbers logic method for more accurate evaluation of agility level. It helps to attribute Fuzzy Agility Index (FAI) to Agility Level more precisely, in other words - to which Agility Level FAI is closer. The natural language expression set for Agility Level (AL) with fuzzy values are presented in Table 4.

Table 4 Agility Levels

Agility Level (AL)	Code	Fuzzy number (\tilde{A})		
Slow	S	0	1.5	3.0
Fair	F	1.5	3.0	4.5
Agile	A	3.5	5.0	6.5
Very Agile	VA	5.5	7.0	8.5
Extremely Agile	EA	7.0	8.5	10

Source: adapted from Lin et al. (2006)

Then by using Euclidean distance method, the Euclidean distance (d) from the Fuzzy Agility Index (FAI) to each Agility Level (AL) is calculated using the following Euclidean Distance Formula 2.

(2)

$$d(FAI, AL_i) = \left\{ \sum_{x \in p} \left[\int FAI(X) - \int AL_i(X) \right]^2 \right\}^{\frac{1}{2}}$$

where:

d – Euclidean distance

FAI – fuzzy agility index

AL – agility level

EMPIRICAL MEASUREMENT OF ORGANIZATIONAL AGILITY LEVEL

Hypotheses are tested after agility level for the surveyed organizations is determined. Based on theoretical organizational agility aspects analysis, it was observed, that the fast-growing organizations need to adapt to the changing environment, thus they have to be agile. Based on scientific literature analysis the following hypothesis is formed: H_1 : “Majority of high-growth companies’ agility level is ‘very agile’ “.

To test the hypothesis (H_1), cluster analysis is applied. Cluster analysis means the grouping of data in order to incorporate homogeneous data into a group (cluster). Cluster analysis is applied in order to classify available data into several groups so that the elements of each group demonstrate similar characteristics. The article uses cluster analysis in order to enable dividing the companies under consideration into groups according to their agility level. To perform cluster analysis, several methods are used: Euclidean distance and K-means method.

An empirical study into organizational agility was conducted during September 2016. The list of high-growth Lithuanian companies was obtained from “Gazele 2015” project implemented by the business daily newspaper “Verslo Žinios” analytics department [22]. 3576 companies were selected from “Gazele 2015” list for telephone survey based on the following criteria:

- a) Business operations started no later than 2011 January 1st;
- b) Any ownership structure;
- c) Revenue for first accountable year (2011) was between 300,000 and 1,000,000 EUR;
- d) Last accountable year (2014) was profitable;
- e) Revenue grew more than 20% (2014 compared to 2011);
- f) Transparency and openness, which is represented by the consent to publicize their financial results and absence of tax-related liabilities.

- g) Company has been in the same industry for the accountable period (2011-2014)
- h) Company provided valid contact information and name of director

Upon selection of the companies, telephone interviews with their management (directors) were held. In all, directors of 1,227 companies were contacted. 252 of them agreed to participate in the survey. Same questions were presented to all of them and the responses were recorded. 239 questionnaires were used for data processing. Thirteen of them had to be rejected because they were not completed in full. It has been established, by means of the *N* formula, that the sample size is 245 when the margin of error is 5% and the confidence level is 90%. Thus, it can be concluded that the results of the survey are representative and reflect the entire target population.

Before testing Hypothesis, organizational agility level for each company needs to be calculated using Fuzzy agility index methodology. For demonstration purposes, evaluation of organizational agility level will be presented only for one studied company (Company 1). While the calculation of agility level in rest of 238 studied companies will be performed using same methodology. After collecting responses via telephone survey using linguistic terms, performance ratings and importance weights of agility attributes for Company 1 are listed in Table 5.

Table 5 Agility attribute ratings and weights (in linguistic terms) for Company 1

Agility attribute	Importance Weight (W_{ij})	Performance rating (R_{ij})
AC ₁₁₁	FH	G
AC ₁₁₂	L	VP
AC ₁₂₁	H	G
AC ₁₂₂	L	G
AC ₁₃₁	H	G
AC ₁₃₂	L	P
AC ₁₄₁	FL	F
AC ₂₁₁	FL	P
AC ₂₁₂	L	P
AC ₂₂₁	FL	P
AC ₂₃₁	FH	G
AC ₂₄₁	FL	G
AC ₂₅₁	FL	F
AC ₃₁₁	FL	G
AC ₃₁₂	M	G
AC ₃₂₁	FH	G

AC ₃₂₂	FH	G
AC ₃₃₁	FL	P
AC ₃₄₁	L	P
AC ₃₄₂	FH	G

Source: author

In next step, agility attribute performance ratings and importance weights in linguistic terms are approximated using values in Table 2 and Table 3 to fuzzy numbers (\tilde{A}) and presented in Table 6.

Table 6 Agility attribute ratings and weights (in fuzzy numbers) for Company 1.

Agility attribute	Importance Weight (W_{ij})	Performance rating (R_{ij})
AC ₁₁₁	(0.5, 0.65, 0.8)	(5.0, 6.5, 8.0)
AC ₁₁₂	(0.1, 0.2, 0.3)	(1.0, 2.0, 3.0)
AC ₁₂₁	(0.7, 0.8, 0.9)	(5.0, 6.5, 8.0)
AC ₁₂₂	(0.1, 0.2, 0.3)	(5.0, 6.5, 8.0)
AC ₁₃₁	(0.7, 0.8, 0.9)	(5.0, 6.5, 8.0)
AC ₁₃₂	(0.1, 0.2, 0.3)	(2.0, 3.5, 5.0)
AC ₁₄₁	(0.2, 0.35, 0.5)	(3.0, 5.0, 7.0)
AC ₂₁₁	(0.2, 0.35, 0.5)	(2.0, 3.5, 5.0)
AC ₂₁₂	(0.1, 0.2, 0.3)	(2.0, 3.5, 5.0)
AC ₂₂₁	(0.2, 0.35, 0.5)	(2.0, 3.5, 5.0)
AC ₂₃₁	(0.5, 0.65, 0.8)	(5.0, 6.5, 8.0)
AC ₂₄₁	(0.2, 0.35, 0.5)	(5.0, 6.5, 8.0)
AC ₂₅₁	(0.2, 0.35, 0.5)	(3.0, 5.0, 7.0)
AC ₃₁₁	(0.2, 0.35, 0.5)	(5.0, 6.5, 8.0)
AC ₃₁₂	(0.3, 0.5, 0.7)	(5.0, 6.5, 8.0)
AC ₃₂₁	(0.5, 0.65, 0.8)	(5.0, 6.5, 8.0)
AC ₃₂₂	(0.5, 0.65, 0.8)	(5.0, 6.5, 8.0)
AC ₃₃₁	(0.2, 0.35, 0.5)	(2.0, 3.5, 5.0)
AC ₃₄₁	(0.1, 0.2, 0.3)	(2.0, 3.5, 5.0)
AC ₃₄₂	(0.5, 0.65, 0.8)	(5.0, 6.5, 8.0)

Source: author

In next step, Fuzzy Agility Index (FAI) for Company 1 is calculated using equation (1).

$$FAI_{Company\ 1} = (4.36, 5.72, 7.16)$$

Fuzzy Agility Index for Company 1 is (4.36, 5.72, 7.16). Similar FAI calculations are done for all remaining 238 respondents. Next, using Euclidean Distance Formula (2), the Fuzzy Agility Index for Company 1 is matched with Agility Level (Table 4).

$$d(FAI, S) = \sqrt{(4.36 - 0)^2 + (5.72 - 1.5)^2 + (7.16 - 3.0)^2} = 7.35$$

$$d(FAI, F) = \sqrt{(4.36 - 1.5)^2 + (5.72 - 3.0)^2 + (7.16 - 4.5)^2} = 4.76$$

$$d(FAI, A) = \sqrt{(4.36 - 3.5)^2 + (5.72 - 5.0)^2 + (7.16 - 6.5)^2} = \mathbf{1.30}$$

$$d(FAI, VA) = \sqrt{(4.36 - 5.5)^2 + (5.72 - 7.0)^2 + (7.16 - 8.5)^2} = 2.18$$

$$d(FAI, EA) = \sqrt{(4.36 - 7.0)^2 + (5.72 - 8.5)^2 + (7.16 - 10)^2} = 4.78$$

Preceding calculations of Euclidean distance for various Agility levels show, that Company’s 1 Fuzzy Agility Index (FAI) is closest to Agility Level – ‘Agile (A)’. This is represented by the lowest Euclidean distance value of 1.30. This indicates that Company 1 is Agile. Using similar method, Agility Levels for the remaining 238 surveyed companies are evaluated.

Upon selection of companies for the study, distribution by types of industry, and calculating agility level for each company, the hypotheses can be tested. To test the first hypothesis (H₁) ‘Majority of high-growth companies’ agility level is ‘very agile’”, the companies were divided into clusters based on the degree of agility. Two methods were used for this purpose: Euclidean distance method and K-means method. Clustering procedure results using Euclidean distance method are presented in Table 7.

Table 7 Cluster analysis using Euclidean distance method

Industry		Agility Level					
		A		VA		EA	
		count	%	count	%	count	%
	Construction	10	21.7	29	19.7	2	8.7
	Manufacturing	8	17.4	25	17.0	2	8.7
	Transportation and storage	6	13.0	31	21.1	4	17.4
	Wholesale and retail; repair of motor vehicles	22	47.8	62	42.2	15	65.2

Source: author’s calculations

As indicated in Table 7, companies are divided into three clusters: agile (A), very agile (VA), and extremely agile (EA). In order to verify the statistical

significance of the clustering procedure, a chi-square test was carried out; its results are provided in Table 8 below.

Table 8 Pearson Chi-Square Tests for Euclidean distance method

		Agility
Industry	Chi-square	5.991
	df	6
	Sig.	0.424 ^a

a. More than 20% of cells in this subtable have expected cell counts less than 5. Chi-square results may be invalid.

Source: author's calculations

As evident from Table 8, $p > 0,05$ (Sig. $> 0,05$). This means that the chi-square test criterion cannot be applied in the verification of statistical significance as the results may be erroneous. To ensure a more accurate cluster analysis, one more method – the k-means method is used, as already mentioned in the methodological part of the thesis. Results obtained by means of this method are presented in Table 9.

Table 9 Cluster analysis using K-means method

Industry	Agility					
	A		VA		EA	
	Count	%	Count	%	Count	%
Construction	11	19.0	28	22.6	2	5.9
Manufacturing	10	17.2	23	18.5	2	5.9
Transportation and storage	7	12.1	27	21.8	7	20.6
Wholesale and retail; repair of motor vehicles	30	51.7	46	37.1	23	67.6

Source: author's calculations

As can be seen from Table 9, in the case of the k-means method, just as the Euclidean distance method, the companies of the industries are grouped in three clusters: agile (A), very agile (VA) and extremely agile (EA). The Pearson chi-square test is used to verify the results (see Table 10).

Table 10 Pearson Chi-Square Tests for K-means method

		Agility
Industry	Chi-square	14.664
	df	6
	Sig.	0.023 ^a

Results are based on nonempty rows and columns in each innermost subtable.

a. The Chi-square statistic is significant at the 0.05 level.

Source: author’s calculations

Table 10 shows that $p < 0.05$ (Sig. < 0.05), which leads to a conclusion that the chi-square test is statistically significant and can be used for the verification of the clustering results. In this case the chi-square (χ^2) is equal to 14.664 when the degrees of freedom are equal to 6. The limit value of the chi-square (χ^2_{tbl}) is 12.59, when $\alpha = 0.05$. Hence $\chi^2 > \chi^2_{tbl}$, therefore, it may be concluded that the results of clustering are significant. Summarized results obtained through the clustering procedure are presented in Table 11.

Table 11 Summarized clusterization results

	Agility level				
Method	Slow	Fair	Agile	Very agile	Extremely agile
Euclidean distance	0	0	46	147	23
K-Means	0	0	58	124	34

Source: author’s calculations

An analysis of the data in Table 11 shows that in each industry under consideration, the majority of companies fall within the second cluster (very agile). This can be explained that high-growth companies during their last period of growth (2011-2014) have seen major changes in external environment. In order to take advantage of this growth opportunity, they had to adapt and change internally. The fact that they were successful in adapting to this change and grew considerably (on average 165%), shows that their internal organization was agile. Also, it should be taken into consideration, that successful company directors tend to evaluate their organization and its ability to adapt more favorably, compared to less successful counterparts. This can explain the lack of ‘Slow’ and ‘Fair’ agility levels in surveyed organizations of four industries. On the other hand, the number of ‘Extremely agile’ agility level cluster companies have the smallest number of companies. This indicates that even successful companies can improve agility level. This has considerable indications for the importance of organizational agility research for practical purposes. If successful, high growth and profitable companies have a place to improve their agility level, then less successful and struggling counterparts should need more serious improvements. This opens directions for further research in the area of organizational agility and its practical improvement. Therefore, regardless of the method used, all the examined companies are agile, very agile or extremely agile. It can be concluded, on the basis of the study results, that the first hypothesis (H_1) ‘Majority of high-growth companies’ agility level is ‘very agile’ has been confirmed.

CONCLUSIONS

Different methodologies used for evaluation of organizational agility level has been analyzed in this article. Organizational agility level measurement methodology is presented. It is suitable for wide range of the industries and combines organizational agility drivers, enablers, capabilities and practices into one

model. Model of organizational agility evaluation could be beneficial for practitioners when analyzing their organizational agility level, internal factors, and attributes. Future research can be focused on external factors that affect organizational agility on the industry, regional level or market as a whole.

The testing of the organizational agility measurement methodology is based on an empirical survey of directors in high-growth Lithuanian companies. The survey was conducted through telephone interviews. The number of methods were used when analyzing collected responses. The responses were expressed in quantitative terms using triangular fuzzy numbers. Triangular fuzzy numbers method had been selected in order to reduce the inaccuracy and uncertainty of the responses. Fuzzy Agility Index was used to measure agility level for each surveyed company. Cluster analysis was applied in order to group the companies under consideration into clusters and continue the analysis for each cluster individually.

On completion of the analysis, it has been established that all fast-growing companies in Lithuania consider themselves to be agile, very agile or extremely agile. Majority of the being 'very agile'. This can be explained by the success of the surveyed companies. The context of the study was high-growth companies. Gazele 2015 is the list of most successful companies in Lithuania in terms of revenue growth. On average, respondent companies grew 165% and all were profitable. Organizational agility is part of this success and experts (company directors) have evaluated their organizations' agility attributes accordingly. It was concluded that the first hypothesis (H₁) 'Majority of high-growth companies' agility level is 'very agile' has been confirmed.

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RELATIONSHIPS BETWEEN ATTITUDES AND BEHAVIOR OF POLISH CONSUMERS TOWARDS CORPORATE SOCIAL RESPONSIBILITY (CSR)

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ABSTRACT

The purpose of the article is to explain the relationship between attitudes and behavior of Polish consumers towards corporate social responsibility (CSR). The article identifies relationships with consumers making their purchases in shopping centers in 2016.

The paper focuses on empirical research conducted on a group of 415 Polish consumers who do their shopping in stores. The study used a questionnaire, including interviews with the consumers.

The article presents empirical insights on the relationship between attitudes and behavior of Polish consumers towards corporate social responsibility (CSR). The research of the authors confirmed the growing interest of consumers in the issue of social responsibility, especially regarding the producers of purchased products. This issue was examined through questions about the consumer's interest in information about the socially responsible activities of producers of purchased products.

The article indicates the willingness of consumers to adopt new rules in business activity. The growing awareness of consumers and their increasing requirements in comparison with the requirements set by other stakeholders, mean that the trends of sustainable development and social responsibility will be implemented by most enterprises.

This article meets a specific need to investigate how one can diagnose consumer attitudes towards corporate social responsibility (CSR), which point to growing market, social and environmental awareness. It can be said that this awareness influences the functioning of enterprises and the way in which they will perceive social and environmental issues.

Keywords: relationships, consumer attitudes, CSR

INTRODUCTION

Providing products and services in accordance with the defined needs, stated in the placed order, is expressed not only by the act of delivery itself, but also by meeting the recipient's specific expectations closely related to the order. From the consumer's point of view meeting these conditions is the source of satisfaction, while from the point of view of assessing the quality of the logistics process, it determines the level of supplier's adaptability, i.e. the ability to adapt to the customer's needs.

The level of consumer service is a determinant of the efficiency and quality of the supply chain operation. Therefore, enterprises should carry out the assessment of potential and existing suppliers and make their choice on the basis of the supplier's ability to deliver a product compliant with the organization's

requirements. It is therefore justified to define the requirements for these suppliers. In the context of the above, it is necessary to assume that some of the criteria are more important and it is on their basis that a system of such evaluation should be built and focused. The aim of the article is to explain the relationship between the attitudes and the behavior of Polish consumers towards corporate social responsibility (CSR). The article identifies relationships with consumers making their purchases in shopping centers in 2016.

1. COSTUMER ATTITUDES AS A SUBJECTIVE DETERMINANT

Attitudes are developed in the process of thinking and feeling on the basis of knowledge and opinions of other people. They are manifested by expressing subjective judgments, beliefs and preferences, and are the causative factor of human behavior towards similar events and by solving similar problems [1].

The term attitude in the present sense introduced by sociologist F. Znaniecki, who applied it do call the state of mind of an individual in relation to certain values of a social nature [2]. In literature, we meet many definitions of the attitude concept. L. Rudnicki classifies the definitions into three main groups referring to [3]:

- behaviorist tradition or learning psychology W.M. Fuson, W.A. Scott, D. Drob [4] describing attitudes as a kind of disposition to behave in a certain way,
- definitions referring to the sociological concept L.L. Thurstone, H.A. Murray, C.D. Morgan, M. Fishbein, J. Reykowski [5] defining attitude as a specific, relatively permanent, emotional or judgmental relation to the subject or disposition for such a relationship to occur, expressed in positive, negative or neutral terms.

Many researchers adopt the so-called a three-element definition of attitude, according to which the attitude is formed by such components as:

- emotional-judgmental (emotional),
- cognitive (beliefs about a given object),
- behavioral (tendencies to positive or negative behaviors towards a given object).

Concluding the analysis of the definition of attitude, the approach by J.F. Engel, R.D. Blackwell and D.T. Kollat [6] is worth quoting, who describe attitude as a learned predisposition to a favorable or unwilling response in relation to specific action options, and state that an attitude is an assessment of the expected results of the use of a given product. From among many interpretations of the concept of attitude, Z. Kędzior [7] chose the following properties:

- "Attitude is a predisposition of reacting to an object, not actual behavior towards this object.
- Attitude is permanent over time. A change in attitude requires sufficient pressure.
- Attitude is a dormant variable that causes consequences in verbal or physical behavior.
- Attitude is given the primacy of direction. It is related to preferences referring to the object's assessment or feelings towards the object (...)"

The attitude structure consists of three elements: cognitive (information possessed by the individual, allowing to express an opinion about it), emotional (refers to feelings and emotions related to the object) and motivational (a tendency

to act, expressing the individual's readiness to a particular behavior towards object) [8].

Attitudes are among the determinants that are subjective (psychological), i.e. as previously quoted after G. Światowy they make up the "whole of mental properties, processes, and spiritual human values" and are classified as factors related to activating processes (related to human instincts, motivation and emotions creating a motor force that stimulates human action) as well as conceptual and cognitive processes (conscious perception and assimilation of information messages, process of learning and remembering experiences, and thus the elements of mental information processing aimed at getting to know oneself and one's environment with the help of intellect) [9]. As subjective determinants constitute an element that is difficult to assign to any of the above categories, because "apart from the emotional component also cognitive elements participate in developing attitudes, which indicates the comprehensive character of this variable".

There are four functions of consumer attitudes [10]:

- practical, related to the benefits or negative consequences of using products by consumers,
- defensive, related to the protection of the consumer against external or internal threats,
- cognitive, connected with understanding the world and orientation in the world,
- valuing, helping to express emotions or self-concept important to the consumer.

Knowledge of consumer attitudes is the way to effective action through its better adjustment to market requirements in the modern economy.

2. RELATIONSHIPS BETWEEN CONSUMER ATTITUDES AND BEHAVIOR

Consumer behavior on the market, however, is not always directly correlated with the manifestation of certain consumer attitudes. The relationship between consumer attitudes and consumer behavior is determined by many factors, the multiplicity and complexity of which makes it difficult to measure and assess the impact of attitudes on actual behavior. L. Rudnicki divides these factors into two groups [11]:

- a. personality-related, including: other attitudes, contrary to the attitude that affects the behavior, motives contrary to a given attitude, verbal skills, social skills - knowledge about the appropriateness of behavior in a given situation;
- b. situational, including: presence of other people, which may restrict the freedom of behavior, regulations defining the social roles in which the individual is active, which are related to the regulation of specific behaviors, occurrence of other behaviors, changes in the level of generality of the subject of attitude, ability to predict the consequences of events, appearance of unforeseen events causing the disclosure of existing attitudes.

However, one must take into account a very important aspect of attitude, which is decisive for the fact that it determines consumer behavior. The internalization process, i.e. the internalization of influences consistent with the individual's value

system, affects the depth of attitude change. The degree of internalization of attitude determines to a large extent its impact on consumer behavior [12].

The influence of attitudes on behavior is explained by the theory of planned behavior of M. Fishbein and I. Ajzen. This theory presents human intentions as factors that are the basis for predicting the purposeful behaviors of man. The basis for predicting these intentions are attitudes towards specific behavior and subjective norms. According to the authors, in the case when planned and thought-out action is possible, attitudes towards specific behaviors in connection with subjective norms have the greatest impact on behavior [13].

The tendency to behave, in accordance with the attitude is influenced by the availability of attitude, that is, the strength of the relationship between the object and the evaluation of this object, measured by the time in which the man realizes his feelings towards the object of the attitude. The availability of attitude also affects the resistance of this attitude to change - the more accessible the attitude is, the greater the compatibility of behavior with it. People with more accessible attitudes, being more inclined to disregard arguments that contradict their beliefs, are more resistant to change. The experience gained due to contact with the object of the attitude makes the attitude more accessible and resistant to change. It is difficult to change important attitudes. The more a man is connected with the concept of his own person, the more important is the attitude is to him.

In psychology it is assumed that the compliance of attitudes with behavior is high, although many studies have not been able to demonstrate it, because they measure attitudes and behaviors at different levels of generality [14]. It should be noted that in certain situations there are objective difficulties in displaying specific behaviors, which may also weaken the relationship between attitudes and behaviors. According to A.W. Wicker individual's behavior is influenced not only by one particular attitude, but also by other attitudes and motives that are often in conflict with a given attitude [15].

3. DATA AND EMPIRICAL RESULTS

The research was conducted on a group of 415 Polish consumers making their purchase in shopping centers in 2016. The research focuses on examining consumer attitudes based on their statements regarding the CSR concept. Consumer behavior results from these attitudes.

The data contained in Table 1 show that consumers were in favor of holding unethical companies accountable for their activities - as much as 44.5%.

Tab.1 Consequences for an unethical company

No..	Should the company bear the consequences?	%
1.	Yes, definitely, legal, financial and image consequences adequate to the act committed	44.5
2.	Yes, legal consequences without publicity	28.8
3.	It depends on the harmfulness of the act, if the act is - yes	25.0
4.	If insignificant, then no. No answer given	1.7

Source: own elaboration on the basis of the questionnaire research data

Tables 2 and 3 show that the consumer's purchasing decision is influenced by the knowledge about negative or positive actions of the producer. Answers to these questions, as in the case of attitudes, were constructed in such a way as to avoid the need to choose extreme answers - they included a strong, indirect and indifferent option, which did not show any reaction.

Tab. 2 *How does the knowledge about the positive qualities or actions of the producer affect your purchasing decisions?*

No.	The impact of knowledge on the decisions	%
1.	No influence on my purchasing decisions	13.4
2.	I sometimes choose the products of this producer	47.7
3.	I definitely choose the products of this producer	38.9

Source: own elaboration on the basis of the questionnaire research data

In the case of negative features or actions, a decisive reaction is declared by nearly 55% of consumers - they definitely do not choose products of this producer.

Tab. 3 *How does the knowledge about the negative qualities or actions of the producer affect your purchasing decisions?*

Lp.	The impact of knowledge on the decisions	%
1.	No influence on my purchasing decisions	14.9
2.	I sometimes choose the products of this producer	30.5
3.	I definitely don't choose the products of this producer	54.6

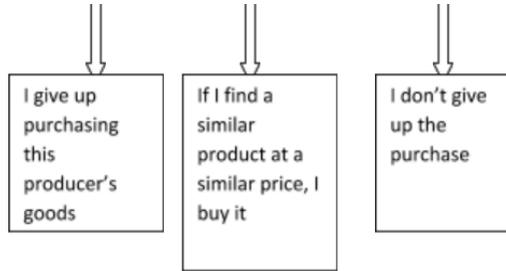
Source: own elaboration on the basis of the questionnaire research data

A number of indications in this question presented an ambivalent attitude - the people presenting it on the one hand highly appreciate and expect responsible business, and on the other hand do not feel enough motivation to "reward" or "punish" the company for certain positive or negative actions with its purchasing decision.

Tab. 4 *How did you react to the following information about the producer of the product you intend to buy?*

No.	Information	I give up buying	If I find a similar one	I don't give up buying
1.	Production of defective products	80	18	2
2.	Harmfulness of a product batch or line	75	13	12
3.	Dishonesty towards customers	51	46	3
4.	Activities harmful to the environment	49	25	26

5.	Corruption and dishonesty of owners and employees	45	23	32
6.	Exploiting employees	67	18	15
7.	Not responding to social criticism	47	11	42
8.	Non-compliance with the law	17	25	58
9.	Lack of care for the common good	20	49	31



Source: own elaboration on the basis of the questionnaire research data

In another question, asking respondents to declare whether they would buy their favorite product (e.g. food, clothing, cosmetics) knowing that its production or use is associated with:

1. significant damage to the natural environment (water, air, soil),
2. killing / destroying any species of animals or plants,
3. employee abuse,
4. fraud, corruption, breaking the law,
5. uncertainty as to the safety of its use,
6. a threat to the existence of certain social values,
7. doing harm to other people.

Answers to this question were ranked on the five-point Likert scale from: "definitely yes", through "rather yes", "rather not" to "definitely not", with the additional answer "I don't know".

The large percentage of respondents declaring that they would not abandon buying their favorite product, even if its production was associated with significant damage to the environment. This attitude is characterized by the tendency of some Poles to specifically justify unethical activities with a different cause, subjectively more important to them. It is also known that often the greatest enemies of social values are producers of goods and services that replace people's family ties, take time, and degrade traditions.

Tab. 5 *Would you buy your favorite product (e.g. food, clothing, cosmetics) knowing that its production or use is connected with:*

No.	Action / effect	Definitely tes	Rather yes	Rather not	Definitely not	I don't know
1.	Significant damage to the natural environment (water, air, soil)	10	7	49	28	6
2.	Killing / destroying any species of animals or plants	5	11	36	40	8
3.	Employee abuse	10	19	40	22	9
4.	Fraud, corruption, breaking the law	8	22	30	31	9
5.	Uncertainty as to the safety of its use	6	19	25	46	4
6	A threat to the existence of certain social values	5	16	42	22	15
7.	Doing harm to other people	5	2	30	55	8

Source: own elaboration on the basis of the questionnaire research data

Another question from the group of questions diagnosing consumer attitudes towards the concept of corporate social responsibility concerned paying for purchased products and services. Consumers were asked there if they would be willing to pay more and how much more for a product of a socially responsible producer.

The answers to this question are optimistic. About 90% of respondents are willing to accept a higher price of the product to a greater or lesser extent, provided that its producer is a socially responsible business.

Tab. 6 Would you be willing to pay more for a product knowing that its producer is a socially responsible business?

No.	Consumer decision	%
1.	Yes, definitely, pretty much more	15.7
2.	Reluctantly, but a small amount - yes	52.3
3.	Yes, but not much more	22.6
4.	No	9.4

Source: own elaboration on the basis of the questionnaire research data

CONCLUSION

In Poland, corporate social responsibility is a relatively new concept, which has been present in public discourse recently in a specific socio-economic situation, unfinished market reforms, openness to the world economy and deepening European integration. Thinking in long-term categories this concept is based on is undoubtedly difficult in Poland, especially when the main problem of many entrepreneurs is the struggle for survival, paying salaries to employees, gaining capital for development, debt collection from debtors or settling disputes with tax

offices. In Poland, according to entrepreneurs, the social and political climate is not conducive to the dissemination and application of the concept of corporate social responsibility.

The research results indicate that consumer attitudes towards corporate social responsibility are definitely positive. The research confirms that consumers have a positive attitude towards the concept of CSR and expect enterprises to implement such activities. They want to be informed about the socially responsible activities of producers of goods and services that they purchase. In addition, they declare their strong reactions to information about negative or positive actions of enterprises.

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SOCIAL INNOVATION IN CLUSTERS AND SMART CITIES

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ABSTRACT

Clusters and smart cities are well aligned with the modern approach of “Open innovation” which depends on the strong interaction between RDI entities, the dynamic entrepreneurship, public administration and the civil society. Social innovation is a challenge for clusters and smart cities as well as for Romania. Clustering and smart cities are team activities and need a common approach in the regional innovation system. Clusters are drivers for social innovation in smart cities and offer solutions to main topics such as: governance, society, mobility, safety, sustainability, circular economy, economy & data & technology. Social innovation is a complex process, which results from the interaction of many entities, public and private, over an extended period. The paper intends to focus on the linkages that involve social relationships or networks that produce benefits for the clusters members and cities and on measures focused on the importance of social innovation that could determine the reduction of the gap between Romania and the other EU Member States. From a methodological point of view, the research paper encompasses 4 components: 1) Clusters and smart cities development in Romania and promotion of social innovation 2) New methods to assess the cluster and smart city impact on innovation, economic growth and social integration, including the testing of methods at the level of the pilot cities Cluj, Timisoara, Alba Iulia, Oradea, Brasov, Iasi, Piatra Neamt 3) Expected results using specific tools for the new methods developed and a large scale dissemination activities including: the elaboration of a Guide on social innovation in clusters and smart cities in the near future; the creation of a national platform for collaboration on social innovation and social entrepreneurship in Romania. 4) Conclusions on clusters and smart cities willingness to embrace this concept of social innovation primarily because there is a new sense of urgency in the need to find solutions to many of the societal problems.

Keywords: clusters, smart cities, social innovation

INTRODUCTION

The **social innovation** in clusters and smart cities is a novelty for Romania as well as for many other countries. Social innovation is a worldwide phenomenon driven by globalization with its main goal to create social change. The growth of social innovation, both in Romania and internationally, has been significant over the last few years, during which time there has been considerable evolution in the

concept and a widening of its application. The more appropriate definition of social innovation within clusters and smart cities could be that of Stanford University (2008) “A social innovation can be a new product, production process, or technology (much like innovation in general), but it can also be a principle, an idea, a new organization, a social movement, a new method, an intervention, or some combination of them [1].

Clusters could promote and support social innovations as products and services. The European Cluster Observatory identified around 3043 clusters with up to 40% of the European workforce employed by companies in such clusters. Employees in strong clusters earn on average 3% higher wages than their colleagues in the same industries but located outside of clusters. This reflects the higher productivity that companies can achieve in clusters [2]. Clusters and smart cities are important components of the European Open Innovation System, where all stakeholders need to be involved and create seamless interaction and mash-up for ideas in innovation eco-systems. Open Innovation 2.0 is a new paradigm based on a Quadruple Helix Model where industry, R&D entities, public administration and civil participants work together to co-create the future and drive structural changes far beyond the scope of what any one organization or person could do alone. There is much that needs to be done to properly establish Open Innovation 2.0 in Europe. There are 5 key elements in the new Open Innovation process: networking; collaboration; dynamic entrepreneurship; research & development; proactive intellectual property management.

Smart City is defined by different people in different ways. A “Smart City” is a city seeking to address public issues via ICT-based solutions on the basis of a multi-stakeholder, municipally based partnership” [3]. People make a city smart. The primary goals of the Smart city include offering digital means for supporting social needs in all daily transactions. It is important to understand that the objective of Smart City is to provide basic infrastructure and give a decent quality of life to city residents through clean and sustainable environment and application of “Smart” solutions.

“When we talk about the smart city, we are definitely talking about social innovation, and so the importance of collaborative networks, partnerships, a community development and citizen participation” [4]. According to Deakin and Al Wear (2011) [5], there are four factors that contribute to the definition of a smart city:

1. “The application of a wide range of electronic and digital technologies to communities and cities;
2. The use of ICT to transform life and working environments within the region;
3. The embedding of such Information and Communications Technologies (ICTs) in government systems;
4. The territorialisation of practices that brings ICTs and people together to enhance the innovation and knowledge that they offer.”

At the beginning of 2015, the European Economic and Social Committee (EESC) adopted a document that sets the basis for a new development and support

strategy for Smart City projects, called "Intelligent Cities as the engine of a new industrial policy in Europe"[6].

The study of the World Bank "Magnet cities-Migration and Commuting in Romania" published in 2017 [7] shows that the large, medium and small secondary cities (outside the capital of Bucharest) are like innovation hubs where the local administration's vision emphasized on raising the quality of people's lives, attracting investments and tourists, ICT and mobility oriented as well as on integration the sustainability as main topic.

The paper intends to focus on the **objectives** related on the innovative capacity of these clusters and smart cities of linkages that involve social relationships or networks that produce benefits for the cluster members and local communities, on important tools and measures to increase social innovation in clusters and cities to become models of good practices for other clusters and cities, on social awareness within clusters and cities to reduce the gap between Romania and other countries as well as on fostering the cross-sectoral cooperation.

The main **barriers** that exist now are related to the followings:

- An insufficient expertise regarding support for social innovation within clusters and smart cities;
- An insufficient cooperation and networking between stakeholders of clusters and smart cities on the dimensions of social innovation;
- A fragmented knowledge transfer on best practices in this field from abroad to Romania;
- A clear lack of exploitation of innovative solutions to address the social challenges within clusters and smart cities;
- The traditional concepts and models of innovation are not adequate to understand socially driven innovation;
- A lack of financing and competences on social innovation, clusters and smart cities;
- Miss of the appropriate methodology to evaluate the social innovation performances in clusters and smart cities.

CLUSTERS AND SMART CITIES DEVELOPMENT IN ROMANIA AND PROMOTION OF SOCIAL INNOVATION

Innovation is the driver of clusters and cities. *Entrepreneurship* is key to the success of urban economy and a source of local improvement. It is not only about job creation, but also about enhancing upward mobility and increasing citizens' self-confidence so that they become active agents of development. The city leaders can boost entrepreneurship and create innovation ecosystems providing a framework for sustainable growth. Innovation eco-systems are similar to clusters, but do not have the same focus on specific sets of related industries. They tend to encompass all activities in a given location (a city or a region) that are connected to innovation.

In Romania there are 320 cities but the Romanian clusters that are working on a smart city sector are few and located around the larger cities such Cluj Napoca, Bucharest, Brasov, Iasi, Timisoara, Craiova, Constanta, Galati (i.e. Cluj IT Cluster develops the strategy for Oradea-the first smart city in Romania and for Sibiu that is part of the pilot project of research and innovation Smart City; Cluster for Innovation and Technology Brasov develops smart mobility in the city of Brasov etc). In this context for developing a Smart City, the focus has to be on people. However, too often the focus on people is neglected. The engagement of people in a city requires to – a) build an enabling environment for public to voice their views and thoughts; b) develop public awareness through sharing and providing access to information; c) identify talents available within the city to provide and implement solutions; and d) form teams to guide, assist, and monitor implementation.

Awareness about smart solutions plays crucial role in developing true smart citizens. In this regard the city authorities cannot ignore to take efforts to raise citizen awareness on the efficient usage of the smart solutions and services in which substantial investments are made. This requires first, education for mind-set change of the people, good governance, and enforcement of law where there is any infringement. To build and implement smart cities successfully, we need to have in-depth insights on the actual needs of citizens of a city and build solutions that are feasible, workable and sustainable in that city. Traditional Smart city model includes separate subject areas or municipal government spheres: transport, healthcare, education, safety, municipal services, environment, the involvement of citizens [8]. The model is oriented on stakeholders – the great number of government agencies, state and business organizations. The city authority goal is to identify all the stakeholders, determine their roles, responsibilities and possibilities, but many stakeholders remain forgotten.

