

University of Economics in Bratislava
Faculty of Business Economics with seat in Košice



ACTA OECONOMICA CASSOVIENSIA

Scientific journal

ISSN 1337-6020

Vol. X, 2017
No. 1

The **aim of the journal** is to publish the papers concerned with developing of new knowledge in the field of economic theories and its application in business practice.

The **scope of the journal** covers the wide range of research problems of business economics, management, marketing and finance, knowledge economy, innovation policy, etc.

The journal contains empirically (experimentally) founded studies, survey studies, contributions to “Discussion” (personal views and attitudes on controversial issues in economics as science, as a professional practice, etc.) and reviews. Integrative studies documented by relevant data from central and east European regions and member countries of European Union are specially welcomed.

All papers are double peer reviewed. The journal is published twice a year.

Editorial board

Chairman

Zuzana Hajduová [University of Economics in Bratislava]

Members

Michal Tkáč	[University of Economics in Bratislava]
Aneta Bobenič Hintošová	[University of Economics in Bratislava]
Józef Poór	[Szent István University, Gödöllő]
Andrea Bencsik	[Széchenyi István University, Győr]
László Józsa	[Széchenyi István University, Győr]
Bożena Frączek	[University of Economics in Katowice]
Marek Szajt	[Czestochowa University of Technology]
Marcin Zawada	[Czestochowa University of Technology]
Petr Suchánek	[Masaryk University, Brno]
Jaroslav Nenadál	[Technical university in Ostrava]
Jitka Langhamrová	[University of Economics, Prague]
John Anchor	[University of Huddersfield]
Jarko Fidrmuc	[Zeppelin University Friedrichshafen]
František Sudzina	[Aalborg University]
Tatjana Volkova	[BA School of Business and Finance]
Kari Liuhto	[University of Turku]
Marina Khayrullina	[Novosibirsk State Technical University]
Kani Kabdi	[N. Gumilyov Eurasian National University in Astana]
Serhii I. Demianenko	[Kyiv National Economic University named after Vadym Hetman]
Oleksandr O. Yerankin	[Kyiv National Economic University named after Vadym Hetman]
James Kilika	[Kenyatta University, Nairobi]

Editor-in-chief

Katarína Petrovčíková

Editor

Matej Hudák

The grammar and language style of papers is not reviewed and corrected.

Editor's office

University of Economics in Bratislava
Faculty of Business Economics with a seat in Košice
Tajovského 13, 041 30 Košice
Tel.: 055/722 3111, fax: 055/623 06 20
IČO 00 399 957
E-mail: acta.phf@euke.sk
<http://www.euke.sk>
<http://acta.euke.sk>

Ministry of Culture reg. Nr.: 3239/09

ISSN 1337-6020

Copyright © PHF EU Košice, November 2017

CONTENTS

SURVEY AND RESEARCH STUDIES

STRENGTHS AND WEAKNESSES OF HUMAN RESOURCE MANAGEMENT IN SMALL AND MEDIUM-SIZED ENTERPRISES OF THE SOUTH BOHEMIAN REGION <i>Vlasta DOLEŽALOVÁ – Richard ŘÍHA</i>	5
ECONOMIC MECHANISMS OF HOUSEHOLDS' INTEGRATION IN THE AGRARIAN SECTOR OF THE ECONOMY OF UKRAINE <i>Andrii HUTOROV</i>	15
ACTIVATION OF INNOVATIVE ENTREPRENEURSHIP – A STEP TOWARDS DEVELOPMENT STARTUPS <i>Olena KURCHENKO</i>	29
EVALUATING THE FINANCIAL PERFORMANCE OF ENTERPRISES IN THE SPACE USING MATHEMATICAL AND STATISTICAL METHODS OF MULTI-CRITERIA EVALUATION <i>Jozef LUKÁČ</i>	39
IMPACT OF GLOBALIZATION ON DEVELOPMENT OF TRADE AND NEW TRENDS IN RETAIL <i>Marta PAVLIKOVÁ – Lukáš ZENDULKA</i>	49
THE MANAGEMENT OF INFORMATION TECHNOLOGY SERVICE MANAGEMENT (MOITSM) <i>Alexander PETROV</i>	61
HEALTH AND HEALTHCARE AS A PART OF WELL – BEING INDICATORS IN EU <i>Katarína PETROVČIKOVÁ – Jana NAŠČÁKOVÁ – Vanda LIESKOVSKÁ</i>	75
UKRAINIAN AND SLOVAK RETAIL CONSUMERS' BEHAVIOR <i>Iryna RESHETNIKOVA – Erika DUDAS PAJERSKA – Mykhailo SAHAIDAK</i>	89

STRENGTHS AND WEAKNESSES OF HUMAN RESOURCE MANAGEMENT IN SMALL AND MEDIUM-SIZED ENTERPRISES OF THE SOUTH BOHEMIAN REGION

Vlasta DOLEŽALOVÁ – Richard ŘÍHA

Annotation

Human resource management is a crucial tool for improving the competitiveness of enterprise. The aim of this paper is to analyze the strengths and weaknesses of human resource management in small and medium-sized enterprises in The South Bohemian Region through a questionnaire survey. Primary data were obtained from 323 managers and owners of these companies in 2013 - 2016. Motivation, remuneration, satisfaction, personal improvement, and communication with suppliers and customers are essential to business success. Enterprises consider these areas as weaknesses of human resource management. Communication, attitude and behaviour, qualification and education of employees are considered as strengths of human resource management.

Keywords:

costs, profit, efficiency, trend, economic analysis

Introduction

Human resource management as a strategic and logically implemented attitude to management is the most valuable property of organization in which people work as individuals and teams to achieve its goals (Armstrong, 2011). The philosophy of human resource management is based on the importance of sustainable success of business therefore human resources cannot be compared to anything else. Efficient management of employees and use of their professional skills, wit and creativity when achieving the set goals can provide the enterprise with a significant competitive advantage (Dytrt, 2006). Characteristic features and special procedures in human resource management create the key skills assessing the competitiveness of enterprise (Cappelli, Crocker-Hefter, 1996).

The aim of human resource management is to ensure the use of the employees (i. e. human resources) in such a way that can enable the employer to benefit as much as possible from their skills and knowledge – human potential – and the employees to receive the material and psychological reward for their work. In human resource management the importance of strategic procedure is to be accepted, i. e. line managers play prevailing roles and the organization policy has to be integrated and show the cohesion so that the crucial goals and values of enterprise could be proposed and supported better, in accordance with an important role of communication. The philosophy emphasizing the achievement of competitive advantage through human effort has to be implemented, and, can be interpreted as hard or soft human resource management (Armstrong, 2011). And, between managers and employees the unitary attitude prevails over pluralist one (Foot, Hook, 2008), i. e. there is a theory that employees and managers share

the same goals therefore cooperation is their mutual goal (Armstrong, Taylor, 2014).

In developed countries the human resources are the most precious capital of enterprise because it is not a problem to equip it with appropriate facilities and technologies, but to hire qualified workers. Workers and their potential become the key factor of enterprise efficiency. Human resource management that develops this potential is the heart of enterprise and is the most dynamic part of management of company (Horalíková, 1999). According to Graham and Bennet (1992) the aim of human resource management is to ensure the use of the employees (i. e. human resources) in such a way that can enable the employer to benefit as much as possible from their skills and knowledge – human potential – and the employees to receive the material and psychological reward for their work.

1. Methodology

The primary data were obtained through a questionnaire survey, supplemented with direct interviews. The data were evaluated by common quantity and quality methods. In 2013 – 2015 the managers and owners of small and medium-sized enterprises filled in 307 questionnaires. 3 questionnaires were removed from this collection because of insufficiency of answers. In 2016 19 questionnaires were filled in by managers to extend the sample in individual entrepreneurial activities.

There were 66,514 economic entities registered in The South Bohemian Region in 2013, in this category there were 96 % micro-enterprises (61,560), 3 % small enterprises (2,349) and just 1 % medium-sized enterprises (608). In the basic collection (66,514 enterprises) a research sample (1,075) was chosen by nonprobability random sampling because of difficult conditions of data collection. In the research sample an examined sample was generated, which involved 323 small and medium-sized enterprises operating in The South Bohemian Region (Holátová, Doležalová et al., 2014).

A structured questionnaire focused on the basic characteristic features of enterprises, importance and functioning of procedure management, providing financial and non-financial benefits, human resource management and its functioning, importance and plan controlling. The questionnaire also focused on enterprise culture, social responsibility, strengths and weaknesses and problem parts of human resource management. The part of questionnaire focused on strengths and weaknesses of human resource management was used for this paper.

Small and medium-sized enterprises (SME's) in The Region of South Bohemia were categorized as follows:

- micro enterprises: 0 – 9 employees,
- small enterprises: 10 – 49 employees,
- medium-sized enterprises: 50 – 249 employees

For accurate numbers see Table No. 1.

Table 1: Categorization of enterprises

Enterprise	Number	Percentage representation
Micro enterprise	60	18.58
Small enterprise	162	50.15
Medium-sized enterprise	101	31.27

Source: Own research.

The characteristics and structure of examined sample (323 enterprises) are as follows: micro-enterprises with 9 employees or fewer – 18.58 %. Small enterprises are represented by the highest number despite representing just 3 % of all SME's in the region – 50.15 %. Medium-sized enterprises are mostly in the District of České Budějovice, which is caused by better entrepreneurial conditions (infrastructure, easier connection with institutions supporting development of SME's etc.), there are 608 of them registered in the region, which is the fewest of the total number, representing 1 % only. They represent 31.27 % within the examined sample.

Managers and owners of SME's answered the questions concerning the strengths and weaknesses of human resource management not having been provided with chosen answers in advance, they answered without any influence or help. There was an unlimited number of answers and answering all questions was not mandatory. The number of answers was 0 to 4 answers in one enterprise. The number of answers was reduced to 25 the most frequent ones occurring in an enterprise so that it could be transparent, considering no answer being left out but assigned to the one in twenty-five answers being the most appropriate. For the selection of answers see Pictures 1 and 2.

2. Results

Part of strategy of human resource management is creation of policy, the policy of creating the relationships with customers and permanent improving communication between sellers and buyers (Purcel et al., 2007). Supplier-customer relationships were considered to be rather weak part of human resource management at 13.32 % in all answers focused on weaknesses. Offered products and services are considered to be a strong part of an enterprise at 16.32 % of SME's, but on the other hand relationships with customers are considered to be a strength in 3 enterprises only. Because of such a low number it is involved in Picture 1 in "Other" column.

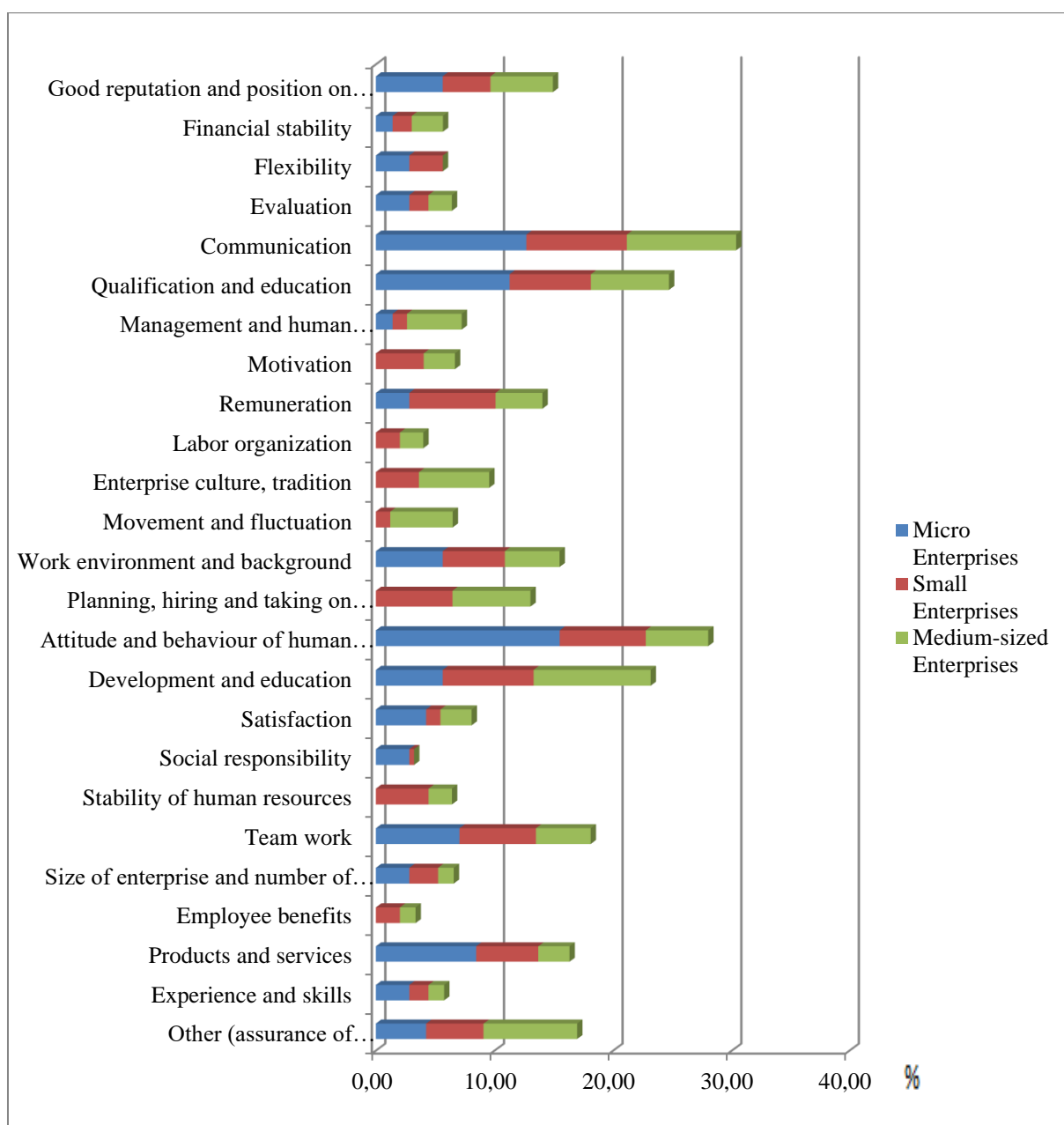
Human resource management strives for good motivation of employees. In this case it is the loyalty of employees to their enterprise. These two aspects provide the evaluation and remuneration employees according to their abilities, skills and competence (Scarborough, 2008). The field of motivation is considered to be a strength just in 6.66 % of SME's (Picture 1) and a weakness in 10.65 % of SME's (Picture 2). No micro-enterprise commented on motivation, either strong or weak in human resource management. Just 14.02 % of SME's consider

remuneration to be a strength (Picture 1) and 37.28 % consider it to be a weakness (Picture 2). The sphere of employability skills and experience of employees is connected with that because just 5.75 % of SME's consider it to be a strength (Picture 1). 4.31 % of SME's only consider this sphere to be weak (Picture 2).

Another important aspect is also the ability and skill to adapt to the situations and changes that can often occur. Adaptability is a big advantage for an enterprise as a whole. Another aspect is operation perfection, which means lots of enterprises on the market and all of them want to be the best (Bontis et al., 1999). The good reputation and position on the market is a strength for 14.93 % of SME's and work environment and background is a strength for 15.48 % of SME's (Picture 1). On the other hand 6.92 % of SME's commented on this field and indicated the size of an enterprise and the number of employees as a weakness. The technologies and facilities are considered for 14.98 % of SME's to be a weakness of human resource management as well (Picture 2).

If employees are satisfied, they pass positive energy on to customers, too, which means success for enterprise as well as its employees. Another important aspect is responsibility that is the principle of responsibility not only for oneself, but also for the tasks having been received. We can also see so called sharp awareness of responsibility, which occurs when somebody does not dare to decide. It often leads to hesitation, which can cause their damage or failure (Purcel et al., 2007).