Small and medium-sized enterprises (SMEs) are the weakest part of the national innovation system as demonstrated by a very small share of innovative SME's. In 2016, 34,26 % of the Romanian SMEs have allocated no resources for innovation activities, while 0,63%% of the enterprises have directed more than 76% of the total investments towards innovation [9]. Romania is ranked 62 out of 138 countries for business sophistication in the Global Competitiveness Report 2016 [10]. There is a low level of collaboration between SMEs and research entities demonstrated by only 1928 SMEs that are members in clusters..

Cities can act as platforms to drive innovation, sustainability, mobility, inclusivity. Small and medium sized cities can also contribute to implement new models of business mainly in creative and cultural sectors, tourism and eco-tourism, textiles, wood and furniture etc.

Clusters play an important role as drivers of economic growth and innovation locally, regionally and nationally. Clustering and smart cities are team activities, not a solo effort and the success requires a core of motivated enthusiasts who would also inspire others to join in.

Clusters have emerged naturally and “bottom-up” from the regional level being mainly industry driven ones, out of which the most important are those of the automotive sector, agro-food, energy and eco-constructions, creative and cultural sectors, wood and furniture, ICT, tourism, health and medical sciences.

Furthermore, advanced are also clusters driven by universities and R&D institutes or by the local administration. The capacity of the Romanian cities and regions to innovate depends on many factors such as: the business culture, the skills and competences of the workforce, the existence of effective education and training institutions, innovation support services, technology transfer mechanisms, R&D&I and ICT infrastructure, the mobility of researchers, business incubators, new sources of finance and local creative potential etc. Good governance is also crucial.

Smart specialization strategies help regions to concentrate resources on a few key priorities. Clusters are used by cities and regions as platforms bringing together and mobilizing local actors to design and successfully implement smart specialization strategies, attracting innovative companies and creating more jobs at local level, implement of social innovation and eco-innovation. Clusters facilitate business opportunities and internationalization for SMEs that activate in cities and regions [11].

CLUSTERO - the Romanian Cluster Association www.clustero.eu is created in July 2011 and brings together 45 clusters and individuals with the purpose to coordinate the sustainable development of clusters in the eight Romanian development regions.. The role and activities of CLUSTERO are focused on: information, communication and knowledge transfer and networking; facilitator of the cross-cluster cooperation and internationalization; partner for the national, regional, European and international consortia in various projects; advisory point for new cluster initiatives formation and awareness building, training on cluster management and clusters promotion, helps clusters to develop a visible profile, lobbying etc.

NEW METHODS IN SMART CITIES AND CLUSTERS ASSESSMENT

There are many different ways of assessing the smartness of cities and clusters. The first way of evaluation of city and cluster smartness is the usage of indicators, elaboration of indexes and city/cluster rankings.

Various evaluation methods, models for understanding and conceptualizing smart cities and clusters have been developed to explain smart city and cluster concepts, which aim to define their scope, objectives and architectures.

A meaningful smart city assessment method should be able to measure individual well-being and satisfaction in the city in a comparable and dynamic way which is a very complex goal. Methodological limits, practical and economical obstacles of data collection at settlement level are also affecting the elaboration of better evaluation system. More specific, focusing on city's vision, strength and weaknesses, using bottom-up approach assessment methods are needed.

Evaluation helps a) to explore the current status and position of settlements as smart cities, b) to present the relative position of cities to each other c) to explore the development or "movement" of cities towards becoming smart cities, d) to provide information and model future actions, e) to prepare, establish decisions and to determine development trends.

In comparative analyses, cities are evaluated and ranked according to their different economic, social and geographical parameters, not least in order to determine “leaders” and those, lagging behind, performing better and least settlements. The city rankings and lists were used by the cities as well, to elaborate development priorities and to improve the prestige and image of the settlements. Romanian cities as members of European urban system are facing global challenges as well: urbanization, ageing population, increasing unemployment, inadequate urban housing stock, climate change, environment pollution, unhealthy environment; traffic jams, inadequate public transport services (long travelling time, parking problems, problems of radial transport system); problems of waste management; inadequate support of regional and governmental authorities on sustainable urban development (need for more autonomy) [12].

Smart city uses technology that city services and systems are connected in a more intelligent and effective way and makes investments into human capital to increase quality of life. City administration puts inhabitants not services in to the center (less bureaucracy, more electronic spread of information and data, better capability to share with other institutions, better transparency) and creates an environment friendly and an intelligent transport system. Technology creates huge possibility to monitor the water and waste management and to assure a better public safety. Cost efficient social and health supply system, quality education and an attractive tourism are also important for cities to become smart. In Romania, the usage of opportunities given by ICT is further disappointingly low.

Indicators and indexes are useful tools of preparation of location choices for enterprises or investments. They are also aiming at positioning cities according to their competitiveness, strength and weaknesses. Indicators are helping to elaborate strategic priorities and development possibilities. There are many advantages of using indicators and indexes for the evaluation of city smartness. City rankings attract lot of attention in both scientific and public life. They generate discussion and debate on smartness, competitiveness, quality of life, helping to rethink formerly elaborated strategies and development priorities. They also allow to position cities, can be marketing tools in city promotion and contribute to the success of city leaders [13]. The usage of indicators is relatively simple, clear, easily interpretable, easy to understand, visualize, compare and reproducible in time and space but there are some limits related to data collection, transparency, comparison of different indicators and methods (the lack of some information on social innovation and quality of services) etc.

As indicators and city rankings have their own limitations and problems, other possible methods were developed. One of them is the analysis followed by clustering. Romanian Clusters Association – CLUSTERO developed this method in relation with the “smartness” of a city (i.e. the relationships between Cluj Innovation City and the seven clusters to develop in top areas of agro-food, ICT-2 clusters, renewable energies, creative and cultural industries, wood and furniture, life style). The analysis follows changes in the dynamic of innovation, entrepreneurial culture, use of funds, number of enterprises and jobs created in clusters with influence on the city, progress of ICT (impact of social media, convergence of products and services, trans-sectoral approach of topics of interest, broad band etc), number of tourists, behavior of the consumer (personalization of

products and services, immediate availability of products and services, shortening the life cycle of products, reduction of carbon footprint) etc. Romania adapted the triple helix paradigm (industry-R&D- public authorities) to a so called „Four Clover Model”, the fourth actor being represented by catalyst institutions such as technology transfer centres, chambers of commerce, consultancy companies, civil community etc. Identifying the relevant stakeholders in a cluster is a challenge in Romania. In cities like Cluj, Oradea, Timisoara, Alba Iulia, Brasov, Iasi, Piatra Neamt, clusters help to develop the smart strategy of the city and to implement projects of interest for the quality of life of citizens and for their “happiness”. But there is an increasing demand for including subjective factors into the evaluation. For this reason citizens are asked to fill questionnaires where they have to evaluate their medical status, well-being, satisfaction and happiness. A key issue that was identified when considering happiness of the cities, is the potential for interdisciplinary research aimed at a better understanding of what makes a ‘happy’ city. For this, it is needed to conduct the analysis on a wide range of disciplines including geography, economics, sociology, urban and regional planning and psychology.

The paper shows that the assessment of smart city and cluster performances is complicated because there are many different factors of influence: culture, infrastructure, location, administration, local facilities, capabilities and limits etc. More specific, focusing on city’s vision, strengths and weaknesses, using bottom-up assessment methods are needed for analysis of social innovation within clusters and smart cities.

THE ORIGINAL CONTRIBUTION AND THE EXPECTED RESULTS

The original contribution of this paper consists in the promotion of first research in Romania of social innovation within clusters and smart cities. The methodology will give the possibility to better analyzing, evaluate and compare the social innovation cluster’s performances. Foresight exercises, projects generation seminars, social innovation audits and business review, cross-cutting collaboration, collaboration platforms will be put in practice as tools for social innovation cluster and smart city development and for increasing their performances on the global market. The project proposes a transfer of know-how and innovation to clusters and smart cities from abroad to Romania within of important annual events like ”EU-Asia Gateway 2018 - The 4th Transylvanian International Clusters Conference” that will take place in Cluj.

The research outcomes are the followings:

- A first research on social innovation within clusters and smart cities in Romania, that creates links between research institutions and researchers from abroad and Romania;
- A new guide for social innovation in the Romanian clusters and smart cities;
- A set of recommendations for developing a support infrastructure for clusters and smart cities such as public, private and European funds (programs), training, networking etc.;

- The new topics on social innovation in clusters and smart cities presented at the national/international scientific events (conferences, innovation forums, workshops, seminars) with different target groups: clusters, public authorities, R&D institutions and researchers, SMEs and sectors ;
- A Romanian platform to share opinions on the research project and connected with the official website of the Romanian Cluster Association – CLUSTERO (www.clustero.eu) ;
- Specific leaflets, articles in different reviews about the research project.

CONCLUSION

Clusters and smart cities do not offer an instant solution that will work in all circumstances for the well-being of their members and communities. In Romania, clusters and smart cities are essential, but to be effective they need the right framework of funding, commitment, and support for smart specialization and creating an open space for cross-fertilization. Building trust is critical for cooperation and involves focusing on strengths, adding value and connecting the right people in certain expertise domains.

Smart specialization needs to be broken down into concrete opportunities, as is reflected in the emphasis on niche and value-chain development. This involves a region identifying its own advantages, and becoming the starting point for internationalization and strategic partnering efforts. Local policy makers have to intercept the evolution of the territory to create and consolidate regional branding strategies connected to the clusters and smart cities. Exchange of best practices and cooperation between clusters and smart cities improve their activities, strategy and services, internationalization and communication, marketing and branding, promotion in EU networks and partnerships for EU projects (Horizon 2020, COSME, INTERREG, Creative Europe etc. This paper demonstrates the importance of clusters and smart cities for implementing the social innovation as well as the need of cooperation within European regional networks.

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THE PUBLIC-PRIVATE PARTNERSHIP MARKET IN POLAND IN 2009-2017 COMPARED WITH OTHER EUROPEAN PUBLIC-PRIVATE PARTNERSHIP MARKETS

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ABSTRACT

Public-private partnership (PPP) is an important and attractive way of implementing public services as part of collaboration between the public and private sectors. The attractiveness results from the option of financial engineering of public resources and private capital, with each party fulfilling its own objectives simultaneously and separately. With budget constraints today, co-operation between both sectors increases the effectiveness of public services by risk-sharing and using the private sector's experience in dealing with particular types of tasks, especially in investment. Besides, the private sector provides financing, which allows public sector units to utilize budgetary resources in other areas.

This study aims to analyse the state of affairs and to evaluate the current market of PPP projects in Poland in compared to other European countries. Also, it shows actions undertaken to accelerate growth in this market. The analysis covers the years 2009 to 2017.

The appraisal of PPP in Poland was based on the relevant literature, European PPP Expertise Centre reports, Ministry of Investment and Development reports, Centrum PPP reports and the author's own research. The methods used were descriptive statistics and inferencing. The findings show that the Polish PPP market diverges from other EU markets in the number of projects, their value, structure and character. The prevailing type in Poland are low-value self-government infrastructure projects. In recent years, Polish governments have often taken legislative and promotional action to more engage the private sector in public services. This has resulted in the adoption of a road map for co-operation between the two sectors, in appointing advisory and consulting teams at government level and in numerous training and promotion practices.

Keywords: public-private partnerships, public sector, investments, infrastructure

INTRODUCTION

Public-private partnership (PPP) is an important and attractive way of implementing public services as part of co-operation between the public and private sectors. The attractiveness results from the option of financial engineering of public resources and private capital, with each party fulfilling its own objectives simultaneously and separately. With tight budget constraints today, co-operation between both sectors increases the efficiency of public services by risk-sharing and using the private sector's experience in dealing with particular types of tasks, especially in investing. Besides, the private sector provides financing, which allows public sector units to utilize budgetary resources in other areas.

There are many various definitions of PPP in the literature. It is generally understood as a long-term agreement between the public sector and the private sector with the intention of running a project or offering a service traditionally provided by the public sector. The main aim of the co-operation is to secure funds for designing, constructing, modernizing, operating and maintaining the infrastructure or for long-term services. In such relations, the private party takes on most of the risks of implementing the project [1], [2].

Being a complex structure, PPP requires a legal and institutional framework which will be clear and simple to implement. In addition, it needs efficient preparation by public authorities, high-quality projects, allocation of appropriate funds and a friendly climate for the formula [3], [4].

This study aims to analyse the status quo and evaluate the current market of PPP projects in Poland compared with other European countries. Also, it shows measures taken to accelerate growth in this market. The analysis covers the years 2009 to 2017.

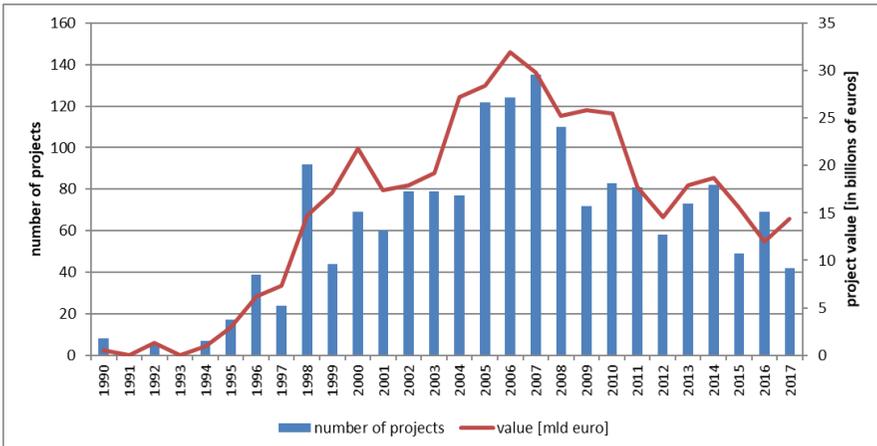
The appraisal of PPP in Poland was based on the relevant literature, European PPP Expertise Centre reports, Ministry of Investment and Economic Development reports, Centrum PPP reports and the author's own research.

1. THE STRUCTURE AND DYNAMICS OF THE EUROPEAN PUBLIC-PRIVATE PARTNERSHIP MARKET

Involvement of the private sector in financing and carrying out public services dates back in Europe to the time of the industrial revolution, urbanization and growing transport. The infrastructure in Europe (and later in America, China and Japan) was built with private funds while public funds covered expenses of manor houses and war effort [5].

In Western Europe PPP developed in the second half of the 20th century and its dynamics increased rapidly in the late 1990s (diag.1). The growing expectations regarding the scale and quality of public services and the considerable infrastructure gap in Europe prompted public authorities to intensify efforts to use intersectoral cooperation to supply technical and social infrastructure [6].

Diag.1. The number and value of PPP projects in Europe in 1990-2017



Source: own elaboration based on data from European PPP Expertise Centre reports for 1990-2017

As shown in Diag. 1, the real boom in PPP projects took place in the first decade of the 21st century to peak in 2006 for the number of financial closes (144) and in 2007 for project value at over 30 billion euros. In years 1990-2017 more than 1,930 PPP contracts were signed with a total value of over 379.74 billion euros.

Those positive trends were broken by the global financial crisis, evidenced by the slump in numbers and total venture value for 2009-2012. 2012 witnessed merely 68 signed contracts to a total value of 12.8 billion euros, which was the lowest for this market since 1999. In 2014-2017 the interest in PPP projects in Europe declined and their number fell from 82 in 2014 to 42 in 2017.

The PPP leader in Europe is the United Kingdom. Its share in 1990-2009 was 67% in the number and over 50% in the value of all PPP projects. Spain ranked second (10.1% and 11.4%, respectively), followed by France (5.4% and 5.3%), Germany (4.9% and 4.1%), Portugal (3.1% and 7.0%), Italy (2.4% and 3.3%), Ireland (1.3% and 1.6%), and the Netherlands (1.2% and 1.8%). In 2010-2017 Britain's influence on the European PPP market decreased to about 30% of total value, giving way to France (23% of closed projects), Italy (8.8%), Belgium (5.8%) and the Netherlands (5.1%). Also Spain and Germany have a high share here. Altogether, those 7 countries have generated contracts worth of 89% of the total European PPP market. The subsequent countries, including Scandinavia and Central Eastern Europe, also follow the PPP mode in their infrastructure investments.

Notably, Turkey's share in the European market is consistently growing. In 2014-2017 it launched 13 projects to the total value of 17.7 billion euros, which amounts to 45% of the European PPP market [7].

Compared to Western Europe, the number and value of PPP projects operated in Central Eastern Europe looks modest. In 1990-2009 their share was 2% of the total number of contracts and 5.2% of the value. Poland ranked second, after Hungary, with its share of 1.7% for value and 0.4% for the number of financial closes [8]. This reflects the immaturity of the markets, delays in initiating relevant

legislation and shortage of specialized institutions to promote PPP. Other reasons of the slow development might be passivity of authorities, psychological barriers (e.g. mistrust or fears of being suspected of corruption) and, lastly, the global financial crisis.

2. THE STRUCTURE OF THE PUBLIC-PRIVATE PARTNERSHIP MARKET IN POLAND IN 2009-2017

Infrastructure development and quality services in line with public expectations are major elements in Poland’s economic development. According to the government’s estimates, maintaining the infrastructure growth rate at the current level until 2030 requires investing capital of 1.5 billion PLN [9]. Public entities’ budgets (including the national budget) do not guarantee sufficient finances to operate projects in economic infrastructure (e.g. transport, natural environment, energy) and social infrastructure (e.g. health care, education, culture, sport and recreation). It is indispensable to engage more private resources in realizing investments and providing public services.

The Polish PPP market, despite the existing legal order in the collaboration of the two sectors, still remains in the initial stage of development, compared to the overall European market. 8 years after new regulations were brought into effect [10], the outcome is 117 PPP contracts signed and 506 private partners selected and announced in the Public Procurement Bulletin. Part of the announcements were about the same projects and they were placed again because the proceedings had been annulled or no bids had been submitted. The index of efficiency (ratio of contracts signed to announcements placed) is low for the Polish PPP market and stands at 23.12%, with peaks of 50% worldwide [11].

Table 1. Number of tenders initiated and PPP contracts signed in Poland in 2009-2017

period	tenders initiated	contracts signed
2009	43	2
2010	60	9
2011	43	11
2012	81	16
2013	70	19
2014	52	16
2015	61	24
2016	60	11
2017	36	9
total	506	117

Source: own elaboration based on: Szymański K., Korbus B., Zalewski D., Analiza rynku PPP, Instytut PPP, Warsaw, Poland, 2017.

This low efficiency in Poland seems to result from misunderstanding the very idea of PPP by both the public and the private party, poor contract processing skills, abandoning professional advice and insufficient social capital.

The total value of the Polish PPP market in 2009-2017 calculated on the basis of published announcements is estimated at 16.12 billion PLN. The real value calculated on the basis of contracts signed is over 5.5 billion PLN.

117 PPP contracts were signed in Poland in 2009-2017. In the first year after the introduction of the new Act of 2008 only two contracts were signed. In subsequent years the number grew steadily. The record of 24 contracts was set in 2015. During the last two years of the period under study the trend was reversed – the number of new contracts fell to 11 in 2016 and 9 in 2017.

As regards the private partner selection procedure used in 117 contracts in 2009-2017, 75 (64.1%) were signed under the Concession Act and 42 (35.9%) under the Public Procurement Law.

Polish PPP investments are mostly made by local governments, which have concluded 76 out of all 117 contracts. The most contracts at an advanced stage of development were signed by urban (37), rural (23) and urban-rural communes (16).

Local governments at a higher level have concluded 12 contracts (province marshal's offices – 9; district governor's offices – 3). Only 5 contracts were signed by the central government administration. The rest of the contracts were concluded by entities linked with local governments, by state budget entities or by executive agencies.

The degree of interest in PPP in a particular public service sector depends on the degree of infrastructure underinvestment in that sector and on the relative accessibility of public funds (local, central and EU). Also, what is very important in successful matching public and private interests is the economics of the very enterprise, especially its ability to generate income and thus guarantee self-financing of the project throughout its implementation. During the period studied, most interest focused on the following sectors: energy efficiency (19 contracts), sport and tourism (16), transport infrastructure (16), sewage and water treatment (13), telecommunications (11). In all, in the above-mentioned 5 sectors 75 contracts have been concluded, which amounted to 64,1% of the whole Polish PPP market. The domination of the energy sector results from the economic profits generated by those projects. Their financing is facilitated thanks to significant savings in electricity consumption costs by using state-of-the-art technological solutions.

Due to the self-governmental character of the PPP market, local governments – proportionally to their needs – plan and implement microenterprises worth up to 5 million PLN. In the period under study, a total of 50 investments were made of a total value of less than 5 million PLN (42.73% of all contracts). The remaining contracts concern investments of various values from 5 to 500 million PLN. There is only one large investment in Poland exceeding 500 million PLN – *Waste disposal system for the city of Poznań*.

Implementation of public services in the PPP mode requires guaranteed funding sources. For 34 contracts (75.55%) the financing was exclusively or almost

exclusively the responsibility of the private partner, who took the whole risk of raising the funds and had to rely on both own resources and debt financing (mainly bank credit). In general, private partners in PPP projects obtain finances in practically the same way and on the same terms as with other investments which they routinely undertake.

For 10 PPP contracts, the hybrid approach has been employed in which both private and EU funds are used. The EU subsidy came from the operational programme for the public partner's home province.

For the picture of the Polish PPP market to be complete, it needs to comprise plans for the future. Public entities declare interest in the PPP formula and they are undertaking more and more analytical studies in preparation for the tender procedure. Until the end of 2017, a total of 113 new PPP investment projects have been recorded. They are each at different stages of completion and so some of them can enter the tender process in 2018 while others have to wait [12].

3. THE GOVERNMENT'S POLICY ON PROMOTION AND DEVELOPMENT OF PUBLIC-PRIVATE PARTNERSHIP IN POLAND

Implementation of PPP investment projects requires extensive action linking legal, economic and organizational fields. Past experience shows that the dynamics of PPP market growth largely depend on positive atmosphere around sectoral co-operation and involvement of central government administration in promotional activities.

Since 2009, PPP collaboration of the public and private sectors in Poland has been regulated by two legal acts: the Act of 19 December 2008 on PPP and the Act of 2016 on concession for construction works or services [13].

In July 2017 the Polish government adopted the document *The Government's policy on the development of public-private partnership* whose aim was to indicate concrete actions to enhance the scale and effectiveness of PPP investments. The government has undertaken to: introduce necessary PPP-friendly changes, monitor the list of PPP investment projects and concluded contracts, raise awareness of PPP through educational and information campaigns, prepare guidelines, model contracts and models of good practice for PPP, organize extensive free consultancy for selected PPP projects, voluntarily evaluate PPP projects planned for implementation in order to confirm their validity, implement an obligatory opinion on the formula of the implementation of state-financed projects worth over 300 million PLN (a so-called PPP test), identify the market's needs and possibly implement a system of warranties for both sectors or other financial instruments with which to lower the costs of preparation and implementation of PPP projects.

The government envisages that thanks to the above-mentioned measures the number of PPP contracts signed will grow till 2020 even by 100 and the value of PPP investments will increase to at least 5% of all public sector investments. 10 private partner selection procedures are to be initiated by the central government and 40% of all procedures (governmental and self-governmental) are planned to close successfully i.e. with signing the contract.

It is too early to assess the impact of the actions adopted because particular ministries are still working on detailed guidelines. Yet, the Ministry of Investment and Economic Development has certainly been successful in implementing an extensive system for information, promotion and consultancy. The webpage www.bazapp.gov.pl provides important information on legal issues, publications, training and advice regarding PPP, which expands the knowledge of sectoral co-operation. Besides, public entities are showing more and more interest in new investment projects in the PPP mode. Having said that, the first concrete measurable results of the government's action should be visible around 2020 and so the final assessment will have to wait until then.

CONCLUSION

The experience of Europe shows that for the public-private partnership to be an efficient solution for investment projects there must be political will of those in power, clear legal regulations and social acceptance. Poland has met the condition of implementing relevant legislation conducive to sectoral cooperation. Before 2017 the action of authorities was limited to declarations which were not followed by practical measures to make efficient implementation of PPP possible.

The Polish market is different from other PPP markets. This is due to the domination of local government projects - with practically none at the central government level - and to the low project value [14]. Also, the PPP sectoral structure is different in Poland. Elsewhere in Europe the prevalent sectors are education, transport and health care, whereas in Poland projects predominantly concern energy, sports, recreation, and transport infrastructure (car parks).

The low efficiency of PPP projects in Poland is determined by various factors. The key ones are[15]:

- the high time consumption of the process,
- the over complexity and high cost-intensity of project preparation,
- distrust of or little knowledge about advisory services and methods and principles of selection and collaboration,
- too few successfully concluded projects and flaws in the standard tender documentation and model contracts,
- poor knowledge and little experience of PPP,
- common stereotypes about collaboration between the two sectors,
- belief that for a PPP project to be in the public interest it should generate income and not charge the public entity's budget.

One should appreciate, however, the efforts of the central government authorities to remove or reduce barriers to the growth of the market in Poland. These actions focus, on the one hand, on advisory and information services by the Department of Public-Private Partnership at the Ministry of Investment and Economic Development and, on the other, on changes in legislation thanks to which small and medium-sized enterprises can access PPP projects. *The government's policy on public-private partnership* of July 2017 is a roadmap for the PPP formula. If the principles adopted there prove applicable and if the atmosphere around the partnership changes, one should expect the volume and value of the market to grow

in the coming years and its structure to change. The Polish PPP market will become more similar to other European and global markets.

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THE TRADE UNION MOVEMENT IN POLAND DURING 1918-1939

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ABSTRACT

The aim of the article is to analyse the formation and functioning of the trade union movement in Poland during the period 1918-1939. The main research problem is the activity and development of trade unions as organizations of the mass labour movement, together with a determination of the main factors affecting the organizational forms and rules of functioning of these organizations. The issue of relations between trade unions and political parties and other social organizations is also presented. Another important issue is the presentation of the role of trade unions in shaping the socio-political attitudes of Polish workers, as well as the fulfilment by these organizations of social, educational, cultural and educational functions. The article uses descriptive and analytical methods appropriate for the investigation of social history.

Keywords: trade unions, social organizations, the Second Republic of Poland (1918-1939)

INTRODUCTION

The functioning of trade unions, their size, ideological foundations, significance, effectiveness of impact and implementation of objectives depends on the specificity of a given country, the conditions of its social and economic life, the quality of political life and finally the awareness of ordinary people making choices whether or not to participate in professional organizations.

For the Polish trade union movement in the interwar period, these circumstances were: a lack of an independent state before 1918 and the functioning of Polish society in the three different social, legal and economic systems of the partitioning states, enormous population and material losses related to military operations in the period 1914-1918, by the necessity for a reborn Poland to fight both for borders and against a Bolshevik invasion, weak industrial development of the Polish lands, the highly diversified ethnic structure of Polish society (ethnic minorities accounted for 31% of the population), the unstable political situation and internal and global economic crises.

DEVELOPMENT OF TRADE UNIONS ON POLISH LANDS BEFORE 1918

The establishment of the first trade unions in Polish territories took place in the last twenty-five years of the 19th century. During this period, the territory of Poland was in the hands of three invaders: Russia, Germany and Austria, which was of fundamental importance to the process of creating and developing a trade union movement. Firstly, because the development of a trade union movement requires full functioning of the sphere of legality. From this point of view, the development of trade unions was possible in the territories controlled by Austria and Germany, where the legal and political system recognized and allowed the functioning of such

organizations. In contrast, in the Russian state, in spite of the functioning of the interim provisions on unions and associations from 4 March 1906, the rule was to limit the activities of trade unions and even subject them to oppressive police activities for any activity considered by the authorities as threatening "public peace." The Russian rules also forbade individual trade unions to be combined into central trade unions.

Secondly, the formation of professional organizations of Polish workers in the partitions of Poland was connected with the necessity to cooperate with the professional organizations of the partitioning state, which concerned especially the socialist movement.

The third important issue was the large ethnic diversity of the working class. There were different sized groups of Jewish, German, Czech and Ukrainian workers. Their attitudes to organizations created by Poles varied from examples of full participation in their structures to a strict enforcement of the separation between national organizations.

The fourth issue was the highly diversified process of organizational development of trade unions in individual partitions. In the Austrian partition they arose as local general vocational associations, which later evolved into organizations related to a specific branch of local and/or central production. They were mostly nonpartisan except for the socialist movement [1] [2].

Hostilities in the period 1914-1918 led to the disappearance of the activities of professional organizations in the areas under Austrian rule. However, thanks to the occupation of the former Russian partition by German troops and the introduction of German legislation, there was a revival of professional organizations in this area.

TRADE UNIONS IN POLAND AFTER 1918: CONDITIONS AND RANGE OF INFLUENCE

The shape and size of the trade union movement in Poland in the interwar period was conditioned by many factors. The most important can be considered: the number of employees in the overall structure of employment, the ongoing economic and social processes as well as political phenomena and processes.

The membership numbers of trade unions seem to depend primarily on the size of the workers' population, their economic status, social engagement and the effectiveness of trade unions in the protection of workers' interests.

A reliable source of data on the number and socio-economic position of workers in interwar Poland is the data of two censuses carried out in Poland in 1921 and 1931. According to them, the number of professionally active workers together with the unemployed was 3036 thousand in 1921, and in 1931 over 4228 thousand. These data include workers employed in all sectors of the economy (Table 1).

The large share (49.0%) of agricultural and forestry workers indicates a weak level of industrialization, and even economic backwardness of the country. It was attempted to change this situation both through free market

activities, but also undoubtedly state economic initiatives (e.g. the construction of a new port and the city of Gdynia, the construction of the Central Industrial District and many others) favoured the development of the working class.

Specification	1921		1931	
	thousands	%	thousands	%
Total	3036	100.0	4228	100.0
Agriculture, forestry	1486	49.0	1337	31.6
Industry, crafts	700	23.1	1039	24.6
Trade	71	2.3	118	2.8
Transportation (except railways)	28	0.9	51	1.2
Railways	133	4.4	143	3.4
Administration, education, culture	109	3.6	206	4.9
Home caretakers	20	0.6	36	0.8
Others	446	14.7	570	13.5
Unemployed	43	1.4	728	17.2

Table 1. Workers professionally active in Poland in 1921 and 1931

The increase in the number of workers was also conducive to the increase in unionization of workers. The unionization rate underwent significant changes during the period from 1918 to 1939 (Fig. 1). The highest value, more than 40%, was obtained at the beginning of the 1920s in the period of Polish state formation, battles for the state border, repulsion of the Soviet aggression and strong social conflicts, and the lowest in the middle of the great economic crisis, when the index of membership dipped to less than 15 %.

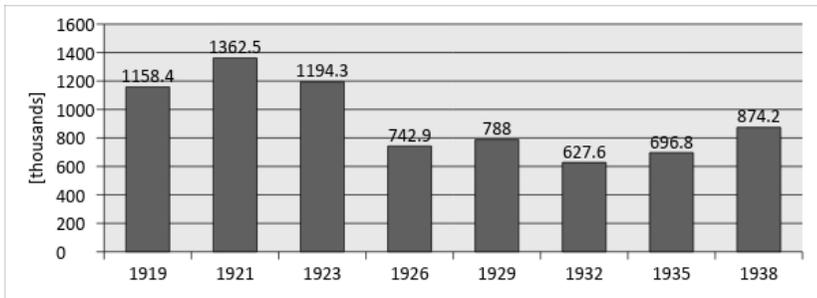


Fig. 1. Membership of trade unions in Poland in the period 1918-1939 [3] [4].

Another factor that strongly influenced the membership numbers of trade unions was migration processes. They were of both a seasonal nature (mainly to Germany and France) as well as permanent emigration (European countries, USA, Canada, Argentina and Brazil). This process was accompanied by a significant re-emigration, especially of seasonal workers, but the overall balance for Polish migration was negative: the balance for the period 1918-1925 amounted to -208,328

people, for the period 1926-1930 it was -253,270 people, and for the period 1931-1938 the migration balance was -32,410 people [8].

Despite the significant fluctuation of the number of members, the number of trade unions was relatively constant. According to the Central Statistical Office, the number of trade unions in Poland oscillated around 300 unions [8].

Factors strongly influencing the functioning of trade unions in interwar Poland were economic and social processes. Particularly negative phenomena were the great inflation in the early 1920s and the great economic crisis of the early 1930s. The latter brought Poland deep and long-term negative consequences (in many industries in 1939, the production volume of 1929 had not been reached).

Positive economic and social phenomena include primarily the expansion of the Polish defence industry in the second half of the 1930s in the form of the Central Industrial District, a large industrial complex built in the second half of the 1930s in the Vistula and San River basin. These investments were based primarily on far-reaching state intervention.

Issues conditioning the functioning of the trade union movement in the sphere of politics can be reduced to two areas. The first one concerns the interdependence of trade unions with party organizations and, more broadly, their affiliation to particular social movements, the second is the area of relations between trade unions and state authorities, particularly significant after May 1926, when in Poland an armed coup took place and Józef Piłsudski and his political camp seized power in the state.

In the Second Republic of Poland, one can speak about the appearance of three models of trade union activity taking into account the influence of the political sphere. The first two of them were a derivative of natural social processes. In one of these models, the political party was the main factor in the integration of the social movement. It was their activists who established professional organizations that were generally heavily dependent on the decisions of the party authorities. This model of cooperation occurred especially in the class (socialist) and communist movement.

In the second model, professional organizations became the main driving force. It was on the basis of their human resources and finances that political parties representing their interests were formed. In this model, trade union officers carrying out propaganda activities for trade unions often conducted a simultaneous propaganda campaign for a selected political party. This model was in force in Poland, especially in the solidarist and Christian-social movement.

The third model of the functioning of professional organizations appeared after Józef Piłsudski's coup d'état in May 1926. The coup took place under the slogans of the repair of the state and, in particular, the ending of party independence, which, according to the coup leaders, was the main cause of the pathology of the democratic system. Aversion to political parties resulted in the passing of the constitution and electoral law that excluded the active role of political parties in the socio-political system (April 1935). The creative role was

entrusted to other social and professional organizations. They were to replace the political parties in determining the list of candidates for election to the parliamentary bodies. In pursuit of the implementation of this system, non-party program trade unions were established, while governing bodies associated with the ruling elite camp were formed. In this model, the unions were often used as a tool of governance and influence over attitudes and social behaviour in accordance with the indications of the supreme authorities of the state.

PROFESSIONAL ORGANIZATIONS IN POLAND IN THE PERIOD 1918-1926

The processes that were initiated in the area of the operation of professional organizations in the rebirth of Poland after 123 years can be seen as a reflection of the general processes taking place in Polish society and the state. The first direction of activities of professional organizations in the period 1918-1926 was the initiation of integration processes aimed at the connection of unions with a similar worldview and ideological profile in nationwide union headquarters covering not only individual partitions, but the whole country.

The basis for such activities was the "Decree of 8.02.1919 on temporary provisions on employee trade unions", which defines the rules for the functioning of professional organizations in the state, together with defining what organizations can be considered to be trade unions. It was stated that trade unions are structures whose goals include "defending and supporting the economic and cultural interests of workers in a given branch of work or related or similar branches" [5].

This decree was in force in the central provinces and somewhat later in the Vilnius region, in other provinces, the legislation from the time of the partitions was in force. This legal status lasted until 1932, when all provisions regarding the functioning of associations and unions in the area of the Polish state were unified.

The second goal was to adapt professional organizations to the massification of structures. In the period after World War I there was a large influx to professional organizations, not only of industrial workers, but also agricultural workers and craftsmen who wanted to create and participate in trade unions.

The consolidation processes taking place in the early 1920s led to the emergence of several nationwide union headquarters. The most numerous of them belonged to the Union of Professional Associations (UPA) and the Polish Professional Union (PPU). The Association of Professional Associations was an emanation of the socialist (reformist) movement onto professional ground. It was headed by activists of the Polish Socialist Party (PSP) Jan Kwapiński and Zygmunt Żuławski, and in 1926 it had almost 270,000 members. The Polish Professional Union was a union headquarters derived from the territories annexed by Germany, established in 1902 in Bochum among Polish emigres in Wesfalia. It proclaimed the principles of social solidarism, was based on Christian values and was moderately nationalistic. After moving its headquarters from the Ruhr area to Poznań and consolidating the unions in the Wielkopolska and Upper Silesia regions, and then consolidating with the Polish Workers' Unions "Work" from the Russian Partition, it commenced organizational operation in the former Austrian Partition. In 1926, this headquarters had almost 380,000 members [9].

The third professional association was made up of Christian trade unions based on the social teaching of the Catholic Church and, above all, on the encyclical of Leon XII "Rerum Novarum" referring directly to the so-called worker question. These unions evolved in each of the former partitions, and the consolidation processes were much slower in this branch of the labour movement. The establishment of a nationwide headquarters was preceded by the creation of several local headquarters. In 1926, Christian trade unions comprised about 120,000 people.

In the mid-1920s, another national centre of trade unions was established, the causative factor being the nationalist People's-National Union. Later, the headquarters became the trade union "Polish Work". Before 1926, it comprised up to 15 thousand members.

The main objectives of trade union activities in this period include, first of all, caring for the development and subsequent protection of the labour legislation. In the first period of reconstruction of the Polish state, in the years 1918-1920, there were two situations that had a particular impact on the development of labour legislation. The first of these was the high activity of the masses of workers, connected with the aspirations to introduce democratic, equality foundations into the state system. The second was the threat of a Bolshevik invasion and the pursuit of political spheres to draw workers away from their possible support. Both of these situations influenced the adoption of normative acts constituting broad workers' rights. The Polish social legislation in this period should be regarded as one of the most progressive in Europe at the time. However, already in 1921-1926, social reforms slowed down considerably, and the main concern of professional organizations was to ensure that there was no regression in this area. In particular, legislation on working time, the law on leave and the act on the protection of women and young people and unemployment insurance were under attack.

In addition to activities related to shaping the labour legislation system, trade unions performed daily tasks related to the protection of employees in specific places of employment. The basic tool of pressure was a strike. The number of strike actions undertaken in individual years was dependent on macroeconomic and local conditions.

Trade unions carried out both economic strikes as well as political, demonstrative and solidarity strikes. The main reasons for the strikes were: an increase in earnings (this is the most frequent cause of strikes, generally about 70%), issues of food supply (this reason for strikes played a special role in the first years of Polish state formation), demand for recognition of a trade union, admission of workers to work, non-compliance with the 8-hour working day, the issue of collective agreements, medical assistance, improvement of working conditions [8].

Trade unions also undertook a number of other areas of activities related to raising workers to a higher level in terms of culture. This goal was achieved through the creation of libraries, reading rooms, choirs, readings on political and social issues, publishing and cooperation with workers' cultural and educational organizations (for the socialist movement it was the Workers' University

Society, for the national-solidarist direction it was the National Workers' University, for the Christian-social movement it was the Christian Workers' University) [6].

PROFESSIONAL ORGANIZATIONS IN THE PERIOD 1926-1939

The coming to power of the Pilsudski camp (the so-called Sanation) led to significant changes in the functioning of the trade union movement. Their source was two processes. The first concerned activities undertaken as part of the Sanation that caused splits in political and professional organizations that opposed the new government. In this way, the Polish Trade Union "Work" reappeared, which in 1926 separated as an independent organization from the PPU structures and the Central Association of Class Trade Unions appeared, which was the result of a split from the unions directed by the PSP in 1928 [7].

The second process initiated by the May Coup in 1926 was the emergence of new trade unions in terms of professed ideology related to the Sanation camp. These were syndicalist relationships, based on the ideology of Georges Sorel and Stanisław Brzozowski. Syndicalism assumed the primacy of economic over political targets in the struggle of workers for their rights. The main tool for this fight were to be trade unions, not political parties. Syndicalism manifested itself especially in the activity of the General Labour Federation (GLF) established in 1926, and then in the Union of Trade Unions established in 1930 (UTU). GLF and UTU belonged to the reformist trend, they were patriotic and pro-state in nature. The leading theoreticians of Polish syndicalism were: Kazimierz Zakrzewski, Jerzy Szurig and Janusz Rakowski [10].

At the end of the 1920s, there was also an attempt to build a legal communist headquarters of trade unions. Communists were present at all times in the trade union movement in Poland. They were mainly active in the structures of class (socialist) unions, often taking over the authorities in individual trade unions at the local level. Communist organizations in interwar Poland were treated by state authorities and institutions as subversive organizations acting on behalf of the Soviet Union, therefore every attempt to legalize such an organization, whether political or professional, was denied. It was no different in the case of the establishment of the initiative by activists of the Polish Communist Party (PCP) of the Organizing Committee of the Trade Union of the Left.

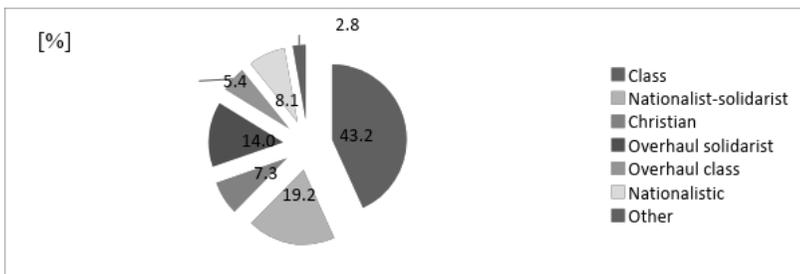


Fig. 2. Social and political orientation of trade unions in Poland in 1938.

In 1935, Józef Piłsudski died, which became the source of a far-reaching break-up of the Sanation camp and the creation of new centres of political integration.

This process took almost two years and ended with the establishment of the Camp of National Unity (CNU). The basing of CNU's activity on nationalist ideology discouraged it from cooperation with the trade unions that had so far been supporting the Sanation camp, especially UTU. Therefore, under the auspices of CNU in 1937, a new trade union centre was established under the name of the Union of Polish Trade Unions (UPTU). In a short time, the UPTU achieved great organizational success, the basis of which was the support of the state administration and the development of the Central Industrial District and the involvement of workers employed in newly established enterprises in the ranks of the UPTU trade unions (Fig. 2).

The ruling camp treated the UPTU as a platform for the unification of the trade union movement in Poland. An example of an attempt to implement this trend were talks with other trade union headquarters, especially PPU and Christian Trade Unions. As a result of these talks, a joint declaration was published, titled the "Agreement of the Polish Workers' World". It provided the basis for the creation in August 28, 1939 of an Inter-organizational Workers' Council as a joint governing body. Further consolidation processes were interrupted by the outbreak of World War II.

In 1937, trade unions were formed that were associated with the extremely nationalistic formation of the National Rehabilitation Camp "Falanga" (NRC). Initially, they adopted the name of the Provisional Committee of National Trade Unions, and then they were transformed into the National Labour Organization. They preached anti-capitalist slogans combined with anti-Semitic and anti-Communist slogans. However, they did not manage to obtain more serious influence and after a short period of operation it was decided to include them in the UPTU.

CONCLUSION

Trade unions played a very important role in Polish social-political life of the interwar period, both in the dimension of shaping the living conditions of the masses of workers and in the area of shaping their social and civic awareness.

The trade union movement in Poland in the interwar period was a pluralist movement, both ideologically and organizationally. Its achievements were the introduction and then protection of the social legislation system, participation of representatives in institutions responsible for health protection of employees, conducting activities for workers in the form of a cooperative movement (consumers, housing, etc.) and broad ideological and cultural-educational activities contributing to raising the standard of living of the mass of workers crowds and their families.

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WORK VALUES OF Y AND Z GENERATIONS AND THEIR ADAPTATION IN NEW WORKPLACES IN THE SERVICES SECTOR IN LATVIA

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ABSTRACT

The population of the world is divided into generations by age, global events experienced during their life, tendencies in the epoch, and scientific achievements. Influenced by these factors, individuals representing a certain generation develop common understanding of the world, traditions, experiences and culture, which facilitates development of similar values and skills. Upon hiring a new employee, the aim of every company is to have as short an on-boarding period as possible and to start using their knowledge and skills within the shortest times possible. To make this essential part of the working process bilaterally valuable, adaptation of the employee needs to take place within the company, and it should also include finding out the values of the new employee. The young people of today represent the future workforce. The research topic is of significance because a new and scantily researched generation, called the Z generation, is currently entering the Latvian labour market. The purpose of the research study is to find out the work values and aspects of adaptation of the Z generation as well as identify the differences between the work values and aspects of adaptation of the Y generation and those of the Z generation. The key research question are the following: Are there differences in the evaluation of the factors of adaptation between the Y and Z generations, are there differences in the work value indicators between the Y and Z generations, are there statistically significant differences within the demographic data groups in the work value and adaptation in a new workplace indicators? The methods used in the research study: A survey regarding work values, a value orientation test, and a survey developed by the authors regarding factors of adaptation. The results of the study revealed that the employees of the Z generation find it important to be proud of their place of work and be able to recommend it as a good place of employment to their friends. Furthermore, the respondents representing the Y generation find the relationships with the colleagues and the direct supervisor important. The most substantial difference between the Y and Z generations can be seen on the Adaptation scale, and this suggests that the factors of adaptation have more influence on the Y generation than on employees representing the Z generation. Each generation has their own attitude towards certain work values. For individuals representing the Y generation, the relationships with the superiors are of a higher value than for the employees representing the Z generation. Regardless of the fact that individuals representing generations Y and Z are young people, there are difference in the orientation of the work values between the generations. Regarding the factors of adaptation in a new workplace, the authors found out that adaptation in a new place of work was important for a new employee regardless of their age.

Keywords: Work Values, Y and Z Generations, Adaptation

INTRODUCTION

A generation is more often defined as an identifiable group with a similar year of birth, age, location and the significant events in life at critical points in their development [1]. A generation is characterised by belonging to certain time [2]. The concept of generation allows to consider the historical dimension of time [3]. Those born in the 80-ies and later are called the Y generation or the millennials [1]. It is the first generation of the new millennium whose life is significantly distinguished from the previous ones by the use of new information and communication technologies [4]. Technologies have had an immense influence on this generation [5]. The contemporary youth rely on their own experience and evaluation of it, shape their lives as an ongoing project, free from previously placed road signs [6]. The Z generation, in its turn, is called the online generation, which has been growing up and is online 24/7. This where the opinion that people of this generation tweet more than they meet their friends in person comes from. Technologies are the labelling of this generation [7]. Considering that the people of the Z generation are currently 18 - 20 years old and younger, the most important events which influence the development of the generation are still ongoing [5].

Adaptation means inclusion of a person into a new thematic and social life. When a person goes to work, they are included in the system of internal work relationships, taking several positions at the same time. The employee sets requirements to the organisation regarding the working conditions, payment, cooperation, career opportunities, social environment [8]. The essence of adaptation is the mutual adaptations of the individual and the environment, both material and social. Before they can work efficiently in accordance with the new requirements, they need some time to accommodate to the new place or the new organisation[9]. The professional aspect of adaptation is acquisition of abilities and skills, certain personal qualities which are necessary for a new place of work[10].

Milton Rokeach defined values as enduring conviction that certain behaviour or the result attained through certain action is personally or socially welcome [11]. One of the first authors who started researching work values in particular was Donald Super. He explained that “work values show the individual's attempt to fulfil their psychological or physical needs” [12]. Work values develop in interaction with other people [13]. If the particular work values of the individual are not satisfied at work, the employee will not feel satisfied with their work, and it will influence the results of work [14],[15].

The services sector can be considered as one of the fastest-growing sectors in Latvia in the last few years which plays a more and more significant role in the economic development of Latvia and facilitates improvement of welfare. The services sector has the largest number of employees. The purpose of the research study is to find out the work values and aspects of adaptation of the Z generation as well as identify the differences between the work values and aspects of adaptation of the Y generation and those of the Z generation.

DESCRIPTION OF RESEARCH METHODS

The authors used 3 methods for the collection of the data: M. Rokeach's value orientation research method which is based on a terminal and instrumental values. A survey developed by the authors regarding adaptation at a new place of work, where the statements were divided into 5 scales: Adaptation; Job responsibilities; Relationship with colleagues and immediate superior; Working conditions and working environment; Place of work. The third method was Super's Work Values Inventory. The Work Values Inventory contains the total of 45 statements covering 15 values which people believe to be essential in their work, i.e., altruism, aesthetic values, prestige, economic advantages, professional stability or security, working atmosphere, relationship with superiors, relationship with colleagues, lifestyle, creativity, management of other people, professional achievements, independence, diversity and intellectual stimulation. The total number of respondents in the research study was 364, including 182 respondents representing the Y generation and 182 respondents representing the Z generation. The respondents were employed at the time of completing the survey. The key research questions are the following: Are there differences in the evaluation of the factors of adaptation between the Y and Z generations, are there differences in the work value indicators between the Y and Z generations, are there statistically significant differences within the demographic data groups in the work value and adaptation in a new workplace indicators?

DATA ANALYSIS

The evaluation of the results of the survey designed by the authors shows that the availability of adaptation at a new place of work is an essential factor for the employees of the Y and Z generations. The scale working conditions can be highlighted in the overall analysis of the results. It is important for a new employee that the premises at the place of work have all amenities and that they are satisfied with the availability of the technology, tools and materials necessary for work. The employees of the Z generation have a higher score on the place of work scale which includes statements regarding the image of the employer, the reputation of the company etc. Furthermore, the respondents representing the Y generation find the relationships with the colleagues and the direct supervisor important. The employees of the Z generation find it important to be proud of their place of work and be able to recommend it as a good place of employment to their friends. It is essential to have a sense of responsibility for the overall performance of the company. The employees of the Y generation, in their turn, find it easier to adapt themselves in a new team, and they can describe their relationship with the colleagues as good. The employees of the Y generation find it more important to be aware of their performance and receive support from their direct superior. The summarised data table (see Table 1) shows that there are statistically significant differences between the scales adaptation, job responsibilities and relationship with direct superior. The representatives of the Y generation find it more important to feel welcomed at the new place of work, and it is important for them that the initial impression about the company corresponds to the actual situation. The respondents representing the Y and Z generations noted that it was essential for them to get to know their job responsibilities during the first week of employment. The employees of the Z generation find it important to have their performance evaluated after

having worked for one month, but the employees of the Y generation need it evaluated after two months of work.

Table 1. The results of the study of the differences in the adaptation survey designed by the authors

	Adaptation	Job responsibilities	Relationship with colleagues and immediate superior	Working conditions and working environment	About place of work
Mann-Whitney U	10924.500	13118.000	14375.000	16354.500	16231.500
Asymp. Sig. (2-tailed)	.000	.001	.028	.833	.740
Z generation	2.8591	2.8487	3.1222	3.3407	3.2013
Y generation	3.1194	3.0391	3.3508	3.4890	3.1826

The analysis of the results of Super's Work Values Inventory shows that the employees of the Z generation give the highest priority to the working atmosphere aggregate of values. This means that the employees of the Z generation find a pleasant environment as one of the most essential work values. The next work value the employees of the Z generation have high ratings for is the relationship with the colleagues. The employees of the Z generation find it important to know they are team members. The above shows the social activity and communicability of the Z generation. It should be noted that the Z generation has the lowest ratings for the work value of managing people, power over others. The authors think that the reason for such a result might be that the Z generation still does not have enough job experience to organise and manage the work of others.

Table 2. The results of the study of the differences in Super's Work Values Inventory

	Lifestyle	Professional stability	Relationship with colleagues	Aesthetic values	Prestige
Mann-Whitney U	12560.500	14965.000	12095.000	11863.500	12571.000
Asymp. Sig. (2-tailed)	.000	.103	.000	.000	.000
Z generation	3.0128	3.3174	3.2534	2.9242	2.9216
Y generation	3.4125	3.2805	3.4748	2.6096	3.0912

There are statistically significant differences on the scales: lifestyle, relationship with colleagues, aesthetic values and prestige. The employees of the Z generation find it important to use their creativity in work, to have the beautiful as their contribution to the world, and to make an attractive product. There is a high rating for the work value lifestyle. The authors think that, because of their age, the employees of the Y generation focus on creating their family and therefore pay more attention to their lifestyle and spending time outside work. The data analysis shows that the respondents have high ratings on the scale professional stability, which is being certain about having a job forever. The lowest rating is on the scale aesthetic values which is the possibility to use creativity at work, contribute the beautiful to the world. Working atmosphere is given as the most significant work value by the representatives of the Z generation, and this suggests that young people find it important to have a pleasant environment. Another important aspect is that the employees of the Z generation find it essential to have an ergonomic and ecologic place of work. The most significant difference is on the scale lifestyle. The employees of the Y generation pay more attention to their lifestyle as “work – life balance”. Compared to the respondents representing the Y generation, the representatives of the Z generation find the aesthetic values, i.e., the visual appeal of the content of work, more significant.

The analysis of the results of the Rokeach Test shows that, compared to the Y generation, the Z generation has a more significant difference on aim to achieve public recognition, i.e., recognition and respect from the surrounding team members. The aim of the Y generation, in its turn, is materially secure life, i.e., life without material difficulties. The representative of the Y generation have the top priority for cognition, which suggests that the employees of the Y generation strive for an opportunity to widen their education, mental outlook. The above is confirmed by the fact that interesting work comes second. The representatives of the Z generation have freedom in the first place, i.e., the employees of the Z generation strive for autonomy and independence in their judgements and action. Furthermore, materially secure life comes second in the list of goals of the individuals representing the Z generation. The representatives of the Y generation have the lowest rating for the value high standards for themselves and life. For the

representatives of the Z generation, in their turn, willpower is in the first place, i.e., the skill of achieving what they wish, not surrendering to hardships. Overall, the generations have differences between the work values.

Table 3. Rokeach Value Orientation Test sample – The goals people strive for

	Interesting work	Cognition	Happy family life	Materially secure life	Public recognition
Mann-Whitney U	10144.000	11679.000	12652.500	11058.000	12207.500
Asymp. Sig. (2-tailed)	.000	.000	.000	.000	.000
Z generation	7.8352	8.0165	6.3242	9.3681	10.4725
Y generation	10.5549	10.7582	4.9286	5.8956	12.7697

The representatives of the Z generation have higher ratings for the statement regarding self-control and not putting up with own imperfections. The individuals representing the Y generation are the ones who put up with own imperfections more easily and forgive imperfections of others more easily, and this allows to state that the employees of the Y generation are less interested in correcting any errors in their work. Considering that Rokeach views the general listing of values which provides more evidence for the personal qualities of a person, it should be considered as an additional tool in the study to better understand the differences between the generations.

CONCLUSION

Regardless of the fact that individuals representing generations Y and Z are young people, there are difference in the orientation of the work values between the generations. Regarding the factors of adaptation in a new workplace, the authors found out that adaptation in a new place of work was important for a new employee regardless of their age. The personnel department should take care that the new employee understands their role in the company, their job responsibilities and the structure of the company management as well as accepts the values, models of behaviour and traditions of the organisation. The employees of the Z generation find it important to be proud of their place of work. It is essential to have a sense of responsibility for the overall performance of the company. The respondents representing the Y generation find the relationship with the colleagues import. It is important for the employees of the Y generation to know that they do good work, i.e., the sense of satisfaction is essential for them, and the employees of the Y generation strive for results of work to a higher extent. The employees of the Y generation pay more attention to their lifestyle. The representatives of the Y generation strive for a happy family life more than the Z generation. The employees of the Y generation find it important to know that there are various things to do at work instead of doing

the same things over and over again each day as well as to know that the employee of the Y generation can expect changes at work in some time, such as changes in the content of work, the salary or work schedule. The employee of the Z generation who starts a job find it important to have a pleasant working environment. The employer should find an opportunity for having the first day of work of the new employee as an informative day during which the new employee would receive valuable information about the company, the internal procedures, the informal rules, the traditions within the team, and also make sure that the information provided to the employee is perceivable and understandable. Particularly when the new employee is a representative of the Y generation. Furthermore, it is important to familiarise the new employee with the colleagues and the direct superior on the first day of employment. In case the direct superior does not participate in the job interview, the superior should have a brief job interview with the new employee on the first day of employment. Since cognition is a priority for the representatives of the Y generation, the employer may use the rating for drawing up an incentive programme for the employees to offer the new employee training, career development courses as well as a system of bonuses (offering the employee to attend cultural events or seminars for good performance). The priority for the Z generation is freedom, so the employer should allow the employees of the Z generation to have more liberty in making decisions. Furthermore, it can be concluded that the employees of the Z generation strive for freedom with regard to their hours of work, so the employer may use this to offer the employees of the Z generation as flexible working hours as possible. The employer may use the rating in such a way that, when motivating the employee of the Y generation to stay at the place of work during the adaptation period, they should emphasise what further perspectives and positive changes in the material sense the new employee may expect and inform them what system of bonuses the company has. A representative of the Z generation may be given opportunities for improving their education, widening their mental outlook, raising the overall level of their culture and intellectual development, and having an interesting job. The employer having a new employee of the Y or Z should consider the work value factors which characterise each generation and influence the employees, as well as the adaptation factors which should be taken into account as factors influencing the work of the employee.

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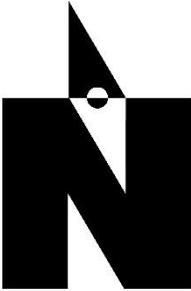
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Section ECONOMICS AND TOURISM

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DIGITALIZATION AS A COMPONENT OF THE WORLD ECONOMY

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ABSTRACT

Nowadays developed and developing countries start and continue to develop theoretical and legislative base of economy digitalization, increasing practical experience of introducing new technologies in the economical processes of at the same time. The article investigates the emerging technologies value in the economy and the economic growth of some selected countries. Authors summarise reports and researches of international organizations and scientific schools that explore such issues as smart technologies, informatization, digitalization, and so on. Taking into account the new technologies implementation features in the production processes of the selected countries provides scientific novelty of the paper. Authors describe the features of digitalization in different countries and group them according to the trends of the phenomenon. Economic, statistical and mathematical methods are used in the paper. In conclusion, the authors combine solutions from different countries to make recommendations for the exchange of experience.

Keywords: digital economy, digitalization, information society, emerging technologies, international comparisons.

INTRODUCTION

In recent years digital technologies became the effective tool in the economic relationship arising in the course of production, distribution, exchange and consumption of the benefits between economic subjects. In July, 2017 in Russia the state program "Digital economy of the Russian Federation" in which the complex of tasks which solution has to promote realization of strategic national priorities of the Russian Federation is established has been adopted. [1], [7]

Widespread introduction of these technologies in economic activity of society stimulates profound infrastructure changes in scales of all global economic space. By data for 2016 the specific weight of the sector of information and communication technologies (further – ICT) in Russia was 2,8%. In 2017 specific weight occupied in the sector of ICT in the total number of the busy population was 1,7%. [2]

The sector of ICT not only stimulates process of informatization of society in many developed countries, but also is the most dynamic segment of national economy and has significant effect on rates of economic growth. Now the majority of the countries seeks for formation of information society, and the most priority directions of development are creation of the electronic government, introduction of information technologies in education, culture and health care.

WORLD TRENDS OF DEVELOPMENT OF DIGITAL TECHNOLOGIES

Tendencies of global world development of digital technologies are crucial for increase in competitiveness of economy, expansion of opportunities of her integration into the world system of economy, safety in society, stimulations of innovations and creation of new jobs. The level of development of the sphere of information and communication defines her place in world economic, political and social spaces. Due to the above, one of important questions creation of rating of the countries on the level of development of ICT in world information community and in a way of his measurement as which the index of development of ICT (IDI) acts is.

The index of development (IDI) allows to carry out classification of the countries with use of the indicators relating to infrastructure, use of ICT and skills of work with ICT. The purpose of carrying out the real research is objective international assessment of efficiency of branch of ICT on the basis of quantitative and control indices which will serve as the major contribution to discussion of policy in the field of ICT in Member states of the International Telecommunication Union (further – MSE). [3]

According to data of the International Telecommunication Union for the last year IDI values have grown in all countries of the considered selection, but differences in prevalence and use of ICT remain. Growth of values of the ICT index demonstrates the continuing expansion of access to ICT and their increasing use, these results also pay attention that the present levels of development of ICT in the world very strongly differ, and IDI values vary from 0,96 (Central African Republic) to 8,98 (Iceland). Following the results of 2017 Iceland is in the lead in ICT rating with the highest value of the integrated index (8,96 points), having pressed long time winning first place Republic of Korea (8,85 points) (fig. 1).

Other countries entering the top ten on IDI are mainly in Europe (Switzerland, Denmark, the United Kingdom, Norway, the Netherlands, Finland and Luxembourg) and also in the Pacific Rim (Hong Kong - China). So, Great Britain, takes the fifth position with value of rating 8,65 (a gain for 8,1% on comparison with the level of 2013), Japan, is in the 10th place - 8,43 points (an index gain in a year for 1,3%), Australia (8,24 points) and the USA (8,18 points) share the 14th and 15th place according to a gain for 4,3% and 8,6% of level of 2013 Finland takes the 22nd place in rating with the index 7,88 points. It should be noted that in dynamics of the developed countries saturation process is observed by information technologies owing to what the rate of a gain of the integrated index has the fading character. The smallest gain of the ICT integrated index among the considered set of the countries characterizes Germany and Korea – less than 1%. [4], [5], [6] Distinctive features of the countries - leaders in IDI are high levels of income, the competitive markets and the qualified population.

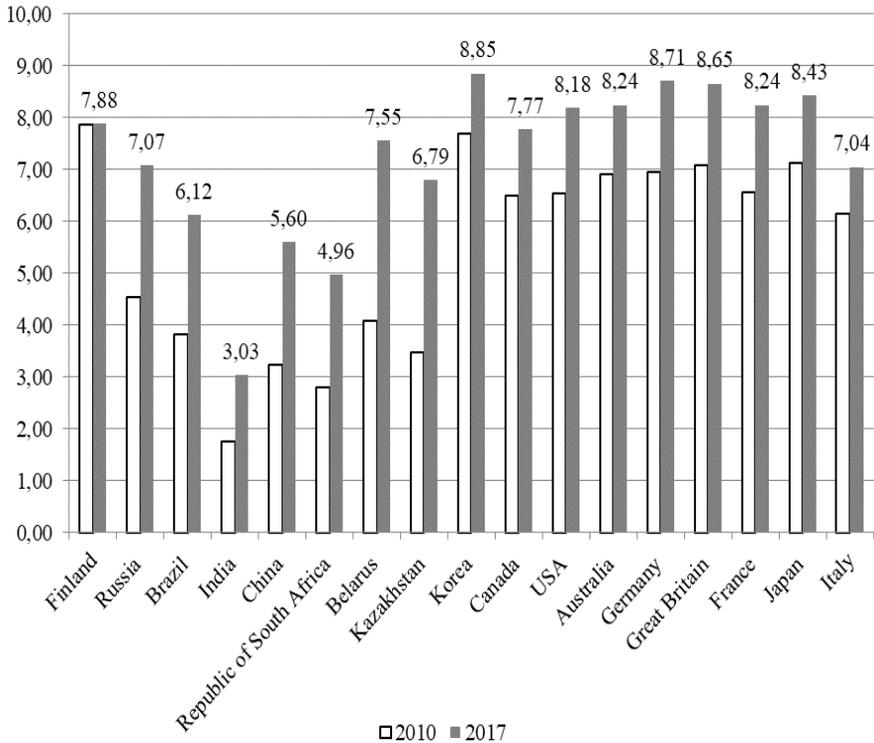


Figure 1 Dynamics of the index of development of ICT (IDI) in 2010 and 2017 in some countries of the world

In the countries with the highest achievements according to the index of development of ICT the governments recognize ICT as the serious engine of growth, innovations and economic development. For stimulation of information economy they have planned a number of the large purposes in the ICT area, including ensuring superfast Internet access for the most part (and sometimes and for everything) the population, assistance to development of wireless broadband access (including LTE) and introduction of ICT in houses. For example, in the Digital agenda accepted by the Evraziisky economic union (further – EAEU), providing general broadband access can provide a gain of gross domestic product (further – GDP) to EAEU till 2025 for 1,7%, and economy level due to elimination of legal barriers can potentially reach 2,6% of GDP. It is expected that introduction of Digital agenda of EAEU will accelerate penetration mobile communications closer to saturation levels due to regional harmonization of regulation, falling of the prices and growth of the competition. Influence of these processes on GDP of EAEU can provide a gain to 0,76% till 2025. According to European Parliament, such innovations as cloud services and analytics of data, will be able to add 200 billion euros to GDP of Europe by 2030 due to increase in efficiency of branch processes. [8]

The return tendency is observed in economy of developing countries. From the considered set of the states India – 14,3% of a gain in 2017 in comparison with 2016 (IDI has made 3,03), the Republic of South Africa – several more than 1% of a gain differs in the highest rates of development (IDI has made 4,96). Russia in 2017 has fallen by the 45th place from 176 considered countries with value of the index 7,07 (in 2016 Russia took the 43rd place with value of the index 6,91 at value of the leading country 8,80 points). Average annual rate of a gain of the integrated index in Russia from 2010 for 2017 was 6,5% (fig. 2). It should be noted that the value of the integrated index of development of ICT for Russia in 2017 is 6% lower, than for the developed countries (7,52 points) and 60% above, than for developing (4,26 points). The Russian dynamics of development of ICT has allowed to reduce a rupture of values of the IDI index across Russia and the leading country of (Iceland) (fig. 2). [4], [5]

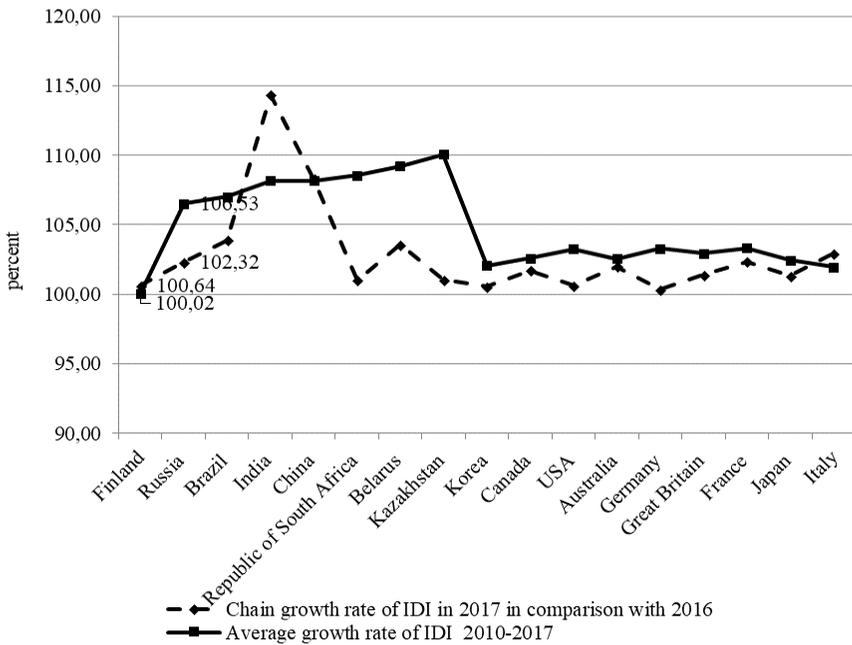


Figure 2 Dynamics of chain and average growth rates of the index of development of ICT (IDI) in 2010-2017 in some countries of the world

The analysis of average rate of a gain of the integrated index of development of ICT from 2010 for 2017 shows rather high rates of development of Russia. At the same time such developing countries of the studied selection as Kazakhstan, Belarus and the Republic of South Africa are characterized by the highest annual average rates of a gain which are 10,1%, 9,2% and 8,57% respectively. Comparison of IDI values for the period between 2016-2017 shows that the largest rates of a gain of IDI value are characteristic of such countries from the studied selection as India (14,3%), Belarus (3,57%), China (8,3%) and Brazil (3,9%) significantly exceeding chain rate of a gain of Russia which is 2,3%. At the same time, chain gains of other countries in this sample it is less, than across Russia. For example, in

Finland, the USA, the Republic of Korea, Germany the IDI index for the last year has increased less, than by 1%. While Russia begins to reach saturation level, in particular as for contracts for mobile cellular communication and access of the Internet, households of India, Belarus, China and Brazil where levels of penetration remain much lower, still have the huge potential for growth. Drawing a parallel at rates of development of ICT in developed both the developing countries and the place of Russia we will note that the rate of a gain of development of IDI in Russia in 2017 in comparison with 2016 was slightly higher than the level of the developed countries (2,0%), but there was lower than the level of developing countries (4,9%) and in general on the world rate of a gain of IDI value – 4,9%. [4], [5]

In spite of the fact that in one year the majority of the countries don't move sharply up in the rating of IDI (and some countries fall in rating, for example, Russia), there were some considerable and remarkable changes. Developing countries on the level of development of ICT are given in table 1 most dynamically, that is those which have moved up to the greatest number of steps in the general IDI index. [3]

Table 1 Most dynamically developing countries in IDI rankings, 2016-2017

Country	IDI rank 2017	IDI rank change
Uzbekistan	118	8
Afghanistan	81	6
Croatia	114	6
Suriname	139	6
Uganda	28	6
Uruguay	111	6
Lao P.D.R.	112	5
Latvia	122	5
Myanmar	67	5
Namibia	80	5
Timor-Leste	135	5
Turkey	95	5

Apparently from table 1, the most dynamic jump shows Uzbekistan, having risen to 8 places up and having taken the 118th place in rating. Follows him, Afghanistan, Croatia, Suriname, Uganda and Uruguay, having improved the positions on 6 places. Thus, the carried-out analysis has shown that among 176 countries entering in members of the International Telecommunication Union are strongly differentiated on the level of development of digital technologies.

CONCLUSION

Direct impact of the digital capital on growth rates of gross domestic product significantly differs in developed and developing countries. However optimistic forecasts of the World Bank confirm growth of this indicator in developing countries owing to decrease in a digital divide in world economy. At the same time, it is specified in the Report of the World Bank that the qualitative characteristic of increase in welfare of people due to introduction of digital technologies isn't supported with quantitative measurement of the received economic benefits. Thus, the relevance and prospects of development of the statistical approaches, techniques and indicators characterizing welfare of the person in information society and the benefits acquired by him as a result of digital transformation is quite obvious. [9]

In recent years in Russia in the field of development of digital technologies a number of the reforms directed to decrease in administrative barriers and creating favorable conditions for development of information society, improvement of quality of services in the sphere of information and telecommunication technologies is realized. At the same time in the conditions of the fierce international competition in the sphere of ICT realization of further measures for improvement of regulation in the considered sphere is important that it will demand essential investments (both state, and private) in infrastructure, development of personnel potential and also in creation of favorable investment climate for development of the information and communication sphere. The major market factors which will provide growth of number of subscribers is the extensive growth of coverage of small settlements communication networks of average and large the Internet – providers. In this regard, revival of providers of satellite broadband access is possible. Growth of a share of package offers among new connections of telecom operators will become the main trend of the market of broadband access in Russia in the medium term.

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ECONOMIC FACTORS OF PROSPECTING AND EXPLORATION DEVELOPMENT ON THE RUSSIAN ARCTIC SHELF

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ABSTRACT

The oil and gas of the Russian Arctic shelf is one of the most important sources of the country's hydrocarbon raw materials. However, despite the sharp activation of geological exploration in Russia in 2012 - 2014, the geological study of the Arctic shelf remains extremely low. At present, the absolute majority of license areas of the shelf are distributed between PJSC Gazprom and PJSC Rosneft. The article notes that the lack of access to the shelf for other Russian and foreign companies can significantly slow down the process of its geological study. Also, as a shortcoming of the offshore licensing strategy adopted in Russia, the focus is on local licensing areas and the absence of the possibility of studying regional patterns. In the context of economic sanctions, an important problem is the almost absolute dependence of the geological exploration process on the shelf on imported equipment and technologies. It was noted that the existing fleet of domestic offshore drilling rigs is not able to fulfill the license obligations of Gazprom and Rosneft. In this regard, it was noted that the most important condition for successful offshore exploration is the availability of a production base and domestic technologies for offshore exploratory drilling. It is established that with the current trends in hydrocarbon sales markets, the cost-effective development of shelf deposits is problematic. It is concluded that the program for studying and developing the shelf should be adjusted in favor of financing the most promising projects in coastal and transit areas near production areas with developed infrastructure. The main points of the strategy for the development of the Arctic shelf zone in addition to the development of hydrocarbon reserves are highlighted: the development of alternative energy, the revival of the reliable hydrometeorological services, the increase in cargo transportation along the Northern Sea Route, and the exploration and development of ore deposits in the region.