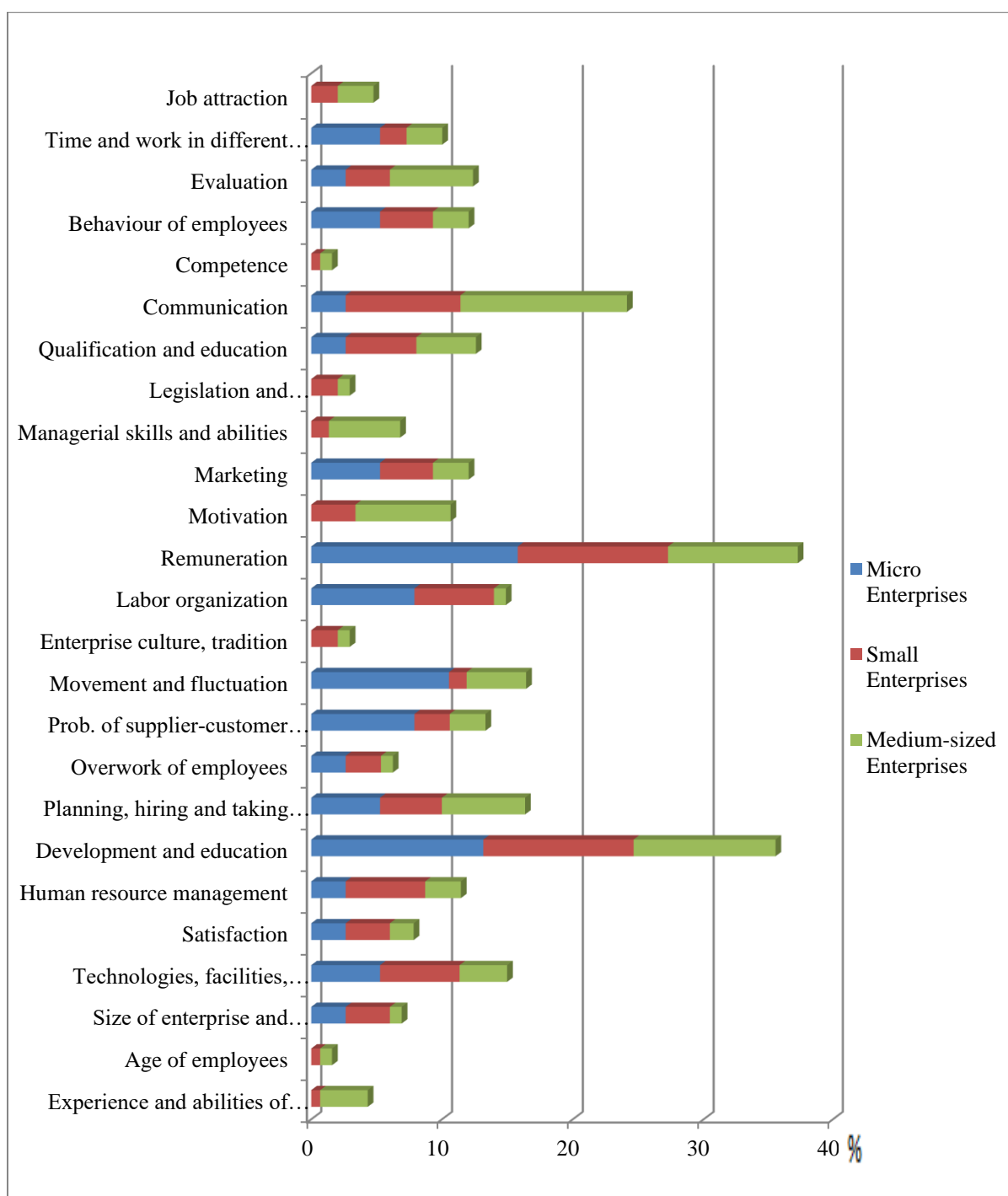
Unlike previous strengths Guest and Conway (2004) state that the most important part of human resource management that every enterprise should strive for is satisfaction and welfare of its employees. They form the fundamental structure of whole society and therefore they should be paid appropriate attention. Satisfaction of employees can also be seen in another strong field of human resource management which is participation in decision-making process of enterprise. In the past it was common that the enterprise was managed by one man only, and such a manager decided on everything. In 8.07 % of SME's there are satisfied employees (Picture 1) and in 7.83 % of SME's there are considered to be unsatisfied (Picture 2).



Picture 1: Strengths of Human Resource Management in SME's

Source: Own research.

This sample of SME's is special because of the most frequent representation of strengths of human resources is as follows: communication – 30.35 %, attitude and behaviour of human resources – 28.01 %, qualification and education – 24.70 %, personal improvement and lifelong education – 23.16 % of enterprises (Picture 1). Small enterprises are represented in all 25 strengths, medium-sized enterprises are represented in 24 strengths, social responsibility is missing there. Micro-enterprises are not represented in employee benefits, stability of human resources, labour turnover, enterprise culture, tradition, organization of work and motivation (Picture 1).



Picture 2: Weaknesses of Human Resource Management in SME's

Source: Own research.

Armstrong (2010) considers investment in human resources and their education and personal improvement as weaknesses. In the point of view of the management of enterprise and vision of the highest profit the amount of money necessary to be invested in the development is one of the highest costs. When implementing new innovation methods that make the development of human resources easier, the costs increase, which is emphasized in accordance with obeying the European rules and regulations. Although enterprise decides to invest in education and personal improvement of its employees, it is primarily employee who is

responsible for it. This can be a problem or can become a negative benefit of enterprise if employee does not have a personal relationship with enterprise and does not care about its development. The results of learning in enterprise are important, however, hidden learning can be considered to be negative or ambiguous because it is carried out in all activities taken place in enterprise. It influences the running of enterprise much more during the common work, supposing the staff to work as individuals. The education process does not take place unless there is a vision of organization united tightly and firmly and employees are familiar and identified with it. The education process is inefficient when permanent communication is missing, the dialogue between employee and employer. The weakness of learning improvement in organization is a human aspect that determines what an individual is willing to learn because it is unambiguous that employees learn more efficiently and more easily when the atmosphere in the organization leads them to improve themselves. The results of personal improvement and human resource education are at level of 35.55 % (Picture 2).

The whole sample of SME's is characterized by the fact that 37.28 % of them indicate the remuneration as a weakness, followed up by personal improvement and education – 35.55 %, communication - 24.14 % and 16,42 % labour and turnover and 16.28 % planning, hiring and taking on employees. Small and medium-sized enterprises are represented in all 25 weaknesses. Micro-enterprises do not consider experience and abilities of employees, age of employees, enterprise culture, motivation, managerial abilities and skills, legislation and occupational health and safety, competence and job attraction to be weaknesses (Picture 2).

Conclusion

The questionnaire survey provided us with alarming results. In accordance with Czech and foreign literature and researches it is necessary to create the relationships with customers and improve the communication with suppliers and customers permanently. Nevertheless, managers and owners of SME's in The South Bohemian Region consider this field to be rather weak. There are only three SME's in the whole sample to consider it to be strong. Motivation of employees in these enterprises is indicated to be rather weak than strong. Another important field is remuneration which is closely connected with the motivation of employees. In this case 6.66 % of examined enterprises only consider this field to be strong, they consider it to be rather weak – 10.65 %. The sphere of employability skills and experience is connected with the results of motivation and remuneration, and 5.75 % of enterprises consider this sphere as a strength. The necessary part of human resource management is the ability and skill to adapt to the situations and changes that can often occur. Adaptability, operation perfection (plenty of them on the market) is an important part of entrepreneurship. However, the good reputation and position on the market, work environment and

background are considered as strengths of human resource management in 14.93 %, or 15.48 % of enterprises respectively. On the other hand just 6.92 % of enterprises commented on this sphere, the size of enterprise and number of employees are considered to be weak. The technologies and facilities are considered for 14.98 % of SME's to be a weakness of human resource management. Enterprise is successful when its employees are satisfied. In 8.07 % of SME's there are satisfied employees and in 7.83 % of SME's there are considered to be unsatisfied, and thus the satisfaction of employees is a weakness of human resource management.

This sample of SME's is special because of the most frequent representation of strengths of human resources is as follows: communication – 30.35 %, attitude and behaviour of human resources – 28.01 %, qualification and education – 24.70 %, personal improvement and lifelong education – 23.16 % of enterprises. Micro-enterprises are not represented in employee benefits, stability of human resources, labour turnover, enterprise culture, tradition, organization of work and motivation.

Investment in human resources is presented as a weakness of human resource management, together with personal improvement and human resource education – 35.55 % of SME's consider it to be a weakness.

Foreign literature involves in the key fields of human resource management the following ones: investment in human resources – improvement at the level of intellectual capital; productivity management – involvement of the value included in the process of human resource management into process of productivity management and assurance of the evaluation being concentrated on how employees keep these values; work process – the key field focused on how work is processed and how it is related to the whole enterprise; remuneration system – the strategy of remuneration development, taking into account the hard managed enterprise. Nevertheless, the results show that enterprises should focus on all the spheres, get interested in them and strengthen them because they were listed in the weaknesses of human resource management mostly. Enterprises could help improve their competitiveness when eliminating their weaknesses.

The knowledge of foreign literature makes managers nowadays to provide their employees with the opportunity to get involved into the decision-making process partially, or enable them express their opinions (e. g. on production process, trading strategies etc.). What is strong in such a change in the system of human resource management that such employees get in touch with the production process and other spheres of enterprises or they can come up with the ideas to improve the processes, which could help improve the competitiveness of the whole enterprise. This opportunity to express the opinions in the decision-making process is a characteristic feature of large enterprises, SME's do not have such a feature so far.

It has to be said in the conclusion that managers and employees did not have the option of choosing the strengths and weaknesses. If they had been offered such an option, the differences in results would have likely appeared. It was a purpose

that managers and owners of SME's did not have any option of a choice so that there could not be any way to influence the answers, and the respondents had to think about which spheres of human resource management they consider to be weak or strong.

References

1. ARMSTRONG, M., TAYLOR, S. (2014). *Armstrong's Handbook of Human Resource Management Practice*. (13th ed.). London: Kogan Page Publishers. pp. 880. ISBN 978-07-494-6964-1.
2. ARMSTRONG, M. (2011). *Armstrong's Handbook of Strategic Human Resource Management*. (5th ed.). London: Kogan Page Publishers. pp. 328. ISBN 978-07-494-6394-6.
3. ARMSTRONG, M. (2010). *Armstrong's Essential Human Resource Management Practice: A Guide to People*. (1st ed.). London: Kogan Page Publishers. pp. 432. ISBN 978-07-494-5990-1.
4. BONTIS, N, DRAGONETTI, N. C., JACOBSEN K., ROOS G. (1999). *The Knowledge -Toolbox: A Review of Tools Available to Measure and Manage Intangible Resources*. European Management Journal, vol. 17. no. 4. pp. 391 – 402. DOI 10.1016/S0263-2373(99)00019-5.
5. CAPPELLI, P., CROCKER-HEFTER, A. (1996). *Distinctive human resources are firm's core competencies*, Organizational Dynamics, Winter., vol. 24, no. 3, pp. 7-22.
6. DYTRT, Z. (2006). *Dobré jméno firmy*. Praha: Alfa Publishing. ISBN 978-80-868-5145-7.
7. FOOT, M., HOOK, C. (2008). *Introducing Human Resource Management*. (5th ed.). London: Pearson Education. pp. 492. ISBN 978-02-737-1200-8.
8. GUEST, D., E., CONWAY, N. (2004). *Employee well-being and the psychological contract: a report for the CIPD*. London: Chartered Institute of Personnel and Development. pp. 97. ISBN 978-18-439-8111-4.
9. GRAHAM, H., T., BENNET, R. (1998). *Human Resources Management*. (9th ed.). London: Pitman Publishing. pp. 448. ISBN 978-02-736-3401-0.
10. HOLÁTOVÁ, D., DOLEŽALOVÁ, V. et al. (2014). *Řízení lidských zdrojů v malých a středních podnicích*. Žilina: GEORG. 147 s. ISBN 978-80-8154-121-6.
11. HORALÍKOVÁ, M. (1999). *Personální řízení*. (1. vyd.). Praha: Česká zemědělská univerzita. ISBN 80-213-0647-5.
12. PURCEL, J., BOXAL, P., WRIGHT, P. (2007). *The Oxford Handbook of Human Resource Management*. (1st ed.). New York: Oxford University Press. pp. 658. ISBN 978-01-992-8251-7.
13. SCARBROUGH, H. (2008). *The Evolution of Business Management*. (1st ed.). New York: Oxford University Press. pp. 373. ISBN 978-01-992-2959-8.

About the authors

Ing. Vlasta Doležalová

Mgr. Richard Říha

Management and Marketing Services Department

College of European and Regional Studies

Žižkova tř. 6, 370 01, České Budějovice, Česká republika

E-mail: dolezalova@vsers.cz; riha@vsers.cz

ECONOMIC MECHANISMS OF HOUSEHOLDS' INTEGRATION IN THE AGRARIAN SECTOR OF THE ECONOMY OF UKRAINE

Andrii HUTOROV

Abstract

On the example of the agrarian sector of the economy of Ukraine we have shown that the solution of problems for households' increasing efficiency and its stability is possible only by their technical and technological re-equipment, by carrying out a complex of educational actions in a rural areas, by creations of conditions for reestablishment old and establishing new integration, intereconomic relations. We generalized the five main models for households' integration into the system of value chains creation in the agrarian sector of the economy as the cooperative-based, the cooperative-integrated-based, the mini-cluster-based, the intraeconomic lease or labor contract based and the production contracting-based. It is shown that the most effective and perspective for use in Ukraine is the production contracting-based model.

Keywords:

household, integration, cooperation, cluster, contractation, agrarian sector, Ukraine

Introduction

Due to providing agrarian and land reforms, the main task of which was a peasant becoming as a true owner of the agricultural land, large state agricultural enterprises were mainly reformed and their lands shared, the existing intereconomic relations were broken, and whole food subcomplexes of the agrarian and industrial complex were disintegrated. The experience of the East Germany, where family farms are a basis of the agrarian system, was fundamental for our reforms. Despite of the state support for farmers and cooperative movement in Ukraine, the available standard and legal base, their development are not sustainable and economic activity is not effective. Small agricultural producers and especially households are not able to compete with large agro-industrial formations, are often focused on self-sufficiency. This fact means that the research problem of their integration into the system of value chains creation is currently relevant.

The subject of study is the theoretical and methodological, and also scientific and practical aspects of households' integration into the system of value chains creation in the agrarian sector of the economy of Ukraine.

The methodological basis of research is the dialectic method of knowledge, system approach to studying problems of households' integration into the system of value chains creation, fundamental thesis of the economic theory and works of foreign and native scientists. For achievement of a goal we applied such methods as abstract and logical, historical, monographic, theoretical generalization, the system analysis and synthesis.

1 Current status

The retrospective analysis of agrarian transformations in Ukraine demonstrates that the statement about the primacy of small-scale production in the form of household over large-scale capitalist agriculture, which was based on almost unlimited opportunities for sharp increase in production volumes on the basis of using own labor and material resources of the public sector of the economy, without the state and enterprise investments – did not come true.

For 2003-2015, the accurate tendency of decreasing a role of households was outlined in the agrarian sector of the economy of Ukraine, which became especially considerable in 2010-2015 (Table 1).

Table 1. Share, sizes and efficiency of agricultural production in agricultural enterprises and households in Ukraine

	Agricultural enterprises			Households		
	2010	2012	2015	2010	2012	2015
Unit weight in total agricultural land, %	49.5	49.7	48.6	38.2	38.1	36.8
– incl. arable land, %	59.2	59.6	59.9	36.0	35.8	35.8
Developed land level, %	96.3	96.5	96.7	96.5	96.4	96.4
Unit weight in gross agricultural production (in 2010 prices), %	48.3	50.7	55.1	51.7	49.3	44.9
incl. – crop production, %	53.6	55.0	59.1	46.4	45.0	40.9
– animal production, %	38.8	41.8	45.5	61.2	58.2	54.5
Per 1 farm:						
– agricultural area, <i>hectares</i>	498.7	501.9	502.6	1.2	1.2	1.2
– employment size on agricultural production, <i>persons</i>	14	13	12	3	3	3
– livestock inventory, <i>conventional heads of cattle</i>	107.1	109.2	103.7	1.4	1.5	1.3
Yield, <i>centners per hectare</i> :						
– grain & leguminous crops	27.6	33.4	43.8	25.0	25.4	33.9
– sugar beet	281.5	420.6	448.2	257.3	329.6	325.3
– oilseeds	15.6	17.6	21.8	13.3	13.0	16.2
– potatoes	171.0	192.0	198.6	131.7	160.1	160.8
– vegetables, total	207.0	313.7	363.4	169.9	187.8	192.6
– food melons & gourds	73.8	72.1	92.4	94.2	102.0	77.1
– fruits and berries	38.2	51.4	70.8	98.5	108.1	117.8
– grapes	47.4	53.2	70.7	115.6	127.0	142.4
Annual average milk yield per cow, <i>kg</i>	3975.0	4676.0	5352.0	4110.0	4276.0	4437.0
Annual average wool clipping per sheep, <i>kg</i>	2.3	1.9	1.7	3.8	3.8	3.3
Use of fodders in animal production, <i>centners of fodder units</i> :						
– per centner of cattle gains	15.7	15.5	14.8	9.2	9.6	8.4
– per one conventional head of cattle	26.7	26.8	26.5	34.0	34.6	34.3
– per centner of pigs gains	6.0	5.4	4.5	8.3	8.1	8.1
– per centner of milk production	1.2	1.1	1.0	1.0	0.9	1.0
Material costs return	0.71	0.71	0.55	0.29	0.33	0.31

Source: own processing on data of the State Statistics Service of Ukraine (2016).

Unit weight of households in the gross agriculture production of Ukraine in the year 2015 compared with the year 2000 was reduced on 16.7 percentage points, including the crop production – on 9.8 percentage points, animal production – on 24.5 percentage points.

Now the gross agriculture production of Ukraine in the context of business patterns is almost similar to the prereform level in the year 1995. At rather constant sizes of agricultural areas, the level of its use intensity on households was significantly lower, than in agricultural enterprises in the years 2010-2015. In addition, the efficiency of land using is much lower by estimation by the main crops yield's indicator, except food melons, fruits, berries and grapes. Production efficiency of animal products is also higher in the agricultural enterprises. Thus, even at slightly lower expenses for forages per centner of milk production, its average annual milk yield per cow in households in the year 2015 was 17.1% lower than the average level in agricultural enterprises. Considerably higher expenses of forages per one conventional head of cattle and per centner of pigs gains show possible imbalance of a ration of animals feeding, an over expenditure of forages and as a result – the low payback of their production and the material costs return (by net income).

The formation of households' inefficiency is provided also through the system of prices of product sales.

According to the data of the State Statistics Service of Ukraine, the average prices of realization (excluding VAT, grants, transportation, forwarding and overhead costs) of grain were lower in households, than in agricultural enterprises, by 3.7 %, of oilseeds – by 10.9 %, of sugar beets – by 19.9 %, of milk – by 16.7 %, of wool of all types – by 43.6 % in 2015 (Prokopenko, 2016). However, the perspective niche direction of specialization for households remains production of labor-consuming types of agricultural products, where their potential on the level of a labor security exceeds the corresponding indicator in the agricultural enterprises in average by 10.2 times. Households can realize the capacity of the local commodity markets on such groups of agricultural products, where the prices of realization are higher purchasing and essentially depend on a factor of lead-time.

2 Household's integration conceptual models

Considering long-term international and national experience, the solution of problems of increasing efficiency and stability of households considers by their technical and technological re-equipment, providing a complex of educational actions in villages, creation of conditions for reconstruction and establishing new integration intereconomic relations. We consider, that integration of the enterprises of the agrarian sector of the economy and households represents interrelation, mutual understanding, close dependence between them, that demonstrates unity and continuity of communications in the course of providing the population with products and the income, realization by them other economic

and socially important for the state functions. Depending on conditions and nature of realization of these integration relations, the last ones can be more or less close, intensive, promote or counteract to realization of the integration relations.

We have developed five main models for households' involvement into the integration relations in the agrarian sector of the economy such as the cooperative-based, the cooperative-integrated-based, the mini-cluster-based, the intraeconomic lease or labor contract based and the production contracting-based (Gutorov, Yermolenko, 2015; Gutorov, 2016(a), 2016(b)).

2.1 The cooperative-integrated-based model

The cooperative-based model provides the creation of the system of consumer cooperation. According to the article no. 2 of the Law of Ukraine "On cooperation" no. 1087-IV of 10 July, 2003, the consumer cooperative is formed by merging of natural and/or legal entities for the organization of trade service, preparations of agricultural production, raw materials, production and providing other services for the purpose of satisfaction of consumer needs of its members (The Verkhovna Rada of Ukraine, 2003), Figure 1. The advantages of consumer cooperation are the possibility of using services in transportation and sales of products, receiving consultative support by its members, collective protection of interests, etc. Besides, the cooperative-based model demands the creation of the legal entity, which pulls the corresponding expenses and legal consequences, needs regular membership due to development of cooperative, reducing economic benefits of its members.

The prototype of such model of integration have already existed at Zaporizhia region, based on the agricultural consumer cooperative "Cossack Grain Union" which belongs to members of the commercial partnership "The Agrarian Union of Ukraine" (Hadzalo, Zhuk, 2015).

For the cooperative-integrated-based model the consumer cooperative, which is integrated with the productive, processing or marketing enterprise of the agrarian sector of the economy, is also created. Deeper level of integration with preservation of independence for an economic entity is the main advantage, and, at the same time, the disadvantages are the lacks of opportunities for participation in integration interaction by individual rural households that are not members of the cooperative. The variants of such households' integration through the form of vertical cooperation based on agro-industrial formations were developed by professors M. Khorunzhyj and V. Zabolotnij (Khorunzhyj, Zabolotnij, 2005), and also improved by the Yu. Nesterchuk (Nesterchuk, 2011) and M. Pitiulych (Pitiulych, 2014). It should be noted, that the cooperative-integrated-based model gives the chance to use the self-government and mechanisms of public control that acquires special relevance in the conditions of decentralization of the authority in Ukraine. The adjustment of organizational and economic principles of such organization to conditions of the agrarian sector of the economy are

developed by academicians Ya. Hadzalo and V. Zhuk in the form of the institute of rural self-government (Hadzalo, Zhuk, 2015).

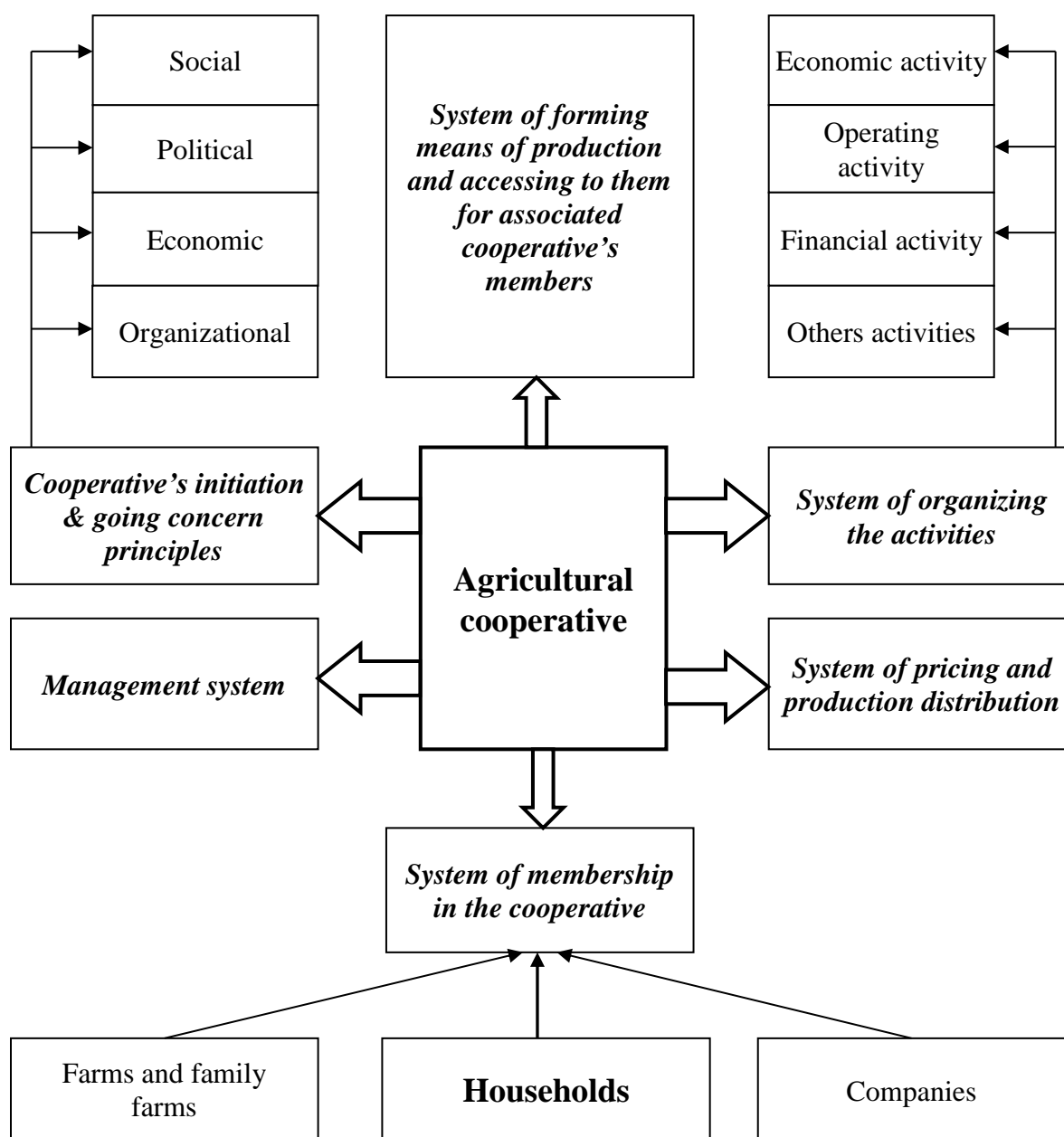


Figure 1. Cooperative-based model for households' integration in Ukraine

Source: own processing.

2.2 The cluster-based model

For overcoming of negative formal aspects of cooperation and application of horizontal and vertical integration in an informal shape, the world practice acquired mini-cluster-based models. In this context, the cluster is understood as the group of the interconnected and complementary economic agents concentrated in a certain territory (Kropyvko, 2013). The enterprise-integrator, which forms cluster's internal infrastructure of a certain direction of specialization acts as a cluster core. There are households, family farms, small farms, cooperatives, that are involved into the integration relations and take part in management of cluster

formation, on the periphery of a cluster. The think tank of the National Scientific Centre “Institute of Agrarian Economics” that led by academician Yu. Lupenko has developed such models of mini-clusters for production of rabbit meat, pork, fruit and vegetable products (Lupenko, 2014). Mini-cluster-based model for households’ integration for animal production in Ukraine, as an example, with our improvements and betterments are shown in the Figure 2.

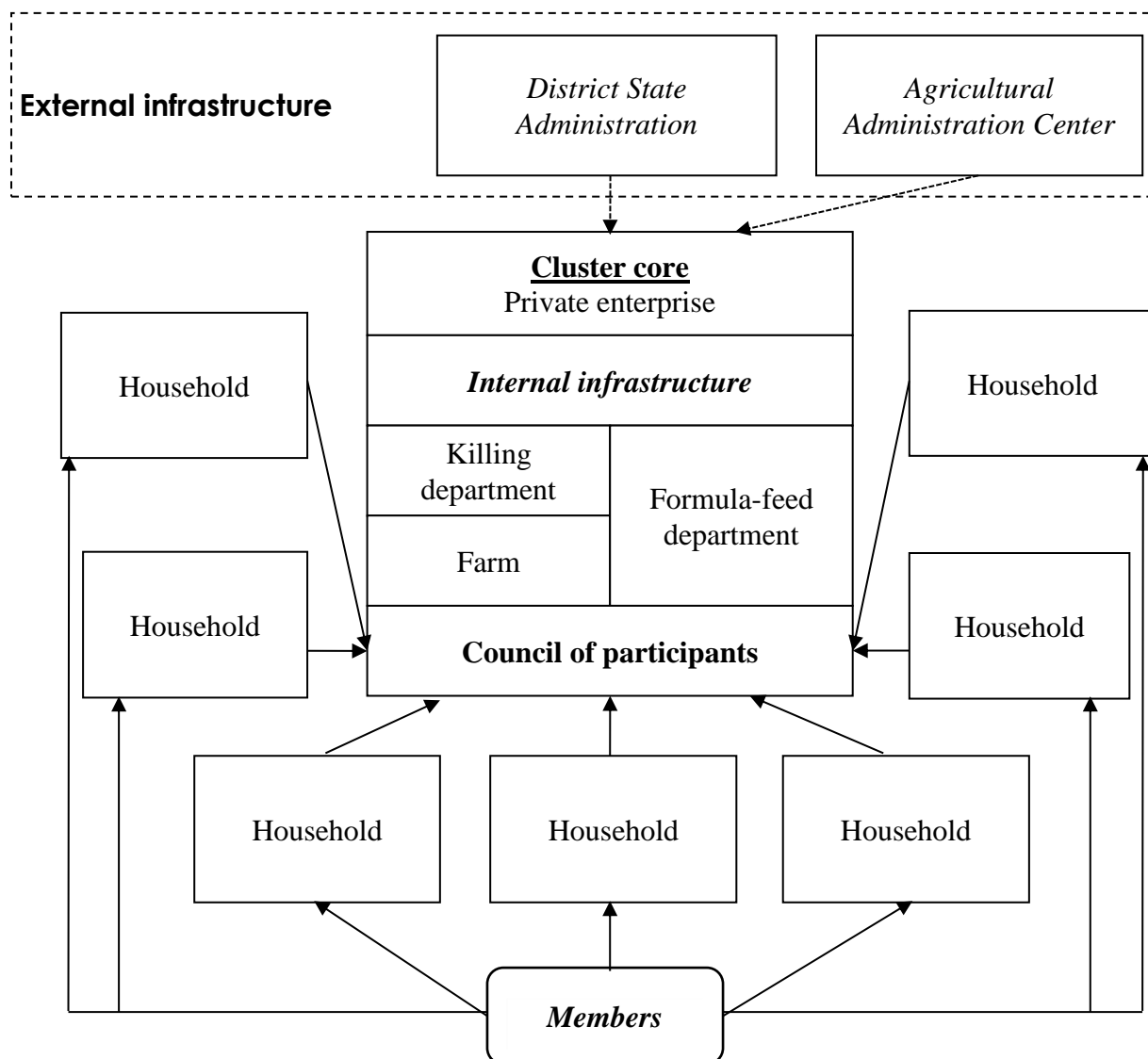


Figure 2. Mini-cluster-based model for households’ integration on the example of animal production in Ukraine

Source: Lupenko, 2014.

Now the main lack and the limiting factor of the agrarian mini-clusters’ development is their informal character, which does not allow to classify and register them as the legal entities. However, in our opinion, cluster associations form is a theoretical platform for understanding of essence and mechanisms of integration, de facto, can exist by enter into contracts for production and supply by separate types of agricultural products.

2.3 The intraeconomic lease model

The model of households' interaction with integrators through the contracts of hiring work can be realized in two ways: by the conclusion contracts for intraeconomic rent and external employment contracts. It should be noted, that the practice of an intraeconomic lease contract was widespread in the USSR in the 1980s. The experience of cattle and bird breeding on a contract basis by households of Tatarbunarskyi district of Kherson region of Ukraine was the best practice at that time and widely lit in the press.

Such rural households were presented by employees of collective farms and state farms, represented as self-supporting units; and a plan target was led up, means and objects of the labor, necessary material resources, etc. were given to them.

Since 2014, the intraeconomic lease contract was legalized in Ukraine via the mechanism of agricultural production cooperatives' creation, but only in the veiled form (Figure 3).

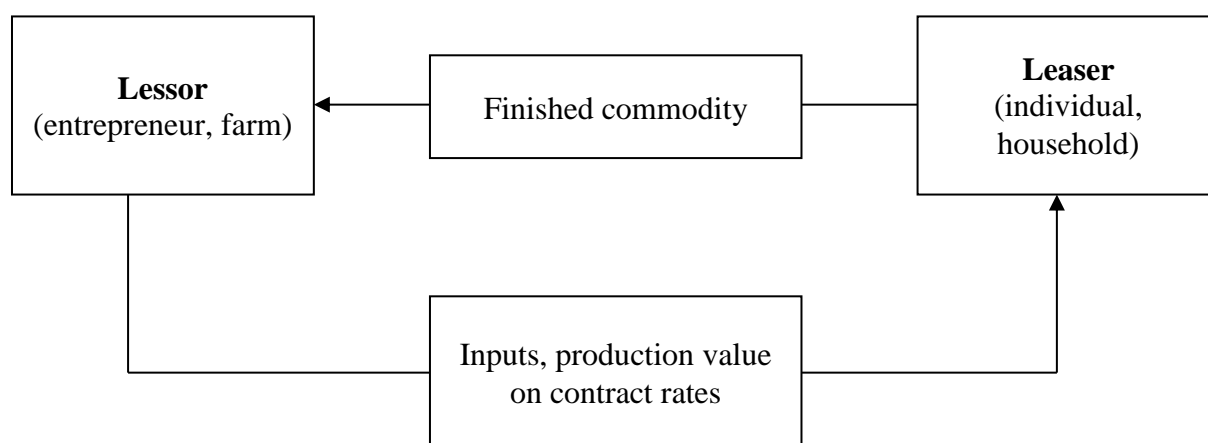


Figure 3. Intraeconomic lease model for households' integration in Ukraine

Source: own processing.

So, according to the model charter of the agricultural production cooperative, approved by the Order of the Ministry of the Agrarian Policy and Food of Ukraine no. 1 of 8 January, 2014, the peasant can transfer farm animals as the cooperative's share and, at the same time, to get them for maintenance and breeding under the contract for the corresponding compensation in the form of cooperative payments back, when entering the cooperative (The Ministry of Agrarian Policy and Food of Ukraine, 2014).

Several other options of registration of the integration relations between households and enterprises of the agrarian sector of the economy are the awarding labor contracts with households' members. Under such contract peasants, de jure, become the workers of the enterprise; de facto, – provide work for production of a certain type of agricultural products. At the same time, the enterprise-integrator undertakes obligations for providing workers with necessary fixed and current assets, guarantees them compensation according to the established standards.

2.4 The production contracting-based model

On the one hand, production contracting is the simplest form of association of production interests of two sectors of the economy from ensuring production of agricultural products to its preparation; on the other hand, it forms strong cooperative and integration production and marketing links in the agrarian sector of the economy (Namnek, 1928). In addition, it means the increasing competitiveness of production and its profitability in the market. According to the IFAD UN, because of involvement of small agricultural producers into the contract quasiintegration relations, they get the qualified support in creation of organizational and personnel potential, the reliable mechanism for disputes settlement, have possibilities for planning and coordination of the activity, mutual participation in execution of expenses and obtaining benefits (European Bank for Reconstructing and Development, 2015). As for contractants, they gain the benefit from guaranteed volumes of agricultural production deliveries by necessary quality that gives them the chance to lower all types of risks, to limit the market power of suppliers and to improve indicators of sale efficiency. Besides, they realize the potential of increase in scales of the production activity without essential capital investments.

However, imperfection of contracts, standard and legal base, market failures, conflict of interests of production contracting participants generate opportunistic behavior and have certain negative consequences. The main risk for households is the probability of hit in enslaving operational dependence on contractors (Wu, Macdonald, 2015). The global experience has cases of the growth of contractants' credit dependence, understating of compensation, loosing of autonomy in adoption of economic decisions, and other displays of opportunism are also recorded from contractors. Thus, the last ones increase the transactional costs related with the conclusion and service of production contracts, expose to bad faith from contractants, which are expressed in inappropriate using or plundering of the material and monetary resources provided to them under the contract, failure of the schedule of deliveries or production with poor quality.

Realization of production contracting in the agrarian sector of the economy procedurally differs depending on the structure of participants of these quasiintegration relations, and form of ownership and managing. Under conditions when contractors and contractants have non-governmental form of ownership, their interaction is reduced to four stages: conclusion of agreement of production contracting, granting to the contractant by necessary for production resources, reception-transmission of finished commodities or goods in process and making control and final payments (Figure 4).