Keywords: Arctic shelf, geological exploration, seismic exploration, licensing, profitability.

INTRODUCTION

Currently, one of the most important factors that may lead to a reduction in oil and gas production in Russia is the depletion of well-established deposits. Newly developed fields are usually located in hard-to-reach areas with a harsh climate, characterized by complex mining and geological output conditions. Continuing advancement of world innovative technologies today allows for the cost-effective developing hard-to-recover oil and gas reserves, but Russia faces a serious lag in the technical and technological support for the exploration and extraction of these resources.

We believe that in the current environment of low prices and excess supply of hydrocarbons, high-cost Russian oil and gas will be uncompetitive in the world market, which is one of the major reasons for the reduction in hydrocarbon production.

PROBLEM STATEMENT

All sources of hydrocarbon raw materials available in Russia can be divided into three groups [1]:

1. Oil and gas from traditional deposits in long-established fields.
2. Hard-to-recover reserves, including shale oil and gas.
3. Hydrocarbons of the Arctic shelf.

The reserves of the first group are concentrated in the old fields with developed infrastructure and therefore these are the most attractive ones. The development of these reserves is likely to provide a significant part of the capital cost savings. However, the evidence from practice suggests that geological exploration in these areas is ineffective, since they lead to the discovery of relatively small deposits with reserves not exceeding 1 million tons, while costs for their implementation are high. For example, small deposits discovered in Western Siberia were not profitable even at oil prices over \$ 100 per barrel. Nevertheless, the development of small deposits in the old oil and gas bearing areas has been implementing through the introduction of new methods to increase the production capacity of reservoirs, as well as due to the devaluation of the ruble in 2014-2015. However, it is no longer possible to maintain production at the same high level.

Reserves of oil fields that are relatively unfavorable for extraction in terms of geological conditions of occurrence and (or) physical properties of oil are considered hard-to-recover. Extraction of such reserves requires considerable expenditures of material, labor and financial resources, employment of non-traditional technologies, special equipment, reagents and materials. According to experts, more than 60% of the explored oil reserves are hard-to-recover [3], most of them currently being of insufficient investment attractiveness for oil companies.

The largest source of alternative oil reserves in the country is the Bazhenov Formation – the rock horizon in the central part of the Western Siberia at a depth of 2 to 3 thous. m. The deposits of the Bazhenov Formation spread over an area of about 1 million square km, contain shale oil with a bed formation thickness of 10 to 100 m. The resources of the formation are estimated at 100-170 billion tons. [5]. It should be emphasized that the production of Bazhenov oil today is no more than 0.7 to 1 million tons per year. This is mainly due to the fact that thin and almost impenetrable shale rock beds do not allow oil to be pumped out using traditional methods, and there are practically no new economically viable technologies for developing such reserves in Russia. In order to solve this problem in 2017, the Ministry of Energy of Russia initiated a special national project. The goal of this project is to create technologies for precise localization of reserves, optimize drilling, and study the effectiveness of thermochemical methods of impact on the reservoir by integrating the technological and scientific potential of PAO Gazprom Neft, leading research centers, oilfield services companies, and manufacturers of

the equipment. The project implementation should render the reserves of the Bazhenov Formation ready for industrial development; and reduce the cost of oil production from the Bazhenov reservoirs as low as possible. However, it must be emphasized that it is scientific organizations that were almost only ones to confirm their participation in the project. Oil companies currently prefer to develop the Bazhenov Formation independently, without placing this task in the priority category. The lack of interest of Russian vertically integrated oil companies in pooling efforts for the most effective implementation of the national project to develop the Bazhenov Formation can be attributed to uncertainty of the legal status of these works.

Based on the foregoing, it can be concluded that the first and second group of hydrocarbon sources will not be able to maintain the output at the achieved level, i.e. 500 million tons of oil and 600 billion cubic meter of gas per annum [4].

RESEARCH QUESTIONS

Let us describe the situation that has developed to date in the field of geological exploration on the Arctic shelf.

It should be noted that despite the surge in geological exploration in Russia in 2012-2014, the Arctic shelf has been studied insufficiently as compared, e.g. with the shelf of Norway or with the shelf of the American part of the Chukchi Sea.

Exploration volumes increased significantly due to the assignment of 93 license areas to the largest oil and gas producing companies, PAO Gazprom Neft (38 sites) and PAO Rosneft (55 sites). The companies carry out the drilling of additional exploration wells, as well as geophysical activities (in particular, 2D and 3D seismic surveys).

The distribution of the most attractive offshore areas between the two largest players in the oil and gas market has entailed a controversial situation. On the one hand, the lack of access to the shelf for other Russian and foreign companies can dramatically slow down the process of geological survey. On the other hand, the need to fulfill license commitment compels Gazprom and Rosneft to carry out geological exploration following the established schedule of work.

Note also that the current scheme for the distribution of licenses for the development of offshore fields does not allow the use of multiclient surveying or some other tools in geophysical operations. This tool is widely used in world practice and implies that service companies independently select shelf areas, conduct geological exploration at their own peril and risk, and then repeatedly sell the information developed to all those concerned. Implementation of this scheme by the Ministry of Natural Resources of Russia would allow receiving information on earth depth at minimal costs for the state budget and the companies. A common world practice involves the development of complex fields using efforts of several companies to reduce risks. When entering the project, the partners are required to purchase the survey findings to estimate the amount of reserves and their own risks. At the same time, the key resource user will compensate for a part of the expenses incurred, while the service company will make a profit.

Furthermore, the concentration of activities on local licensed areas and the lack of the possibility of studying regional trends are on the downside of the current Russian system of licensing on the shelf. To address this issue, public funding or joint research by Russian and foreign companies is necessary.

The foregoing allows for the conclusion that it is necessary to revise the existing shelf licensing procedure.

A particularly pressing issue in studying the depths of the Arctic shelf is the almost absolute dependence of the geological prospecting process (mainly, of geophysical research) on imported equipment and technologies.

One of the principal methods of geophysical activities on the shelf is seismic exploration, which makes it possible to evaluate the structure of the earth depth and locate probable places of occurrence of hydrocarbons on the basis of dynamic interpretation based on the anomalies of the reflected signal. Alongside the widely used 2D and 3D seismic survey techniques, broadband seismic methods are rapidly developing today, which are significantly more informative, with comparable operational costs.

The broadband seismic techniques have been developed exclusively by foreign companies: CGS (Broadseis technology), PGS (GeoStreamer technology), Sercel (Sentiel technology), Western Geco (Izometrix technology), etc. Among these technologies, GeoStreamer is the undisputed leader in broadband marine seismic surveys both in productivity of offshore operations, and in geological performance. Because of the economic sanctions, these companies actually left the Russian market

Today, the Russian service companies can employ none of the said technologies. In addition, it should be emphasized that Russian marine geophysical companies such as OAO MAGE (Marine Arctic Geosurvey Expedition), OAO DMNG (Sakhalin Geophysical Company, Dalmorneftegeophysica), OAO SMNG (Sevmorneftegeophysica) are not equipped with modern specialized vessels for 3D seismic exploration. As a result, current 3D seismic operations on the Russian shelf are lagging behind the world level by more than 15 years [4]. This means that only foreign contractors can perform high-tech 3D work. Due to the imposed sanctions, most foreign contractors cannot operate as before.

Another complicating factor is the inability to conduct 3D seismic survey by specialized vessels in ice, as there is a risk of cutting the outboard equipment by ice. As the case stands, in the Eastern Arctic, only 2D seismic survey is possible during the ice-free period, which lasts only 1.5-2 months in these arctic surroundings.

Availability of a reliable production base and advanced technologies for exploratory and, subsequently, operational offshore drilling is key to successful exploration on the shelf. However, it should be noted that the Russian-owned fleet of domestic drilling rigs is not in a position to fulfill the license commitments undertaken by PAO Gazprom or PAO Rosneft in the offshore areas [1].

An important factor limiting intensive shelf development is the issue of environmental protection. The spills of oil have a negative impact on all participants of the Arctic food chains. Some Arctic faunal forms are particularly sensitive to oil

spills, since pollution with oil and oil products will degrade fur and feathers heat-insulating properties. Today, there are no reliable technologies for eliminating such accidents in the world in the presence of ice cover. This problem is extremely urgent for polar water areas, where mitigation of accidents is complicated not only by the presence of a thick ice cover, but also by the polar night, low temperatures, strong winds, and lack of infrastructure.

In the event that all license commitments have been delivered on the offshore fields, significant volumes of oil and gas will enter the market. Let us consider the possibilities of effective sales of this hydrocarbon raw material.

In recent years, the competition for oil and gas markets has seriously worsened. According to initial forecasts, a portion of the gas from offshore fields, in particular Shtokman field, liquefied on the shore of the Kola Bay was to enter the US market. However, the development of shale gas reserves, as well as the discovery of new deposits in favorable economic and geographical conditions, let the US abandon imports.

The aggravation of the geopolitical situation and the deterioration of diplomatic relations with Europe compel Russia to turn to the market of the Asia-Pacific region, which is located in close proximity to the Russian offshore projects Sakhalin-1 and Sakhalin-2.

Today, the Sakhalin shelf projects based on the production sharing agreement (PSA) are rather effective. Implementation of the projects has become quite profitable for the state budget due to the main investments within the PSA made by foreign participants. Thanks to the implementation of these projects, high-technology industrial and social infrastructure facilities have been created in the Sakhalin Region. The products of the gas liquefaction plant located in the region are sold to Japan, Korea and China.

In contrast, offshore projects in the Barents Sea, where the PSA scheme is not applied, have not become effective even given the substantial government investments for their implementation.

Increased oil production in the US is certain to have global consequences, since it is the United States and China that are the main consumers of hydrocarbons in the world. There is a high probability that the surplus of hydrocarbons produced in other countries and not in demand by America will enter the world market to lower the price of oil. In addition, it should be borne in mind that significant volumes of oil and gas are concentrated in Iran, Iraq, and Libya, which for political reasons are currently unable to supply in full. Consequently, a shortage of hydrocarbons in the world market is very unlikely. In periods of surplus, producers with a lower production cost are found in a more favorable situation, meanwhile, the production costs of Russian hydrocarbon raw materials rather high. Moreover, the cost of delivery of the hydrocarbons produced to the consumer in Russia is a multiple of what is recorded in the Middle East. In this situation, with a decrease in world prices for hydrocarbons, the companies operating on the shelf face extremely high risk of losses.

Consequently, we may conclude that implementation of costly offshore projects can be frozen before the market conditions are optimized. Therefore, it is advisable

to adjust the program of study and development of the shelf in favor of funding the most promising projects in coastal and transit areas near production areas with highly-developed infrastructure.

It should be emphasized that the Arctic zone is a very important region for Russia not only in economic terms, but also geopolitically, therefore the need for its development cannot be attributed to high hydrocarbon potential only. The main directions of the development strategy of the Arctic zone in addition to the development of offshore projects can be stated as follows.

1. In the Arctic zone, the use of alternative energy, especially for energy supply to small settlements located at considerable distances from infrastructure facilities, can become extremely popular. Laying pipelines or power lines in these territories is economically inexpedient. In our opinion, the use of the following energy sources is possible:

- wind energy, due to an exceptional potential the Arctic region holds. To successfully unlock the potential, it would be required to adapt the wind generators designed for Europe to the harsh climatic conditions of the North;

- solar energy, which can be successfully used in the conditions of the polar day, also provided that the existing equipment is adapted to the local climate;

- gas hydrates, often located in the Arctic near the surface.

2. Reliable hydrometeorological support. Currently, the equipment used for meteorological observations is obsolete, the number of observation points reduced significantly. It is against this background that the meteorologists' performance and the accuracy of forecasts lag behind current requirements.

3. Increased cargo transportation along the Northern Sea Route, which is the shortest sea route between Europe and Asia. It passes through the seas of the Arctic Ocean (Kara, Laptev, East-Siberian and Chukchi) and has a length of about 2,500 nautical miles. The average duration of passage of the Northern Sea Route is 10.6 days [2]. Transportation of equipment for the development of Arctic deposits and the need for subsequent export of extracted raw materials will require a complex infrastructure for the delivery and storage of oil fuels. An alternative is the integration of Arctic LNG projects into transport and energy schemes of existing projects.

The role of the Arctic region as a transport corridor is currently increasing due to the reduced ice cover in some areas of the Arctic Ocean. In this regard, it becomes possible to consider the Arctic zone of Russia as an important transport route that can connect Europe and Asia. The main advantages of the Northern Sea Route are no piracy in the region and cutting time of transportation. For example, it is possible to carry cargo from Norway to Japan up to 21 days faster than through the Suez Canal [2].

An additional advantage of the Northern Sea Route is a possibility to bunker vessels with natural gas from onshore or offshore fields almost throughout its entire length. This circumstance can also contribute to improving the competitiveness of the NSR.

4. Exploration and development of ore deposits in the Arctic zone. First of all, these are potential ore deposits in the north of the Eastern Siberia, which reserves can be used for the subsequent manufacture of solar batteries, as well as for the long-term storage of the accumulated energy.

CONCLUSION

In view of the foregoing, the following conclusions can be made.

1. Additional exploration of hydrocarbon reserves in well-established fields discover small deposits, which development is not cost-effective, even with oil prices exceeding \$100 per barrel, because of high production costs. More than 60% of the explored oil reserves in Russia are hard-to-recover, thus having no investment appeal for domestic oil companies. To develop the deposits of the Bazhenov Formation, the largest source of shale oil in Russia, a national project of the Ministry of Energy has been initiated. However, today the large Russian vertically integrated oil companies show no interest in joining efforts to implement the project. Thus, hydrocarbons from traditional deposits, as well as hard-to-recover reserves, cannot serve as a reliable base for maintaining oil and gas production at the existing level.

2. The Russian Arctic shelf accommodates significant reserves of oil and gas; however, the shelf deposits are extremely understudied in geological terms. The pace of study and development of the Russian Arctic shelf has seriously slowed down due to the imposing of economic sanctions. At present, geological survey of the shelf almost absolutely depends on foreign technology and technology. There is a significant lag in the technical and technological security of seismic and drilling operations on the shelf as compared with the world practice.

3. The shelf development is limited by the environmental issue, as currently there are no reliable technologies for liquidating oil spills in ice conditions in the world.

4. Compliance with the license commitment of PAO Gazprom and PAO Rosneft in all offshore licensed areas under the current licensing system, given low oil prices, may lead to excessive exploration of potentially unclaimed hydrocarbon reserves.

Large-scale development of offshore fields in the Arctic region can be suspended for economic, technological and environmental reasons.

6. The Arctic zone can be developed in alternative directions not related to the extraction of hydrocarbon raw materials.

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INTERREGIONAL LOGISTIC CENTERS IN THE MODERN REGIONAL DEVELOPMENT: AN ESTIMATION OF NEEDS AND PROSPECTS (ON THE EXAMPLE OF THE SVIYAZHSK INTERREGIONAL MULTIMODAL LOGISTICS CENTER)

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ABSTRACT

In this research we investigate the location rationality and the need of further investment in the Sviyazhsk interregional multimodal logistics center development which is situated on the Republic of Tatarstan territory. The aim of the study is an estimation of this logistic center possible load degree (as the capacities storage factor, etc.) from the perspective freight turnover due to its physical location in the region and its impact to the regional development. Basing on this analysis is determined the degree of conformity of the proposed picture to the real regional development. For the forecasting were used the formalized methods the advantages of which are the accuracy of results in the short term and the reproducibility ease. Also there were some disadvantages as within the study was revealed some data collection complexities hereat the forecast is based fully on the open statistical data of regional and national economic indicators. For the more detailed results was made an attempt of data collection (using the created questionnaire) an analysis of which would show the most adequate picture of the real needs of companies coordinating the storage facilities, transport services, information support, and the degree of their interconnections on the territory of the republic. With the forecasting using the random-walk method and the moving average the received results of the real and the future picture comparison looks satisfactory proved. The results of our estimation confirm the necessity of this center and demonstrate its full load based on the dynamics of studied freight turnover indicators.

Keywords: logistics center, international transport corridors, freight turnover, Sviyazhsk interregional multimodal logistics center, random-walk method.

INTRODUCTION

Adopting the world experience of foreign countries in the management of freight flows Russia seeks to ensure the integration of national and regional logistics centers, similar to the TEN strategy, which implies the creation of a unified transport system. In the field of cargo management Lean production (JIT, KANBAN), DDT (Demand-driven techniques) and their conceptually improved versions were used as one of the first methods. One of the current and demanded

trends in the development of the logistics services market is the development, implementation and operation of smart machines for transportation tasks and rationalization of storage. Today the world's largest providers of logistics services use in the work drones and UAVs, robotic systems-loaders, automated storage and search systems in warehouses, IOT, smart sensors, RFID tags, etc. Now the technological development as an effective solution in the field of transport distribution is realized mostly in regional logistics distribution centers which unite and realize the possibilities of integrated supply chain management.

LITERATURE REVIEW

The modern economic development of all Russian regions and its innovation reciprocity are impossible without realising the regional logistics potential. The logistics potential of the region is a combination of logistics infrastructure factors and objects that used in the decisions of regional and national strategic optimization tasks for material flows. One of the key links in the Russian economic growth is the development of the country's transport system and the realization its transit potential for securing the Euro-Asian links, therefore it is necessary to develop an effective logistics network. Modern methods allow estimating the logistics potential, and especially the possibilities of such logistic vehicles like logistic centers, which also allow transforming the foreign material flows to the interregional and intraregional [15].

The current problems in development of logistic infrastructure and methods of its decision were studied by R. Alarcona, etc. [2], J. Blyde [3], H. Lean and others [4]. Issues of territorial development and impact assessment of logistical infrastructure on the competitiveness and efficiency of the regional economy were studied by O. Velychko [5], and in other researches [6]. While the number of researches of the logistics infrastructure development impact for the regional economies growth is serious, there isn't complex and easy in use (which is more necessary) methodological approach for evaluating this impact for the whole economy and separate territories. From the recognized point of view it is necessary to use the potential of the international transport corridors for the regional infrastructure development. Such position could be noted for example in such paper like [1] in which V. Khomenko and co-authors concentrate on the role of integration of Russia and in particular the Republic of Tatarstan in the network of international and domestic regional transport corridors, etc. This aspect has a central place in our study basing for the estimation of the regional logistic development prospects on the possibilities of regional multimodal terminal complexes network and in particular for the Republic of Tatarstan on the Sviyazhsky interregional multimodal logistics center (SIMLC) data. For this aim the estimation of the prospects for the possible SMLC load degree basing on its (physical) location is achieved with the forecasting methods using.

THE REGIONAL DEVELOPMENT OF THE REPUBLIC OF TATARSTAN IN THE GLOBAL LOGISTICS SYSTEM

Foreign and domestic experience shows that integrated logistics services which based on a stable demand growth promote the greatest economic efficiency. This point of view is confirmed with such evidences like the world GDP from the

beginning of the second half of the 20th century, exports and imports and positive income dynamics from the taken measures for the logistics centers creation. For example, in the Netherlands the transit logistics centers brings about 40% of the whole transport complex income, about 31% in the France and 25% in Germany. In the Central and Eastern Europe countries this share is about 30% in average. The total turnover of the European logistics services market is more than €600 billion. In these countries about 30% of logistics functions in all sectors of the economy are annually transferred to logistics companies [7] outsource.

The logistics centers (parks) are the market enterprises which provide information and physical support for the goods delivery. The concentration of complementary companies on a single platform makes possible to reduce the warehouses renting and the logistics services costs. For the main part of the Republic of Tatarstan firms concerned with the tasks of storage, acquisition, packaging and distribution to the next level by various ways of transporting with the channels like railroad, on water, automobile, aviation or with pipeline transport the cooperation will be the profitable decision (see for example Shikhalev, Vorontsov, etc., 2015). Analyzing the data available on the state statistic Rosstat website for the Republic of Tatarstan [8] for the period of 2011-2016 it is possible to note that about 80% of the region's total freight turnover was delivered with the railway transport. The majority of region's cargo turnover is concerned with the oil products, construction aggregates and cargos, chemicals and metals. Due to its geographical location the region has the strategically important position for the whole state in the cargo transportation system. The Republic of Tatarstan is the cross-over point for two important international transport corridors, "North-South" and "West-East" (Picture 1), so basing on these factors it is possible to predict an increase or decrease in freight flows through the region. Basing on these factors and due to the serious increase in the needs for large logistics center on the regional territory as a result of research and comparative estimation was chosen the location for such center in the Kazan transport hub, Zelenodolsky district near the Sviyazhsk railway station and at the mouth of the Sviyaga river.



Picture 1 The international transport corridors passing through the Republic of Tatarstan territory

The purpose of the work is to study the prospects of the possible load degree (the capacities storage factor) of the SIMLC basing on the possibilities of its physical location and its possible impact for the regional economic development. The project of the SMILC was firstly included in federal programs and different strategies in 2006[9]. Nowadays has been completed the construction of such objects like a moorage wall for receiving river and sea vessels, railway access roads, an anti-radiation shelter for 600 people, roads and a traffic intersection built on the connection with the federal M-7 highway, and an upgrade of the all Sviyazhsk railway station's equipment[9]. According to the announced in 2012 data the estimated volume of SLC processing cargoes was 14.6 million tons a year; this is 25% of the total regional cargo traffic volume which is 45 million tons per year[8]. So, for the proposed aim of study it is necessary to clarify the actual volumes of cargo flows on the international transport corridors passing through the territory of Tatarstan for the period from 2017 to 2018 on the ITC №2 "West-East" and ITC №9 "North-South".

For such case it's better to analyze the part of "West-East" ITC as a Russian cargo transportation way to the Primorsky region ports and back. This includes Russian export-import and transit cargo traffic between the Asia and Europe. The aggregate freight turnover between China and Europe in 2015 reached more than 100 mln tons/km and has a growth potential up to 120-160 mln tons/km to 2020. In fact this value remained at 100 mln tons/km [9] in 2017 and the cargo turnover of the such Caspian ports like the Astrakhan, Olya and Makhachkala decreased from 10.9 million tons to 6 million tons in 6 years from 2010 to 2016 [8]. The project of the ITC "North-South" already could be estimated as profitable. Only from the beginning of the 2017 the volume of freight traffic on this direction has increased up to 20% and reached the value of 5 million tons [10]. However, according to the Russian Federation Federal Customs Service data in the last 6 years there was an

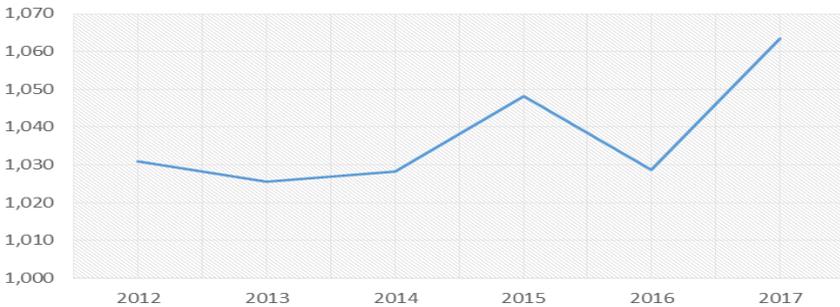
opposite situation i.e. the volume of freight turnover with the major partners decreased [11], and the main type of goods were the food products, agricultural raw materials and timber, which are not fitted with the Tatarstan cargo turnover structure. An analysis for the Tatarstan of the typical trade turnover structure [8] with these corridors players and the same for the Russia i.e. their trade linkages with the ITC "North-South" and "East-West" projects countries participating shows the total trade turnover in 2017 11.8 million tons and 41.2 million tons. However, could we propose for the crowd a depot to SMILC capacities? For this purpose i.e. for the estimation of the level of current needs it is necessary to make a forecast basing on the open data and to concern it with the today's realities.

METHODOLOGY

The intensive development of prognostication as a science in the recent decades led to the creation of multitude methods and procedures, and the value of these forecasting methods are not equal. There are a hundreds methods of forecasting [13] according to various estimates of foreign and domestic forecast systematics, with each author specifying his own classification of these methods. In our study the chosen prediction methods are based on the approaches described below. For example, in the research of E. Tikhonov [12] in the part concerned with the methods classification, the methods of forecasting firstly could be represented in classes like the intuitive and formalized. To the intuitive methods the author refers the questioning method, brainstorming, the "commissions" method, etc. Intuitive methods are usually used in the auxiliary procedures for generating the predictive information. For the purposes of the research and its specific (logistics) for the information collection was chosen the questionnaire method. The organizations engaged in the cargo deliveries field were asked to complete a questionnaire to concrete their needs from the services of the regional logistics center. For the questionnaire results assessment was created the estimation method on the basis of generalized data of freight volumes. The advantages of this method are the cheapness and wide territorial coverage with the relatively short time costs but the lack of questioning is the reluctance of respondents to provide information, referring to the commercial secrets. In such case it's necessary to use the formalized methods consider forecasting models which are divided into the statistical and structural models. In the statistical models the functional relationship between the future and actual values of the time series as well as with the external factors establish analytically. For the forecasting was chosen the method described below due to its accuracy in the short-term forecast. As the forecasting process itself could be presented in two periods, the retrospection period T_r in the form of the available dynamic series and the prediction period T_f than we could note that for the larger ratio (T_r/T_f) it will be more reliable forecast value, in ceteris paribus. It is important that the period of retrospection T_r has the same causal (factorial) character in general because after all we determine the character of the random increment "e" as a continuation of the same conditions with which were formed the levels of dynamic series levels in the retrospective period of T_r , before the main forecasting. Therefore, in a broad sense this type of forecast is concerned with the extrapolation. One of the most famous prediction models is the autoregression of the integrated moving average with the external factor [14]. The moving average method is one of the widely known methods for the time series smoothing. With this method

applying this it's possible to eliminate the random oscillations and obtain the values corresponding to the influence of the main factors. The smoothing with the moving averages is based on the fact that the random deviations cancel out in the average values. This is realized as because the original levels of the time series replaced with the average arithmetic value within the selected time interval. Then the period shifts to one observation and the average calculation is repeated. For such cases the periods of average determining are taken the same at all times. Thus, in each analyzed case the average is centered, i.e. is referred to the midpoint of the smoothing interval and represents the level for this point. The choice of the smoothing interval depends on the study objectives. At the same time it's necessary to base on in which time period is the action and consequently, the elimination of the random factors influence. This method is used for the short-term forecasting [14]. After the Rosstat data [8] analyzing and making the calculations of the growth and increase in freight turnover for the last 5 years we observe a consistently low average annual growth rate (Picture 2), related to the economic situation in Russia. A sharp jump up to 2017 corresponds with the terms of trade softening. Based on the obtained results after the the Rosstat data[8] analyzis we could forecast the cargo turnover volume with the multiplicative time series model constructing [14] to the fourth quarter of 2018. The general form of the multiplicative model (Y is the model value) will be the next:

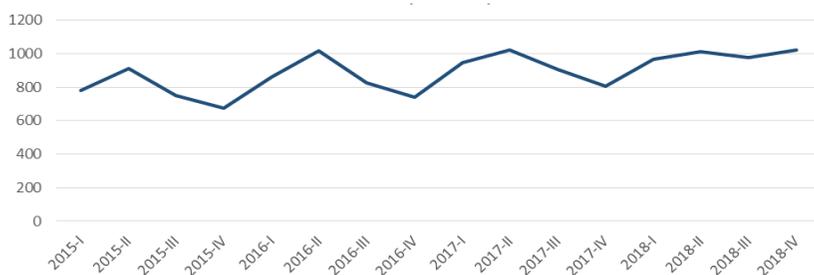
$$Y = T \times S \times R \quad (1)$$



Picture 2. An average annual road transport growth rate for 2012-2017

This model assumes that the each level of the time series could be represented as a product of trend (T), seasonal (S), and the random (R) components. The predicted F_t value of the time series level in the multiplicative model is the result of the trend and seasonal components. To determine the trend (T) component let's use the trend equation (2). It is a table below with the predicted values quarterly, mln tons/km (Table 1).

$$T = 754.685 + 20.825t \quad (2), \text{ where } t - \text{ the calculated period.}$$



Picture 3. The current and predicted volumes of cargo turnover

Table 1. The predicted cargo turnover values for 2018 in million tons/km.

Period	2017-3	2017-4	2018-1	2018-2	2018-3	2018-4
Forecast, mln t/km	905,21	807,10	969,71	1010,81	977,07	1022,25

Here is quarterly observed the seasonality (Picture 3). From the first to the third quarters there is growth, then a decline in the fourth quarter. The derived by years forecast shows a decrease in the cargo flows. For the reliability of the results we will construct the forecast using the random walk method and compare the results with the Table 1. Below are the forecasts for the 2018 quarters on quarterly 2015 - 2017 data with the random walk method (Table 2). The most of the Table 1 predicted values are within the forecast interval of Table 2. This means that the verification of results obtained by the random walk method with the dynamic series apparatus method should be considered as successful. So, the results of the quarterly forecasts given in Table 2 for all 2018 quarters should be considered as the fairly reliable.

Table 2. The forecast for 2018 with the random walk method.

Quarter	2018 – 1	2018 – 2	2018 – 3	2018 - 4
Forecast, mln t/km	933,8 ± 42,6	955,2 ± 48,5	974,1 ± 63,3	1082,6 ± 63,4
Interval	[891,2-976,4]	[906,7-1003,7]	[910,8-1037,4]	[1019,2-1146,0]

With the moving average method based on data for the period 2011-2016[8] made a forecast for the cargo transportation volumes of the Republic of Tatarstan in million tons (Table 3).

Table 3. The forecast for 2018 with the moving average method.

Period	2011	2012	2013	2014	2015	2016	2017	2018
Mln.t.	171	165,4	160,5	140,3	142	145,7	265	243,7

DISCUSSIONS

From the analysis of the obtained data we could come to the conclusion that the freight turnover through the Republic of Tatarstan is going to increase, which is also

observed in the forecasts based on Rosstat data. In our study with the formalized forecasting techniques we tried to find the most adequate current picture of the real needs of regional companies. However, the study revealed difficulties in collecting data (especially with created questionnaire) and it is difficult to predict the full picture without supplier response. Due to this the realised forecast is based on the open regional and national data. The issue above remains necessary for the next part of the research i.e. to use the specific indicators for the excluding the transport costs of large players of regional logistics market. So, for the more precise estimation of the Sviyazhsky logistics center possible load it will be necessary to use the main regional players of the logistics market more detailed data (also on economically advantageous types of cargo, etc.).

CONCLUSION

The territory of the Republic of Tatarstan is located very successfully in the logistics system of Russia which gives to the region some advantages, but the development of the Sviyazhsk logistics center still concerned with the number of controversial issues related to both the location of the facility and the prospects of its loading from all planned types of vehicles. The creation of regional logistics centers is always accompanied by risks related to their capacities storage factor (load degree) as it is necessary to crowd a depot to capacity. But as we could see the forecasts give an optimistic assessment which could be based on the total turnover of the corresponding weight of the Republic of Tatarstan in the ITC "North-South" and "West-East". About a third of cargo deliveries volume passing through international transport corridors could ensure the full loading of the Sviyazhsky logistics center, and therefore we could conclude that the need for the development of the SMLC is confirmed. It could be reasonably argued that further development of the Sviyazhsky interregional multimodal logistics center allow to obtain a synergistic and multiplicative effect, which will increase the interest of local commodity producers and the regional economic positions.

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MEDIA CONVERGENCE IN PUBLIC BROADCASTING COMPANIES IN EUROPE. DELPHI STUDY

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ABSTRACT

This article presents the results of a Delphi survey of 45 experts about public broadcasters in Europe. The starting point of the survey is the unsatisfactory theoretical discourse about the construction of convergence. The findings show what media convergence currently means for planning and journalist players in public media organisations in Europe and in the future. As part of a three-stage Delphi survey, experts from the fields of “Innovation management/Corporate planning”, “Editorial management/Department leadership” and “Science/Research” took part in an anonymous group discussion with a feedback loop. Using a “most different systems” design, Germany, Austria, Slovenia and Hungary were screened as media environments for this study.

In a pan-European overview, the panel views the technical sector as the most important driver of media convergence at the moment. Aspects of use and particularly regulation of convergence will become more significant at the end of the ten-year period reviewed. Public providers then generally aimed to represent their contractual fixed added value by focussing on news-related and regional programmes, own apps and digital platforms became standard outputs.

Keywords: Media Convergence, Public Service Media, Public Service Broadcasting, European Dual Media Systems, USP Public Service Media

INTRODUCTION

Our everyday life is the everyday life of the media. We consume content whenever and wherever we want via whatever channels we find it on. In this respect, the boundaries between different types of media have been becoming increasingly blurred for some time now. There are multiple reasons for this media convergence, as it is called – technical, legal and economic, but also equally editorial reasons. Changes to established media landscapes and their description are severe, diagnoses Andy Kaltenbrunner: “We are re-defining the media sector as a result of convergence processes” [1]. Research findings and classifications are supposed to reach the users via different output channels, sometimes in almost identical versions, at other times sufficing as variously edited and traditional representations of forms specific to different types of media (radio, television, online, etc.).

Public service broadcasters (PSB) in Europe above all are leading the way with regard to the future of media convergence. They frequently have at their – proximate – disposal financial resources, and their public service remit binds them to innovation. [2] While private broadcasters in general have their eye on the costs and profits, and tend to undertake convergent experiments rather cautiously, public service providers are resorting to looking for the ideal ways to interweave media. They are currently doing so without really being able to anticipate if “tri-mediality,”

“cross media,” “trans-mediality,” “multi-mediality,” etc. will generate significant savings potential, bind (new) audiences more closely and make established types of media obsolete. Using the obvious synergy effects, the first joint steps are being taken beyond the boundaries of the different types of media, above all in the area of current affairs. PSBs would see themselves forced to leave their traditional engagement in “push” communication and seek alignments with today’s interactive, multimedia world, Karel Jakubowicz explains and proposes a switch in terminology: “The concept of Public Service Media (PSM) can be briefly summed up as ‘PSB + all relevant platforms + Web 2.0’, representing a technology-neutral definition of the remit” [3].

What might sound very unstructured, is rarely so. Fontane’s “broad field” still applies to attempts at media convergence. This is due to a lack of much practical experience, but also equally to a secondary literature whose terminology is often diffuse and usually based on the analysis of individual examples focussed solely on Western Europe and the USA. This may appear to be a dilemma, but is also a spur to have a closer look at the fundamental principles of the phenomenon of “media convergence”.

This paper shows the results of a Delphi survey of 45 experts about public broadcasters in Europe. The survey departs from the unsatisfactory theoretical discourse about the construction of convergence. The findings present what media convergence currently means for planning and journalist players in public media organisations in Europe and in the future. As part of a three-stage Delphi survey, experts from the fields of “Innovation management/Corporate planning”, “Editorial management/Department leadership” and “Science/Research” took part in an anonymous group discussion with a feedback loop. Using a “most different systems” design, Germany, Austria, Slovenia and Hungary were screened as media environments for this study of public service media’s role in a converging space and time.