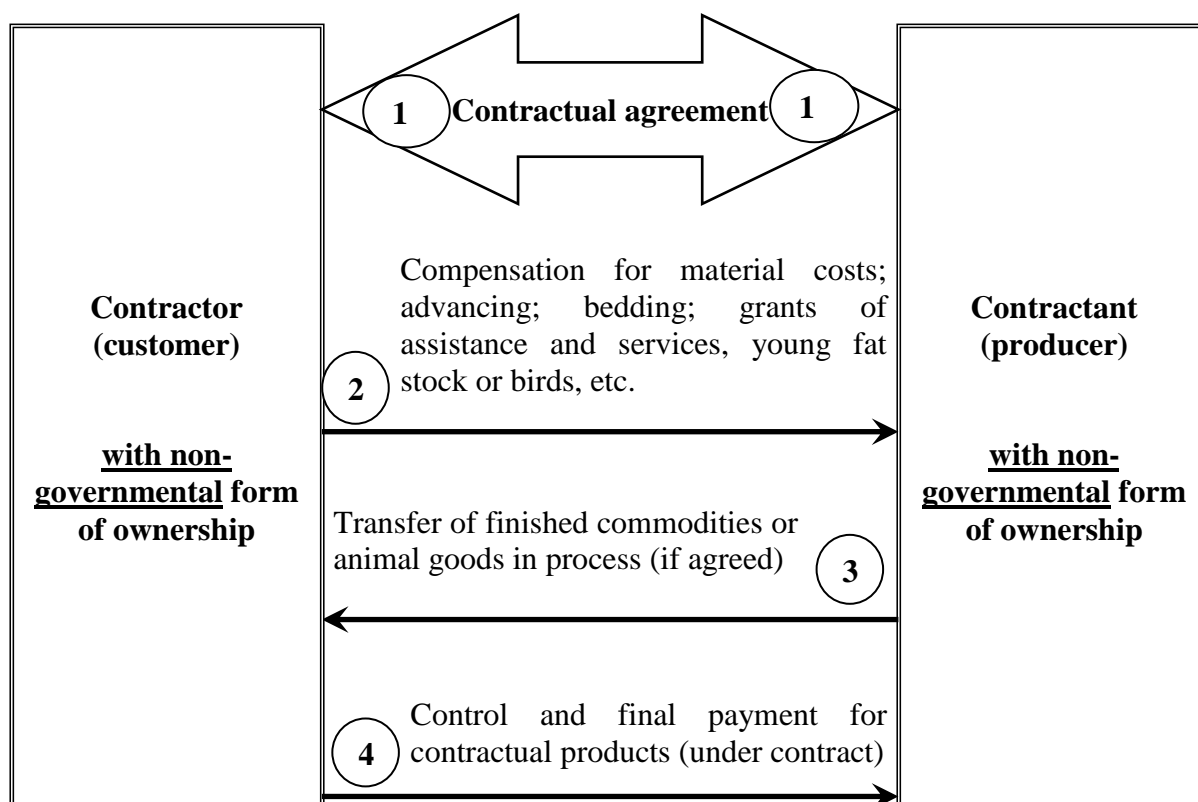


Figure 4. Conceptual model of simple production contraction for economic agents with non-governmental form of ownership in the agrarian sector of the economy of Ukraine

Footnote. Production contracting project milestones are numerated.

Source: own processing.

At the same time, there are two options of quasiintegration interaction, which differ among themselves by extent of integration – the “soft” and the “hard”. At the “soft” form of contract quasiintegration producers of agricultural products get the minimum resource providing and advance support from contractors. They with their own risk obtain the credit on the security of property in the market of credit resources, buy necessary production resources and carry out production in volumes and with the parameters sufficient for realization of production contract terms. Their interaction happens to contractors mostly only in dates of transfer of finished commodities and final payment for contractual products. At the “hard” form of production contracting is carried out completely under management, and at the expense of the customer, who advances production, exercises control of target use of material resources, and the contractant, de facto, loses the market independence and undertakes to observe strictly signed contract.

Realization of arrangements for resource providing of the contractant demands from the contractor their existence at a certain timepoint in necessary volumes. In case of lack of available current assets, the contractor has the right to apply multilateral production contracting model (Figure 5).

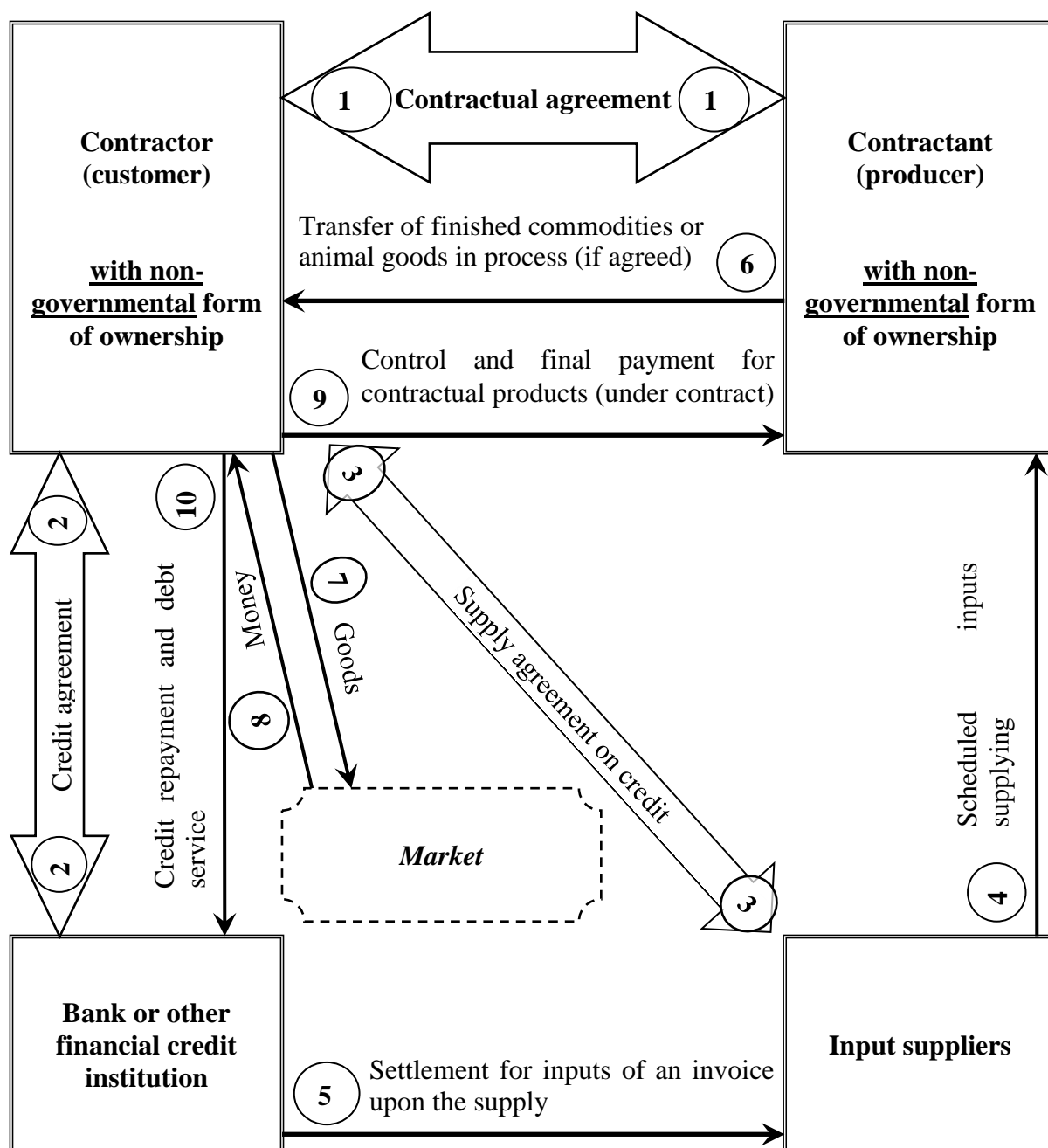


Figure 5. Structural model of multilateral production contraction in the agrarian sector of the economy of Ukraine

Footnote. Production contracting project milestones are numerated.

Source: own processing.

According to this model, after the conclusion of agreement on production contracting, the customer of production concludes business deal with credit institution, finds necessary suppliers of inputs and transfers the relevant documents to the creditor. Having received documentary confirmation of the fact of resources delivery or work performance or services rendering, the creditor pays their cost to the supplier. After receiving finished commodities from the contractant and carrying out final settlements, the contractor realizes it in the market, and then repays debt obligations to the creditor. It should be noted, that

such model of multilateral production contracting has the increased risk level, which completely lies down on the contractor, thereby essentially increasing his costs and the cost of the project of custom-made agricultural products. On the other hand, the contractor receives greater capital maneuverability, which needn't to be accumulated and withdrawn from circulation for the period of production contracting.

For effective development of the integration relations on the basis of households' involvement into the system of value chains creation in the agrarian sector of the economy, we offer to make changes in the article 713 of the Civil Code of Ukraine, having changed its name to "The Agreement of Production Contracting of Agricultural Products", and also to establish, that under the contract of production, contracting of agricultural products, the producer of agricultural production (contractant) undertakes to make the agricultural products defined in the contract in terms, in the volume, in the assortment and the corresponding quality, which are provided by the agreement, and to transfer it to the ownership of the supplier (contractor) or to the recipient determined by it; and the contractor undertakes to assist the contractant in production of the specified products, to accept this production and to pay it for the established prices according to terms of the agreement. With the aim of equal conditions' creation for production contracting realization, we offer to add the Civil Code of Ukraine with the new article 7131 "Significant Conditions of the Production Contracting Agreement of Agricultural Products", where all the significant conditions of the contract are defined.

We have developed the draft of the "Regulations on Production Contracting of Agricultural Products" that consists of eight sections and includes 89 points, which define the general principles of production contracting, the principles of its realization, the requirement to the parties, their rights and a duty, the order of the conclusion and realization of the agreements, the form and pricing mechanisms, the mechanisms of making payment under contracts of production contracting, responsibility of the parties for non-performance of contractual obligations, the order of adjudication of the disputes, etc. At the same time, production contracting of agricultural products has to be based on such principles as legality, formality, responsibility, equality, openness and transparency, ensuring competition, efficiency, controllability, cannot be done to the detriment of environment.

It is necessary to make corresponding changes to the statistical reporting forms for providing the appropriate competent authorities with reliable information, and realization of scientific maintenance and expeditious monitoring on the development condition of production contracting of agricultural products.

Conclusion

During agrarian reform in Ukraine, the priority was given to the development of small and average-sized economic agents based on a private property and a priority of a personal interest over public. Destruction of the integration relations in the agrarian sector of the economy negatively affected, first, on rural households, which are at survival border. The international practice convincingly demonstrates that the sustainable development of all spheres of the agrarian and industrial complex and the village is possibly only based on strong intereconomic links in which all told agricultural producers are involved.

Among the five main models of households' involvement into the integration relations in the agrarian sector of the economy, the most effective and perspective for using is the production contracting-based model, which harmoniously fits for processes of liberalization, globalization and agrarian transformations, allows uniting of interests of all producers indiscriminately.

References

1. EUROPEAN BANK FOR RECONSTRUCTING AND DEVELOPMENT, 2015. Contract farming and its collaboration with agrarian stallholders: the drown lessons from operational experience (in Russian: Kontraktatsiia selkhozproduktcii i uchastie v ee proizvodstve melkikh selkhozproizvoditelei: uroki, izvlechennye iz opyta raboty), (Downloaded: May 2017). Available at: <http://www.ebrd.com/documents/comms-and-bis/pdf-law-in-transition-2015-russian-contract-farming.pdf>.
2. GUTOROV, A. O., YERMOLENKO, O. A., 2015. Models of production contracting in the agrarian sector of the economy (in Ukrainian: Modeli vyrobnychoi kontraktatsii v ahrarnomu sektori ekonomiky Ukrainy). In: *Modelling of Regional Economics*, Vol. 2, No. 26, pp. 53-62. ISSN 2313-027X.
3. GUTOROV, A. O., 2016(a). Organizational and economic bases of households' involvement into the integration relations (in Ukrainian: Orhanizatsiino-ekonomichni zasady zaluchennia hospodarstv naselennia do intehratsiinykh vidnosyn). In: *Nobel Economic Herald*, Vol. 1, No. 9, pp. 102-113. ISSN 2312-7600.
4. GUTOROV, A. O., 2016(b). Theoretical and methodological bases for contacting in the agrarian sector of the economy (in Ukrainian: Teoretyko-motodolohichni zasady kontraktatsii v ahrarnomu sektori ekonomiky). In: *Ahrosvit*, Vol. 15-16, pp. 14-21. ISSN 2306-6792.
5. HADZALO, Ya. M., ZHUK, V. M., 2015. *Science behind of development of the agrarian entrepreneurship and rural areas based on the rural-retaining model* (in Ukrainian: *Naukovi osnovy rozvytku ahrarnoho pidpriemnytstva ta silskykh terytorij za selozberihaiuchoiu modelliu*). Kyiv: NNC "Institute of agrarian economics".

6. KHORUNZHYY, M. J., ZABOLOTNIJ, V. M., 2005. Justification of entering rural households into the integrated production (in Ukrainian: Obgruntuvannia dotsilnosti vkhodzhennia osobystykh selianskykh hospodarstv v intehrovane vyrobnytstvo). In: *Ekonomika APK*, Vol. 2, pp. 29-34. ISSN 2221-1055.
7. KROPYVKO, M. F., et al. 2013. *Agrarian clusters in questions-and-answers* (in Ukrainian: *Ahrarni klasteri u zapytanniakh ta vidpovidiakh*). Kyiv: NNC "Institute of agrarian economics".
8. LUPENKO, Yu. O., et al. 2014. *Improvement of agriculture's organization and management in the decentralization of authority conditions* (in Ukrainian: *Udoskonalennia orhanizatsii ta upravlinnia silskym hospodarstvom v umovakh detsentralizatsii vlady*). Kyiv: NNC "Institute of agrarian economics".
9. NAMNEK, T. G., 1928. Contracting as a cooperative problem (in Russian: Kontraktatsiia, kak kooperativnaia problema). In: *Planovoe khoziaistvo* (Planned economy), Vol. 2, pp. 155-163.
10. NESTERCHUK, Yu. O., 2011. Integration processes in strategy of rural households' investment security (in Ukrainian: Intehratsijni protsesy u stratehii investytsijnoho zabezpechennia osobystykh selianskykh hospodarstv). In: *Zbirnyk naukovykh prats Vinnytskoho natsionalnoho ahrarnoho universytetu, seriia "Ekonomichni nauky"* (Collection of scientific papers of the Vinnytsia state agrarian university, on Economic sciences), Vol. 3, No 2(53), pp. 147-152. ISSN 2306-4242.
11. PITIULYCH, M. M., 2014. Features of integration and co-operation of economies of population of mountain territories (in Ukrainian: Osoblyvosti intehratsii ta kooperatsii hospodarstv naselennia hirskykh terytorij). In: *Sotsialno-ekonomichni problemy suchasnoho periodu Ukrainy* (Social-economic problems of modern period of Ukraine), Vol 3, pp. 418-424. ISSN 2071-4653.
12. PROKOPENKO, O. M., 2016. *Agriculture of Ukraine: Statistical Yearbook for 2015*. Kyiv: State Statistics Service of Ukraine. ISBN 978-966-8459-94-8.
13. THE MINISTRY OF AGRARIAN POLICY AND FOOD OF UKRAINE, 2014. The Order of Ministry "On approval the model statute for agricultural production cooperative", (Accessed: May 2017). Available at: <http://minagro.gov.ua/ministry?nid=11261>.
14. THE VERKHOVNA RADA OF UKRAINE, 2003. The Law of Ukraine "On cooperation", (Accessed: May 2017). Available at: <http://zakon.rada.gov.ua/laws/show/1087-15>.
15. WU, S. Y., MACDONALD, J. M., 2015. Economics of Agricultural Contract Grower Protection Legislation. In: *Choices*, Vol. 30, Issue 3, pp. 1-6.

About the author

Dr. Andrii O. HUTOROV, PhD, Senior Scientific Researcher
Department of Sectoral and Territorial Administration
National Scientific Centre “Institute of Agrarian Economics” of the National
Academy of Agrarian Sciences of Ukraine
Kyiv, Heroiv Oborony, 10, 03127, Ukraine
e-mail: Gutorov.Andrew@gmail.com

ACTIVATION OF INNOVATIVE ENTREPRENEURSHIP – A STEP TOWARDS DEVELOPMENT STARTUPS

Olena KURCHENKO

Abstract

A startup company - is a new form of innovative entrepreneurship. Start-ups reinvigorate the business community, increase competition for innovation, introduce new products, services and business models, create new markets and offer innovative solutions to emerging problems. Governments of the leading countries, recognizing that startups (from the English "start-up"-start) is the engine of innovation development of economy, on the one hand, create basic conditions; on the other – implement initiatives aimed on supporting these companies. The purpose of this article is to study the experience of supporting startups in OECD countries, especially in relation to the creation of innovative programs in entrepreneurship, with the future prospect of the introduction of similar programs in Ukrainian universities. For this (based on the author's questionnaire) a survey was conducted of Ukrainian universities during October-November 2016 about the availability of courses of innovative entrepreneurship. The results of this survey will be the analytical basis for decision-making on creation of a special curriculum of innovative entrepreneurship in the natural and technical universities with the aim of developing a startup ecosystem in Ukraine.

Keywords:

startup, training, innovative companies, universities, OECD, Ukraine

Introduction

Until 2005 in Ukraine there weren't actually startups and all took place around outsourcing (transfer a part of tasks or processes of company through subcontracting schemes) and research and development (R&D). Despite this, the number of Ukrainian startups in recent years is growing rapidly. According to the various estimates, the Ukrainian startup ecosystem has about 3 thousand startups, mainly on the early stages. Also, according to the one of the world's most prestigious accelerators Techstars - in Kiev there are more venture capital funds than in Copenhagen, Oslo, Warsaw and Vienna.