Embedding in the Area of Research

As an academic overview, much of what media structures wish to describe are generally formulated as succinct summaries. Scholarship in the areas of communication, the social sciences and economics attempt to clarify what effect the global information age is having on each of our media, our communities, and us and to apostrophize the dual role of users as both recipients and (potential) producers. This option of a role reversal draws on numerous individual analyses, since the secondary literature available generally focuses on only partial insights. Works that pursue universal theory and model building are even rarer. Only a few authors venture into a meta-level and propose handy analytical frameworks in order to explicitly differentiate, for example, the technical and economic content as well as the application aspects of media convergence. In describing media convergence, cultural studies approaches focus on overarching schemata regarding “media”, “society” and “change” in the age of globalisation. However, the majority of these approaches are coupled with a small number of intradisciplinary and transdisciplinary trends, the majority of which are inscribed in philosophical-sociological tendencies. [4] Sometimes media and cultural-oriented positions are merged in order to outline the geography of global media landscapes and to discuss

the possible specifics of "Convergence Culture" [5]. Rarely, theoretical findings are subsequently reviewed regarding political and legal real-world conditions. The latter of these look at other disciplines separately, and without making extensive use of cultural implications. "Most of the literature on the media is highly ethnocentric, in the sense that it refers only to the experience of a single country, yet is written in general terms, as though the model that prevailed in that country were universal" [6]. This is justified criticism by both Daniel C. Hallin and Paolo Mancini about an absolutization of Western theorems as well as models for the description of all potential media systematics, which are still monodisciplinary, and being transdisciplinary is noteworthy. [7]

As far as the literature is concerned, finding a balance remains an obvious need. European media systems are rarely covered in terms of media convergence and a multi-perspectival form. They are categorically compared within their overall spectrum just as infrequently. This may seem like a dilemma, but rather, it encourages the exploration of the "media convergence" phenomenon. It is not only theoretical attitudes that must be dealt with, but first, empirical insights must be included in the business planning and journalistic practice field in order to make the present and future relevance of media convergence recordable in a comprehensive way. Particularly within the context of public sector broadcast operators this study is dedicated, per its social financing and programme obligation, to innovation and the importance attached to this by the European Union (EU) and its member states regarding "their" public sector structures. Tarlach McGonagle points to the legislative position and clarifies by saying, "current regulatory and policy approaches to PSB are placing increasing emphasis on the role of PSM in a reconfigured mediascape". He elaborates further, "its engagement must also remain within relevant parameters set by EU law, e.g. rules and guidelines governing State funding for PSB and the relationship between such funding and PSB mandates" [8]. Many of these regulatory frameworks are currently in an exploratory process.

In order to make the conceptually diffuse and de facto dynamic subject area of "media convergence" methodologically manageable, a study system based on Delphi design is recommended.

METHODOLOGY

The Delphi study system

The study's approach is a three-level qualitative and quantitative survey of experts according to Delphi's design of "How to identify and qualify the views of a group of experts on a diffuse issue" [9] regarding the guiding research question: *What significance does media convergence have for business planning and journalistic parties at the public sector operators in Europe today? How do the parties assess the future relevance of media convergence?*

A preliminary phase with interviews will explore positions on deductive categories regarding the term "media convergence" gathered from secondary literature, as well as an exploration of technical, economic, content, legal, convergence of usage and the public sector operator organisational structure. The open plan of these guidelines allows for the inclusion of additional aspects in order to have inductive categories. Using the results of the preliminary phase the

questionnaire for the standardised Wave 1 will be generated. These findings are given to the panel in an anonymous and uncommented format of group-response feedback. For the subsequent Wave 2 standardised questionnaire, any arguments that are controversial or that were newly introduced in Wave 1 are presented either again or for the first time. The orientation is detailed in the below chart. The section entitled "Implementation" gives a detailed explanation.

Table 1: Delphi_Waves procedure

1 Qualitative interviews with experts (preliminaries)

- *Form:* Guidelines based interview
- *Objective:* Aetiology of topic areas
- *Next step:* Questionnaire development

2 Standardised interviews with experts (Wave 1)

- *Form:* Online questionnaire survey
- *Objective:* Quantitative and partially qualitative assessments showing interim results on apostrophised topics
- *Next step:* Derivation of an anonymous group opinion from feedback plus possible revisions to the questionnaire

3 Standardised interviews with experts (Wave 2) per feedback

- *Form:* Online questionnaire survey (from enhanced Wave 1, abbreviated catalogue)
- *Objective:* Quantitative and partial qualitative assessments on relevant topics
- *Next step:* Analysis of the collected data

4 Evaluation

- Interpretation of the findings
- Feedback to the participants regarding the anonymised results

Source: Weichselbaumer 2018

The "Delphi tool", which is frequently used in the social sciences and has been used in other disciplines, requires careful conceptualisation and operationalisation in its conditional standardisation in order to generate conclusive findings. These findings cannot claim to be representative beyond the group of experts from which they are derived. Nonetheless, the method and accompanying anonymity offers advantages over other interview based or question based techniques. Any answers regarding "social desirability" or certain kinds of dependency within the subject group can be excluded by utilising anonymised feedback. In a public sector environment, in which internal and international contact among potential experts can be considered a given, other anticipated distortions within this methodical procedure may be minimized as much as possible.

Selection of experts

With 36 panel invitees, the study invited a sufficient number of subjects for the research project. [10] Relevant experts from public sector institutions, as well as equivalently high-ranking representatives (such as directors, editors-in-chief, etc.)

from the fields of “innovation management/corporate planning” and “editorial management/department leadership” were selected (12 from each group). The first group demonstrated a profound knowledge of future planning content, including project planning, while arguments and forecasts from a journalistic perspective were stronger among the second group. As an external element, experts from “science/ research” supplemented the panel, who did intensive work on the topic of convergence and/or public broadcasting in Europe in the interest of communication and media science. Thus, the selection of experts was divided into three groups that each had different primary “types of knowledge” [11]: Contextual knowledge, business knowledge and interpretation knowledge.

Table 2: Selection of experts per planned types of knowledge

Expert groups (each with 12 representatives)	Planned types of knowledge
Science/Research	Experts primarily from the fields of media and communication science create ubiquitous theoretical classifications and produce procedural model references, ergo they offer contextually-based knowledge.
Innovation management/ Corporate planning	The internal experts on public providers primarily have informative operational knowledge.
Editorial management/ Department leadership	These <i>de novo</i> experts contribute their interpretation and combine both practical and contextual knowledge in this practice-oriented link.

Source: Weichselbaumer 2018

In order to have a sufficient sample size of experts for the envisaged area of interest, the study had to focus on its individual service and system promotion. A theoretical overview of the media and communications studies approach, albeit in connection with transdisciplinary orientated approaches to media concepts, media genres, media landscapes, media systems, etc., provided parameters for the national relevance of public media.

Location selection of the samples

Utilising a “most-different-systems-similar-outcome” type of access [12], from a population of ($n = 72$), including members of the European Broadcasting Union (EBU) as a value and a cooperative community [13], four public entities were removed. Initially, in order to make potentially convergent items suitable for contrast examination, the criteria included the organisational involvement of the triad Radio, Television, Online group, which fell under an official public umbrella. The existence of a public sector triad such as this one is not a given in all countries. The progressive selection process moved forward against a backdrop of key indices (Freedom House, Reporters Without Borders, Transparency International) and the

scientific explanation was based on common media theory and media system models. It was divided into three categories:

- Characterisation of the environment-based system for media regulation: Minimalist-liberal versus light touch versus client-based [14]
- *Financing*: Dues/ fee versus government grant versus mixed funding
- *Public structure*: Federal versus centralised versus proportional

Based on this grid, the following four samples could be assembled as a set of widely divergent systems: For Germany there was a focus on the ARD (*Arbeitsgemeinschaft öffentlich-rechtlicher Anstalten der Bundesrepublik Deutschland*), or the consortium of public sector broadcasters in Germany, as a definitively federal structure that was endowed through budgetary expenditures with advertising subsidies serving as marginal sources of funding. As part of a light touch media regulation style, the variety of the programming and its composition is strongly influenced by the "three-step test".

The ORF (*Österreichischer Rundfunk*) in Austria is also similar in that it may be associated with the light touch media regulation style, however, it differs in that it has a single regulator. The organisational structure of the ORF, which is primarily sponsored through advertising, is considered to be very centralised. Slovenian RTV SLO (*Radiotelevizija Slovenija*) operates through royalties and advertising/sponsoring on a pro rata basis. The organisational structure is one in which there is a significant core of federal satellite channels, and the traditionally narrow portfolio of programming is a reflection of this. RTV SLO operates in a client-based media regulation landscape. Likewise, Hungary's MTVA (*Médiaszolgáltatás-támogató és Vagyonkezelő Alap*) is also part of this client-based media environment, with de facto centralisation and state financing.

For each national location, there were three experts within each defined knowledge group including ("Science/research", "Innovation management/Corporate planning", and "Editorial management/department leadership"). The Delphi study was divided into a guideline-based first round of interviews, which deduced from the theoretical categories in the preliminary work that was done (definition of terms, technical, economic, content, legal and convergence of use, public organisational structures) and inquired about other essential points. The result was the standardised questionnaire for Wave 1 and the development of Wave 2. The exact sequence is explained below.

Procedure

The qualitative preliminary round conducted in January/February 2017 selected a cross-section of 15 of the 36 total participants. One participant from each of the three chosen groups participated at each location nationwide. For the two public-internal groups "Innovation management/Corporate planning" and "Editorial management/Department leadership" three representatives, who work closely with EBU partners in their professional milieus and are therefore appropriate in a EU-level discussion, were recruited from different sample locations. The individual interviews focused on the deductively based topics regarding the definition of terms, types of convergence (technical, economic, content, legal convergence and usage thereof) as well as on public service organisational structure. Indirectly,

additional fields of public legitimacy and future consensus for social systems grew. As per the preference of the participants, the discussions took place in German or English. The two languages were sufficient for the questionnaire.

The standardised Wave 1 was a quantitative online questionnaire with 18 items from the guideline topic discussions deductively set up and inductively collected in the guideline. 30 participants provided assessments between June and August 2017. Future horizons that were to be assessed were divided into two parts. Assumptions were made for the next two to five years, and forecasts for the time span of six to ten years were treated differently. This enabled potential trends and disruptions to be accounted for. Without assigning weighting and in an anonymous format, the results of Wave 1 were included in a feedback sheet that was made available to the whole panel before the creation of the questionnaire for Wave 2. Wave 2, (from August to September 2017) which was also standardised, indicated 10 items within the topics of definition of terms, types of convergence (technical, economic, content, legal convergence and usage) as well as public organisational structures, legitimacy and regulation. Thus, the second questionnaire was evaluated by the experts in Wave 1 either as contestable points or as requiring additional or repeated elements. 22 volunteers participated in this round, who would be queried again at intervals of two to five and six to ten years in the future.

Methodology evaluation

The option of a non-response answer for the field, "I do not know" for a specific question, as well as the possibility of self-assessment per one's professional background (corresponding to the demonstrated methodical expert groups), expertise in the different convergence areas, (technical, economic, content, legal, convergence usage) and knowledge of national media environments of the given sample, all served to ensure a discussion at the highest possible level. The majority of interviewees were transparent regarding their knowledge in these areas.

It was not possible to maintain the plan of keeping the panel consistent over all three phases - initially as a cross-section in the preliminary round and then combined in Waves 1 and 2. Few participants had to be recruited over the course of the study. In a multi-stage Delphi procedure, the panel attrition rate and the time availability of the experts should be taken into account methodically and in the analysis. Again, it should be reiterated that a Delphi study does not ultimately claim to create a generalisation, but rather it allows the opinion within an expert group to be put forth.

6 Results and discussion

Based on the entire panel, 17 theses were collected to create a conceptual definition, technical, economic, content and legal convergence, those of usage, public organisational structure, legitimacy and a "USP (Unique Selling Proposition) public sector operators". In most cases, the assessments gathered from the groups "Science/Research", "Innovation management/Corporate planning" and "Editorial management/Department leadership" were not clearly divisible from one another. In many cases, the CVs and the experts' fields of knowledge meshed: Public-sector journalists and managers who worked in similar areas at a university, or academics who had journalistic experience before their scientific careers. On the other hand, in the areas of "legal convergence" and "public organisational

structure" in particular, the differences were quite noticeable. First and foremost, rigorous evaluations of the respective national implementations of EU framework directives were done, and less frequently, these were examined at a pan-European meta-level, e.g., the topics of "technical" or "economic convergence". At the same time, particularly internal test subjects closely linked the public organisational structure to the corporate culture of ones' employer. The theses from the Delphi survey will be discussed in a condensed form.

Thesis 1 ("Definition"): "Media convergence" is useful as a conditional and flexible semantic concept in order to describe a complex phenomena in transition. However, even here this dynamic requires clear positioning and the naming of reference objects.

Alternative levels of abstraction allow for the term to be sufficiently malleable.

Thesis 2 ("Definition"): Over a two to five year time period, "technical media convergence" is the most noteworthy factor, other than "Legal convergence/Regulation", in terms of media changes in Europe. In the longer term, the latter category will overtake the former and become a decisive factor. "Convergence of use" will also take precedence over "technical convergence". "Convergence of content" fails and is deemed to be controversial in its meaning.

Thesis 3 ("Technical convergence"): Linear and non-linear offerings should be considered two separate phenomena each with their own specifications, which must fall under the jurisdiction of the European public sector and not only in cases where the programming mandate includes the general public as an audience. The volume of programming is still notably expanding in a non-linear manner, recalling the convergence in terms of usage factor.

Thesis 4 ("Technical convergence"): Based on multimedia focused academic and in-company training, public broadcasters in Europe will have to develop experts for individual channels and formats in addition to all-rounders. Newcomers are still possible.

Thesis 5 ("Technical convergence"): Europe's public sectors explore technical orientation and updates, primarily in the form of an exchange, be it in the EBU network or bilaterally. In addition to cooperation with entities in the open economy, cooperation with government agencies provides significant technical potential for creation.

Thesis 6 ("Economic convergence"): Media convergent processes will slightly increase production costs in the public sector in the next two to five years, or remain as they are currently, but over the next six to ten years they will decrease. Start-up financing, reconfigurations, changes in product and platform portfolios, and technical acquisitions have an impact at present, but this impact will be reduced by the end of the decade.

Thesis 7 ("Economic convergence"): With the intention of both preserving things that are tried and tested and also trying new things, Europe's public providers will seek to maintain established channels of access, while keenly striving to grow and expand alternative platforms and independent digital brands. Personnel and production costs are lowered in this pecuniary countermove and license and legal

purchases are reduced, as are event reporting (sports, shows, etc.) and certain productions (film, experimental radio, etc.)

Thesis 8 (“Economic convergence”): Europe’s public sector operators will seek funding through contributions or device-based fees. A small expansion of advertising income is to be assumed, if anything, a tertiary exploitation or programme revenue. State subsidies remain controversial and the public sector will not claim a reported tax requirement.

Thesis 9 (“Content convergence”): Over the next decade, public sector organisations in Europe will determine their multimedia departmental and editorial content. In this process, guaranteeing domestic diversity will be a given. This is to safeguard varying opinions on topic selection and reporting, which represent both a public sector requirement as well as value based on programming.

Thesis 10 (“Content convergence”): Large and live events are less featured in public sector offerings. Monomedia premiere broadcasts subsequently in multiple use, or adaptations for other outlets, outweigh the approaches of multimedia storytelling. News reporting and regional focus will define format development in the public sector. It will be less about establishing programming patterns such as fact checking, but rather about finding and operating proprietary platforms.

Thesis 11 (“Utilisation convergence”): Although public sector providers in Europe will increasingly incorporate user-generated content and open up a dialogue with the public, they will create separate platforms, formats or environments that will increasingly be taken care of by “social media experts”. Journalistic competence, as a high-quality, professional public sector value add, either as compared to or along with original usage, will be evident.

Thesis 12 (“Utilisation convergence”): Public sector providers in Europe have different motivations regarding varying advertising requirements, and most importantly regarding the necessary legitimacy of the public system with society as its sponsor, and the task of gaining a new, growing public audience. Subcultural, social, demographic etc. components in fragmented environments gain varying usage preferences for multimedia sectors to rapidly gain relevance.

Thesis 13 (“Legal convergence frameworks”): Public sector issues in Europe are, first and foremost, regulated by national bodies where the EU acts as a framework.

There will be a need for regulation, primarily with regard to multinational media corporations and international competition law in general. Copyrights will also be discussed by regulators.

Thesis 14 (“Public sector organisation structure”): Europe’s public sector will restructure its organisational charts. Established structures are reluctantly abandoned, with new ones implemented in a parallel format (rather than as a substitution) before they ultimately replace obsolete ones. Multimedia responsibilities initially appear in editorial contexts without completely overpowering monomedia outlets. It is debateable whether committee cuts will be done in lockstep or at a slower pace. Outsourcing will particularly affect technology and facility management, while administration will be less affected. New corporate building blocks contributing to the establishment of separate social media

departments and research and development departments are increasingly expected. The regional element as a part of organisational chart modification will play a more significant role in the near term as opposed to in the long term.

Thesis 15 (“Public sector organisation structure”): In the coming decade, the exchange of individual programme products in Europe's public sector will increase. On the other hand, joint program creation and the establishment of shared organisational structures, as well as anything more than peripheral development of common platforms, will remain unlikely.

Thesis 16 (“Public sector legitimization”): Europe's public sector will closely align its efforts to safeguard legitimacy with the respective programme mandate on topics and opinions that are to be included. In so doing, a balanced and pluralistic opinion will be essential to break down the demands on regional positions and realms of experience, which in turn indirectly support the public image via media products. Metacommunicative legitimization approaches via public value reports or discussion events remain marginalised.

Thesis 17 (“Public sector USP”): Europe's public sector operators will try to anchor their USP, particularly through parameters such as “trust” and “reliability” in order to be viewed as bodies that represent a certain level of “quality”. Firstly, this argument will continue as a result of the explicit link to the programming mandate and the resulting multi-value in the media system. It is less likely that Europe's public sector operators will get involved in a discussion about political independence or lack thereof in order to define themselves as being bound by both internal and external norms.

When condensed, these theses create a clear picture regarding the future of public sector providers in Europe in relation to media-convergencies or media converging times, especially the reflection of the designated programming. Its reliable and audience-effective implementation formed the core of public sector operators' future strategy, according to the Delphi panel. Requirement fields must be designated in the technical, economic convergence sector, and increasingly, those of use and regulation and legal settlement as well. But the means of measurement is and will remain: What do European public sector providers do for “their” respective societies? At this point, the panel was given feedback on content related convergence spectra, which would be used both in traditional linear, and increasingly, in non-linear formats as well. However, organisationally, they developed gradually and within thematic journalistic areas. However, the test persons were much less against the restructuring of public sector bodies in the coming decade according to patterns of content.

Continuing examinations will be necessary, and they will in turn examine this interfacing societal mandate and public sector self-definition, as well as the implementation of this mission and societal perception. Media convergence as part of a change in media will certainly be an essential component, as well as the exploration of a what is currently being virulently discussed in certain countries: why public sector broadcasting should exist in Europe. Another task within the research will be to develop and test methods of media investigation that provide robust empirical results in this highly dynamic environment. Similarly, it will be

appropriate to counter this theoretical dynamic and model formation more consistently and more strongly than was done so before.

CONCLUSION

The current Delphi study predicted paths in a media-convergent era that can and will probably exceed Europe's public service broadcasters. The analysed time frame is not excessively long. Two to five and six to ten years were highlighted as intervals. The participants estimate that there will be rich periods, conversion, change, re-orientation with a simultaneous attempt to preserve the tried and test and take a chance on new things. "Reliability" and "trust" coined as a USP to satisfy the programming mandate concluded within the interest of society – and with their financing – will presumably form an imaginary nucleus that must be secured. Linked to a *most different system* approach and recruited from the public reference areas, ARD (Germany), ORF (Austria), RTV SLO (Slovenia) and MTVA (Hungary) in the expert judgements of this Delphi study have crystallised many common denominators. Whether political accesses or concerning their prevention, economic weightings, legal requirements – Europe's public service broadcasters will have to work together on EU-level in the next few years. However, they will also have to be responsible for providing "public cultural sovereignty areas" that are relevant to society.

Media convergence in terms of terminology will be a generally accepted driver and a challenge. "Media convergence is like teenage sex", is a quote by Danish chief editor Ulrik Haagerup that has continued to be used since 2002: "Everybody thinks everybody else is doing it. The few who actually doing it aren't very good at it" [15]. The public service broadcasters in Europe will have to grow up in this process in a clever and level-headed manner. And passion for games should be maintained more than before. Monolithic medial lord of the manor mastery is no longer viewed as an option by this Delphi study. However, innovative and patent public-law vitality as the zest for survival is an option.

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MILLENNIUM TRAVELERS TOURISM CHOICES IN AN ERA OF GLOBAL THREATS OF TERRORIST ATTACKS – A CASE STUDY OF POLAND AND LITHUANIA

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ABSTRACT

In tourism sector, young tourists are considered to play an important part in its future development. The literature shows that Millennial travelers, representing the so-called Generation Y, will create about 50% of the total tourist sector in 2020. Millennials are more diverse as a group than non-Millennials and are more interested in international travel and having global cultural experiences. That Millennial travelers are more carefree, and, perhaps therefore, more susceptible to various risks and threats, including terrorist attacks. The subject of the paper is young tourists from Poland and Lithuania and their choices regarding the tendency to travel and the choice a tourist destination. The aim is to assess the importance of travel costs and safety levels during the tourist decision-making process by the Millennium travelers from Poland and Lithuania in the context of terrorist threats existing in the world. This objective will be achieved through critical analysis of literature and empirical analysis of young tourists on the basis of a questionnaire survey carried out in Poland and Lithuania.

Keywords: Millennium travelers, travel cost, safety level, terrorism threat

INTRODUCTION

The tourism sector has been seeing the influx of a new generation tourists in the market [1],[2],[13]. Relevance of this phenomenon is supported by the increasing scientific research on this topic. The Millennial Travelers or Generation Y are people born between 1982 and 2002 [2]. In scientific literature they are referred to as the future market [2].

Millennial Travelers area group of people who in the year 2020 will constitute about 50% of the tourism market [1]. Researchers raised the question, what distinctive characteristics they exhibit and what measures should therefore be used to target them and offer such tourism products which would meet their expectations (such factors, as ratio of price to safety). The challenge has become greater since the number of emergencies and crisis situations has grown worldwide in recent years. We also have had a growing number of tourist deaths caused by terrorist attacks in popular tourist destinations. For this reason, this challenge becomes even more important and requires multifaceted research. The subject of the research paper is young tourists from Poland and Lithuania, and their choices regarding their tendency to travel and their choice of a tourist destination. The aim of the study is to assess the significance of travel costs and safety levels during the tourist decision-making process by the Millennium travelers from Poland and Lithuania in the

context of the terrorist threats existing in the world. This objective will be achieved through critical analysis of literature. Empirical data analysis and its verification were carried out. Empirical analysis is based on the results of the survey research carried out in Poland and Lithuania among young tourists who belong to generation Y. To conduct the analysis, Statistical Program Statistica version 13 was used. To add, a statistical analysis was carried out using descriptive statistics (percentages, mode, median, mean, sum of ranks) and inferential statistics (Mann-Whitney U test and Chi-square independence test).

MILLENNIAL TRAVELERS – WHO ARE THEY?

Pursuant to Strauss and Howe’s theory [11], a new unique generation of human nation emerges about every 20 years (Table 1).

Table 1 Brief Overview of Current Generations in Tourism [11]

Generation label	Approximate birth dates	Decision making	Earning and spending
Silent Generation	1925–1942	Barely active in the tourism market	Barely active in the tourism
Baby Boomers	1943–1960	Authority, brand, loyalty	Conservative, pay upfront
Generation X	1961–1981	Experts, information, brand switchers	Credit savvy, confident investors
Generation Y	1982–2002	Friends, little brand loyalty	Uncertain spenders, short-term wants, credit-dependent
Generation Z	2003 – 2012	Do not travel on their own and their travels depend on parents’ decisions	Depend on parents’ decisions
Generation Alfa	2013 –	Do not travel independently and their travels depend on their parents’ decisions	Depend on parents’ decisions

Each of the above listed generations is typical of a certain specific behavior pattern or model which affects not only their professional and personal life but also travelling. Table 2 lists characteristics of which travelers of Generation Y (the object of this article) are typical as well as their traveling peculiarities.

Table 2 Y-Generation Travelers Mapped against Generational Traits [11]

Features	Explanation of feature
Travelling more often	Average number of trips taken has increased in the last 5 years
Exploring more destinations	Take more trips outside the local region and explore new areas of the world
Spending more many on travel	As a proportion of their income, spend more than any other
Booking more over the Internet	Early adopters of new travel technology
Experience hungry	Want a range of different experiences often involving everyday life and culture of places visited, including contact with local people
Information hungry	Consult a greater number of information sources to plan trips
Intrepid travelers	Are not deterred by problems such as terrorism, natural disasters and epidemics – mitigate these risks through information
Getting a lot out of their travel	Travel makes them want to travel more, serving as a stimulus to learn and develop, including developing greater cultural understanding

The Millennial generation is one of the largest generations in history – even larger than Baby Boomers [8]. Researchers are unanimous in stating that they are a group of tourists who willingly invest their time and money in travelling [8]. As stated, they see travelling not as an object luxury but as the natural law – their birthright [5].

Millennials are more diverse as a group than non-Millennials (Generations Baby Boomers and X), they are interested in international travel and global cultural experiences [1]. Research shows that most often they try to avoid traditional, mass and popular tourist routes, they do not stay at luxurious hotels, they can afford spending up to two months travelling [5]. These tourists are more open to novelties and are more interested in the environment which surrounds them while travelling as well as in people they meet while visiting foreign countries [2],[9]. Besides they are not familiar with pre-internet life or ruck-sacs!, smartphone ‘addicts’-free and fast WiFi–suffer from the Fear Of Being Offline (FOBO), likely to return later in life and word-of-mouth advertisers –opportunity and threat [7], they are looking for authentic word-of-mouth information, but not only from family and friends and mainly from anonymous people [3]. The main differences between the generations of Baby Boomers and X are the following: travel motivations, planning sources, preferred destinations and vacation activities [12]. As Morrison et al. [9] observe, they focus more on search of information on social networks and care about the opinion of a certain field of experts. They review about 10 sources on average until they decide to buy a travel, book a hotel, etc. [9],[14].

Some other differences can also be noticed in terms of comparison of this group of tourists and the previous generations. One of them is travel price. As Barton et al. [1]. put it, these tourists care about the price point as Millennials are less willing to pay more for travel. It is said that “they’ve discovered that travel doesn’t need to be complicated or expensive” [5].

As can be seen, the Millennial travelers have set new requirements for the tourism industry. Since it is one of the biggest generations coming to the tourism market, we must respond to their needs and meet their expectations.

MILLENNIAL TRAVELERS AND TRAVEL RISK

The chosen tourist group travels more often and their travel geography expands (thus increasing the risk of facing crisis situations and emergencies during the travel). This leads to new challenges to persons who are responsible for the enlargement of the tourism sector. The Millennial travelers are more aware of travel risks’ associations with digital and technology tools [12]. However, as noted by Woods and Davis [13] “millennials are also more willing to trade personal information in return for discounts, better products or more targeted offers”.

Barton et al. [1] hold the view that the Millennial travelers are not so cautious since they tend to share personal information online, such as brand preferences, where they live, household composition, loyalty status and numbers, age and general personal information, frequent destinations, preferred airports, personal hobbies. As a result, they might become the target of terrorist groups since it is very simple to collect sufficient amount of information about them and to use it for planning attacks.

This group of tourists is more likely to behave in a different way when a potential danger arises. Whereas older generations tend to refrain from certain travels, young tourists travel according to the plan prepared in advance [4]. For this reason, they are often defined as brave tourists who regardless of anything travel abroad to gain some experience [6]. However, as research by Mura [10] demonstrates, young tourists “play with fear...but not too much”. Additional risks and participation in emergencies give their travels the taste of venture and savor, however, to a certain limit.

Methodology

The aim of the paper was to assess the significance of travel costs and safety levels during the tourist decision-making process by the Millennium travelers from Poland and Lithuania in the context of the terrorist threats existing in the world. As indicated in the literature review, both travel costs and safety level during a tourist trip are one of the most important factors determining the tendency of tourists to travel, and what is important in the context of our study, which tourist destination to choose. To determine the significance of these factors, a survey research was conducted among respondents from Poland and Lithuania aged 18-36. The survey questionnaire was conducted among students at the Faculty of the Economics and Management University of Szczecin in Poland (N=849) and at the Faculty of Public Governance Mykolas Romeris University in Lithuania (N=652), who accounted for 63.2% and 50.2% of the total number of people studying there, respectively. Only

respondents who are tourists have been subject to the analysis, which was checked by asking respondents whether they travelled and how many times a year. Demographic and travelling characteristics of the respondents are provided in Table 3.

Table 3 Profiles of the samples

Demographic and travelling characteristics		Country	
		Poland	Lithuania
Average Age	years	22.6	28.1
Gender (in %)	women	72.9	76.5
	men	27.1	23.5
Frequency of travelling (in %)	Less than once a year	7.5	11.8
	Once a year	16.8	29.1
	2- 3 times a year	42.8	39.4
	4 -7 times a year	20.6	14.0
	More than 8 times a year	12.2	5.7

The statistical package Statistica 13 was used for statistical analysis of the data. Descriptive statistics which is suitable for the Likert Scale was employed, namely, frequency expressed by means of percentage was used (ranging from 1=of no importance to 5=very important). Hypotheses for two independent samples were verified by applying nonparametric criteria of Mann-Whitney U test and Wilcoxon rank sum test. To compare the details of a few independent samples, Kruskal-Wallis test was applied. The statistical level of significance $\alpha = 0.05$, p value (Asymp. Sig.) ≤ 0.05 was chosen. The hypotheses were checked against the aim to find out whether the evaluation of significance of travel costs and safety level during the tourist decision-making process by the Millennium travelers depend on the country of studies (Poland and Lithuania), age, gender and frequency of travelling.

Results

First, it assessed how respondents evaluate the importance of factors determining their travel decision. As can be seen from the details of descriptive statistics (Table 4), both the level of security and travel cost are perceived as important or very important in Poland and Lithuania (over 70% of respondents).

Descriptive statistics (Table 4) indicate that in Poland the assessment of the importance of both factors determining the choice of tourist destination is on a similar level with a slight accent towards the level of security, while in Lithuania travel costs are assessed as a more important factor than the level of security. It is confirmed by such descriptive statistics as mode, number of modes, mean rank and sum of ranks. Statistical verification by Mann-Whitney U test indicated (Table 5),

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when grouping variable is country, that in assessing the level of security by Millennium travelers there is no statistically significant differences between respondents from Poland and Lithuania. However, there are statistically significant differences between the respondents from Poland and Lithuania in the assessment of the importance of travel cost as a factor determining the tourist trip.

Table 4 *Assessment of the Importance of Tourist Factors According to Countries*

* Scale for evaluation of the importance of tourist factors ranging from 1=of no

Cou ntry	Factor	N	Media n	Mode	Number of Modes	Mean Rank	Sum of Ranks
PL	Level of Security	849	4	5	379	4.11	653841.0
	Travel Cost	849	4	4	335	4.11	611705.5
LT	Level of Security	652	4	5	261	4.03	473410.0
	Travel Cost	652	4	5	295	4.27	515545.5

importance to 5=very important.

It is worth noting that differences between countries in the assessment of these factors (level of security and travel cost) are greater among the younger part of Millennium travelers. Figure 1 shows a positive assessment of the level of security and travel cost in Poland and Lithuania according to age, ie. among respondents aged up to 24 and respondents over 24 (this is due to the fact that the majority of people aged 24 ends academic education). The difference in the assessment of the importance of the level of security, depending on the age, is 0.0-7.7 percentage points, while in the assessment the travel cost is 7.4-9.3 percentage points. However, the influence of age on the assessment of factors by respondents was not confirmed by the Mann-Whitney U test ($p > 0.05$).

up to 24 years old

25 years old or more

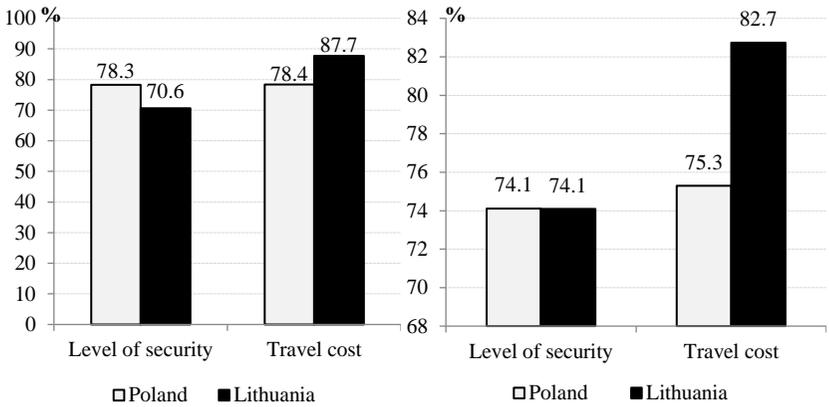


Figure 1. Share of respondents in Poland and Lithuania who claim that level of security or travel cost are important or very important factors determining their trip

Conclusion of decisive importance travel cost for Lithuanian respondents is confirmed by data on the inclination of Millennium travelers to choose a trip with a lower level of security when there is an economic incentive in the form of price reduction of the total cost of tourist trip (Figure 2). In Poland, 57.7% of respondents (and depending on the age 56.9-64.7%) do not react to price reductions, while in Lithuania 53.1% (depending on the age 46.5-61.1%) react to price reductions. Millennium travelers from Lithuania are more willing than Polish travelers to go to a less secure country when they receive an appropriate price incentive.

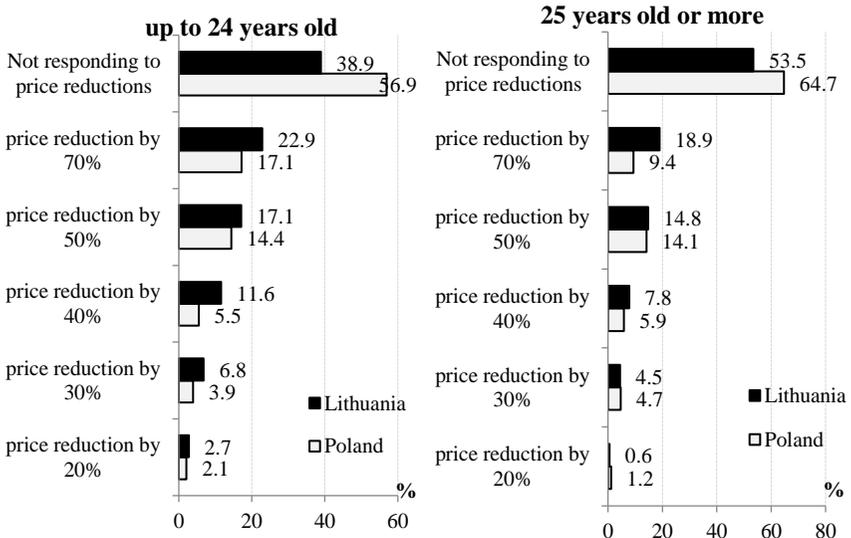


Figure 2. Price reduction of the total cost of tourist trip that would have persuaded of respondents in Poland and Lithuania to choose a trip to a country with a lower level of security

Statistical analysis by Mann-Whitney U test (Table 5) indicated that there are statistically significant differences between the respondents from Poland and Lithuania in answering the question whether they would be willing to choose the travel to a country that has lower level of security (a tourist destination with a higher risk rating) when a price reduction occurs. It is worth adding that there are differences in the assessment of this factor among respondents from Lithuania depending on their age. The result of Mann-Whitney U test according to age is $p=0.000$ ($Z=-3.67$). Younger Millennium travelers from Lithuania are more likely to go to a country with a low level of security when the price for the trip will be reduced.

Table 5: Evaluation of the importance of **factors determining respondents' decisions about their trip** - Mann-Whitney U test statistics

Grouping variable	Country			Gender					
	Poland/Lithuania			Poland			Lithuania		
Test statistics	U	Z	p value	U	Z	p value	U	Z	p value
Level of security	260532.0	1.95	0.051	49043.5	6.97	0.000	36080.0	1.03	0.304
Travel cost	250880.5	-3.11	0.002	62206.0	2.83	0.003	32490.0	2.79	0.005
Price reduction	246211.5	3.67	0.000	55228.5	5.02	0.000	33451.0	2.32	0.021

Due to the fact that the level of security in both Poland and Lithuania is important, but for Lithuanians, travel cost is a more important factor than the level of safety, so it was investigated how Millennium travelers assess the occurrence of various security measures during a tourist trip (Figure 3). The results of research in assessing the importance of security measures at the airport by the respondents indicate that Millennium travelers from Lithuania prefer hard security measures, ie. additional camera, enlarged list of prohibited items, strict control of baggage and tourists. On the other hand, Polish people prefer to see security measures, but they do not necessarily consent to limit their privacy. These tendencies of respondents and differences between countries in the perception of security measures may explain why tourists from Poland pay more attention to safety than tourists from Lithuania.