Now Ukraine has one of the fastest growing startup communities in Europe. Among these internationally-oriented startups are: BPMOnline, DepositPhotos, Grammarly, InvisibleCRM, Jooble, Lookser, MacPaw, Paymentwall, Readdle, StarwindSoftware. Some of them, for example, Grammarly, Paymentwall are global companies, while their main offices of research and development (R&D) are located in Ukraine.

Also according to the international research company Akholi Research, the implementation of Ukraine's export potential in the ICT sector fully may result in an increase of GDP, from 183 billion to 325 billion, even in the absence of export growth in other sectors (Akholi, 2016).

However, until now, Ukraine has no instruments of state support of innovative startups. The experience of many countries with a developed startup ecosystem

have shown that national and local governments, in partnership with the private sector, can play a major role in setting the right environment for innovative startups. The uniqueness of Ukraine is that innovative startups jointly with the venture business and other participants of industry exist independently, without government support.

O. Kurchenko studied the successful experience of programs to support startups in the former socialist countries: Poland, Slovenia and the Czech Republic (Olena Kurchenko, 2016). O. Kurchenko and O. Kardash have created a survey program of Ukrainian universities on availability of courses in innovation management in technical and natural institutes (Olena Kurchenko, Oleksandr Kardash, 2016).

Results

Foreign experience of supporting innovative startups

As shows the experience of OECD countries, the success of innovative start-up companies is inseparably, linked with the state support (not only financial), but also marketing, legal, infrastructural, and educational, in form of advice for managers, special courses on entrepreneurship.

Marketing support consists of grants to startups for participation in foreign fairs and organizing trade fairs, where new businesses can present their products (e.g. in Germany).

Legal and management consultation are carried out to compensate lack of related business information from potential entrepreneurs to enhance the success of entrepreneurial activities. Such services usually cover information on legal issues (including questions about organizational forms of enterprises, contracts, labor law, etc); basic information on entrepreneurship and management; practical tips relating to registration of enterprise, way of writing a business plan, as well as information about where the company may obtain public support and find potential business partners. The following services are provided to entrepreneurs, public organizations, private institutions free or at low cost, and are paid by the government (e.g. in Lithuania, Germany, UK, USA).

Infrastructure support includes such things as office space, telecommunication services, technical equipment and office services, which may be provided free of charge or at below-market rates. The infrastructure is usually in specialized incubators or start-up centers funded with public money. Start-up centers - are buildings in which new businesses can set up their premises. Most such centers are open to startups in all lines of business. Some also specializes in particular industries (like «businesses of the future»), such as nanotechnology, biotechnology, creative industries or environmental technology (e.g. Germany, Ireland).

However, special attention is given to educational support - courses of innovative entrepreneurship, that can takes several forms, ranging from short

seminars (teaching of (basic) business knowledge)) to half-year study courses; can include business games at schools and universities, or it might be an intrinsic part of the curricula at secondary schools and universities. Increasingly, chairs for entrepreneurship are being set up at universities to facilitate entrepreneurship education. The goals of entrepreneurship training are, on the one hand, to reduce gaps in business-related knowledge and, on the other, to increase the general awareness of entrepreneurship. Students should come to see entrepreneurship as an alternative to salaried employment, and they should learn to think and act entrepreneurially.

Training for entrepreneurs is provided to ensure training to entrepreneurs, people with entrepreneurial attitudes, but who lack the necessary business know-how (management, accounting, legal matters) – such programmes should either cooperate with other activities, that also promote entrepreneurship, or they should be run by organizations that have contacts to a wide variety of potential firm founders. In practice, such measures are often run by local chambers of commerce or local business development authorities (e.g. in Portugal, Slovenia, Austria, UK, Belgium, Latvia, the Netherlands).

Training courses in entrepreneurship should be integrated into the standard curricula of higher-education study programmes in order to reach all students. Most importantly, these teaching programmes should employ teachers who possess entrepreneurial attitudes and skills themselves. It is also helpful to involve older entrepreneurs who can provide their real-world view of starting a business (OECD, 2016).

There are no such initiatives to create courses of innovative entrepreneurship in Ukrainian universities. But, the beginning of any measures requires a preliminary assessment of presence of innovative entrepreneurship courses of technical and natural Sciences in universities.

As showed the conclusions of research, now in Ukraine for the budgetary funds, prepare specialists in the field of Economics and Law annually in three times more, than experts in natural and physical and mathematical Sciences, able to generate new knowledge, produce, adapt and use advanced technology, providing innovative development of the economy. This, in turn, will contribute to the creation of a new generation of engineers, mechanics, communications technicians, designers, energy experts, i.e., experts in STEM-education, which will be at the forefront of the development of the national startup-ecosystem, founding new high-tech companies.

That's why, authors created a statistical form of monitoring about the existence and content of courses of innovative entrepreneurship in Ukrainian universities (Olena Kurchenko, Oleksandr Kardash, 2016). The content of statistical form in the original edition is presented below.

The structure of program of monitoring of innovative startups

Section 1 is concerned on questions about availability and content of courses of technological entrepreneurship.

1.1. Specify, branches of knowledge and total number of students in university on 01.09.2016 including all forms of learning (if there is no, put "0" or "-")? (table 1).

1.2. In which the above branches of knowledge (except Business and Management, Economics, Accounting), is taught students the *innovation management course*, which gives practical skills to students on how to transform ideas into real products, services and processes; to assess the potential of innovative ideas as the basis for innovative projects; create business plan for new innovative enterprises; to build a successful enterprise strategy and implement it; to find funding sources (including learning the basics of venture investing), and to build an effective team?

2.3. If «Yes», please specify: numbers of directions, in accordance with question 1.1., and number of hours for each direction (for example: 1. - 100 hours; 2. - 50 hours; 21. - 10 hours, etc.).

Table 1: Total number of students in University

№	Branch of knowledge	Total number of students
1.	Accounting	
2.	Agriculture	
3.	Architecture	
4.	Aviation	
5.	Biomedical	
6.	Business and management	
7.	Communications	
8.	Computing and Information Technology	
9.	Economics	
10.	Engineering	
11.	Environmental Science/Development	
12.	Forestry	
13.	Geology	
14.	Health Services and Wellness	
15.	Mathematics	
16.	Medical, Dental, Nursing	
17.	Mining Engineering	
18.	Pharmacy	
19.	Physical Science	
20.	Technology	
21.	Veterinary Science	

Source: developed by authors

2.4. In which the above branches of knowledge (except Business and Management, Economics, Accounting) is taught students other courses, which provided skills on how to transform ideas into real products, services and processes; to assess the potential of innovative ideas as the basis for innovative projects; create business plan for new innovative enterprises; to build a successful enterprise strategy and implement it; to find funding sources (including learning the basics of venture investing) and to build an effective team?

2.5. If «Yes», please specify: numbers of directions, in accordance with question 1.1.; the names of courses and the number of hours for each; (example: 7. - 75 hour. – Communications; 20. - 100 hours. – Technology, etc.).

2.6. What, disciplines, on your opinion, should be introduced to help students and graduates to create their own innovative companies?

- Innovative management.
- Startup (start-up own business).
- Business management.
- Another variant.

Section 2 includes questions of encouraging students/graduates of the University's own startup companies as well as participation in meetings with representatives of businesses and venture capital organizations.

2.1. Are there any contests on best projects of innovative startups for students, graduates and scientists in the University?

2.2. Is there a necessity for beginning any contests on best projects of innovative startups in University and provide financial support in form of grants, vouchers?

2.3. Is there a necessity for creation a state support program of innovative startups for the development of innovative entrepreneurship in Ukraine and improving the interaction between universities, research institutes and industry?

2.4. On what stage, in your opinion, state program is the most important?

- During the study (for students).
- After graduation (for graduates).

2.5. Does occur meetings with representatives of companies from private sector, owners of venture capital, and innovative startups in University and invite students/graduates of technical specialties to attend them?

So, a survey of Ukrainian universities will be critical to the adoption of effective legislative and normative-legal documents, science-based management decisions related to the strengthening of entrepreneurial thinking and entrepreneurship, particularly for technical disciplines, as well as implementation of the state program of support of innovative startups.

Obtained results

The survey was conducted on availability of courses of innovative entrepreneurship of technical and natural Sciences in Ukrainian universities.

With the purpose of providing training innovation managers and experts able to conduct a professional feasibility study and implementation of innovative projects, as well as experts of natural, physical and mathematical Sciences, able to generate new knowledge; produce, adapt and use advanced technology, providing innovative development of economy, the Ministry of Education and Science of Ukraine (MES), jointly with «Institute for Economics and forecasting» NAS of Ukraine, initiated a survey of higher educational institutions of Ukraine for preliminary assessment on availability and content of courses of innovation management.

140 universities took a part in this survey. TOP 10 classical universities of Ukraine (including the Kiev National University after T. Shevchenko, Kyiv Mohyla Academy), as well as the TOP 10 technical universities (incl. National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute»), agricultural, architectural/artistic and economic took a part in survey.

87% of Ukrainian universities *don't teach the course «Innovation management»*, which provided skills on how to transform ideas into real products, services and processes; to assess the potential of innovative ideas as the basis for innovative projects; create business plan for new innovative enterprises; to build a successful enterprise strategy and implement it; to find funding sources (including learning the basics of venture investing) and to build an effective team (in addition to economic institutions). It shows that there is a need for introduction of technical and natural institutes of course «Innovation management» in Ukraine.

The course «Innovation management» is present only in **13% of Ukrainian universities**: technical – 6; teaching - 3; agrarian - 3; economic - 1; architecture - 1 and classic – 2 universities.

52% of universities (except directioni «management and administration» and «marketing») have **other courses**, which provided skills on how to transform ideas into real products, services and processes; to assess the potential of innovative ideas as the basis for innovative projects; create business plan for new innovative enterprises; to build a successful enterprise strategy and implement it; to find funding sources (including learning the basics of venture investing) and to build an effective team. Among them: economic – 9; agricultural – 12; technical – 21; teaching 8; architectural and classic 5 – 18%.

According to 54% of respondents it is necessary to introduce a discipline «Startup» (starting own business) should be introduced to help students and graduates to create their own innovative companies, «Innovation management» (their share was 26%), «Management of company» (their share was 4%) and about 16% think that it be better to create another discipline (Fig. 1).

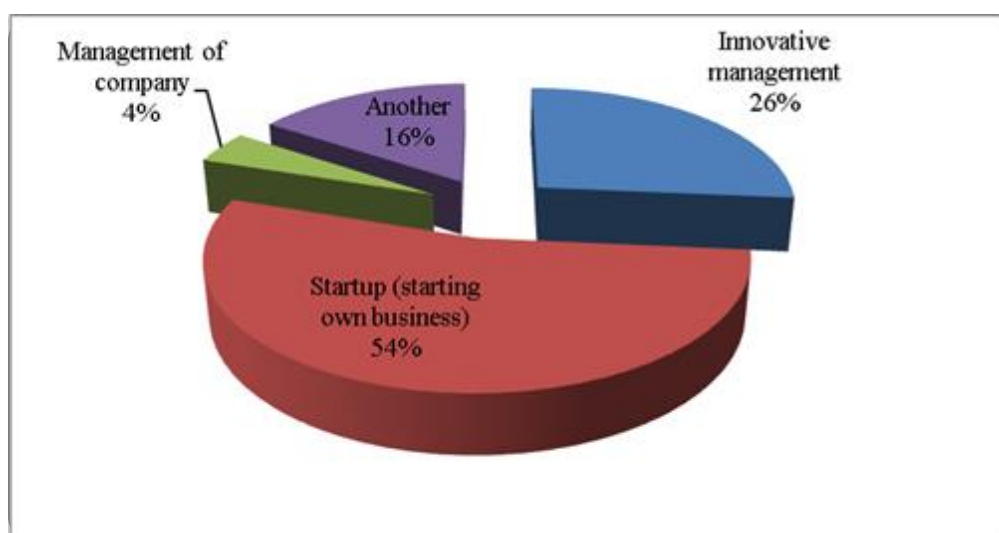


Figure 1: The structure of disciplines that helps students and graduates to start-up innovative companies, %

Source: developed by author

59% of universities reported that they conduct contests on best projects on innovative startups for students, graduates and scientists in the university, whereas almost half of the respondents (their share - 41%) don't organize such contests.

It is also noteworthy that **all respondents (100%)** agreed that in Ukraine is lacking any contests on best projects of innovative startups in University and provide financial support in form of grants, vouchers.

100% universities agreed about necessity of creation of the state program of support for innovative startups, with the aim of development of innovative entrepreneurship in Ukraine and improving the interaction between universities, research institutes and industry. Most suitable, according to respondents, is the creation of the state program of support of innovative startups during the study (for students) – 75%, after graduation from university (for graduates) – 18,6%, other (6,4 percent) (Fig. 2).

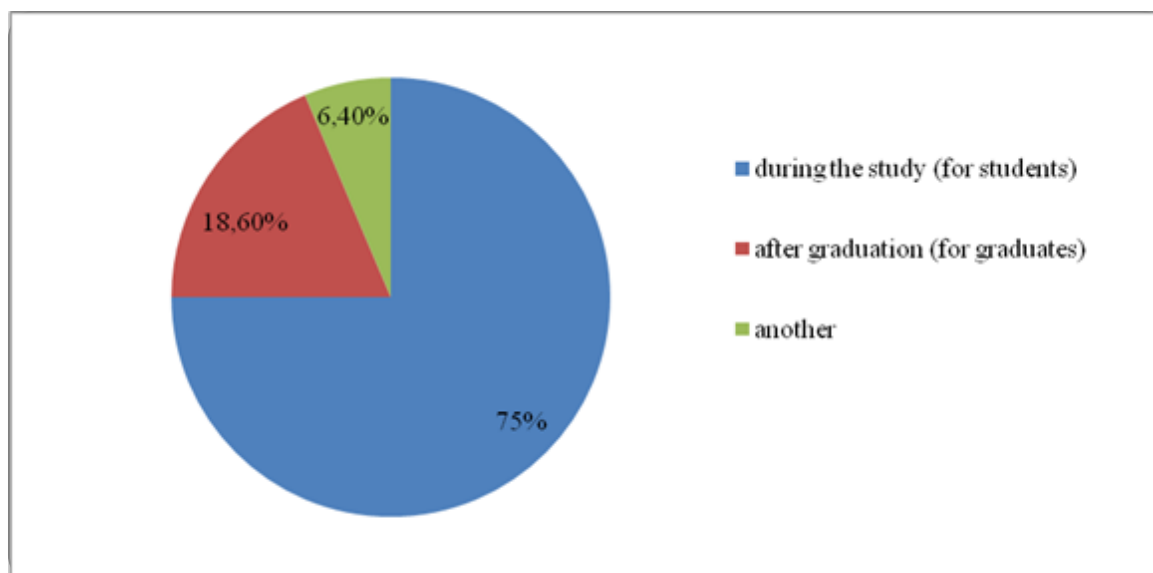


Figure 2: The stages on which state program of innovative startups is the most important, %

Source: developed by author

Almost 91% of respondents visit meetings with representatives of companies from private sector, owners of venture capital, and innovative startups in University and invite students/graduates of technical specialties to attend them. Only 9% (13 Universities) don't visit such meetings.

Conclusion

As shows the results of Ukrainian universities survey, the focus of Ukraine on innovative development should begin with introduction of educational support for potential entrepreneurs, students:

1) from introduction of the course «Innovation management» in science and technical universities, which will create opportunities for the emergence of a cohort of new generation of engineers, mechanics, communications technicians, designers, energy experts, who will create new innovative companies;

2) on the organization of the discipline «Startup», which will help students and graduates to create their own innovative companies;

3) inclusion in the curriculum of the discipline «Entrepreneurship»;

4) conducting of free master classes (training event (along with seminars, courses, workshops), where participants acquire knowledge on their own) for potential entrepreneurs with successful owners of startup companies;

The introduction of the above measures will be an important step that will lead not only to increasing of graduates who will create new companies, but also and increasing of innovative start-up companies and the development of a startup ecosystem in general.

References

1. OECD (2012), Innovation Policy: Start-up promotion instruments in OECD countries and their application in developing countries, p. 12, 16.
2. Olena Kurchenko, Oleksandr Kardash (2016), Training of Innovative Entrepreneurship – a Key to Creation of Startups // *Economie și Sociologie*. - №3, p. 51-53.
3. Olena Kurchenko (2016), The experience of support of innovative start-ups in Poland, Slovenia and Czechia: lessons for Ukraine // *Economic and Environmental Studies*. - Vol.16. - №4 (40), p. 781-791.
4. Akholi (2016), Technology Market Assessment: Ukraine 2016 – available at: <http://www.akholi.com/wp-content/uploads/2016/02/Ukraine-Technology-Exports-2016.pdf>

About the author

Olena Kurchenko

post-graduate student

Institute for Economics and Forecasting, NAS of Ukraine

Department of innovation policy, economics and organization of high technology

Panasa Myrnogo 26

Kyiv 01011

Ukraine

e-mail: molunat69@gmail.com

EVALUATING THE FINANCIAL PERFORMANCE OF ENTERPRISES IN THE SPACE USING MATHEMATICAL AND STATISTICAL METHODS OF MULTI-CRITERIA EVALUATION

Jozef LUKÁČ

Abstract

The paper deals with the analysis of the financial situation of enterprises. We will use enterprise performance indicators to measure enterprise performance. On selected financial indicators we will apply methods of multi-criteria assessment in the space. In particular, we will deal with the weighted sum order, the scoring method, the standard variable method, and the distance method from the fictitious object. The goal of the paper is to determine the order of business for each method on the basis of analyzes and subsequently to determine the overall order of enterprises, to summarize the results and to point out the advantages and disadvantages of the individual methods. In particular, the paper presents a case study on the assessment of small and medium-sized enterprises in Slovakia, which for the first time prepared financial statements in accordance with international financial reporting standards on 31th of December 2014.

Keywords:

enterprise evaluation, multi-criteria methods, profitability, debt, financial performance,

Introduction

The market economy is based on two fundamental phenomena, supply and demand. Supply and demand dependence is unquestionable. Another major economic phenomenon is competition, which is the "driving force" of every market sector. Competition shifts the quality of products and services forward. There is no business that ignores it. However, the problem often occurs when selecting comparators, evaluation methods, as not all companies are well aware that classical methods of analysis are in that competition's competitive struggle a weak means of achieving a "market value" top position. In this paper, we will look at companies' ratings based on the financial performance of individual businesses. We will use multi-criteria methods for determining business order.

1 Multi-Criteria Methods

According to Vojtková (2007), the multi-criteria assessment method belongs to a group of multidimensional statistical methods used for the examination of multidimensional statistical sets. Their characteristics include the fact that they are able to synthesize several different signs - indicators into one integral indicator (the resulting characteristic) expressed by a specific number. We include, for example, the weighted sum of order, the scoring method, the standard variable method, and the distance method from the fictitious object.

These methods are suitable for comparing different objects and allow them to be organized based on acquired values. It is also possible to analyze the competitiveness of products when selecting a suitable set of competitiveness

indicators. The common basis for all methods of multi-criteria evaluation is the starting matrix of objects (statistical units) and their characteristics (variables). The determination of the methods is based on basic characteristics such as arithmetic mean, variation coefficient, variance and standard deviation.

Here is also an example of research that uses the same methodology. According to Wei Gu (2017), it is necessary to develop an effective methodology and improve existing credit assessment methods to help companies providing Internet funding to make effective and symmetric funding decisions. To effectively evaluate SME performance, the Bank proposes an online credit rating system that includes financial, credit, corporate development, and financial status on the Internet. This model is based on a multi-criteria assessment methodology.

Similar methods have been used to analyze the different types of fuel used in US shipping. It tried to find out which types of fuel and engines are making the lowest marine pollution. (Maimoun, 2016)

The basis of the multi-criteria evaluation method is the starting matrix of the objects and their characteristics (variables, variable statistical characters). Enterprise rating includes the following steps:

- 1 Selection of objects included in the analyzed file while attaining comparability conditions.
- 2 Selection of properties (indicators) characterizing the object.
- 3 Determining the character of all indicators:
 - Growth indicators of type +1
 - Declining indicators of type -1
- 4 Choice of the multi-criteria evaluation method, i. the method of selecting the integral pointer.

The aim of all methods of multi-criteria evaluation is the transformation and synthesis of the values of the various indicators into the one - integral indicator (the resulting characteristic). This pointer expresses the complex level of individual objects in the examined file.

2 Aim and analyzed data

The goal of the paper is to determine the order of business based on 4 ratio financial ratios. To determine the order, we will use the methods of multi-criteria evaluation of 30 small and medium-sized enterprises from Slovakia. The data from which the calculated ratios are derived are the financial statements as at 31th of December 2014. The financial statements are prepared in accordance with International Financial Reporting Standards. The following table shows the financial indicators we used to use our analysis. These are the indicators: Leverage ratio, return on assets (ROA), return on equity (ROE) and return on sales (ROS).

In our case, follow these steps:

- 1 Selection of enterprises to be analyzed. Small and medium-sized enterprises with IAS / IFRS compiled financial statements.

- 2 Calculation of financial indicators according to financial statements. (Leverage ratio, ROA, ROE, ROS)
- 3 Determining the character of the indicators:
 - Growth indicators of type +1 (ROA, ROE, ROS)
 - Declining indicators of type –1 (Leverage ratio)
- 4 Choice of methods: the weighted sum order, the scoring method, the standard variable method, and the distance method from the fictitious object.

The following table shows 30 objects. For each object, the selected attribute is assigned - Leverage ratio, ROA, ROE, ROS.

Table 1: Selected financial indicators

<i>Enterprises</i>	<i>Leverage ratio</i>	<i>ROA</i>	<i>ROE</i>	<i>ROS</i>
1	0,306	-0,825	0,101	-0,092
2	0,333	-0,425	0,133	-0,020
3	0,403	0,486	0,220	0,128
4	0,433	4,704	0,632	0,085
5	0,292	-0,109	0,159	3,552
6	0,253	-0,427	0,040	-4,009
7	0,281	-0,380	0,137	-0,020
8	0,223	0,203	0,198	-0,019
9	0,471	-0,302	0,151	-0,019
10	-0,016	-0,435	0,130	-0,032
11	0,263	-0,431	0,133	0,009
12	0,264	-0,428	0,133	-0,021
13	0,046	0,233	0,334	-0,018
14	0,105	0,279	0,265	-0,016
15	0,518	-0,382	0,135	0,011
16	0,455	-0,418	0,133	-0,016
17	-0,393	-0,211	0,115	0,300
18	0,015	-0,785	-0,024	-0,055
19	-0,021	-1,303	-5,259	-0,329
20	0,300	0,102	0,232	0,103
21	0,056	0,445	0,364	0,150
22	0,262	0,477	0,215	0,047
23	-5,135	0,467	0,190	0,121
24	-0,270	0,175	0,056	0,094
25	-0,502	-0,306	0,223	-0,018
26	0,172	-0,387	0,147	-0,018
27	0,057	-0,166	0,202	0,005
28	0,437	0,853	0,208	0,127
29	0,268	-0,361	0,136	-0,014
30	0,125	-0,344	0,158	-0,014

Source: own processing

In the following sections we will discuss the individual methods that we will apply to a selected sample of enterprises.

2.1 Method of weighted sum order

The simplest, quickest method of ranking evaluates us the position of the company according to the ranking scale given by the number of business entities. The indicator of productivity, efficiency, ie the indicator in which we try to maximize them, is the order determined from 1, 2 ..., n , according to the number of enterprises, so that the smallest value is obtained by the entrepreneur with the greatest value. For instance, in reader inputs, t. j. an indicator of difficulty that we are trying to minimize is assigned the smallest value to the business entity with the lowest value achieved.

Values are assigned from 1, 2, ..., m . The resulting ranking is obtained by adding together the values of individual indicators for a particular business entity. We then calculate the integral pointer as a simple sum of order (if we do not use weighting coefficients) or a weighted average using weighting coefficients. The disadvantage of the method is that it can not determine how much the enterprise is, ($n-5$) better or worse than enterprise ($n-6$).

Table 2: Application of the method

Enterprise	Lverage ratio	ROA	ROE	ROS	Mean	Sum	Rank
1	8	29	26	28	22,75	91	21.
2	7	23	21	24	18,75	75	19.
3	6	3	7	4	5	20	2.
4	5	1	1	9	4	16	1.
5	10	12	13	1	9	36	5.
6	16	26	28	30	25	100	23.
7	11	19	17	23	17,5	70	16.
8	17	9	11	22	14,75	59	12.
9	2	15	15	21	13,25	53	9.
10	25	27	24	26	25,5	102	24.
11	14	25	23	12	18,5	74	18.
12	13	24	22	25	21	84	20.
13	23	8	3	20	13,5	54	10.
14	20	7	4	16	11,75	47	7.
15	1	20	19	11	12,75	51	8.
16	3	22	50	17	23	92	22.
17	28	14	25	2	17,25	69	15.
18	24	28	29	27	27	108	25.
19	26	30	30	29	28,75	115	26.
20	9	11	5	7	8	32	3.
21	22	6	2	3	8,25	33	4.
22	15	4	8	10	9,25	37	6.
23	30	5	12	6	13,25	53	9.
24	27	10	27	8	18	72	17.
25	29	16	6	18	17,25	69	15.
26	18	21	16	19	18,5	74	18.
27	21	13	10	13	14,25	57	11.
28	4	2	9	5	5	20	2.
29	12	18	18	15	15,75	63	13.
30	19	17	14	14	16	64	14.

Source: own processing

2.2 Scoring method

In the scoring method, we choose the best value for each business subject from each of the monitored indicators, t. j. for Productivity Indicators, the maximum value for the difficulty indicators, this value is the selected object for which a maximum of 100 points are allocated. From the value of this given pointer, other points are derived from these relationships by determining linear interpolation. The worst object has 0 points. The resulting order is determined in a simple way, the number of points from the largest to the smallest quantifies the object from the best to the worst. The integer indicator d_{2i} is then calculated as the weighted average of the points for the individual pointers as follows:

- when the maximizing marker is $b_{ij} = x_{ij} / x_{jmax}$
- when minimizing maker is $b_{ij} = x_{imin} / x_{ij}$

x_{ij} - the value of i the pointer in the j firm

x_{jmax} - the highest value of the j indicator rated by 100 points

x_{imin} - the lowest value of the j indicator is 100 points

b_{ij} - point assessment of i enterprise for j indicator

Table 3: Application of the method

<i>Enterprise</i>	<i>Leverage ratio</i>	<i>ROA</i>	<i>ROE</i>	<i>ROS</i>	<i>Mean</i>	<i>Sum</i>	<i>Rank</i>
1	0,042	-0,077	-0,063	-0,020	-0,029	-0,117	26.
2	0,048	0,001	0,001	0,000	0,013	0,050	22.
3	0,075	0,179	0,175	0,042	0,117	0,470	7.
4	0,098	1,000	1,000	0,030	0,532	2,128	1.
5	0,040	0,063	0,054	1,000	0,289	1,156	2.
6	0,034	0,001	-0,185	-1,116	-0,317	-1,266	29.
7	0,038	0,010	0,009	0,000	0,014	0,057	21.
8	0,031	0,123	0,131	0,001	0,072	0,286	12.
9	0,166	0,025	0,037	0,001	0,057	0,229	13.
10	0,017	-0,001	-0,006	-0,003	0,002	0,007	25.
11	0,035	0,000	0,000	0,009	0,011	0,044	23.
12	0,035	0,001	0,001	0,000	0,009	0,037	24.
13	0,019	0,129	0,403	0,001	0,138	0,553	5.
14	0,022	0,138	0,264	0,002	0,106	0,426	8.
15	1,000	0,010	0,005	0,009	0,256	1,024	3.
16	0,128	0,002	0,001	0,002	0,033	0,134	16.
17	0,010	0,043	-0,035	0,090	0,027	0,108	17.
18	0,018	-0,069	-0,314	-0,009	-0,093	-0,374	28.
19	0,017	-0,170	-10,806	-0,086	-2,761	-11,045	27.
20	0,041	0,104	0,199	0,035	0,095	0,379	10.
21	0,020	0,171	0,464	0,048	0,176	0,703	4.
22	0,035	0,177	0,165	0,019	0,099	0,397	9.
23	0,002	0,175	0,115	0,040	0,083	0,332	11.
24	0,012	0,118	-0,154	0,032	0,002	0,008	30.
25	0,009	0,024	0,180	0,001	0,054	0,214	15.
26	0,026	0,009	0,029	0,001	0,016	0,064	19.
27	0,020	0,052	0,139	0,008	0,055	0,218	14.
28	0,103	0,250	0,150	0,042	0,136	0,544	6.
29	0,036	0,014	0,007	0,002	0,015	0,059	20.
30	0,023	0,017	0,051	0,002	0,023	0,093	18.

Source: own processing

2.3 Standard Variable Method

With this method, the original values of each selected pointer are converted to a standard, theoretical form, quantified by a dimensionless number. The standardized method first calculates the simple arithmetic mean (x_j), the standard deviation (s_{xj}) for each pointer separately. From the original values, the arithmetic mean is subtracted and their difference is divided by the standard deviation, so reading the individual q_{ij} is the obtained variable. For indicators of material intensity (for exapmle indicators to minimize, on the contrary), the arithmetic mean is the deduced value and consequently the difference divided by the standard deviation. The normalized value is divided by the number of normalized values given in the NH diameter column. The resulting order is then determined by an evaluation criterion from (0-100), with the best object being the highest achievable value. The resulting order can be determined not only by unit weights but also by differential weights.

In the standardized method, we transform the original values of the x_{ij} to the form of the standard variable u_{ij} as follows:

- when the maximizing marker is $u_{ij} = (x_{ij} - x_{mean j}) / s_{xj}$
- when minimizing maker is $u_{ij} = (x_{mean j} - x_{ij}) / s_{xj}$

x_{ij} - the value of i the pointer in the j firm

$x_{mean j}$ - the arithmetic mean calculated from the values of the j indicator

s_{ij} - the standard deviation calculated from the values of the j indicator

Table 4: Mean and Standard derivation

	<i>Leverage ratio</i>	<i>ROA</i>	<i>ROE</i>	<i>ROS</i>
Mean	0,911086667	0,101503143	-0,635461767	0,034688667
Standard derivation	1,727503512	0,235524811	4,786239697	1,596493665

Source: own processing

The integer d_{3i} is then calculated as the weighted average of the normalized values for the individual indices in the enterprise as follows:

$$d_{ij} = \sqrt{\frac{1}{n} \sum (x_{ij} - \bar{x}_i)^2}$$

Table 5: Application of the method

<i>Enterprise</i>	<i>Leverage ratio</i>	<i>ROA</i>	<i>ROE</i>	<i>ROS</i>	<i>Mean</i>	<i>Sum</i>	<i>Rank</i>
1	0,306	-0,825	0,101	-0,092	-0,127	-0,418	25.
2	0,333	-0,425	0,133	-0,020	0,005	0,042	16.
3	0,403	0,486	0,220	0,128	0,309	1,109	3.
4	0,433	4,704	0,632	0,085	1,464	5,769	1.
5	0,292	-0,109	0,159	3,552	0,974	0,343	10.
6	0,253	-0,427	0,040	-4,009	-1,036	-0,134	23.
7	0,281	-0,380	0,137	-0,020	0,004	0,038	17.
8	0,223	0,203	0,198	-0,019	0,151	0,624	8.
9	0,471	-0,302	0,151	-0,019	0,075	0,320	11.
10	-0,016	-0,435	0,130	-0,032	-0,088	-0,321	24.
11	0,263	-0,431	0,133	0,009	-0,007	-0,035	19.
12	0,264	-0,428	0,133	-0,021	-0,013	-0,031	18.
13	0,046	0,233	0,334	-0,018	0,149	0,613	9.
14	0,105	0,279	0,265	-0,016	0,158	0,648	6.
15	0,518	-0,382	0,135	0,011	0,070	0,271	12.
16	0,455	-0,418	0,133	-0,016	0,039	0,170	13.
17	-0,393	-0,211	0,115	0,300	-0,047	-0,489	26.
18	0,015	-0,785	-0,024	-0,055	-0,212	-0,794	28.
19	-0,021	-1,303	-5,259	-0,329	-1,728	-6,583	30.
20	0,300	0,102	0,232	0,103	0,184	0,635	7.
21	0,056	0,445	0,364	0,150	0,254	0,866	5.
22	0,262	0,477	0,215	0,047	0,250	0,955	4.
23	-5,135	0,467	0,190	0,121	-1,089	-4,478	29.
24	-0,270	0,175	0,056	0,094	0,014	-0,039	20.
25	-0,502	-0,306	0,223	-0,018	-0,151	-0,585	27.
26	0,172	-0,387	0,147	-0,018	-0,022	-0,068	22.
27	0,057	-0,166	0,202	0,005	0,025	0,094	14.
28	0,437	0,853	0,208	0,127	0,406	1,497	2.
29	0,268	-0,361	0,136	-0,014	0,007	0,043	15.
30	0,125	-0,344	0,158	-0,014	-0,019	-0,061	21.

Source: own processing

2.4 Distance method from fictional object

A fictitious, ideal, model, model business entity represents an abstract model that achieves ideal values among all variables (productiveness or difficulty) among the whole set of values of available objects. The indicator is captured in a standard shape, and the Euclidean distances of each object from the abstract model are then calculated. The resulting order of objects is determined by the distance from the fictitious model. The enterprise that is most distant from the fictitious business is the worst, and vice versa, the business that is the least distant from the fictitious object is the best.

Similarly to the standard variable method, we calculate the arithmetic averages and the standard deviations for the individual variables and convert them to a standardized shape:

$$d_{ij} = \sqrt{\frac{1}{n} \sum (x_{ij} - u_{i0})^2}$$

when $u_{i0} = \frac{x_{i0} - x_i}{s_{xi}}$, $x_{i0} = x_{i \max}$ or $x_{i \min}$

Table 6: Application of the method

Enterprise	Leverage ratio	ROA	ROE	ROS	Sum of Euclidean distances	Rank
1	0,109	1,027	0,124	0,686	1,945	21.
2	0,095	0,936	0,091	0,652	1,774	13.
3	0,060	0,731	0,001	0,582	1,374	3.
4	0,045	0,221	0,436	0,602	1,304	2.
5	0,115	0,865	0,063	1,042	2,085	26.
6	0,135	0,937	0,189	2,543	3,803	28.
7	0,121	0,926	0,087	0,652	1,785	14.
8	0,150	0,795	0,022	0,651	1,617	6.
9	0,026	0,909	0,072	0,651	1,657	8.
10	0,269	0,938	0,094	0,658	1,959	23.
11	0,130	0,937	0,091	0,638	1,797	16.
12	0,130	0,937	0,091	0,652	1,809	18.
13	0,238	0,788	0,121	0,651	1,798	17.
14	0,209	0,778	0,048	0,650	1,684	9.
15	0,003	0,927	0,089	0,637	1,655	7.
16	0,034	0,935	0,090	0,650	1,709	11.
17	0,457	0,888	0,110	0,500	1,954	22.
18	0,254	1,018	0,256	0,668	2,196	27.
19	0,272	1,134	5,788	0,798	7,991	30.
20	0,112	0,817	0,014	0,593	1,536	5.
21	0,233	0,740	0,154	0,571	1,698	10.
22	0,130	0,733	0,004	0,620	1,487	4.
23	2,818	0,735	0,030	0,585	4,168	29.
24	0,396	0,801	0,172	0,597	1,966	24.
25	0,511	0,909	0,004	0,651	2,074	25.
26	0,175	0,928	0,076	0,651	1,830	20.
27	0,232	0,878	0,018	0,640	1,767	12.
28	0,043	0,648	0,012	0,582	1,285	1.
29	0,128	0,922	0,087	0,649	1,786	15.
30	0,199	0,918	0,064	0,649	1,830	19.