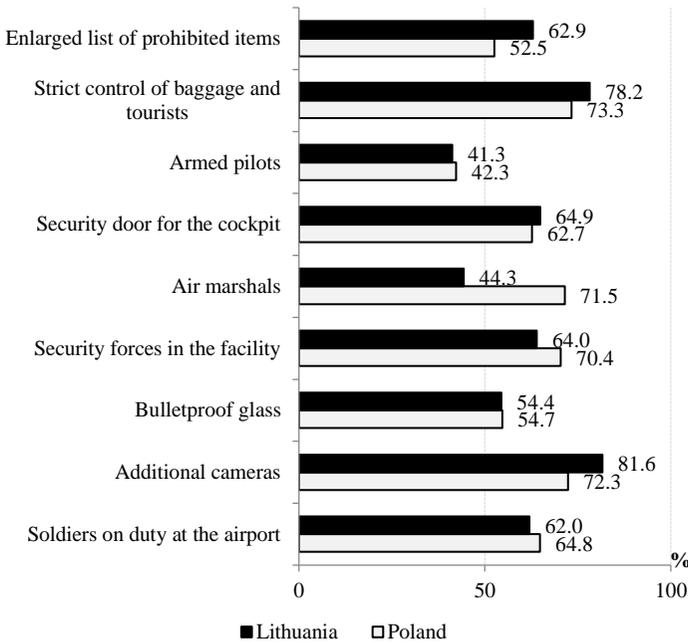


Figure 3. Security measures at the airport which are important or very important to respondents in Poland and Lithuania

Analyzing the survey data, it was found that the assessment of factors affecting the tourist preferences of Millennium travelers may depend on gender. Research results indicate that the importance of the given factors (level of safety, travel cost, price reduction) when making a choice about travel to a given tourist destination, depends on the gender of the respondents (in Poland, for the studied factors the average rank is respectively for women: 4.29; 4.18; 5.26, for men: 3.63; 3.95; 4.74, and in Lithuania for women, respectively: 4.06; 4.32; 4.97, and for men: 3.94; 4.08; 4.64). Women in both countries pay more attention to safety and security than men, and when it comes to prices, they are more likely to give up security (mode in Poland and Lithuania) for any price, or require very large, 70% price reductions. Data analysis by Mann-Whitney U test (Table 5) indicates that there are statistically significant differences in the assessment by respondents in Poland depending on the gender for all of studied factors, and in Lithuania when assessing the importance of travel cost and price reduction. The analysis shows that differences in assessment between women and men are greater in Poland than in Lithuania.

DISCUSSION AND CONCLUSION

Research results indicate that Millennium travelers are a group of tourists who willingly invest their time and money in travelling and are more diverse as a group than non-Millennials, they are interested in international travel and global cultural experiences, and are more open to novelties. These tourists care about the cost of the package/holiday and are less willing to pay more for travel. Besides this group

of tourists are more brave, ie. compared to older generations and travel according to the plan prepared in advance to gain some experience regardless of anything.

Discussing the postulates raised by literature, it should be stated that the results of the research have confirmed that Millennials pay considerable attention to the issue of travel costs. In addition, it can be seen that they are willing to take greater risks in tourism and travel to destinations with lower levels of security, but not at any price. This may be confirmed by the fact that the majority of respondents in both countries consider the price to be a very important factor determining their tourist trip. In Lithuania, price is even a more important factor than security level), but at the same time, about half of the respondents (to a greater extent in Poland) would be willing to pay extra if the travel destination was characterized by too low level of security.

Research results by the authors indicate that most of Millennium travelers in Poland and Lithuania greatly appreciate the importance of safety and security and travel cost levels (around $\frac{3}{4}$ of respondents). However, there are statistically significant differences between respondents from Poland and Lithuania in assessing the importance of travel cost as a factor determining a tourist trip. Respondents in Poland perceive travel cost as an important factor affecting their tourist choice, while in Lithuania travel cost is assessed as a very important factor, and even more important than the level of security. Differences in assessment between respondents in both countries occur regardless of age (although this difference is slightly higher among younger tourists).

Research results indicate that Millennium travelers from Lithuania are more willing than Polish travelers to go to a less secure country when they receive some incentive in the form of a price reduction. In Poland, over half of respondents do not react to price reductions when it concerns a low level of security, while in Lithuania just over half of respondents would be willing to react to the price factor in such a situation. Studies indicate that in Lithuania this is influenced by age (younger tourists show a greater lack of reaction to a low level of safety).

It was also stated that Millennium travelers from Lithuania prefer hard security measures, while Polish travelers like to see security measures, but do not necessarily consent to limit their privacy.

Research results also indicate one important conclusion: gender influences the assessment of the importance of factors determining the choice of a tourist destination. In Poland, women value safety more than men, and for any reduction in price they are not willing to give up security, while in Lithuania gender differences occur when assessing the importance of the travel cost.

The analysis carried out in the paper indicates that there is a need for further research in this area.

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MODELING AND FORECASTING OF INDICATORS OF THE HIDDEN BANKRUPTCY OF THE ENTERPRISES

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ABSTRACT

This article contains statistical analysis of the hidden bankruptcy of the organizations, the existing principles and approaches to the identification of a hidden bankruptcy in the early stages for the purpose of commercial credit. A new approach in the analysis of concealed bankruptcy, using the three-dimensional model that combines the most adaptive forecasting models for the global and Russian terms of trade. The stages of development of models of forecasting of bankruptcy in different countries, as well as Russian experience in research of this issue. The author offers the classification of existing models identified their advantages and disadvantages. Systematization of the models are based on statistical methods used in solving the problem of bankruptcy forecasting organizations in the selected models. The definition of hidden bankruptcy should be, the state of the enterprise, in which there are predictive trends in the deterioration of financial performance, shortcomings in the management of the company are qualified as errors and failures, and lead to financial insolvency. However, that hidden bankruptcy is not legally defined and regulated, there are many methods for evaluating the effectiveness of the company's financial activity, which has as its basis a model for assessing hidden (unrecorded) bankruptcy. Also in the predictive models are calculated indicators of cash flow, cash from operations, costs for servicing loans (sales financing from funds raised - the price of borrowed capital), tangible assets or tangible total assets, salaries - the ratio of labor costs to the added value (cost price - the cost of raw materials, energy, services of third-party organizations) or remunerated staff ratio, profit before interest and taxes or gross operating profit, revenues - gross income from sales of products, works and services, extraordinary items - extraordinary consumption and financial expenses - financial costs, as well as GNP price-level index.

Keywords: commercial loans, bankruptcy risk assessment, credit policy, bankruptcy, forecasting models.

INTRODUCTION

The need to develop methodological approaches to identifying bankruptcy in the early stages is due to some trends occurring with the Russian economy at the present stage. The strong growth in the share of loss-making enterprises in Russia comes with the aggravation of crisis situations in the world markets, during the world economic crisis, as well as in connection with the current currency crisis in Russia, when there is a sharp jump in the share of loss-making organizations.

The impact of operational and financial difficulties in the company is based on the traditional analysis of financial indicators (quantitative factors).

The first studies in the search for quantitative analytical coefficients to predict possible complications in the financial activities of companies were carried out in the United States in the early 30-IES.XX century. So in 1932, when Fitzpatrick published a study of 20 pairs of firms, among which were bankrupt firms and firms that were able to survive, were commensurate with the age of the company, size and industry, in Certified Public Accountant. At that time, he was unable to carry out a complete statistical analysis, as it is now possible, but intuitively interpret the values of indicators and their trends. His interpretation was effectively a complex multivariate analysis.

One of the first financial analysts, who used statistical techniques in combination with financial ratios to predict the likely bankruptcy of the enterprise, was W. H. beaver(W. N. Beaver) 1966. U. beaver on the basis of comparison of the influence of 30 financial indicators proposed five factors to assess the financial condition of the enterprise in order to diagnose bankruptcy. [2]

The most accurate in the conditions of modern market economy specificity are multi-factor models of bankruptcy prediction, which usually consist of five to seven financial indicators. In the practice of foreign financial institutions for assessing the probability of bankruptcy is often used "Z-account" E. Altman (creditworthiness index), which is a five-factor model, based on the data of successfully operating and bankrupt US industrial enterprises. [1]

As well as Altman (1968), discriminant analysis is used by many researchers by making changes in the choice of financial indicators, the study of different enterprises of different industries and different business cultures. Some of the known studies are dickin (1972), bloom (1974), Springate (1978) and Fulmer (1984).

The advantage of methods similar to the Altman model is the high probability with which bankruptcy is predicted approximately two years before the actual announcement of the competition, the disadvantage is the decrease in the statistical reliability of results in the preparation of strategic forecasts.

Limitations of discriminant analysis created a space for the development of the logit model. Olson (1980) presented logit model in bankruptcy prediction. Assumptions of the logit models differed from the models Z-score. Olson identified nine independent variables (financial and non-financial) based on their frequent use in bankruptcy forecasting. This model was developed on the analysis of 2,163 companies (105 bankrupt and 2,058 non-bankrupt) for the period 1970-1976. According to the model of Olson, Abdullah et al. (2008), applied logistic model foreshadows the corporate bankruptcy of Malaysian firms.

Despite the positive factors in the use of logistic regression and its logic models to assess the likelihood of bankruptcy of organizations, this model can be criticized. For example, a detailed analysis of the risk assessment of bankruptcy of domestic companies, obtained on the basis of this model, does not allow to draw a clear conclusion regarding the probability of bankruptcy of organizations included in the analyzed sample, the calculations give the opposite results.

Zmieviskiy (1984) used a probit model using data from 40 8000 bankrupt and not bankrupt firms for the period 1970-1978. He conducted a comparative analysis of 13 models of the definition of bankruptcy and on their basis built his model. One of the criticisms of Zmieviskiy's model is that other bankruptcy models for identifying problem firms were more accurate due to the completeness of financial data. [6]

Nonparametric models are highly computer-dependent and are mostly multidimensional (Andan and Dar, 2006). Some of the well – known nonparametric models are artificial neural network (Ann) models, hazard models, fuzzy models, genetic algorithms (GA) and hybrid models, or models in which some of the former models are combined.

The model of the artificial neural network can examine a particular dataset, and to adapt to it, they also have the ability to grasp the nonlinear relationship between the variables, what is the advantage of these models. The main disadvantage, however, is that they are unable to explain the cause-effect relationships between their variables, which limits their application to practical management problems (Lee and Choi, 2013). Kirkos (2015), in a credit risk review article that focuses mainly on artificial models of research published between 2009 and 2011, that is, during the information technology revolution, suggests that in the 1990s through the creation of artificial intelligence and management systems, these models were able to grow and develop. This led to the development of a new set of bankruptcy prediction models known as neural networks. Messier and Hansen's (1988) studies related to the use of neural networks in predicting bankruptcy are emerging. Followed by a large number of studies, such as Ragupathi (Raghupathi et al (1991), Fant (1993), Guan (1993), Tsukuda and Baba (1994), Altman, Marco and Barreto (1994). [4]

Artificial neural networks are a method that has been used in predicting bankruptcy, mostly over the past two decades. Neural network models include quality criteria and are in essence computer systems that make decisions based on established facts as well as the human brain operates, in addition, they aim to solve a specific problem, or used to create new models of governance.

Neural networks are also used for other tools of mathematical modeling, for example, to predict the corporate ratings of the company, share value and profitability. Neophytou, Charitou & Charalambous (2001) argues that by comparing the results of multiple discriminant analysis and neural network approach, it is proved that the artificial neural network model is more effective in classifying problem and successful companies. [5]

Neophytou (2001) identified some of the benefits of neural networks as their ability to induce algorithms in pattern recognition. Unlike traditional models, the approach of neural networks is considered to be more reliable due to the fact that it is not subject to statistical postulates, for example, linear coupling and multi-variability of the random variable. As such, it is adaptive and has the ability to Express non-linear relationships. Holi, Johnson, and Raina (1990) noted that the approach taken in neural networks could be most effectively used to solve problems such as classifications and clustering where environments are unstructured or with incomplete data. The disadvantages of the neural network can be attributed to the

fact that they do not evaluate the contribution of each variable to the final classification, i.e. do not determine the value of this variable for the whole variation. Therefore, it is impossible for the researcher to select the most significant predictive variables to develop a model with a neural network approach.

In addition to the artificial neural network model, there are other nonparametric models, namely hybrid models. Hybrid models are a combination of two models, either parametric or nonparametric (Lee et al., 1996).

Genetic algorithm is also one of the most striking in the list of nonparametric models, which work as a method of stochastic search to find out will be the company bankrupt or not (Varreto, 1998). Other widely used non-parametric models: Etemadi (2009) genetic programming, the models based on the theory of "rough test" Dimitrios (1999), Bayesian, Fuzzy, models of hazards and analysis of data Data Envelopment Envelopment Analysis (DEA). [3]

In the case of nonparametric models, we are talking about modeling a huge amount of data that are not used in the realities of commercial lending, but are more often used in complex tasks of investment decision-making, ratings of companies, the value of shares and their profitability.

In the case of using some mathematical models, the influence of qualitative factors in identifying hidden bankruptcy is not taken into account. The next important stage in the development of hidden bankruptcy forecasting models is the creation of high-quality forecasting models. With them, it became possible to identify potential bankrupt even before financial performance began to deteriorate. Qualitative analysis is based on the use of information that cannot be expressed in quantitative terms. To carry out such an analysis, questionnaires and information about the borrower from various databases are used.

One of the most relevant models is the model j. Argenti (1976). Parametric models include discriminant models and conditional probability models (logit and probit), while nonparametric models include iterative sections, such as Argenti's hidden bankruptcy model. The model is based on the calculation of the company's assessment, which is based on three stages: the company's shortcomings, management errors and symptoms of bankruptcy. There are two important limitations of the model, first, there are no specific financial indicators used to describe the financial health of the company. As a result, the concept of financial health of the company is unclear and does not give the slightest idea of the importance of financial indicators, such as profit, profitability, turnover and liquidity at various stages of bankruptcy, secondly, although Argenti emphasizes the importance of management shortcomings, the existence and importance of specific errors, as a consequence of the symptoms of hidden bankruptcy, without specifying the distinctive features, the definition of the stages of bankruptcy is not quite clear. As a result, the details of the definition of hidden bankruptcy are not obvious and there are too few differences between them. Moreover, they may not occur for a long time, and appear at the same time.

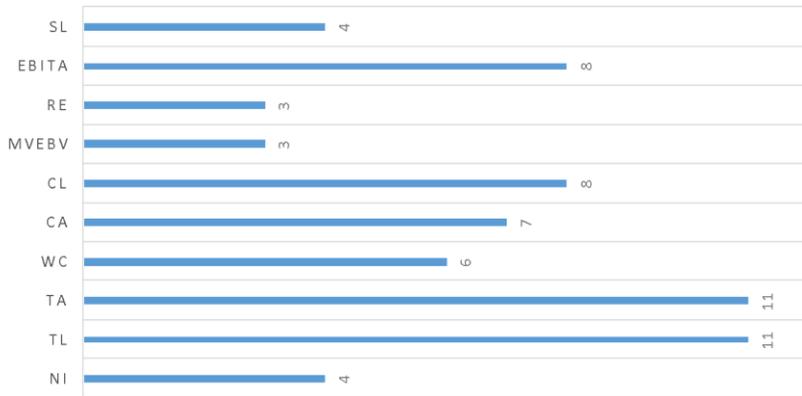


Figure 1 Study of indicators in forecasting models (compiled by the author based on the analysis of 11 forecasting models)

To implement commercial lending companies, it is advisable to include in the set of indicators characterizing the results, namely, sales Revenue (without VAT) – sales (SL) in accordance with IFRS or GAAP revenues (SL), Net profit, net income (NI) or in GAAP net profit in IFRS, the indicators characterizing the effectiveness of commercial lending is accounts receivable (AR – accounts receivable) and payables (AP – accounts payable), they are components of the CA and CL indices, which are often used by foreign authors in their bankruptcy forecasting models. And indicator stocks (Inventories) as characteristic of the influence of external factors on the operation of enterprises, namely the glut of products in the warehouse, because of the impossibility of its implementation (the complexity of the sale, nonpayment of contractors and improper strategic planning of production volume). Also in the set of features added quality measure, allocated A-score for the estimated model latent bankruptcy "of the company less than five years? the answer to which can be obtained by an indicator of the age of the enterprise.

According to the factor analysis of the indicators, based on a set of 629 agricultural enterprises, the importance of the selected factors SL (sales revenue), NI (net income) and AR (accounts receivable) is confirmed that they have the greatest impact on the model and are important for the community of the set.

From the matrix of the main components of table 1 it follows that, for example, the indicator age has a negative value, this suggests that in the model it is necessary to take the opposite indicator, too, with stocks, the first component is influenced by indicators such as revenue (SL), accounts payable and receivables (AP, AR), on the second component they have no impact, but has an impact on profit (NI).

Based on the results of the consolidated analysis of the selected models of bankruptcy prediction, it can be concluded that one of the priorities of statistical studies of hidden bankruptcy is the analysis of differentiation and identification of traits that distinguish enterprises prone to bankruptcy.

The combination of economic and statistical and qualitative analysis of the organization makes it possible to determine in advance the harbingers of hidden

bankruptcy. The determination of the most significant influence factors based on the coefficients of Altman's multivariate analysis models, Olson's logit model and Zmievskiy's probit model (X&Y&Z) and Argenti's qualitative model is likely to yield more accurate results in predicting the bankruptcy of organizations.

CONCLUSION

A new approach in the analysis of concealed bankruptcy, using the three-dimensional model that combines the most adaptive forecasting models for the global and Russian terms of trade. The stages of development of models of forecasting of bankruptcy in different countries, as well as Russian experience in research of this issue. The author offers the classification of existing models identified their advantages and disadvantages. Systematization of the models are based on statistical methods used in solving the problem of bankruptcy forecasting organizations in the selected models. The definition of hidden bankruptcy should be, the state of the enterprise, in which there are predictive trends in the deterioration of financial performance, shortcomings in the management of the company are qualified as errors and failures, and lead to financial insolvency. However, that hidden bankruptcy is not legally defined and regulated, there are many methods for evaluating the effectiveness of the company's financial activity, which has as its basis a model for assessing hidden (unrecorded) bankruptcy. Also in the predictive models are calculated indicators of cash flow, cash from operations, costs for servicing loans (sales financing from funds raised - the price of borrowed capital), tangible assets or tangible total assets, salaries - the ratio of labor costs to the added value (cost price - the cost of raw materials, energy, services of third-party organizations) or remunerated staff ratio, profit before interest and taxes or gross operating profit, revenues - gross income from sales of products, works and services, extraordinary items - extraordinary consumption and financial expenses - financial costs, as well as GNP price-level index.

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OPTIMAL STRUCTURE OF PENSION SYSTEM - PENSION ENTITLEMENTS WITH FOCUS ON REPLACEMENT RATE

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ABSTRACT

The aim of this paper is to find possible solution that would be applicable in the current economic conditions of the Slovak Republic to increase the sustainability of the first tier with the focus on replacement rate. If we would like to find the optimal solution for pension system we should consider that replacement rate is one most crucial part. Current structure of pension system of Slovak Republic is not optimal and significantly caused the annual increase of public debt. On the other hand, people in retirement age are still not satisfied with their incomes. Part of the work is analysis of current approaches to the pension system in different countries. We compare main indicators such gross pension replacement rate, replacement rates for mandatory and voluntary pension schemes. Based on this analysis we will propose our recommendations structural changes in the Slovak pension system. Obviously, we consider long term conditions of public pension expenditure.

Keywords: Pension system, Replacement rate, Mandatory scheme, Voluntary scheme

INTRODUCTION

Quality of Life in retirement age is a question that has become more resonant in society in recent years. The long-term trend of demographic change, the prolongation of life and low birth rates or replacement rate, pose huge challenges to the sustainability of pension systems. The article discusses how the different countries of the European Union are accustomed to the replacement rate in pension systems as well as the structure of pension systems.

Methods of research

The work will rely on both empirical and theoretical research methods. Basic analytical methods will be used prepare a comparison of the retirement age and replacement rate in European Union and Slovak republic. We will also use analysis of the European Union countries pension systems and Slovak pension system as well as analysis of the partial problem of the Slovak pension system with focus on sustainability.

Pension systems in European Union

Population ageing is one of the greatest social and economic challenges facing the EU. Projections foresee a growing number and share of elderly persons (aged 65 years and over), with a particularly rapid increase in the number of very old persons (aged 85 years and over). These demographic developments are likely to have a considerable impact on a wide range of policy areas: most directly with respect to the different health and care requirements of the elderly, but also with

respect to labour markets, social security and pension systems, economic fortunes, as well as government finances [1].

Although European Union countries have the primary responsibility for designing their pension systems, we can see different approach to the public pension schemes. Adjustment of the pension schemes across European Union countries are so different that's make cross-country comparisons much more challenging. Indeed, system differences are not only various provide retirement income or different phases of the pension systems' reform process neither different approach to pension expenditures. However, a huge part of the systems represents by involvement of public sector in the pension system that is common for all European Union countries. However, we can divide systems with focus on publicly provided earnings to the following schemes: defined-benefit (DB), notional defined contribution (NDC), and point systems (PS).

Country	Public pension scheme
Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Spain, Luxembourg, Hungary, Austria, Slovenia, Portugal, Finland	Defined-benefit (DB)
Ireland, Malta, Netherlands, United Kingdom	Flat rate + Defined-benefit (DB)
Greece	Flat rate + Defined-benefit (DB) + Notional defined contribution (NDC)
Italy, Latvia, Poland, Sweden, Norway	Notional defined contribution (NDC)
Germany, Croatia, Lithuania, Romania, Slovak Republic, Cyprus	Point systems (PS)
France	Defined-benefit (DB)+ Point systems (PS)

Tab.1 Main public schemes type in the European Union source: *The 2018 Ageing Report Economic & Budgetary Projections for the 28 EU Member States (2016-2070)*

Pension System in Slovak Republic

After 2003, the Slovak Republic enacted extensive pension scheme reform. As a result, the one-pillar scheme with established PAYG (pay as you go) benefits was transformed into a scheme built on three separate pillars.

1st pillar – mandatory pension insurance defined by benefits and funded on an ongoing basis and administered by the Social Insurance Agency. The 1st pillar of the pension insurance scheme is defined by benefits and funded on an ongoing (PAYGO) basis. It is closely connected to the economic activity and income of the citizens.

2nd pillar – old age pension saving defined by contributions and capital funded insurance administered by pension fund management companies. Pension savings system with defined contributions is financed by capitalization and managed by

single-purpose private pension management companies (PFMC). It is based on savings invested in an individual account intended, together with the old-age insurance provided by the Social Insurance Act (1st pillar), to guarantee an income to the beneficiary in retirement or to his or her descendants in case of death.

3rd pillar - voluntary supplementary pension saving defined by contributions and capital funded insurance administered by supplementary pension companies. Supplementary pension insurance is voluntary and represents the third pillar of the pension scheme in which the funds of the participants are administered by supplementary pension companies [2].

According to the European Commission's report, Slovakia will be the third fastest aging country in the European Union. One of the youngest economies in the EU will change to the earliest eight. 1 Aging-sensitive spending will grow by almost 16% (3% of GDP) by 2070. Against the previous three years' report, the increase in spending is due to more favorable demographic assumptions and an improving labor market. However, their level is now higher than predicted in the previous report. The introduction of the retirement age ceiling must be conditional on structural reforms. Also necessary is the connection with the provisions of the Constitutional Bill on Budgetary Accountability [3].

Ageing pressure

Demographic projections predict the rapid aging of the population, but the rate of aging will be slower than predicted by the previous report. Low birth rates and a rise in life expectancy will result in a change in the age structure of the population. One person over 65 years worked 3.2 in 2016, but in 2070 it will be only 1.5 workers [4].

Life expectancy at older ages is especially important for wellbeing. However, it also influences the finances of retirement-income systems. In 2015-20, on average in OECD countries, women aged 65 could expect to live an additional 21,3 years, which is forecast to increase to 25.5 years by 2065-65. Men of same age could expect to live 18,2 more years in 2015-20, with a project increase of 4.5 years by 2060-65 to reach 22.8 years. Gender gaps in longevity of older people are expected to decrease slightly over next 45 years (from 3,1 to 2.7 years on average in OECD countries) [5].

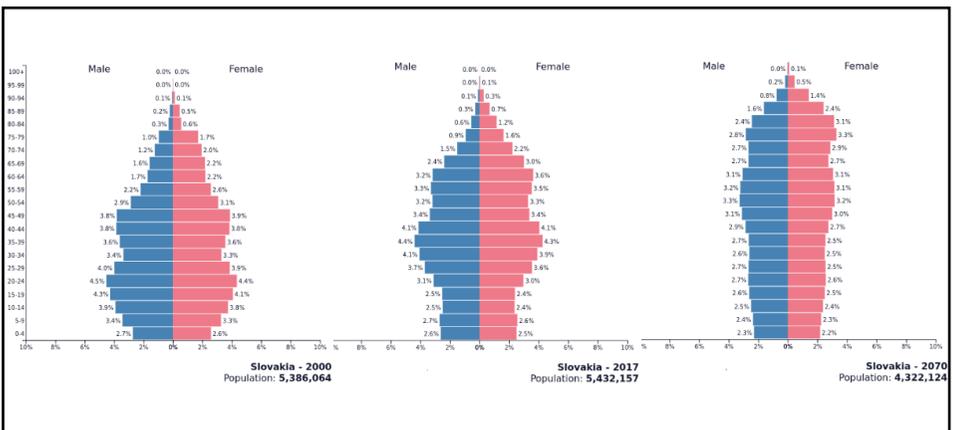


Figure. 1 Population pyramid graphs evolution of Slovak republic, years 2000, 2017, 2070.

Source: <https://www.populationpyramid.net/slovakia/>

Replacement rate

Replacement rates are measured as the very first pension benefit relative to the last wage before retirement. As such, a downward trend of the replacement rate for new pensions might cause the benefit ratio to decrease. Older generations generally experienced a situation of full employment and complete careers and thus made higher contributions than younger generations [6].

Country	2016	2070
BG	35,8	39,2
Denmark	27,2	27.1
ES	78,7	45,0
IT	60,4	49,8
LV	51,7	21,7
Slovak Republic	49,0	50,2
EU 27	46,3	38,1

Tab.2 Replacement rates in selected countries of European Union in 2016 and 2070 (%) Source: *The 2018 Ageing Report Economic & Budgetary Projections for the 28 EU Member States (2016-2070)*

In the Tab.2 we can see comparison of different approaches to the replacement rate in European Union countries. In generally we could see decreasing trend of the replacement rate in European Union countries. Average value of replacement rate in 27 countries of European Union drop down from 46,3 % to 38,1%. On the other side there are still some countries that’s ignore the trend, for example Bulgaria and Slovak Republic.

Year	Average retirement income (€)	Average monthly wage in economy SR (€)	Average replacement rate in % (brutto)
2009	339,73	744,50	45,63
2010	352,54	769,00	45,84
2011	362,08	786,00	46,07
2012	375,89	805,00	46,69
2013	390,51	824,00	47,39

2014	400,18	858,00	46,64
2015	411,06	883,00	46,55
2016	417,46	912,00	45,77
2017	428,31	954,00	44,90

Tab. 3 Average replacement rate in % in Slovak Republic in 2009 – 2017. Source: Social Insurance Agency in Slovakia <https://www.socpoist.sk/vztah-priemernej-vysky-vyplacaneho-starobneho-solo-dochodku--k-3112--a-priemernej-mesacnej-mzdy-v-hospodarstve-sr/3166s>

Increasing the replacement rate is not the solution for any PAYGO system. With focus on replacement rate as solution, we could not compare average wage in Germany (3771€ in 2017) to the average wage in Slovak Republic (945€ in 2017 see Tab.3).

CONCLUSION

Public finance deficit has only three possible solutions that are cutting costs, increasing revenue, or combination of both. Immediate cuts in pension expenditure are the last in the list or we can say to cut costs is politically impassable.

PAYGO pension systems are generally very sensitive to political interference. Especially in terms of sustainability of the system, retirement income, or retirement age. Unsystematic interventions such as supplemental benefit payment (13th pension payment) or the retention of retirement age in the long run seriously undermine the sustainability of the pension system.

The rate of compensation as a key indicator of the sustainability of the pension system has shown that, despite its increase, it is not possible to achieve a significant increase in pensions and a disproportionately high burden on the working population.

Solution for PAYGO system are gradual increase of the retirement age with focus on demography, slow reducing the replacement rate and sensitive approach to pension indexation.

If we do not start to tackle our pensions responsibly and the sooner our descendants will have to deal with the ever-increasing debt of the on-going pension system. Without effort and enormous engagement, every attempt to change the establishment is condemned to failure and raising replacement rates is not the right solution to the current situation.

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PRODUCTIVITY IMPROVEMENT IN A MANUFACTURING COMPANY – CONCEPTS, METHODS AND TECHNIQUES

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ABSTRACT

The article presents a new approach to productivity improvement in a manufacturing company, based on a rich collection of concepts, methods and techniques in the scope of production management. Productivity improvement is a complex technical-organizational-social undertaking, implemented in order to improve performance of the entire enterprise. This approach assumes continuous productivity improvement in all phases of design and operation of the production system. The strategic, comprehensive approach towards productivity improvement is currently becoming more and more important; it is expressed in striving for the implementation of contemporary, complex management concepts. The result of the analysis is a prepared productivity improvement methodology taking account of new production paradigms, among others: Lean Manufacturing, Lean Logistics, Agile Manufacturing, Total Productivity Maintenance, Theory of Constraints as well as Dynamic Process Management. The summary emphasizes the importance of preparing a new productivity improvement methodology for improving production management practices focused on productivity growth.

Keywords: productivity, productivity improvement, manufacturing company

INTRODUCTION

Productivity is an extremely complex and interdisciplinary problem. It refers to macroeconomic systems, such as the world economy and economies of particular countries and to microeconomic systems, especially production systems, which, depending on the degree of aggregation, can be the entire enterprises, divisions, branches, work cells, as well as individual work posts. Productivity is one of performance measures, which characterizes well the company's operations; especially the degree of using all the resources being at its disposal.

With regard to manufacturing companies, productivity is understood in the economic-social (qualitative) and technical (quantitative) perspective. In the qualitative perspective, the productivity concept is presented as progress mentality expressed in the organization and support for different types of projects that are intended to continuously raise the effectiveness of business operations, improve the company's market position as well as increase employee satisfaction from work conditions and the quality of life. In this perspective such matters are stressed as [1]:

1. state of awareness, way of thinking focused on progress, continuous improvement of what already exists (faith in the progress of the mankind),
2. the will to improve the condition of the present, regardless of how good impression it makes or how good it really is,

3. continuous adjustment to changing conditions in the economic and social sphere,

4. organization and support for all types of projects, designed to continuously raise the effectiveness of operation of the organization, improve its market position and increase employee satisfaction from work conditions and the quality of life,

5. pursuit of using new techniques and new methods.

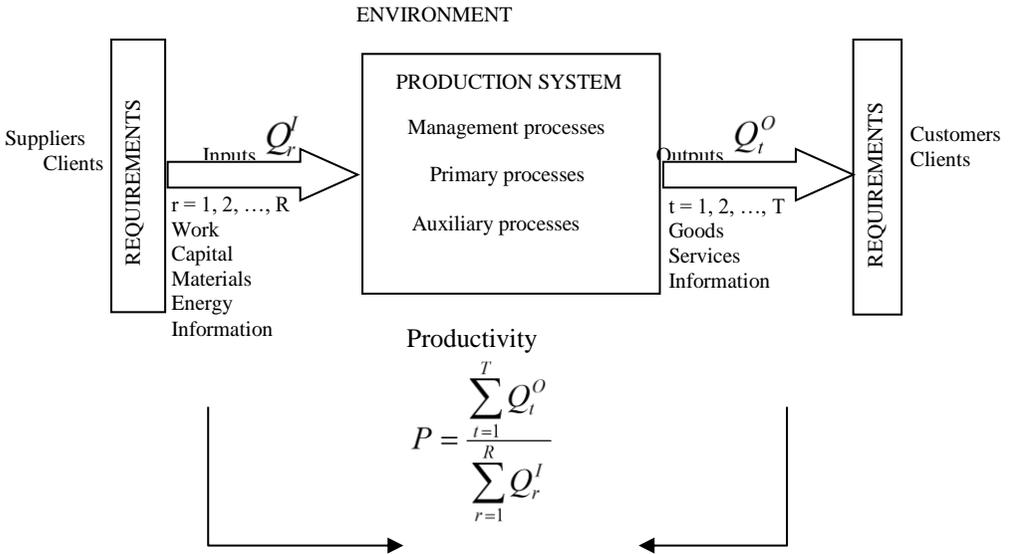
On the other hand, the quantitative productivity concept is the ratio of the amount of output manufactured and sold over the given period to the amount of input resources used or wasted. Productivity is therefore interpreted as the effective use of system's input resources – human work, capital, materials, energy – in the production of goods and services, being the company's output.

An important problem which a lot of attention has been devoted to are various approaches to productivity improvement. Productivity improvement on the grounds of KAIZEN continuous improvement philosophy is the subject matter of studies by such authors as: M. Imai [2], W. Lareau [3], while the problems of radical productivity improvement on the grounds of process reengineering – of the works by: M. Hammer and J. Champy [4], H.J. Harrington [5], L. Pacholski, W. Cempel and P. Pawlewski [6]. Production process improvement methods and techniques towards productivity improvement are discussed by: R. Harris, Ch. Harris, E. Wilson [7], D. Jones and J. Womack [8]. Productivity improvement by the application of production engineering tools has been examined by H.A. Salaam, S.B. How, M.F. Faisae [9]. Achievement of productivity growth using Lean Manufacturing to reduce cycle time for production processes by Value Stream Mapping (VSM) has been presented by B. Vijaya Ramnath, Vishal Chandrasekhar, C. Elanchezian, Vinoth Selva Bruce. L, K. Venkataraman [10]. The implementation of lean tools along with the work research methods was the subject of research of P.P. Kulkarni, S.S. Kshire, K.V. Chandratre [11]. On the other hand, I. Dincută-Tănasea, C. Bordea, E. Câmpeana, D. Pop proposed a method to determine the level of productivity for qualitative and quantitative factors [12].

Currently, the most practical approach seems to be an analysis of work processes, namely overview and redesign of activities and the application of modern production management concepts, methods and techniques. At present, only companies using modern productivity improvement programs are successful, as they can rapidly and dynamically adjust to the changing conditions of the environment. Consequently, productivity assessment is also important in this perspective as vital for both managers and employees. It makes it possible for managers to understand business processes, formulate objectives and strategies, assess the degree of achievement, resource allocation, better plan, control and inspect operations, assess the company's competitive position in the market environment, assess time trends in utilization of the resources, identify problems in the organization, assess any introduced improvements and introduce the so-called management by results, i.e. motivate subordinates subject to tangible results they obtain. For employees important are clearly set goals and scope of responsibility, determined using well selected productivity indicators as well as objective assessment of their achievements, contributing to higher motivation.

PRODUCTIVITY MODEL AND ITS ASSESSMENT IN A BUSINESS

For practical effectiveness analysis of a production system, a simplified productivity model can be used, as presented in Fig. 1.



Symbols:

Q_r^I – input resource quantity (I = input) of type r,
 r = 1, 2, ..., R – number of types of resources used by the production system,
 Q_t^O – quantity of products (O = output) of type t produced and delivered to the buyers,
 t = 1, 2, ..., T – number of types of products manufactured by the production system.

Fig. 1 Productivity model

As presented in Fig. 1, each production system may be characterized by its set of input resources, the processes inside, the set of products (goods and/or services), and its productivity can be determined [13]. At the same time, it should be borne in mind that any product must have its client, as productivity exists only when there is demand for particular goods or services as well as when the manufactured goods are provided to the client.

Currently, most Polish enterprises assess their operations through the prism of indicators of sales profitability and profitability of total capital involved in the operations. This is an insufficient measure sometimes not reflecting the results being actually obtained by the company, because profit can result from the company's non-operational activities, such as, e.g. investment in shares, resale of

some assets, etc. A measure that characterizes well the company's operations, especially effectiveness in using all the resources being at its disposal (capital, human or financial) is productivity [14].