Source: own processing

In the following table, we see a tangle of enterprise rankings based on the different methods used.

Table 7: Compare the results of the order of methods

<i>Enterprise</i>	<i>Method of weighted sum order</i>	<i>Scoring Method</i>	<i>Standard Variable Method</i>	<i>Distance method from fictional object</i>
1	21	26.	25.	21.
2	19.	22.	16.	13.
3	2.	7.	3.	3.
4	1.	1.	1.	2.
5	5.	2.	10.	26.
6	23.	29.	23.	28.
7	16.	21.	17.	14.
8	12.	12.	8.	6.
9	9.	13.	11.	8.
10	24.	25.	24.	23.
11	18.	23.	19.	16.
12	20.	24.	18.	18.
13	10.	5.	9.	17.
14	7.	8.	6.	9.
15	8.	3.	12.	7.
16	22.	16.	13.	11.
17	15.	17.	26.	22.
18	25.	28.	28.	27.
19	26.	27.	30.	30.
20	3.	10.	7.	5.
21	4.	4.	5.	10.
22	6.	9.	4.	4.
23	9.	11.	29.	29.
24	17.	30.	20.	24.
25	15.	15.	27.	25.
26	18.	19.	22.	20.
27	11.	14.	14.	12.
28	2.	6.	2.	1.
29	13.	20.	15.	15.
30	14.	18.	21.	19.

Source: own processing

The table shows colorful companies that have reached approximately the same order according to the various methods used. We can say that the methods used achieve approximately the same results and determine the same ranking for some companies.

Conclusion

Finally, we can note that, as in our case, we need to compare all the results of the multi-criteria enterprise valuation methods. The literature states that consistency in several methods can be judged with an average order or by a Spearman's correlation coefficient. An essential part of enterprise evaluation is the definition of the key rating factors that helped businesses in the first places to locate them. In our case, this was a ROA indicator, which helped businesses get a better starting position. However, it is important for an enterprise to be able to prepare an appropriate strategy for such an analysis in such an analysis.

Acknowledgement

Tento príspevok je čiastkovým výstupom Projektu mladých vedeckých pracovníkov a doktorandov, číslo I-17-105-00, 2017: Hodnotenie ekonomickej a finančnej výkonnosti malých a stredných podnikov v krajinách V4.

References

1. MAMOUN, M. 2016. Multi-level multi-criteria analysis of alternative fuels for waste collection vehicles in the United States. In *Science of The Total Environment*. Volume 550, 15 April 2016, Pages 349-361. ISSN 0048-9697.
2. VOJTKOVÁ, M. 2007. *Viacrozmerné štatistické metódy s aplikáciami*. Bratislava: Iura Edition, spol. s r. o., 2007. 261 s. ISBN 978-80-8078-152-1.
3. WEI, G. 2017. A Unified Framework for Credit Evaluation for Internet Finance Companies: Multi-Criteria Analysis Through AHP and DEA. In *International Journal of Information Technology & Decision Making*. Volume 16, Issue 03, IBSN 0219-6220.
4. Účtovné závierky podnikov

About the author

Ing. Jozef Lukáč
Department of Corporate Financial Management
Faculty of Business Economics with seat in Košice
University of Economics in Bratislava
Tajovského 13, 041 30 Košice
e-mail: jozef.lukac@student.euke.sk

IMPACT OF GLOBALIZATION ON DEVELOPMENT OF TRADE AND NEW TRENDS IN RETAIL

Marta PAVLIKOVÁ – Lukáš ZENDULKA

Abstract

Globalization as a major global trend affects many aspects of economic life and drives innovation. It has an important position in the overall business process and in the current retail development. Technological progress and globalization have created a dynamically developing system of business activity among the various actors involved in the process of trade. Due to globalization, internationalization, technology progress and the change of consumer preferences, the structure of retail trade, as well as consumer preferences and interests and many related aspects of business activity are gradually changing. The aim of the paper is to explain the impact of globalization on trade on the basis of theoretical backgrounds in the context of current development trends and to define new retail trends that will shape strategies developed and further development of retail.

Keywords:

globalization, deglobalization, trade, retail, European market, developmental tendencies

Introduction

Globalization as an important process of contemporary economic life and the world itself is often manifested in the form of multinationals with great economic strength and dominance. In the last few decades, world economic development has been affected by internationalization and globalization in all areas without exception. Trade as one of the most important sectors is also subject to this process. The creation of a single European market increases the speed and effects of this phenomenon even more. Can globalization lead to the removal of the cultural identity of individual markets and countries? Is it currently a truly robust process or has it already reached its peak and is emerging in the form of new global trends? The impact of globalization is different in individual sectors of economic activity, and its research is currently attributed a high attention. Despite the fact that globalization is not a new phenomenon, its effects affect the functioning and activities of individual markets and are associated with many new expectations. The undisputed claim is that the world is changing under the influence of globalization and many major changes are just beginning to be explored in full.

1 The nature and importance of globalization

The start of the process of globalization is the subject of long-term debates. While some experts are convinced that globalization is the result of the present time, others are of the opinion that we can identify the beginnings of it in ancient history. In literature, however, we encounter the most frequently the developmental phases of globalization according to Robertson (1992), who emphasizes the main influencing factors in history and does not identify the

underlying factors and mechanisms of globalization. On that basis, he defines the following five stages:

- stage 1 (1400-1750) – the beginning of the growth of national communities and the disappearing importance of the medieval transnational system; the beginning of modern geography can be considered the origin of globalization;
- stage 2 (1750-1875) – a move towards the idea of homogeneity, the unitary state, the development of the concepts of formalized international relations, and the more concrete concept of mankind; a sharp increase in legal conventions dealing with international and transnational regulation and communication. In addition, industrialization has led to major reconstruction of production and transport processes;
- stage 3 (1875-1925) – a phase in which the developmental tendencies of previous periods deepened; the integration of many non-European countries into the international community; the sharp rise in global forms of communication, the development of a global form of competition (Olympic Games, Nobel Prize), World Time implementation, and World War I;
- stage 4 (1925-1969) – this phase is marked by disputes and wars, World War II, the formation of the United Nations, the formation of Third World countries, the establishment of the principles of national independence;
- stage 5 (1969-present) – the manifestation of the capitalist economic system as a certain form of globalization, increase of the number of global institutions and movements, the development of global communication; society faces multiculturalism, and civil rights become a global problem.

Robertson did not define an end of the final stage because of the vague developments at the moment. According to some authors (Sengupta, 2001), new markets, new authors, new organizations, and faster and cheaper means of communication are characteristic for the current stage and form of globalization developed in the 19th and 20th centuries. German professor Backhaus (1999) also defines the sixth follow-up phase, for which deregulation, privatization and consolidation of the global media system are significant. However, it should be noted that the process of globalization did not take place at the same pace and at the same time in all areas of social life. It was Theodor Levitt, in 1985, who used this term in connection with the world economy for the first time in history. It is difficult to define precise periods of time or processes influencing globalization, and there is no uniform definition of this term as well. This definition needs to build on the areas it concerns, whether it is the demise of national borders, or it leads to global cultural unification, or is present in the form of new trends in a certain space.

Globalization is a major phenomenon in the world today, affecting the economy, financial markets, legislation of countries, social systems, the media, business strategies and consumer behavior. Clarification of the concept depends on its perception as a process or as a result of certain phenomena, as well as on the representatives defining the essence of globalization. The definitions of globalization reflect the perceptions of the issue of the authors coming from different areas of social life worldwide (political scientists, economists, sociologists, psychologists, traders, academics and others). This is thus a multidisciplinary concept that can be defined in several ways.

From an economic point of view, the globalization can be defined as *"the internationalization of production, a significant increase in capital mobility and multinational corporations, as well as deepening and stronger economic dependence. The economic manifestations of globalization include spatial reorganization of production, cross-border merging of industries, the expansion of the same consumer goods to distant countries and massive population transfers"* (Mittelman, 1996).

Many economists consider globalization to be the natural development of the world economy. Given the scale of the economic aspect of globalization, it is also necessary to distinguish between the process of internationalization and globalization. Although these are generally interrelated and influencing processes, their distinction can be defined according to Sýkora (2000) as follows: *"Internationalization is an international commodity trade created by production organized within national economies. In the case of globalization, however, state borders no longer play the role of the barriers within which the production process is closed."* This leads to the emergence of multinational companies using the advantages of locating individual parts of the company in different parts of the world, and in this context, the production of goods and services is organized on a global level. It follows from these definitions that globalization can also be defined in terms of geographic dimension. Friedman (2000) defines globalization as an *"international system based on the relentless integration of markets, states and technologies"*. On the basis of this, we can say that it is also a *"process of world diminishing, shortening the distance, increasing simplicity, through which one on one side of the world can communicate with one another on the other side"* (Larsson, 2001).

Within the political dimension of globalization, there is a growing trend of multilateralism leading towards the formation of transnational state administration and the emergence of significant transnational institutions. From the point of view of the cultural and social dimension, globalization brings about the transfer of thoughts and values worldwide in a way that extends and strengthens individual relationships. According to James (2010), this aspect of globalization refers to *"the formation of common standards and knowledge with which people associate their individual and collective cultural identity. This phenomenon brings about a growing interconnection between different*

populations and cultures." Consequently, it is possible to define globalization in terms of marketing as a necessary response to the emergence of international markets characterized by the unification of the consumers' lifestyle, the formation of comparable patterns of consumption, the sale of the same products through similar promotional activities to people belonging to different cultures. All the above-mentioned phenomena of globalization in different areas are also affected by the development of information and communication technologies and the political dimension. In general, however, we can say that: *"Globalization, which has become the most important development phenomenon of the world economy in the 20th century, presenting other developmental challenges, is nothing but another developmental stage of the capitalist way of management, and therefore cannot naturally be immune to its short-term laws, which it implies by its character"* (Baláž, 2010).

Based on these approaches, we can define different types of globalization as economic, cultural, political, institutional globalization, or globalization of production. In terms of its understanding as a process or spatial phenomenon, we can identify process and spatial globalization. In all cases, however, it is essentially about the manifestations of interconnectedness, dependence and unification. In terms of specific segments affected by globalization, we can identify the following types in individual economic areas (Kunešová, 2001):

- globalization of financial flows – international movement of capital and investment,
- globalization of energy flows – cross-border movement of oil, natural gas and electricity and ensuring global energy security,
- globalization of information flows – the development of information and communication technologies, the interconnectedness of media,
- *globalization of trade* – movement of goods and services beyond the borders of countries,
- globalization of the labor market – the mobility of human capital.

Ultimately, we can define globalization as a strengthening of economic, cultural, political and social relations between countries. However, individual countries, regions or industries have specific developments and certain attributes, cultural characteristics and regulatory measures that shape their status and influence the extent of the impact of globalization. For this reason, the effects of this process cannot be generalized and need to be addressed in specific areas.

1.1 Positive and negative aspects of the process of globalization of trade

International trade represents the exchange of goods and services across national borders. Although it is not a new issue, its importance is growing mainly due to the emerging infrastructure, globalization, the emergence of transnational companies and many other related processes.

Although globalization is, according to most authors, an irreversible and natural phenomenon, we can identify several causes and consequences of it. The causes for the process are the constantly evolving information and communication technologies, the liberalization of the various barriers to entry to the foreign markets, the saturation of domestic markets, the reduction of risk, attractive opportunities in new markets, the international policy of certain non-governmental organizations having impact on the people worldwide, and the issues of poverty, ethical and ecological environment.

The steady expressions of globalization can be described as the consequences of this phenomenon, such as economic growth, promoting competitive environment in individual markets, influencing employment or raising living standards. The following figure shows that world trade has been contributing significantly to GDP growth and, according to World Bank data, reached almost 45% in 2015. Based on this, we can say that trade also has impact on different economic indicators.



Figure 1: Share of world trade on global GDP in 2005-2015 (in %)

Source: World Bank, 2017.

Other expressions of the globalization of trade include unifying interests and tastes of customers, unifying needs, shaping the global consumer, increasing the market share of successful businesses, and creating their global image. These accompanying phenomena can be positively and negatively allocated within various areas of economic life. Given the interconnectedness of individual countries, sectors and activities, we can therefore apply its positive and negative traits to trade as well. Table 1 shows the most common positives of globalization for business, customers and countries.

Table 1: Positive aspects of globalization for businesses, customers, and countries

Positives for businesses	Positives for customers	Positives for countries
free trade	global availability of products using new technologies	economic growth
growth of world trade	wider range of goods and services	foreign investments
liberalization, possibility of internationalization	quality of products	fostering competitive environment
simpler expansion	decrease of prices	mobility of human capital and knowledge
more efficient supply chains	satisfying the same needs in different markets	increase of standard of living
unification of consumer needs		increase of purchasing power
savings in various processes		

Source: Own processing according to Brooks, Weatherston, Wilkinson, 2004.

On the other hand, however, the manifestations of globalization can also be observed in the form of negative aspects. Expansion of trade and the removal of national borders, the formation of a global market and the mobility of capital lead to the interdependence of states on the system. Such interconnectedness of countries and dependence of economies may, in particular at the time of global economic imbalances, lead to global crises (financial, economic or social), global violence and criminality. These expressions represent negative impacts on both the global and national economies. Another concomitant phenomenon of the globalization of trade is the cross-border purchases of selected goods, which often have a negative impact on the domestic economy. Given that globalization affects and influences all related business activities and processes, these accompanying phenomena are not final. Individual manifestations of globalization are mutually intertwined and influenced and, for their full assessment, they need to be addressed in a particular sector and space.

1.2 Deglobalization and related new global trends

The process of globalization affects all areas of economic and social life. Gradual liberalization, fast-growing markets, new information and communication technologies and other related trends have also led to an acceleration of global trade. Globalization has thus become a key instrument of the global strategy for business companies. However, the current economic situation points to the emergence of certain developmental tendencies, new global trends, the existence of which can be explained by basic economic indicators. The relatively steady trend of the past thirty years, during which global trade grew faster than the global economy, has changed sharply in recent years. While trade growth has traditionally been greater than world GDP growth, world trade growth has now fallen dramatically and is lower than GDP growth. As shown in Figure 2,

this marked change has occurred especially since 2012, and we can see the phenomenon as the current end of the process of strengthening of the globalization of trade.

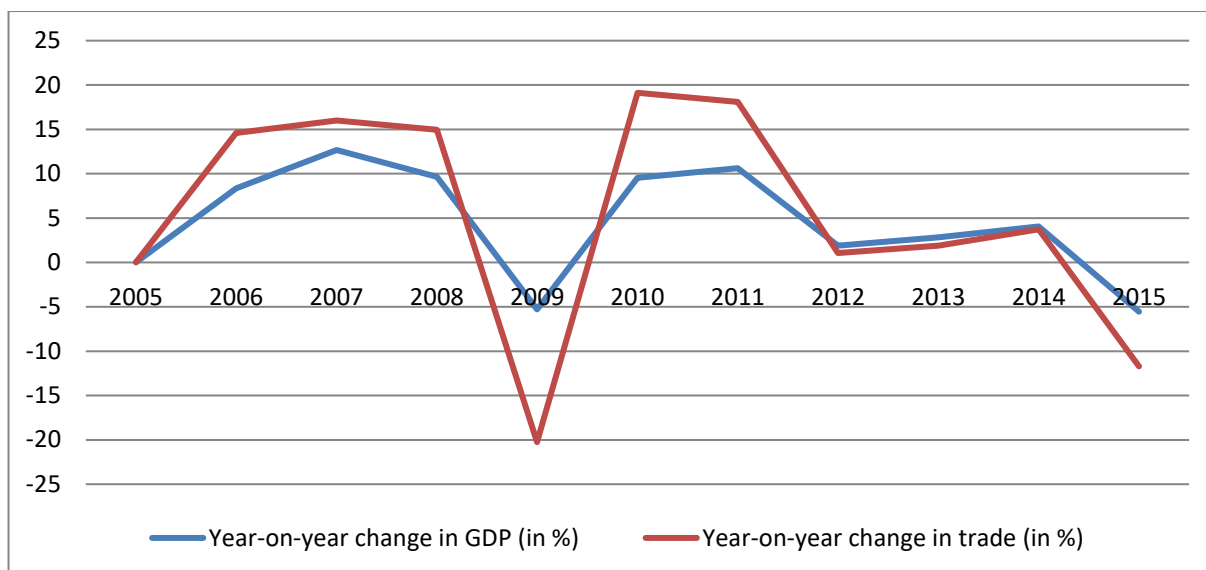


Figure 2: Year-on-year change in global GDP and trade in 2005 – 2015 (in %)

Source: World Bank, 2017.

Based on this phenomenon, we can say that there is a new world trend – deglobalization, where, according to the Czech economist Milan Zelený (2014), goods and services are produced and consumed in the given territory. Bello (2002) also describes this phenomenon as a *"process of reducing dependence and integration between certain world units, usually national states"*. However, it cannot be said that this is a completely new trend, as it has been reflected in some form in the past and used to describe the *"period of history when trade and investment between countries is declining"* (Lambin, 2014).