The company, in order to be able to control its position on the market and adapt to the changing conditions of the environment by continuously improving the existing condition, should dispose of a productivity measurement system. The indicators selected to be used in the productivity measurement system depend on many factors, comprising the specific nature of the company. It is most important to ensure that the productivity measurement system is coupled with the company's economic and financial system and the production planning and recording system as well as with the production costs registering system.

Productivity is therefore a very "spacious" measure expressing how efficiently and effectively the organization executes its tasks, how efficient and effective it is in pursuing its goals and standing a comparison with the competitors.

The observation of productivity indicators makes it possible first of all to:

- assess the results achieved by the company as compared to other businesses, especially in the same industry,
- identify any "weak spots", i.e. areas of operations which are characterized by low productivity and require improvement,
- formulate productivity improvement programs and company's strategic plans,
- observe trends in productivity indicator changes, making it possible to introduce early warning mechanisms about possible threats and opportunities for the company,
- deliver feedback information about the consequences of any earlier introduced productivity improvement programs,
- link the company's remuneration policy with productivity of its organizational units.

In order for the company to effectively control its productivity and consciously stimulate its improvement, it must dispose of an effective and fast tool for its assessment. These requirements are fulfilled by the indicator method, consisting in analysis of a well selected set of productivity indicators. Productivity measures can therefore be classified in terms of:

- productivity definition: 1. direct – indicators expressed by the quotient of the production effects to the outlays incurred (technical perspective of productivity); 2. indirect – exceeding the technical perspective e.g. measures related work quality referring to the level of shortages, costs of shortages as part of production costs, etc.,
- complexity: 1. complex – general for the whole company; 2. partial – productivity indicators of capital, materials, energy and labour,

– method of expressing the parameters: 1. physical – are based on expressing products and resources only in physical units (e.g. pieces, kilograms, minutes, kilowatt hours, etc.); 2. economic – use, apart from the "physical" parameters, also amounts expressed by value (product prices, costs of resources, foreign exchange rates etc.),

– hierarchy: 1. measures for the company – assessment of effectiveness of the organization as a whole; 2. measures for the processes – assessment of effectiveness of the processes implemented in the organization; 3. measures for posts – assessment of effectiveness of the work posts.

CONCEPTS, METHODS AND TECHNIQUES USED IN THE COMPLEX PRODUCTIVITY IMPROVEMENT METHODOLOGY

Productivity improvement consists in introducing changes of different nature at all levels in the company in the field of basic, auxiliary production, administrative and management operations.

For this purpose, every company introduces development programs based, above all, on implementing contemporary management concepts, the functioning of which should result in productivity growth (Table 1).

Table 1 Management concepts/methods used in the complex productivity improvement methodology

Concepts/ methods	Characteristics of the approach and expected benefits	Technologies/tools			
		5S	Process maps	PDCA/SDC A cycle	FMEA
Kaizen	Constant process improvement by small improvements, conducted in a continuous manner by all the employees. Benefits: shortened production cycles, assembly time reduction, increased productivity, reduction in waste, capital expenses and complaints,	●	○	●	○
Total Quality Management (TQM)	Complex business management by quality improvement. Benefits: "no quality" related costs and losses reduced to a minimum, growing customer satisfaction, quick and timely deliveries, higher production efficiency, improved business profitability,	●	●	●	●
Total Productivity Maintenance (TPM)	Quick refitting of technical resources (production line machines). Benefits: labour productivity growth, reduction in breakdowns, reduced quantity of internal waste, reduced number of complaints and production	●	○	◐	●

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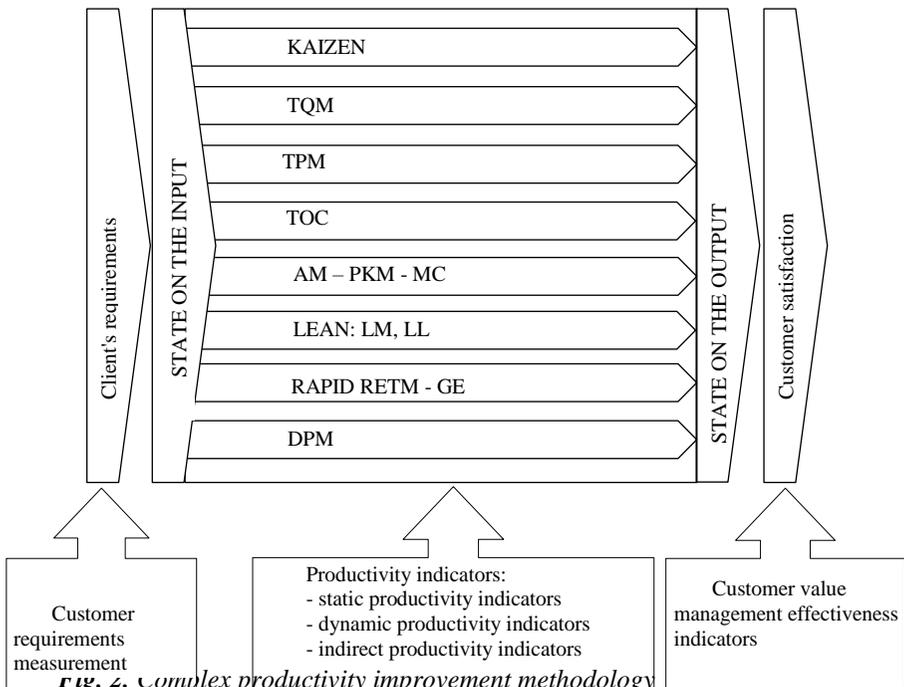
Concepts/ methods	Characteristics of the approach and expected benefits	Technologies/tools			
		5S	Process maps	PDCA/SDC A cycle	FMEA
	costs, reduced stocks and work-in-progress,				
Theory of Constraints (TOC)	Improved results by the identification of and focus on "bottlenecks". Benefits: shorter order lead time, improved resource management, shorter material passage time, reduced costs,	●	◐	○	○
Agile Manufacturing (AM)	Fast response to opportunities and threats in the environment, creates and integrates processes, technologies and knowledge-equipped employees, so as to ensure fast response to the client's needs. Benefits: for all participants (manufacturers, suppliers, clients), integration (of resources, methods, technologies, organizational departments),	●	○	◐	◐
Lean Manufacturing (LM)	Reduced costs and maximized profits by eliminating all losses in the manufacturing process. Benefits: reduced shortages, refitting times, stocks and work-in-progress, productivity growth,	●	●	◐	●
Lean Logistics (LL)	Optimization of intra-plant logistics, lean, complex material flow. Benefits: decreased product design costs, stocks and work in progress and personnel costs, shortened production cycle, higher efficiency, improved production quality,	●	◐	◐	◐
Rapid Re TM method	Redesign of the operations process in a short time. Benefits: shortened production cycle and reduced costs, improvement in product quality and customer satisfaction, increased profitability and market share,	●	◐	●	○
General Electric method (GE)	Revolutionary introduction of changes to the company in a continuous manner. Benefits: higher revenue and net income, significant productivity growth,	●	◐	◐	◐
Dynamic Process Management	Fast response to changing significant conditions of operation. Benefits: focus of the company on customer	●	●	●	●

Concepts/ methods	Characteristics of the approach and expected benefits	Technologies/tools			
		5S	Process maps	PDCA/SDC A cycle	FMEA
(DPM)	satisfaction, identification and arrangement of the areas that require improvement.				

Techniques/tools used in the concepts/methods to a degree:

● - comprehensive, ◐ - partial, ○ - not used.

The productivity improvement concept assumes continuous observation, analysis and rationalization of systems. The so adopted course of conduct should be repeated in each of the system's organizational units with regard to every productivity improvement project. Fig. 2. presents a complex productivity improvement methodology.



A significant problem in the functioning of the productivity improvement process is selection of the management concept (one or several), after the implementation of which the desirable changes will occur. The subject literature indicates that selection of the methods and their effectiveness is largely dependent on the specific nature of the business. Factors such: as business focus and organizational culture, depending on people, their preparation, experience, readiness for change and team problem solving skills, play a role here.

The productivity improvement process, as the unique type of activities designed to solve problems, should be a sequence of actions with the following course:

1. identification of the goal to be reached in the given organizational unit,
2. existing condition diagnosis using a well selected system of measures,
3. search for solutions and choosing the solution for implementation,
4. planning and implementing the improvements program,
5. controlling the obtained results.

In order to analyse and design the productivity improvement methodology in a manufacturing company and ensure its proper and effective functioning, stage-based implementation of a number of tasks of organizational, technical and social nature is necessary (Fig. 3).

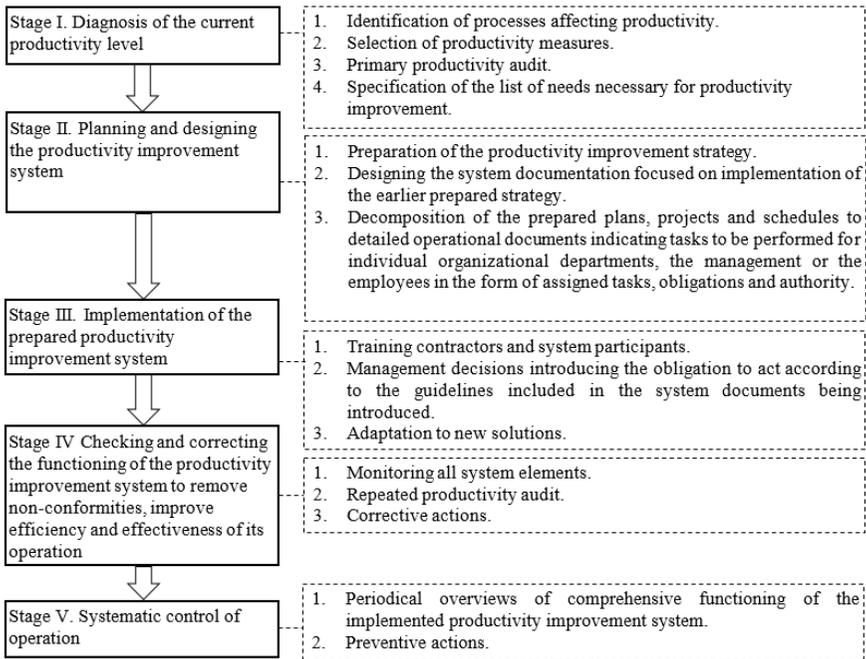


Fig.3. Stages in the implementation of the complex productivity improvement methodology

These stages are binding both in the situation of local changes, coming down to productivity improvement on the level of a manufacturing work cell or a group of positions and those which encompass the entire company. These changes may involve a series of small modifications, but also projects being innovative in nature.

CONCLUSIONS

The prepared complex productivity improvement methodology arranges the implementation process of contemporary concepts, methods and techniques focused on productivity growth, taking advantage of their complementary nature

and synergy resulting from using common specific tools. The methodology may be helpful for manufacturing companies in programming productivity improvement in the field of production management. Its advantage is that it puts emphasis on sustainable and harmonious implementation of modern management concepts.

To sum up, it may be said that the effectiveness of implementing particular concepts and the related methods is largely determined by the specific nature of the business. A great effect on the implementation process of contemporary management concepts is exerted by the organizational culture, dependent on people, their experience, preparation, commitment, readiness for changes and team problem solving skills.

The solutions presented in the study are practical. Their readiness for application consists in: making entrepreneurs aware that productivity of their organization depends on the degree of implementing the contemporary concepts, methods and techniques used in production management and proposing organizational solutions which will make it easy to implement an employee motivation system based on the Kaizen concept in the company, to ensure active and creative participation in productivity improvement projects. The answers to the following matters should be treated as challenges: considering new management concepts in the proposed methodology, starting research determining the factors that have particularly strong effect on the degree of its implementation as well as identification and elimination of barriers to introducing new management concepts.

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THE ATTRACTIVENESS OF ECONOMIC SYSTEMS AS THE ASSESSMENT BASIS OF THEIR COMPETITIVENESS

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ABSTRACT

Modern conditions are characterized by a sharp acceleration of all processes taking place in society. At the same time, competition in all studied social processes has intensified. The main factors that conditioned this situation are the extremely high rate of development of communications, transportation and the associated with this global digitalization and the integration of the world space. The external environment becomes the main source of uncertainty and the opportunities for development of each economic system. Increasing the competitiveness of economic systems at various levels should be the answer to these challenges. In this work, an economic system can be understood as any economic agent - a country, a region, an industry, an enterprise, a household, etc. The article deals with topical issues related to the development of an approach to the notion of competitiveness, based on the attractiveness of economic systems for stakeholders. Analyzing the works devoted to the competitiveness of systems, it can be noted that the main discussion goes on the competitiveness assessing indicators. The methods of evaluation offered by various scientists are more or less traditional indicators of the effectiveness or efficiency of the system. However, according to authors, the evaluations obtained are of unequal importance for various stakeholders, and, therefore, affect the competitiveness of the analyzed systems in different ways. The authors suggested using the concept of attractiveness as a basis for determining the competitiveness of systems. Within the framework of the proposed approach, "attractiveness" is the degree of importance of one or another characteristic for a particular person evaluating the given object. Therefore, one and the same object, characterized by certain indicators of its status and development, can be attractive to one type of interested parties and unattractive for another.

Keywords: competitiveness, attractiveness, evaluation, assessment

At the initial stage of the development of the evaluation methodology, a comparative analysis of the theory and practice of evaluating the attractiveness of systems was carried out. As a result of the analysis, the need to clarify the nature of the attractiveness and the factors affecting it, as well as the uncertainty factors and specificity of the analyzed systems, was revealed. The authors grouped the main tools for assessing the attractiveness of economic systems (regional and sectoral levels), highlighted their strengths and weaknesses, identified the main tasks, and built a logical framework for evaluation. The result of the analysis is the

systematization of knowledge in the evaluation of attractiveness, identification of the applicability limits and the possibilities for developing the existing theory and practice of assessing the attractiveness of economic systems.

INTRODUCTION

As part of a research project of RFBR № 15-32-01058 «The development of a methodology for evaluating of the attractiveness of industries using techniques of key performance indicators and clustering in order to manage economic systems," the authors developed industries operating concept. This concept should become the basis of industrial policy pursued by the state and regional authorities. In this paper, industrial policy refers to the purposeful activity of the state in maintaining priority economic activities from the point of view of the state by applying administrative, organizational, financial and other instruments. Due to the uncertainty of the concept of "industrial policy," it can also be considered a synonym of the often used in our country concept of "structural or sectoral policies." Despite the large number of definitions, all authors agree on two distinctive features. The first is the unconditional need for state active participation in shaping the structure and organization of the sphere of material production. The second - the impact of the state is carried out in order to achieve national, system goals and objectives with long-term effect on the entire economy [1],[2],[3],[4].

METHODS OF RESEARCH

The authors have proposed industries operating concept, implemented in the following stages:

- 1) Study of the region's economy to determine the goals and objectives of regional development;
- 2) Formation of relevant evaluation criteria, assessment of attractiveness and selection of industries;
- 3) Formation of a set of incentive measures;
- 4) Implementation of a set of incentive measures;
- 5) Monitoring the implementation and effectiveness of measures taken.

Considering the issues of industrial policy, the authors usually stop at the application of various instruments of influence on the development of various objects (national economy branches) [5],[6]. From the point of view of the authors, the measures and means of supporting the industries, studied in the literature are tools, the application of which must be methodologically grounded and, most importantly, goal-oriented. Thus, in our opinion, the stages of goal setting, task definition and selection of objects (industries) are fundamental and determine the further effectiveness of industrial (sectoral) policy for government intervention measures. It should be emphasized once again that the evaluation can not be performed using "normatively", "from above" laid down criteria. The choice of criteria should be clearly linked to the objectives and priorities of development priorities based on studies of the state of each particular region. Another characteristic feature of the evaluation is that as a result there is no need for "culling". Another characteristic feature of the evaluation is that as a result there is no need to cull or drop out certain objects that do not meet the specified criteria. So, for example, when considering alternative investment projects, the investor

conducts an assessment precisely to weed out the worst and choose one (or several) of the best. In the case of assessing the industries of the region, this task is obviously not being put. All evaluated objects are included in the overall structure of the region's economy and, in general, can not be excluded, eliminated from it. Thus, the set of analyzed objects (industries) in this case more suits the definition of «portfolio». In general, a portfolio is a set of objects that are designed to reduce risks and increase the profitability of the entity managing these objects. It is well known that even with a simple increase in the number of objects in a portfolio, non-systemic (specific) risks are significantly reduced, which is the reason for diversification and use of the portfolio for this purpose.

The above considerations lead to the following conclusions.

First. The goals of industrial (sectoral) policy are strategic at the level of the state and the region. The main task is the assessment, ie positioning of industrial branches on the economic map of the region for efficient distribution of state support funds.

The second. Complex of industries of the region (territory) can be considered as a kind of portfolio of objects, each of which should take its place in the structure of the economy of the region, increasing the overall stability of the territory.

Thus, the authors substantiate the idea of the possibility of using the tools of strategic enterprise management, expanding the scope and methods of its use in the sphere of industrial policy. Just as at the enterprise level strategic matrices are used to determine the means of influencing managed objects, in the field of industrial policy, the authors propose using a matrix approach to determine measures of state strategic support for managed objects (industries).

Let's consider in more detail the use of matrices in the process of strategic management of an enterprise to determine the opportunities for the development a matrix approach for the assessment of industries [7],[8].

Table 1 Use of matrices in the strategic management of an enterprise

№	Name of the tool	Indicators used for axes	Analyzed objects	Area of analysis and management
1	The growth–share matrix	Market share - Market growth rates	Products, SBU	Market analysis
2	McKinsey matrix	Industry attractiveness - Business unit strength	Products, SBU, SBA	Market analysis
3	ADL Matrix Литтла	SBU's competitive position - SBU's life cycle	SBU, SBA	Market analysis
4	Shell Directional Policy Matrix	SBU's competitive capability - Prospects for sector profitability	SBU	Market analysis
5	Ansoff Matrix	Type of goods - Market type	Products, SBU	Market analysis

6	Hofer matrix	SBU's competitive position - The maturity of the sector	SBU	Market analysis
7	Price quality matrix	Price - Quality	Products	Market analysis Quality analysys
8	Quality - resource consumption matrix	Quality - Cost	Products	Production process analysis
9	Work quality management matrix	Labor results - Quality of work	Staff	Analysis of staff productivity and efficiency
10	The Blake Mouton Managerial Grid	Concern for People - Concern for Results	Management Styles	Management Review

Analysis of the practice of using the matrix approach in strategic management shows that the scope of its use is limited to the level of the enterprise. At the same time, various objects within the enterprise, such as products, business units, strategic business areas, personnel and management become objects of analysis. The authors suggest to expand the procedure for using the strategic management matrices, transferring their application to higher levels of management - territory, region, country. Thus, the matrix approach will be applied to the solution of high-level strategic tasks.

Another «narrow» place for the use of matrices is the use for their construction indicators of one type, most often market ones. As a result, the analysis of the investigated objects is limited to one aspect, usually - market.

RESULTS

To solve the problems of assessing the attractiveness of industries, it is necessary to take into account various aspects that affect the attractiveness - economic, social, macroeconomic, etc. In such cases, there is a need to take into account indicators of different types - economic, social, environmental, etc. simultaneously. That is, the use of indicators of only one group is not sufficient. The authors propose to use complex indicators to construct a strategic matrix reflecting various aspects of the attractiveness of industries.

On the other hand, the authors consider that the use of indicators of the current state is not adequate. And in the general case, when evaluating certain objects in the scientific literature and practice, "point" indicators or indicators reflecting the state of the object at the current time are used. In view of the fact that in this study the tasks of strategic management of industries are considered, the use of only indicators of the current state is clearly insufficient. Thus, on the other axis of matrix formation, the authors suggest postponing of dynamic indicators reflecting the rate of change in current indicators. As a result, the possible perspective of the

development of the analyzed objects (industries) will also be displayed in the matrix.

The received matrix allows to place the analyzed objects (branches) in some or other quadrants of the matrix. Next, a set of measures and support tools will be defined for each set of industries along the quadrants of the matrix.

CONCLUSION

In the course of research, the authors previously formed the concept of industrial policy, the main core of which is the stage of assessing the attractiveness of industries. This stage is decisive for the effective implementation of the distribution of government support measures. To solve this problem, the authors proposed an approach based on the methods of portfolio analysis in strategic management. This provision is justified by the presentation of the sectoral structure of the region as an analogue of the portfolio of business units of the company. Analyzing the limitations and drawbacks of the traditionally used tools of portfolio analysis, the authors present an authorial approach to the construction of a strategic matrix for assessing the attractiveness of industries. The place of the industry in this matrix is determined by the indicators of both the current state and the development of the industry. In the future, this will allow the development of a set of strategic support measures in accordance with each quadrant of the matrix.

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Section FINANCE

FINANCE

The section covers papers relating to finance, public finance, investment, taxation, banking and globalization

REVITALIZATION OF URBAN GREEN AREAS AS AN ELEMENT OF THE PROCESS OF THE CITY REGENERATION AS EXEMPLIFIED BY THE EXPO HORTICULTURAL 2024 IN ŁÓDŹ

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ABSTRACT

Revitalization is a process which takes place simultaneously in many dimensions such as social, town-planning and functional or environmental one. The manner in which the post-industrial, post-military or run-down city quarters are adapted to serve new purposes is of vital importance in the said process. It results in changes in the functions performed by a particular area, the architectural and urban layout and transformations of some parts of the city. One element of the process is revitalization of green areas. It is even possible to venture a statement that revitalization is not possible without taking into account urban greenery. Greenery is currently referred to as the “green infrastructure” of the city since, in the same manner as the technical infrastructure, it plays a crucial role in improving the living conditions and increasing the comfort of urban life. The regeneration of greenery exerts a very positive impact not only on the image and the aesthetic value of the city, but also on the whole process of reviving degraded spaces. Changes in the city landscape are one of the most spectacular effects of revitalization activities. At the same time, they become a stimulus for taking more intense recovery measures in other spheres which are crucial for the revitalization process, e.g. in the social, economic or legal sector.

The paper is devoted to the revitalization undertakings in the city of Łódź from the point of view of the activities carried out within the framework of the EXPO Horticultural 2024. The paper discusses the vital issue of regenerating urban areas in cities. The issues presented in the paper concern current critical problems, which constitute global challenges, aimed at improving the quality of life in cities by means of modernizing or regenerating recreational areas, i.e. the green fabric. The objective of the paper is to draw the readers’ attention, firstly, to revitalization, including regeneration of urban greenery, as a tool aimed at recovery from the crisis state of the degraded area and, secondly, to the benefits resulting from hosting international events and their impact on the local development. Łódź as one of the pioneering cities in Poland has made an attempt at carrying out comprehensive revitalization. Apart from the rehabilitation of degraded infrastructure, historic tenement houses or post-industrial areas pertaining to the 19th century factories, also the public space including green areas undergoes revitalization. The research methods applied in the paper are based on the study of literature on the subject. They will also encompass a financial analysis concerning revitalization in Łódź in the light of hosting by the city of the International Expo Horticultural 2024.

Keywords: local development, revitalization, EXPO Horticultural

INTRODUCTION

The end of the 20th and the beginning of the 21st century is referred to as the era of cities. Over the last century, on almost all continents, there has taken place a significant change with regard to the image which has consisted in gradual transforming rural areas into urban ones. In 2010 the rate of inhabitants dwelling in urban areas in proportion to the overall global population amounted to approximately 50% and it has been growing ever since. According to the UN estimates, it is predicted that by 2050 almost 70% [1] of the population will reside and work in urban areas. Although modern-day cities play a vital role in the social and economic life of countries, they are a generator of innovative solutions, serve the society and boost prosperity, nevertheless they themselves require aid. Contemporary cities are fraught with problems regarding gradual degradation ensuing from the overexploitation of the urban fabric. Therefore, the regeneration of the extensively devastated urban fabric is of particular importance. Revitalization projects implemented in a comprehensive and coordinated manner should not only focus on recovering from the critical state of a given degraded area, but also on creating the conditions which may trigger its further development. Reviving the run-down city quarters, which consists not only in renovating the “hard fabric”, *id est* the technical infrastructure, but also in introducing more greenery into the public space, constitutes a significant element of the whole revitalization process. In general, regeneration undertakings should not only be aimed at improving the standard of living in cities, but also at enhancing the quality of public space. For the purpose of spatial processes which are taking place in cities, including in particular revitalization activities, it is necessary to review the meaning of public space and urban green areas. Currently, it is increasingly emphasised that in order to attract people as well as business entities a city cannot be a “concrete desert”. The greenery in a city is crucial for fostering a good climate and providing adequate conditions for effectively implementing comprehensive revitalization. Green areas in a city are indispensable for a good quality of life. The very awareness of the significance of greenery in highly urbanised areas in conjunction with the specific development and infrastructure of these areas, which are often of a historical, post-industrial or post-military character, exerts a positive influence on the revitalization activities carried out by public authorities. Greening of urban space constitutes a highly important component of the whole process aimed at regenerating degraded urban fabric. Selected examples of greening projects have been of such a significance that they have attracted publicity from far beyond the administrative boundaries of the cities in which they have been implemented, which is the case with hosting *inter alia* the EXPO Horticultural.

Although the paper is devoted to the revitalization projects carried out in the city of Łódź with regard to the activities undertaken in the course of organising the EXPO Horticultural 2024, it touches upon the current critical problems which constitute global challenges. The paper discusses the activities aimed at improving the quality of life in cities by means of modernizing or regenerating recreational areas, i.e. the green fabric.

The objective of the paper is to draw public attention to revitalization treated as a tool designed to enable the recovery from the crisis state of a degraded area as well as to the benefits resulting from hosting international events. Apart from the

study of literature on the subject, research carried out for the purpose of this paper will also encompass a financial analysis concerning revitalization in Łódź in the light of hosting by the city of the International Expo Horticultural 2024.

REVITALIZATION – ITS ROLE AND SIGNIFICANCE IN TERMS OF LOCAL DEVELOPMENT

Local development is defined in various ways in the subject literature. It may be described as “harmonised and systematic activity undertaken by the local community, local authorities and other entities operating in the *gmina*, which are aimed at creating new practical advantages of the *gmina* and improving the existing ones, fostering local economy as well as ensuring spatial and economic order”[2]. Local development may also denote “the process in which local governments or community-based organisations engage to stimulate or maintain business activity and/or employment. The principal goal of this engagement is to develop local employment opportunities in sectors which are beneficial for the whole local community. In the process of local economic development, existing human, natural and institutional resources are used.”[3] In general, when defining the notion of local development, it is possible to point out its characteristic features which show that it is an intentional, time- and labour-intensive process. It is initiated by local self-governments which take on the responsibility for monitoring, evaluating and analysing the effects which should bring about the amelioration of the living conditions of local communities. It is directly related to the increase in the standard of living of the inhabitants, and in the level of satisfying their life needs, which is reflected in a general improvement in the actual quality of existence. Any activities carried out at the local level should lead to *inter alia*: [4]

- supporting entrepreneurship and the local labour market,
- the ability to use the practical advantages and determinants prevalent in the *gmina*,
- improving the condition of the natural environment, and
- constructing technical infrastructure or further developing the existing one.

When seeking the stimuli which could intensify local development, many local self-government units implement activities pertaining to revitalization. Revitalization is a process whose distinctive features are the complexity and the interdisciplinary character of carried out activities, which is reflected not only in the time needed to implement these activities, which usually covers several years, but also in the need to constantly monitor, modify and update the whole process. In general, revitalization projects implemented by local self-governments may be divided into *inter alia*:

- economic revitalization undertakings – intended to provide conditions conducive to boosting the economy,
- spatial revitalization undertakings – aimed at improving the technical condition of buildings, and
- environmental revitalization undertakings – encompassing the processes designed to ameliorate the condition of the natural environment by enhancing communal green space.

With regard to the function performed by the area in which regeneration works are carried out the following types of revitalization activities can be distinguished: [5]

- revitalization of multi-family high-rise housing estates – the process of so called humanizing the high-rise,
- revitalization of degraded inner-city quarters as well as old city districts,
- revitalization of abandoned mono-functional lands – of a post-industrial, post-railway, post-shipyard, post-harbour or post-military character.

In addition to the above mentioned activities, also the undertakings aimed at regenerating degraded green areas in cities are growing in significance and thus urban greenery revitalization projects may be included in the catalogue of revitalization activities.

In general, it can be stated that “urban revitalization concerns selected areas, where negative phenomena are prevalent and their intensity makes it impossible to apply simple sectoral solutions”[6]. Revitalization projects, that is activities carried out primarily in the architectural and town planning, social and environmental scope, should revive degraded space by adding to it a new dimension of aesthetic order. Revitalization may also be perceived as an opportunity to create new spaces which can foster a friendly and attractive environment for inhabitants and tourists, including those who will visit a particular city due to mass events organised within its boundaries.

To sum up the deliberations presented above, it may be stated that revitalization undertakings are made up of the activities of an architectural and town planning, social and environmental character which together constitute a cohesive whole. They present a chance for restoring spatial order. At the same time, it is an opportunity to redevelop degraded areas to serve new functions. Apart from the improvement of the quality of life of the residents of a particular degraded area, revitalization activities are aimed at supporting local development defined, first and foremost, as a long-term process of change with an intentional character, which is focused on an intended improvement in the current state. Thus, it may be stated that one of the objectives of revitalization is boosting local development and one of the tools which may be applied to achieve it may be the hosting of mass events, in particular international exhibitions such as the EXPO. Such pro-developmental events constitute a part of the development strategy adopted by the local self-government.

ORGANISATION OF INTERNATIONAL EXHIBITIONS – BENEFITS FOR THE HOSTING CITY

In accordance with Article 1 of the Convention Relating to International Exhibitions [7] an exhibition is a display which, whatever its title, has as its principal purpose the education of the public: it may exhibit the means at man’s disposal for meeting the needs of civilisation, or demonstrate the progress achieved in one or more branches of human endeavour, or show prospects for the future. The above mentioned definition is supplemented with a statement that an international exhibition is a mass event in which more than one state takes part. The functions attributed to this kind of events encompass economic and commercial functions, but

also developmental ones, in the case of which the primary goal is to support the development of countries, regions and cities.

It is commonly acknowledged that mass events, including international exhibitions, help the city to develop its image. The venue where such an event is organised gains recognition in the international arena. Apart from the hosting city, also the whole region benefits from this kind of events as it takes advantage of the incentives stimulating local entrepreneurship. Thus, exhibitions are not only an effective aspect of local, regional or international promotion, but also a significant vehicle for conveying information, e.g. about the markets, the directions in which they develop and about new trends in international economy [8].

The list of positive effects for the city, which has endeavoured to organise a mass event must be based on the statement of gains which encompasses the following benefits: indirect and direct ones, current and future ones, primary and spin-off ones, financial, material, infrastructural, educational and marketing ones, gains for firms, fairs market entities, city budget and inhabitants. [9]

All the enumerated effects complement one another and achievement of the majority of these guarantees a successful fulfilment of set objectives, one of them being local development. A detailed listing of these effects together with their potential impact on local development are presented in Table 1.

Table 1. *The effects related to the organisation of international exhibitions.*

Time of exerting an impact	Effects of the impact			
	Measurable		Hard to measure	
	Positive	Negative	Positive	Negative
Before the event	New jobs	Preparation costs	New ideas connected with arranging the space in the city	Inconvenience connected with the organisation of the event
During the event	An increase in city budget revenues	Implementation costs	Better image, active promotion of the city	Changes to traffic organisation
After the event	Better look of the city as a result of renovation works including renovation activities carried out in green areas	Costs connected with cleaning up the area when the event has terminated	Experience, boosting local entrepreneurship, pride	Littering of public space, increase in petty crime

*Compiled by the author on the basis of: Budner W., Organizacja imprez biegowych źródłem korzyści dla różnych beneficjentów, pp 10-11,

When summarising the deliberations concerning this issue in a general context, it may be pointed out that the organisation of any mass event, including international exhibitions, is inextricably linked with incurring costs (it is often the case that, in the initial calculations, outlays exceed potential profits), however it is

a part of creating the image of a particular city or region, which in turn is supposed to generate profits in the future.

Generally, the impact of mass events, including international exhibitions, on local development depends, first and foremost, on the significance of the undertaking. Nevertheless, regardless of the scale of the organised event (no matter whether it is of a regional, national or international character – as is the case with the EXPO Horticultural 2024) it may be stated that one of the benefits resulting from the hosting of such events is creating the positive image of the city, which influences its development by *inter alia* an inflow of new inhabitants, investments and intensification of tourism as well as by achieving the objectives adopted in development strategies.

THE EXPO HORTICULTURAL 2024 ŁÓDŹ – ANOTHER STEP TOWARDS REGENERATING DEGRADED SPACE

The EXPO is a mass event which is held on a cyclical basis. One of its goals is to enable its participants to present scientific achievements, to share knowledge and to showcase state-of-the-art technical advances as well as to participate in a worldwide debate on presented technologies, materials and ideas. One of the characteristic features of this kind of events is a specific guiding theme which corresponds to current world trends, which usually touches upon the issues of particular importance for present-day economies. The themes the EXPO is devoted to are crucial since they highlight what is, to a lesser or greater degree, relevant to most societies worldwide at the current moment, in the times in which we live. In general there are two basic types of world expositions. Every five years the World EXPO is organised. Its theme is of a general character. The next exhibition of this kind will take place in Dubai. The other type of exposition is of a specialised character. It is the so called International EXPO and it is held in between World EXPO exhibitions. The next exhibition of this kind will be hosted by Buenos Aires and will take place in 2022. Apart from the exhibitions which are devoted to society, technology, science, etc. there are also expositions where the guiding theme is the natural environment, i.e. EXPO Horticultural. Such exhibitions are devoted to the issues focused on urban greenery. As many as 7 types of EXPO Horticultural may be distinguished. These categories depend on the duration of the event, and the area it will cover. The existing categories of EXPO Horticultural are as follows: A1 – World Horticultural Exhibition (Large), duration 3-6 months, minimum area of 50 ha, sanctioned by the BIE, held every 2 years, minimum period of 10 years between two exhibitions organised in the same country, A2 - International Horticultural Exhibition (Short), duration 8-20 days, minimum area of 15,000 m², B1 – Horticultural Exhibitions with International Participation (Long), duration 3-6 months, minimum area of 25 ha, B2 – Horticultural Exhibitions with International Participation (Short), duration 8-20 days, minimum area of 6,000 m², A2/B1 – Horticultural Exhibition with International Participation (Long), duration 3-6 months, minimum area of 25 ha, C – International Horticultural Show, duration 5-20 days, and D – International Horticultural Trade Exhibition the so called business exhibition. [10]

The first EXPO Horticultural was held in 1960 in Rotterdam. The exhibition was organised on the area of 50 ha and it was visited by 4 m people. Overall, in the

period from 1960 to 2024, 23 EXPOS Horticultural of A1 type will have been held. Table 2 presents basic information concerning EXPOS Horticultural in the years 2002-2024.

Table 2 EXPOS Horticultural A1 type in the years 2002-2024

Country	City	Theme	Duration	Number of visitors	Area
The Netherlands	Haarlemmermeer	The contribution of the Netherlands horticulture and international horticulture in the quality of life in the 21st century	25.04.2002-20.10.2002	2,071,000	140 ha
Germany	Rostock	A Seaside Park. A new flowered world	25.04.2003-12.10.2003	2,600,000	100 ha
Thailand	Chiang Mai	To Express the Love for Humanity	01.11.2007-31.01.2007	3,848,791	80 ha
The Netherlands	Venlo	Be part of the theatre in nature; get closer to the quality of life	05.04.2012-07.10.2012	2,046,684	66 ha
Turkey	Antalya	Flowers and Children	01.04.2016-31.10.2016	4,693,571	112 ha
China	Beijing	Live Green, Live Better	29.04.2019-07.10.2019	~16 mln	503 ha
The Netherlands	Amsterdam - Almere	Growing Green Cities	28.04.2022-23.10.2022	~2 mln	60 ha
Poland	Łódź	City Re:Invented	04-10.2024	~ 4 mln	~ 75 ha

*compiled by the author on the basis of <https://www.bie-paris.org/site/en/expos/about-expos/expo-categories/horticultural-exhibitions>, <http://docplayer.pl/72308754-Expo-2024-lodz-polska.html>

On the basis of the data presented in the above table it may be noted that exhibitions raise interest among the general public. The expositions have been or will be visited (in the case of the exhibitions which will be held after the year 2018) by between 2 m to 16 m people. The area subjected to the “green metamorphosis” accounts for a large percentage of the city area as regards the cities which have hosted or will host EXPO Horticultural and ranges from 60 ha to 503 ha.

In March 2018 the members of the International Association of Horticultural Producers decided to grant the hosting of the EXPO Horticultural 2024 to Łódź. The city authorities applied for hosting the event in February 2018 after the city had lost in the competition for organising the small EXPO in 2022 (Łódź lost with Buenos Aires with the ratio of votes 56 to 62). Łódź is the third most populous city in Poland. The current population of Łódź amounts to 690,422 inhabitants [11], which accounts for 1.80% of the overall population of Poland. Łódź is the city where the issue of reconstructing degraded urban fabric is very important due to the large area in which the problems directly connected with revitalization processes are concentrated. Degraded quarters cover the area of 1,783 ha, which accounts for 6.08% of the total area of Łódź [12]. Aggregate minimum costs of the revitalization projects planned until the year 2020 will amount to approximately 233,492,300.16 euros, out of which the subsidies from the state budget will account for 4,393,202.52 euros and the funds from the European Union – 102,879,991.34 euros [13]. As indicated by the above mentioned data, total costs of revitalization activities constitute a significant financial burden for the city budget. Generally, the scarcity of public financial resources means that it is impossible to fully complete the tasks concerning rehabilitation of degraded urban fabric. Therefore, the priority in financing is accorded to the investments which have taken advantage of or will be able to take advantage of external financial assistance in the form of the EU funds or financial resources from private investors. Thus, the possibility of hosting the EXPO Horticultural 2024 is one of the methods of raising additional funds for implementing the investments which are so crucial for the city.

The guiding theme of the EXPO Horticultural 2024 will be ‘City Re:Invented’. It is a recognisable catchphrase which was first used during the promotional campaign of the city when it was running for the hosting of the EXPO 2022. This slogan is undoubtedly a continuation of the activities undertaken beforehand. It incorporates all the revitalization activities (social, economic and spatial ones), which are aimed at improving the quality of life. “The meaning of ‘City Re:Invented’ goes beyond the Horticultural EXPO. It encompasses *inter alia* social participation, area revitalization or social inclusion. At the same time ‘City Re:Invented’ means the preservation of the local and national heritage, which is manifested in protecting and respecting the functions and traditions of the city as well as in bestowing new energy on it.” [14] As part of the exhibition, a new Central City Park will be founded in the very centre of the city which will consist of three expanded parks the 3rd of May Park, the Baden-Powell Park and the area adjacent to the Clinical and Didactic Centre of the Medical University of Łódź. In other green spaces in Łódź special pavilions and thematic gardens will be set up for the duration of the exhibition, which will serve the needs of the inhabitants of Łódź many years after the termination of the said event.

The tentative cost of the exhibition, according to the data obtained from the Project Management Division, has been estimated at 100 m euros. These expenditures may however increase by additional 5 m euros when taking into consideration the financial resources allocated to developing the road infrastructure for the purpose of the organisation of the event. The Łódź authorities expect the central government to financially support the city in the organisation of the exhibition, as was the case with the Expo 2022 (according to the estimates resulting from the financial analysis of the budget of the International EXPO Exhibition, the amount earmarked to the EXPO from the city budget and the EU funds was supposed to amount to 649.76 m euros. The remaining amount totalling 738.14 m Euros was supposed to be provided by the company established especially for this purpose. The major shareholder of the said company was supposed to be the State Treasury which would contribute in the amount of 376.54 m euros, whereas the remaining 361.61 m euros was supposed to come from debt financing).

To sum up, although the estimated costs of the organisation of the Expo Horticultural 2024 are fairly high, it is envisioned that over the period of six months Łódź will be visited by at least 4 m guests. This means 21 thousand people per day (according to the Łódź City Office, the number of visitors may increase even to 30 thousand people per day). When calculating on average, one tourist will spend around 20 euros, which makes up the sum of 420 thousand euros. The sum will land directly in the purses of private entrepreneurs, and a proportion of it will indirectly contribute to the city budget in the form of taxes. Apart from that, also the proceeds from potential exhibitors will be transferred to the city budget. This means that the hosting of the EXPO Horticultural 2024 in Łódź will not only boost local entrepreneurship, but it will also improve the image of the city as well as enhance general local development.

CONCLUSION

Summing up, the experience of territorial self-governments, including the worthy example of Łódź, as regards revitalization activities proves that bringing back to life the places which have lost their original function by promoting mass events such as EXPO or EXPO Horticultural constitutes a right direction for investment. It may bring substantial benefits not only for the local community, but also for the city. It should be taken into consideration that revitalization is a process which consists in regenerating degraded urban fabric. It is a recovery process which comprises many kinds of activities such as *inter alia*: modernisation of buildings, adapting the existing developments to new needs and assigning new functions to them, but it also encompasses the actions stimulating local development in the sphere of trade and services or restoring the balance in social life. Therefore, undertaking the activities in this regard results, first and foremost, in improving the quality of life of the city dwellers, but also in enhancing the image of the city. It is necessary to be aware of the fact that revitalization is not limited to merely reconstructing run-down urban infrastructure, but it also entails regenerating the city's green areas which enable city dwellers to rest. Greenery plays a vital role in the city. It exerts a substantial influence on raising the quality of life of its inhabitants. Unfortunately, revitalization is a particularly cost-effective process and local self-governments, trying to overcome the problem of scarcity of financial

resources, are currently searching for other sources of finance. One of such sources may be the hosting of the EXPO Horticultural 2024, which, on the one hand, will require spending 100 m euros but, on the other hand, will considerably contribute to the process of regeneration of the city which is currently under way.

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THE SOCIAL COSTS IN INTERMODAL TRANSPORT BASED ON THE EXAMPLE OF THE EUROPEAN UNION

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ABSTRACT

Transportation depends on the mining industry, as it provides transport and traction stock, fuels and energy, human labor, machinery, equipment and materials used to build transport infrastructure. Taking into account that transport in the European Union is heavily dependent on fossil fuels, limiting their consumption will entail reducing the mobility of road transport, which consumes most energy. Therefore, the priority of actions of the Member States of the EU is to transfer the burden of transportation from roads to multi-branch transport. It is dictated by the constant increase in the greenhouse effect, which is a consequence of the emission of toxic gases formed in the combustion of fossil fuels. In addition to the degradation of the environment, the negative effect of excessive use of road transport are its external costs, i.e. social costs, which are not directly born by transport companies, but by the entire society. These costs are directly related to the negative impact of transport activities on the environment and human life. The costs of environmental degradation, traffic accidents, traffic congestion, noise, human health, infrastructure of the area and lost production as a result of human death have the largest share in the external costs of transport.

The main objective of the study is to present the competitiveness of intermodal transport in relation to road transport in the process of generating external transport costs resulting from the European Union's transport policy.

Keywords: social cost, intermodal transport, environment, competitiveness

INTRODUCTION

Contemporary transport connects people, cultures, cities, countries and continents and is one of the main pillars of modern society and innovative economy. Therefore, creating interoperability of transport requires the European Union to take action to include transport into a common European policy, which undoubtedly contributes to reducing the difficulties in the trade of products around the world. However, the increase in the scale of global transport in addition to the obvious benefits associated with the mobility and economic growth of individual regions creates a very high external (social) cost that burdens the whole society. These costs are brought about by the negative impact transport-related activities have on the environment and on human life, while not taken into account by any of parties involved. This phenomenon occurs when the interested entities use resources that have unspecified property rights. The said costs result mainly from the assortment structure of the demand on transport and the increase of quality requirements in transport. The largest share in external costs of transport are those related to

environmental degradation and pollution, which result mainly from soil, air and water contamination and the increase in the greenhouse effect. Additionally, there are also costs of traffic congestion, noise, human health deterioration, destruction of spatial economies of cities, production losses resulting from human death or road accidents. It is worth mentioning that globally everyday 140 thousand people are injured in road accidents. Of these, over 3 thousand die, and about 15 thousand never regain full health. [1] Furthermore, the noise of above 55 Db, caused by road traffic, is a problem of nearly 125 million people – one fourth of all Europeans. [2] Hence, the European Union in its transport policy aims to reduce the volume of car transport, which to a large extent depends on fossil fuels and contributes to the creation of significant social costs, including excessive emissions of greenhouse gases. According to EU guidelines, by 2050, the transport sector must reduce its emissions by 60% [3] so that the overall percentage of greenhouse gas emissions in Europe is to be reduced by around 80%. With this fact in mind, the aim of the article is to attempt to present the issue of the competitiveness of intermodal transport with respect to road transport in the process of generating external transport costs resulting from the European Union's transport policy.

EXTERNAL COSTS OF INTERMODAL TRANSPORT

The external costs of transport, i.e. social costs, are all costs of consuming the means used to create a transport service, which are not borne by the producer of the service, but by the general public. [4] These are the costs resulting from the transport of goods and persons who are not directly borne by transport companies but by the whole of society. The problem of social costs is an important issue in European transport policy. In its activities, the European Commission strives to internalize the external costs of transport. As early as the "Green Paper" published in 1995, the external transport costs were pointed as a threat to the European public and environment. Another signal to create a unified transport policy and an attempt to reduce external costs was the "White Paper" publication in 2011, on the future of the transport sector until 2050, entitled *"Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system"*. In this document, the European Commission described the situation of the transport sector in the transition phase between old and new challenges and referred to measures aiming at external costs reduction. By outlining 10 objectives in the 2011 "White Paper", the Commission sought to create a single European transport area by removing persistent barriers between modes of transport and national systems, supporting the integration process by facilitating the creation of international multimodal operators. [5] Contemporary EU transport policy seeks to eliminate difficulties and barriers affecting the development of European transport. The manifests itself in the creation of a single European transport area, operating on the basis of fair competition between various forms of transport, such as road, rail, air and water transport. Undoubtedly, it is triggered by the fact that European road transport of goods grows at an average rate of 4.5% per year and, according to experts, this will not change. According to estimates of the European Commission, by 2050, the demand for passenger transport will increase by more than 50%, and for freight transport - by 80% compared to 2013. [6]

Taking into account the degree of use of various transport branches, it is estimated that in previous years, the volume of freight transport in the EU inland

transport (including road, rail and inland waterways) stabilized at around 2300 billion tonne-kilometers, while the share of road transport is about 75% [7] (see Fig 1).

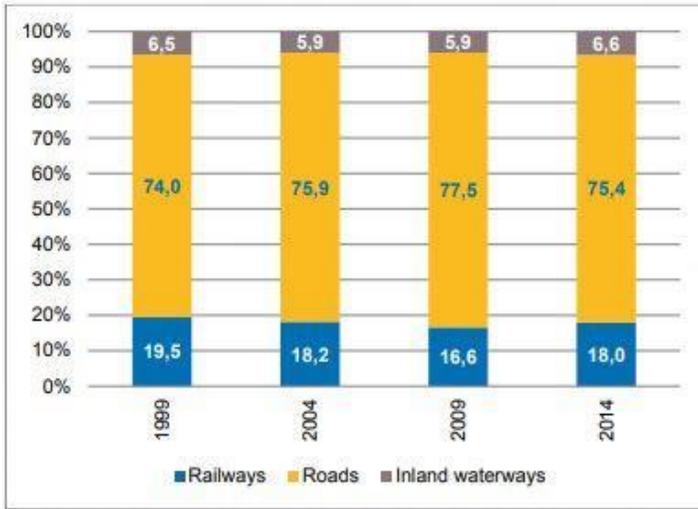


Fig 1. Freight land transport modal split [9]

In 2014 the share of rail freight in land transport was 18%, almost the same as 10 years ago. The share of road transport in generating all external costs is estimated at around 85% - 97% of the total costs. Out of all external transport costs of the European Union, 13% of them are generated by lorries which roughly amounts to approx. € 65bn. It is worth noting that the road congestion alone costs between € 146 and € 243 billion. Rail transport has a share of not more than 2% in these costs, whereas, importantly, freight transport is only 0.7%. [8]

In the case of intermodal transport, the costs incurred during the process are the sum of many elements occurring throughout the entire transport chain. These costs depend on the designed chain itself and on the activities related to transport. However, in intermodality, the essential transport of the cargo unit is carried out by railway, inland or sea routes. As a result, the road transport as such is very limited, practically used only for the pick-up and drop-off operations. In rail transport, the length of railways in the European Union in 2014 was about 220,000 km. [9] In the same year, rail freight transports were at a level of 417.6 billion tonne-kilometers, showing an average annual growth rate of 3%. In total, more than half of freight transport was international, which shows the scale of the importance of this type of transport in relation to passenger traffic (see Fig. 2).

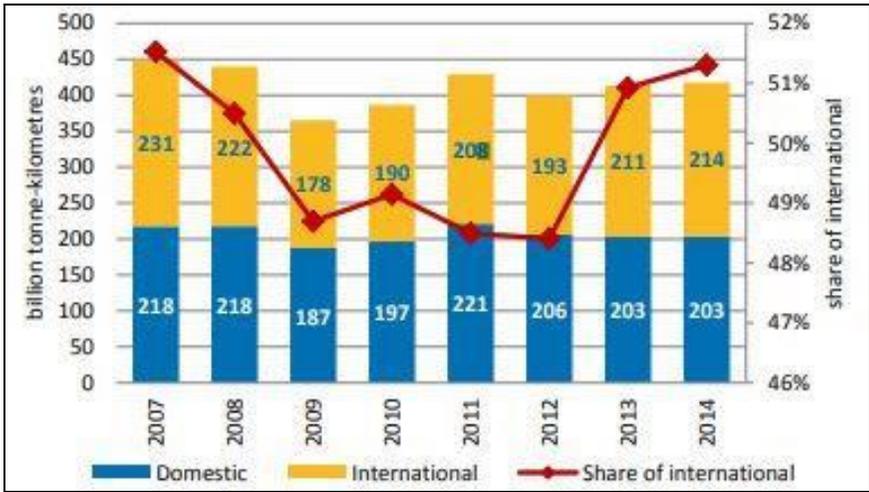


Fig. 2 Evolution of rail freight traffic [9]

This situation causes a rapid increase in the social costs of transport, reflected in the deterioration of the natural environment. Road transport is estimated to account for approximately 71% of carbon dioxide emissions from the entire transport sector. On the other hand, passenger cars account for two thirds of the emissions from road transport. Other means of transport cause significantly less pollution. Sea and air transport is responsible for 14% and 13% of pollution respectively, and the share of emissions from inland waterway transport is only 2%. The least pollutants are caused by rail transport, which is a source of less than 1% of emissions. [10] The negative impact of rail transport on the environment is essentially limited to noise and vibration emissions, pollutants (from diesel locomotives) and occupancy (see Table 1). According to the data of the Ministry of Investment and Development, European rail transport emits about 13% of total pollutant emissions from transport. [11] According to the publication of the European Environment Agency, rail transport in the EU is responsible for 1.5% of total NOx and CO₂ emissions. [12]

Table1. External costs of transportation by branch

Cost tkm	euro/1000	Road freight transport	Rail freight transport	Waterborne freight transport
Noise		1.8	1.0	0
Nature and landscape		0.7	0.0	0.4
Accidents		10.2	0.2	0.0
Air pollution		6.7	1.1	5.4

Climate change high	9.8	0.9	3.6
Soil and water pollution	0.8	0.4	0.0
Road congestion	0.4-7.0	0.1-0.5	0.0
Total	30.4-37	3.7-4.1	9.4

Source: Own study, based on CE Delft, Infrans, Fraunhofer ISI, *External Costs of Transport in Europe – Update study for 2008*, CE Delft, 2011, p. 10

The average value of external costs for road transport is EUR 33.7 per 1000 tkm, while in rail transport it is only EUR 3.9 per 1000 tkm. Thus, the costs generated by road transport are more than 85% higher than the costs generated by rail transport and by over 70% higher than the costs generated by inland transport. This is mainly due to the fact that there is a much smaller number of railway accidents in rail transport, as well as lower emission of air pollution and noise levels.

Social accidents are another extremely important aspect of social costs borne by the whole society. In its directives, the European Union aims to improve road safety and introduces the highest safety standards for road traffic across Europe, which are to reduce the number of road fatalities by half by the end of 2020. However, as statistics show, the number of victims in the European Union has not only not decreased, but the number injuries and deaths has increased. Only in 2015 there were 1090.3 thousand accidents, 3.3% more than in 2013, and the number of injured persons increased by 4.2%. 0.4% more people died on roads than in 2013. [13] (see Fig. 3). The low level of road safety in the European Union is the measurable social costs borne by citizens and economic costs burdening the economies of individual Member States. It is estimated that tens of thousands of fatalities and several million injured in road accidents significantly affect the reduction of national income, which undoubtedly leads to the impoverishment of individual countries. According to the European Union, only in 2015, social costs related to rehabilitation, health care, material damage, etc. of injured people and road deaths fluctuated at least 100 billion euros. [14]

On the other hand, the number of accidents in intermodal transport is completely different. The number of railway accidents is constantly decreasing, which results in a decrease in the number of fatalities. In 2014, the total number of victims of railway accidents amounted to 1054 deaths, i.e. by 7% less than in 2013. In 2010-2014, the combined number of fatal rail accidents decreased by 17%, an average of 4% per year (see Fig. 3). [15] In total, the social costs of railway fatal accidents at EU-28 level are estimated at EUR 1.4 billion, including material damages is about EUR 103 million, and the total costs of delays amount to EUR 71 million. It is estimated that the environmental costs generated by accidents on the railways are about 71 million euros. Thus, the social costs related to the safety of cargo transportation by – respectively - road or rail transport are definitely in favor of the latter, when analyzing even security issues only. With regard to road transport, rail transport is a much safer, which confirms the fact that almost 30 times less people

are killed in road accidents than in road accidents, while in relation to the number of passenger-kilometers, rail transport is almost 3 times safer than the road one.

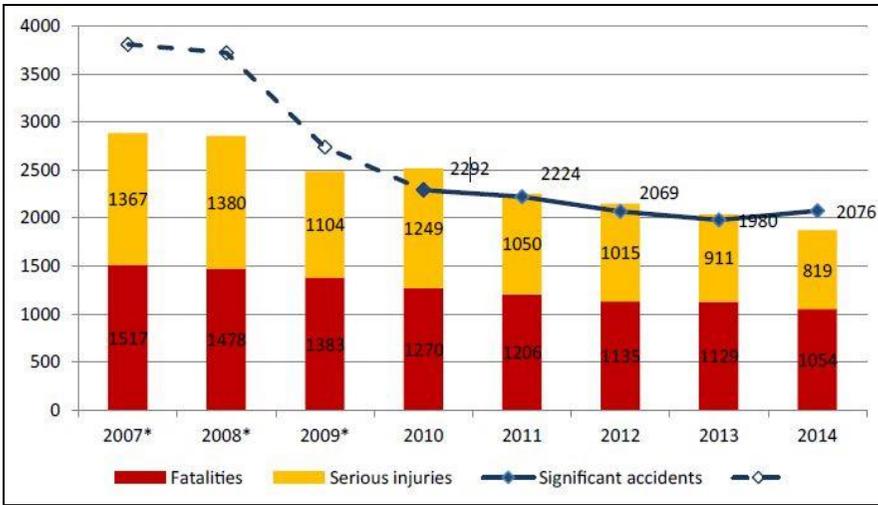


Fig. 3 Significant accidents and consequences for EU-28 countries (2007-2014) [15]

In 2014, there were reports of 2076 serious accidents in the European Union resulting in 1.054 people being killed and 819 being seriously injured. This means a 5% increase in the number of accidents, but a 7% drop in the number of victims compared to 2013. Gradually, from year to year, the number of casualties and injuries in railway accidents in 2007-2014 is decreasing. Taking into account all deadly railway accidents (excluding suicides) in the European Union, the risk of mortality per million kilometers traveled by train was 0.28. It follows that the social costs of accidents in rail transport are lower by over 95% in urban areas and by over 90% in non-urban areas in relation to transport by road. Therefore, thanks to the use of intermodal transport as the main branch of freight transport, the total external costs of transport can be reduced by about 80-85% in relation to road transport.

CONCLUSION

Intermodal transport that is developing in the modern world combines not only different branches of transport of goods and services, but mainly means for the movement of these goods. It provides the basis for an alternative solution to road transport. The development of the intermodal transport system requires not only a good knowledge of benefits and barriers, but above all a close integration of several transport branches, offering higher quality services and more cost-effective solutions than road transport does. This approach to intermodal transport is currently the main priority in the transport policy of the European Union and its countries. Due to the large environmental pollution and greenhouse gas emissions arising from the combustion of fossil fuels, the EU aims to shift the burden of freight transport from road to multi-branch transport. This is due to the fact the European Union has ordered all Member States to reduce greenhouse gas emissions by at least 60% by 2050 compared to 1990 levels. Currently, around 25% of total energy

consumption in the EU-28 is associated with the transport sector, except for sea and pipeline transport, while the road transportation amounts the largest of energy usage in the sector, as much as 83%. The demand for oil in the transport sector accounts for 70% of all demand for oil in the EU, in 94% it depends on fossil fuels, while only 2% is supplied with electricity and 1% with biofuels. The total emissions in the transport sector are still growing, this sector was responsible for 1/4 of total greenhouse gas emissions (CO₂, CH₄, N₂O) in 2014 alone. Therefore, the European Union introduces instruments limiting the negative impact of road transport on the natural environment by financing infrastructure projects, among others: elimination of congestion of big cities and cargo ports, improving the competitiveness of rail transport (as a mode of transport generating lower CO₂ emissions than road transport), establishing rules for intermodal transport. According to the European Commission, these transport methods are considered to be one of the best solutions for environmental hazards generated by transport.

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VALUE ADDED AS THE BASIS FOR MEASURING LABOUR PRODUCTIVITY

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ABSTRACT

Productivity is generally defined as a ratio of output to input and may be expressed in physical quantity or financial value. At the organizational level, the financial value may refer to sales, value of production or value added. Value added (VA) indicates the wealth created through the organisation's production process or provision of services. According to the definition VA can be calculated as the difference between sales and the cost of materials and services incurred to generate the sales. This method is called the subtraction method or the VA creation method. Another way of calculating VA is by adding personnel cost (e.g. salaries and wages), management, cost of maintaining the business (e.g. interest from loans, depreciation), and profit. This method of calculation is called the subtraction method or the VA distribution method. If we assume that manpower plays key role in creating the wealth of an organisation, labour productivity (i.e. value added per employee) may be used as the overall measurement of productivity. However, to investigate what affects labour productivity, disaggregation of this ratio should be made to the levels of activity and operational ratios. In this way, several indicators can be obtained, which allow the board to assess the productivity of its company. These levers are areas or actions that organisation can focus on to improve productivity, although the analysis shows that these levels are not autonomous. Improvements at one level requires simultaneous action at some other levels to achieve the effect. A set of indicators used to assess productivity of the company can be called value-added productivity measurement.

The aim of the study is to assess the productivity of the Polish mining company based on the generated value added and on indicators obtained from disaggregation of VA on the activity and operational levels. The analysis of results will allow to show in which areas improvements should be made.

Keywords: value added, productivity, labour productivity, activity indicators, productivity indicators

INTRODUCTION

Each company must evaluate its activities. This assessment, on the one hand, aims to determine its current situation in relation to previous periods, and on the other hand to determine its position in relation to the competitors. One of the areas to be analysed is a broadly understood financial analysis, where several indicators are calculated from groups of ratios such as liquidity, debt, asset management, profitability and market value. The analysis of the productivity of the company is a supplement, or rather broadening of the financial analysis.

Productivity shows the company's ability to use its resources. It is commonly defined as a ratio of a volume measure of output to a volume measure of input use. There are some objectives of productivity measures. These are [5]:

- to trace *technology* change which appears either in its disembodied form (e.g. scientific results, new organisational techniques) or embodied in products (e.g. new design, improved quality);
- to identifying changes in *efficiency*; to what extent a production process has achieved the maximum amount of output that is physically achievable with current technology and given a fixed amount of inputs,
- to achieve *cost savings*; it could be seen as a chance to identify real cost savings in production;
- to compare with other companies for measures expressed in physical units.

There are many different measures of productivity. At the industry or company level it is useful to use productivity measures that relate some measure of gross output to one or several inputs or to use a value-added concept to capture movements of output. Various productivity measures can be computed, depending on the treatment of inputs and outputs. Single-factor productivity ratios, such as labour productivity or capital productivity, give output per unit of a single input type. Multi-factor or total-factor productivity ratios take into account the fact that multiple inputs are jointly used [4].

Labour productivity is the most common productivity measures, partly because it is the easiest to compute. Labour productivity corresponds to output per unit of labour input or value-added per worker-hour. It reflects the efficiency and effectiveness of labour in the production and sale of the output. There are many factors that affect labour productivity; these are: demand factors, innovation, investment in machinery and equipment, technology, systems and processes, attitudes and skills of workers.

THE CONCEPT OF VALUE ADDED

Value added (VA) can be calculated through the modification of retained profit formula, which is obtained after subtraction from sales bought-in-materials and services, depreciation, wages, interests, dividends and taxes:

$$R = S - B - Dep - W - I - Div - T \quad (1)$$

where: R – retained profit, S – sales, B – bought-in-materials and services, Dep – depreciation, W – wages, I – interest, Div – dividends, T – taxes.

Hence Value Added is calculated according to the following formula (gross value added):

$$S - B = W + I + Dep + Div + T + R \quad (2)$$

or (net value added)

$$S - B - Dep = W + I + Div + T + R \quad (3)$$

VA can be calculated in two ways; either the left side is calculated – it is called subtractive method, or the right side is calculated – it is called additive method.

VA is distributed as wages to employees, depreciation for reinvestment in machinery and equipment, interest to lenders of money, dividends to investors and profits to the organisation. This distribution level reflects Value Added Statement which is obtained by modifying the profit and loss account. Equation (2) reflects the format of the VAS. Left side of (2) presents the upper part of the VAS, where the value of purchased materials and services is deducted from the sale revenues, which shows gross VA obtained by the company. The right-hand side of this equation corresponds to the lower part of VAS; it shows the distribution of the created gross value added between participants that generate this value [3]. The simplified form of the VA statement can be illustrated as follows:

Sales Revenue	1000
Less: Cost of bought in goods and services	250
Value Added	750
<u>Distribution of Value Added</u>	
Employee Benefits	250
Capital providers (Creditors and Lenders)	100
Taxes	100
Value retained	300
Value Added	750

The value added can be computed by using data from a company's financial statements. The analysis of VA information focuses on how well a firm is able to increase the sales by better integrating customer requirements into product functionality and service delivery. It also helps a company focus on listening to the voice of its customers, building core competency, and search for ways to purchase the raw materials at the optimal price. Hence creativity and innovation in translating customer needs into product and service development become critical [7, p. 42].

LABOUR PRODUCTIVITY INDICATORS

For each organization, the set of productivity indicators can be designed and adapted accordingly to its needs. It should be guided by certain principles:

- Indicators should measure something significant;
- Indicators should be meaningful and action-oriented;
- Components parts of the indicators should be reasonably related;
- Indicators should be compared within industry or benchmarked;
- Data should be reliable and consistent;
- Indicators should be easily understood by employees and practical to obtain.

There are at least ten key indicators commonly used to measure an organisation's overall productivity performance. These are [2]:

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	Indicator	Unit	Formula	What It Measures
1	Labour Productivity	Monetary unit	$\frac{\textit{Value added}}{\textit{No. of employees}}$	Efficiency and effectiveness of employees in the generation of VA
2	Sales per employee	Monetary unit	$\frac{\textit{Sales}}{\textit{No. of employees}}$	Efficiency and effectiveness of marketing strategy
3	Value added-to-sales ratio	%	$\frac{\textit{Value added}}{\textit{Sales}}$	Proportion of sales created by the organisation over and above purchased materials and services
4	Profit margin	%	$\frac{\textit{Operating profit}}{\textit{Sales}}$	Proportion of sales left to the organisation after deducting all costs
5	Profit-to-value added ratio	%	$\frac{\textit{Operating profit}}{\textit{Value added}}$	Operating profit allocated to the providers of capital as a proportion of value added
6	Labour cost competitiveness	Times	$\frac{\textit{Value added}}{\textit{Labour cost}}$	Efficiency and effectiveness of the organisation in terms of its labour cost
7	Labour cost per employee	Monetary unit	$\frac{\textit{Labour costs}}{\textit{No. of employees}}$	Average remuneration per employee
8	Sales per monetary unit of capital	Times	$\frac{\textit{Sales}}{\textit{Fixed assets}}$	Efficiency and effectiveness of fixed assets in the generation of sales
9	Capital intensity	Monetary unit	$\frac{\textit{Fixed assets}}{\textit{No. of employees}}$	Extent to which an organisation is capital-intense
10	Capital productivity	Times	$\frac{\textit{Value added}}{\textit{Fixed assets}}$	Efficiency and effectiveness of fixed assets in the generation of value added

An effective productivity measurement system should be an integral part of any organisation’s information system. Regular data collection and calculation of productivity indicators allows for an in-depth analysis of the company's operations and internal comparative analysis within the assumed time horizon, as well as a

comparison with indicators from a given sector. Generalizing, productivity indicators can be used to [1]:

- Evaluate the effectiveness of action plans;
- Monitor performance;
- Set targets and formulate strategies;
- Account to various stakeholders – customers, investors, employees, suppliers and funding agencies;
- Link effort and reward for employees.

The presented indicators are interrelated, and some of them can be assigned to the category respectively key management indicator, activity indicators and operational indicators. At the top is key management indicator, which is labour productivity. It can be broken down into activity and operational indicators. Activity indicators provide a picture of costs, activity levels and resource utilisation rates – they are useful for middle and higher management. Operational indicators are usually physical ratios that relate to operational aspects that need to be monitored and controlled.

PRODUCTIVITY INDICATORS OF MINING COMPANY

The calculations illustrating presented in this paper issue were carried out on the example of one of the Polish mining companies for the years 2014-2017. Based on the annual reports and financial statements, the conducted calculations are presented in tables 1-3.

Table 1. Value added statement for mining company

	2014	2015	2016	2017
Revenues from sales	1 627	1 657	1 538	1 798
Material costs	580	1 368	586	604
Value Added [million €]	1 046	289	953	1 194
Distribution of Value Added distribution [million €]	2014	2015	2016	2017
	1 046	289	953	1 730
Employees	870	841	658	757
Capital providers	26	36	47	-2
Interest	26	36	47	-2
Dividend	0	0	0	0
State Budget	-3	-128	54	181
Income Tax	-54	-182	3	137
Taxes	51	54	51	44
Company	154	-459	193	793
Depreciation	311	326	192	194
Retained earnings	-157	-785	1	599

Table 2. Value added distribution for mining company

Value Added Distribution	2014	2015	2016	2017
Employees	83%	291%	69%	44%
Capital providers	2%	12%	5%	0%
State Budget	-0,3%	-44%	6%	10%
Company	15%	-159%	20%	46%
	100%	100%	100%	100%

Table 3. Productivity performance indicators for mining company

Ratios	2014	2015	2016	2017
1-Labour productivity	€ 43 886	€ 11 424	€ 41 503	€ 57 571
2-Sales per employee	€ 68 227	€ 65 537	€ 67 024	€ 86 662
3-Value-added-to-sales-ratio	64,32%	17,43%	61,92%	66,43%
4-Profit margin	-11,37%	-56,18%	3,37%	40,83%
5-Profit-to-value added ratio	-17,67%	-322,30%	5,44%	61,47%
6-Labour cost competitiveness	1,20	0,34	1,45	1,58
7-Labour cost per employee	36 476	33 241	28 685	36 492
8-Sales per 1 € of capital	0,57	0,82	0,91	1,10
9-Capital intensity	€ 119 591	€ 80 037	€ 73 697	€ 78 993
10-Capital productivity	0,37	0,14	0,56	0,73

The situation in mining, including also in Poland, is very variable, which is reflected in the financial results. The net profit generated by the audited company changed from the net loss in 2014 (-156.9 million €) and in 2015 (-785 million €), through net profit in 2016 (1 million €) and in 2017 (599.2 million €). This, among others had an impact on the VA generated - as can be seen in Table 1. These two years of net loss meant that the company did not pay taxes and retained earnings are recorded as negative. This makes it difficult to analyse VA distribution.

It is much easier to analyse the years 2016-2017. The main changes are the reduction of VA distribution to employees and the increase of VA distribution to the company.

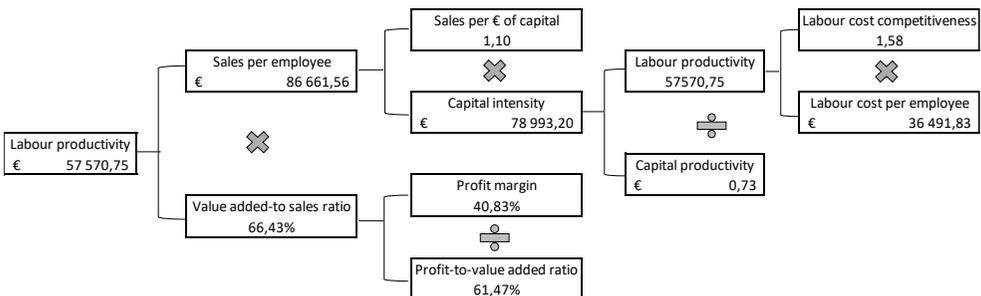


Fig. 1. Disaggregation of the Labour productivity indicator (values for the year 2017 of the mining company)

Analysing the productivity performance indicators (Tab. 3), the years 2015 to 2017 are optimistic. Most indicators are gradually increasing. For example, Labour productivity has more than quadrupled, and Sales per employee increased by over

30%. It is worth showing the relationship between these indicators, so you can see which indicators and to what extent they have affected Labour productivity. This is shown in Figure 1.

For each company, the disaggregation of Key management indicator (Labour productivity) can be achieved for the analysis to show the relationship between the various indicators specific to a particular industry and indicate the activity and operational indicators. An example of such a visualization for a surveyed mining company is shown in Figure 2.

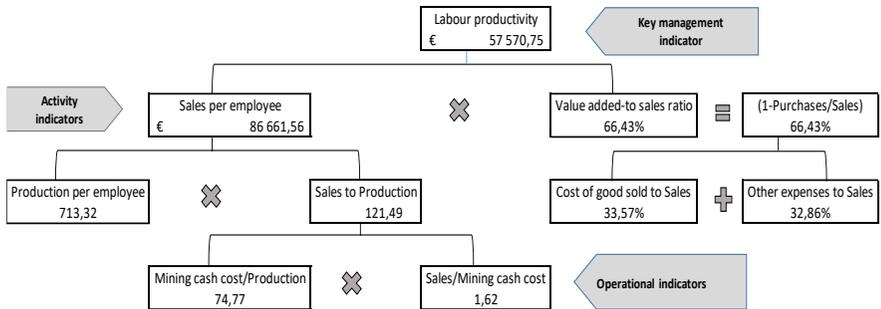


Fig. 2. Factors affecting the labour productivity indicator (values for the year 2017 of the mining company)

CONCLUSION

Productivity measurement usually deals with three perspectives with the primary focus on the input side. The first one is called total factor in which an organisation's output is divided by a total input. Partial or multi factor productivity measurement involves the relationships between total output and two or more input factors. And the last one is called single factor productivity measurement calculated as a total output divided by a single input factor. Each perspective represents different challenges for measurement effort [6].

Recently, we have been observing a special emphasis on the output side and the attention has turned to how much value, i.e. value added, a firm is able to generate. The term value added is used to show how well a firm can utilize both tangible and intangible assets which represent its input factors. This is because an output should not only represent what a firm produces but also reflect the value added into the products and/or services to be used by customers.

The basic productivity indicator based on value added is Labour productivity. But for a thorough analysis it is necessary to disaggregate this indicator into other ones. In this way, a number of indicators mutually related to each other can be obtained. Thanks to this, it is possible to analyse which indicators and to what extent they have affected Labour productivity, as well as being able to simulate using the "what if" method.

The work presents these issues on the example of a Polish mining company, but the problem is of a general nature and such analysis can be carried out for a company from any sector, possibly selecting activity and operational indicators.

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