According to Zelený (2014), several new trends are currently being demonstrated in relation to these facts, including metamorphosis as *"moving from globalization to relocalization, i.e. to the local and regional concept of economic activity"*. This fact, however, does not only concern trade but all economic areas. Relocalization basically means that *"instead of global logistics of physical products and objects, local relocalized production is supported by digital information flows"* (Zelený, 2014).

Many authors consider these terms synonymous or use only selected terms to explain these ongoing phenomena. Other authors also explain regionalization as a process pointing to the arrangement of a less interconnected world with a larger regional focus. According to Hurrell (1995), regionalization can be understood as the growth of social integration within a region, including indirect processes of social and economic interaction between units, such as national states. In terms of trade and marketing, we rather call this phenomenon glocalization, derived from the terms globalization and localization, referring to *"business neologism for*

specific adaptation of a product or service to each site or culture in which it is marketed" (Lambin, 2014).

Taking into account the rise of these new trends, total or partial decentralization in the management of individual business processes, strategies and activities also occurs in the trade sector. Progress in information and communication technologies has also brought about significant changes in the way of perceiving consumers and dealing with their own identity. All of these developmental trends are the result of the globalization process. In connection with their prediction, however, it is questionable whether future technologies, inventions and developments in consumer behavior will strengthen the trend of decreasing global trade and its local focus. Among the accompanying phenomena of these processes, we can also include disintegration where the intermediaries in the production and distribution chain are eliminated and the interconnection between producer and consumer is emerging, as well as growing self-service, customization of products and services to individual requirements, and interconnection of tasks and knowledge of employees (Zelený, 2014). The orientation of these developmental trends will depend on the policies and level of the protectionist measures adopted by various countries.

1.3 Trends in global retail management

Due to globalization, the retail itself is also significantly changing. As a consequence of globalization processes, the retail companies are exposed to constant turbulent changes and stronger competitive pressures, to which they must respond flexibly and adapt their business strategies to new needs if they are to succeed in the global market. A number of retailers have expanded their business abroad to bring their offer to new consumers. The impact of globalization on retail also changes product offer, consumer preferences and consumer behavior at the place and time of purchases, the form of retail sales, the number of sales units and the size of the sales area. However, the above-mentioned enlargement of the consumer base, and hence the acquisition of international consumer, thanks to the use of technologies in the retail process, can be considered as a significant consequence of the contribution of globalization.

On the other hand, we can observe in the retail sector also the deglobalization caused by the global slowdown of economic growth in key markets and by current events in many areas, which is directed against globalization towards the direction of protectionism. One of its manifestations is the change in consumer preferences demanding local products from regional suppliers. The stronger globalization consequences and, above all, a considerable over-supply of goods over demand have reinforced the position of the consumer in retail trade, increasing its bargaining power. Despite the fact that trade has been adapted from the outset to the needs and preferences of consumers, the availability of a wide range of offers and the stronger competitive pressure on retailers to provide consumers with the

highest quality products and services have caused an enormous struggle for customer, and strong trading position of the latter.

Managers of retail companies have to take into account the current trends in the retail management when creating and managing their managerial and marketing programs on domestic and foreign markets. Given that there are developmental trends that are gradually emerging in all markets, we can say that these are global retail trends. By continually analyzing and applying the given development trends in their management, retail companies can achieve a competitive advantage. The selected development aspects that companies should focus on now include the following (Berman, Evans, 2013):

1. **demonstration of differentiation** – to differentiate from competition, it is not sufficient for retail companies to do all the activities correctly. In the future, those retailers will be successful, who differentiate themselves by factors other than prices (for example, through value creation and customer experiences);
2. **retail investments in services** – within the planning and management of their activities, retail companies must take account of the fact that consumer spending on goods as a share of GDP is decreasing while spending on services increases;
3. **integration of multichannel retail** – the most successful retailers are most likely to focus on enhancing their brand experience for individual customer segments through multiple distribution channels;
4. **focus on the experience** – one way to address the problem of inadequate differentiation is to improve customer experience at the point of sale. This includes, in addition to the customer service, many other features (layout, signage, lighting, service, speed and simplicity of transactions, technology used, etc.);
5. **retailers as World Marketers** – some of the most successful retail companies are currently hiring top-level marketing workers from manufacturing companies. Their goal is to build a strong brand identity and gain a competitive advantage over suppliers through private brands.

According to the Central European branch of the Global Association for Marketing at Retail (POPAI), we can supplement the following trends affecting retail management (Jesenský, 2014):

1. **omnichannel customers** – shoppers using mobile devices and computers will be more and more frequent. More and more management and marketing retail activities will focus on an effective and innovative combination of three key areas – retail, communications technology and experience;
2. **investing in digital in-store technologies** – these are mainly investments in the Internet and mobile technologies. The term "outernet" has been introduced worldwide for this approach. Retailers on some foreign

markets (Walmart, Target) have, for example, applications that are activated at the beginning of a purchase and help customers navigate, use benefits or make a purchase decision. In this area, it is necessary to identify which tools will be the most appropriate, most relevant and convenient for the customers;

3. **personalized product** – mass customization to customer requirements. Shoppers want to feel extraordinary and one of the effective ways to get closer to their ideas is to use tailored product lines, customer colors, flavors, etc. This approach can improve the overall shopping experience and customer experience.

In connection with the need to adapt to individual foreign trends, Vend (2015), the company active in retail services, defines as additional trend the need for localization that will become more and more important. According to them, those retailers will succeed who adapt their retail units, their type and range of products to meet the requirements of local customers. The management of retail companies must take account of these trends and then use them in the design of individual strategies.

Conclusion

We cannot convincingly claim that the process of globalization is on the decline, but it is likely that in some areas of life and business it has reached its utmost in its fundamentals. However, it will continue to manifest itself in the form of new trends, which we can call global, given that they will, despite some differences, apply globally. For these reasons, it is important to deal with the issues of trade, retail and its management under the conditions of current developmental tendencies.

Current retail is influenced by factors of environment, in particular by demographic changes, the use of technology, the increasing value of time, demanding and informed customers, or a healthy lifestyle. Retailers must offer customers a certain competitive advantage. They need to sensitively listen to customers' demands and needs, and tailor their assortment composition and pricing. At present, consumers' ability to recognize local food and the willingness to buy home-made products that the consumer perceives positively in terms of their safety, especially in the range of foods, is increasing. An important factor is the time, and the retailers respond by introduction of small and medium-sized stores and concepts that save time for customers and are close to them. Within the framework of technological change, multichannel (use of different sales channels) and omnichannel marketing (the ability to leverage the customer at any given moment through the channels used) are developing, thereby increasing retailing efficiency and responding to current trends. Given the easy-to-duplicate competitive advantage and the increasing demand and dominance of the customer, there is a need for innovation in the retail environment. Retailers must also take

into account in their strategies the fact that consumers are increasingly focusing on value-creating factors.

It should be emphasized that the processes of changes in retail trade have reached varying degrees of intensity and pace in individual countries, especially in countries with different structural models of retail development. In some countries or regions, retail has maintained its traditional character with a relatively large share of small outlets, despite the presence of multinational retailers, while in other countries market is dominated in particular by these subjects.

References

1. BACKHAUS, N. 1999. *Zugänge zur Globalisierung – Konzepte, Prozesse, Visionen*. Zürich : Universität Zürich, 1999. 255 p. ISBN 978-39-063-0200-3.
2. BALÁŽ, P. a kol. 2010. *Medzinárodné podnikanie: Na vlně globalizujúcej sa svetovej ekonomiky*. Bratislava : Sprint dva, 2010. 546 s. ISBN 978-80-89393-18-3.
3. BELLO, W. F. 2002. *Deglobalization: Ideas for a New World Economy*. London : Zed Books, 2002. 132 p. ISBN 978-18-42-7305-5.
4. BERMAN, B. – EVANS, J. R. 2013. *Retail Management: A Strategic Approach*. Edinburgh : Pearson Education Limited, 2013. 619 p. ISBN 978-0-273-76856-2.
5. BROOKS, I. – WEATHERSTON, J. – WILKINSON, G. 2004. *The International Business Environment*. London : Pearson Education Limited, 2004. 463 p. ISBN 978-02-736-8247-9.
6. FRIEDMAN, T. L. 2000. *The Lexus and the Olive Tree: Understanding Globalization*. Picador, 2000. 512 p. ISBN 978-8-125-00137-43.
7. HURRELL, A. 1995. *Regionalism in Theoretical Perspective*. In FAWCETT, L. – HURRELL, A. 1995. *Regionalism in World Politics*. Oxford : Oxford University Press, 1995. 340 p. ISBN 978-0-1982-8067-5.
8. JAMES, P. – STEGER, M. B. 2010. *Globalization and Culture*. London : Sage publications, 2010. 432 p. ISBN 978-1-4129-1953-1.
9. JESENSKÝ, D. 2014. *Retail trendy 2014 – Ještě větší moc zákazníků a on-line!* [online]. [cit. 21.06.2017]. Available at: www.popai.cz/d-2-21-307/Retail-trendy-2014Jeste-vetsi-moc-zakazniku-a-on-line!.aspx.
10. KUNEŠOVÁ, H. 2001. In: CIHELKOVÁ, E. a kol. 2001. *Světová ekonomika – nové jevy a perspektivy*. Praha : C.H. Beck, 2001. 257 s. ISBN 80-7179-311-6.
11. LAMBIN, J. J. 2014. *Rethinking the Market Economy: New challenges, new ideas, new opportunities*. Hampshire : Palgrave Macmillan, 2014. ISBN 978-1-137-39289-3.

12. LARSSON, T. 2001. *The Race to the Top: The Real Story of Globalization*. U.S. : Cato Institute, 2001. 164 p. ISBN 978-1-930-86514-3.
13. MITTELMAN, J. H. 1996. *Globalization: Critical Reflections*. Boulder, CO : Westview Press, 1996. 273 p. ISBN 978-15-558-7565-7.
14. ROBERTSON, R. 1992. *Globalization: Social Theory and Global Culture*. Londýn : SAGE, 1992. 211 p. ISBN 978-14-462-3588-1.
15. SENGUPTA, C. 2001. Conceptualising globalization, issues and implications. In *Economic and Political weekly*. 2001, vol. 36, no. 33.
16. SÝKORA, L. 2000. Globalizace a její společenské a geografické důsledky. In *Stát, prostor, politika*. Praha : Univerzita Karlova, pp. 59-79.
17. VEND. 2015. *12 Retail Trends and Predictions for 2015*. [online]. [21.06.2017]. Available at: <https://www.vendhq.com/university/retail-trends-and-predictions-2015>.
18. WORLD BANK, 2017. *Data*. [online]. [cit. 27.05.2017]. Available at: data.worldbank.org.
19. ZELENÝ, M. 2014. *Nové globálne trendy: Deglobalizácia, relokalizácia, regionalizácia a decentralizácia*. [online]. [cit. 01.06.2017]. Available at: www.konzervativizmus.sk/article.php?5789.

About the authors

Ing. Marta Pavliková, PhD.
 Department of Marketing
 Faculty of Commerce
 University of Economics in Bratislava
 Dolnozemska cesta 8/A
 e-mail: marta.pavlikova@euba.sk
 phone number: +421 2 6729 1578

Ing. Lukáš Zendulka
 Department of Marketing
 Faculty of Commerce
 University of Economics in Bratislava
 Dolnozemska cesta 8/A
 e-mail: lukas.zendulka@gmail.com
 phone number: +421 2 6729 1133

THE MANAGEMENT OF INFORMATION TECHNOLOGY SERVICE MANAGEMENT (MOITSM)

Alexander PETROV

Abstract

In this article are considered the issues related to one approach of IT service management (ITSM) based on a system of principles of ITSM and a model of integration of different frameworks and standards for the IT services management.

Keywords:

information technology (IT), IT service management (ITSM), Management of ITSM (MoITSM), Information services (IS), recursive management, regeneration, integration of frameworks and standards

Introduction

The modern society can be defined with full justification as a post-industrial information society, in which the rapidly developing information and communication technologies are leading to qualitative changes in all of the spheres of human activity and social relationships (Varbanov, 2009).

An important feature of the information society is the ever-increasing dependence of the business, citizen and society on the information technologies (IT).

Under these conditions the improvement of the Information service (IS) (considered broadly as an activity which satisfies users' needs of data, information and knowledge) is becoming a vital element of the strategy of each and every organization's development, regardless of its type and field of activity. The modern approaches of improving the IS management are based on its orientation towards services providing and implementation of the theories and good practices of the IT service management (ITSM). The foundation of ITSM consist of the implementation and management of quality IT services, which meet the needs of the business in a timely and effective manner.

Despite the presence of a variety of frameworks, methodologies, guidance, best practices, standards, tools, ready solutions and academic researches on ITSM, its implementation in practice leads to the overcoming of a number of difficulties and problems, wherefore the extent of its practical application does not correspond to its rich theoretical development. Based on this contradiction, a research problem can be formulated, which consists in finding a unified approach to improving the IS, ensuring the successful deployment and development of ITSM.

1 The game of prefixes, digital transformation and ITSM

The development of information technologies have created the conditions for a fully digital firm, where all significant business relationships with customers, suppliers and employees are digitally enabled and mediated (Laudon, 2013).

The automated processes in this digital business can be indicated as d-processes, and digital organizations themselves as d-organizations. The modern trends in the development of information technologies, driven by globalization, digitalisation, automation and the ubiquitous use of the Internet, transform more and more business processes into automated, electronic online processes that can be referred to as e-processes.

IT from the so-called "third platform" (a term introduced by IDC) - cloud computing, mobility, Big data, Artificial intelligence, social networks, provides the opportunity to turn the organizations into fully e-organizations. The Artificial Intelligence and the Business Intelligent Technologies, the technologies for processing huge volumes of structured and unstructured data (Big data) are allowing the automation of the most sophisticated (decision-making) activities in the organizations management, turning it into e-management, and the processes automated through intelligent information systems are turning into intelligent processes (i-processes). The development of Internet of things (IoT) technology allows automatic (non-human) connection of individual technical devices ("things") between them, thus enabling not only to automate their joint functioning, but also to collect a huge amount of data from them needed to manage business processes. The expansion of the use of mobile technology (m-technology) starts the process of transformation of e-processes to mobile processes (m-processes). The development of cloud computing has prompted the emergence of the "as a Service" phenomenon - ubiquitous, convenient, and scalable Internet access to any kind of IT resource available as a service: from „software as a service (SaaS)“, „platform as a service (PaaS)“, „infrastructure as a service (IaaS)“ to „everything as a service (EaaS, XaaS)“. We believe cloud computing has already created the necessary basis for the transformation of e-processes into cloud processes (c-processes) with its fast pace of development. The social networks, directly integrated into the cloud - a natural means of connecting people and content regardless of the end devices used, provide the businesses with a wide range of opportunities for convenient communication, collaborative work, quick access to the information, research of customers, users and employees feedback. The activities based on the widespread use of social networks can be referred to as s-processes. With the use of modern IT, some organizations are becoming wholly Internet-only institutions, which gives them a reason to be qualified as virtual organizations (v-organizations) and their processes can be qualified as v-processes.

So the modern IT extends the variety of digital processes - with electronic processes (e-processes), mobile (m-processes), intelligence (i-processes), social (s-processes), cloud (c-processes), virtual (v-processes) that enable the

deployment of new business models. These models can provide drastic changes in the organizations management, operation and interaction with each other and with their customers. This "game of prefixes" is in fact a manifestation of the deep transformation that, with the help of IT, takes place in the business and in the whole society. According to IDC, this expansion of Digital Transformation at a macroeconomic scale signals a new, Digital Transformation (DX) economy . IDC predicts that in 2019, enterprises worldwide will spend \$2.1 trillion on technology and related services to implement and manage Digital Transformation initiatives. There is a tremendous amount of opportunity in the space, but there is also a large amount of risk (An IDC whitepaper, 2017). There is a growing direct interdependence between organizations' ability to use information technologies and their ability to implement corporate strategies and achieve their corporate goals (Laudon, 2013). The organizations that fail to transform their business and deploy new business models based on the use of modern IT are threatened not only by customer loss and revenue cuts, but even by an extinction from the market.

The need for business transformation and the introduction of new models for its functioning and management requires that the information service of organizations should also be transformed in ways that enable the organization to achieve its goals, increase its efficiency and enhance the quality of the products and services provided to its customers. According to the best world practices, the achieving of this goal is related to the implementation of the IT service management (ITSM) (The official introduction to the ITIL Service Life Cycle, 2007, p. 4) and the transformation of the IS management of the organizations into a service management model.

2 Evolution of ITSM

„IT service management”(ITSM) is still a term with undefined content. There is no clear answer to the question “What exactly is ITSM?”. Is it a concept, a best practice, a process, a capability, an approach, a methodology or a section of service management scientific theory?

Information Technology Infrastructure Library(ITIL) v3, which is the classic source of knowledge for ITSM, defines “IT Service Management” as „The implementation and management of quality IT services that meets the needs of the business. IT Service Management is performed by the IT service providers through an appropriate mix of people, process and information technology“ (ITIL Service strategy, 2011, p.16). The term “Service Management” is defined as “a set of specialized organizational capabilities for providing value to customers in the form of services “ (ITIL Service strategy, 2011, p. 15) but it has been clarified that service management is more than just a set of capabilities. It is also a professional practice supported by an extensive body of knowledge, experience and skills. The practice of ITSM has grown with the adoption by the IT organizations of a service-oriented approach to managing IT applications, infrastructure and processes. Solutions to business problems and supporting the

business models, strategies and operations are increasingly in the form of services (The official introduction to the ITIL Service Life Cycle, 2007, p. 5).

Although there is no clear definition of ITSM, its role in the modern IT knowledge management system is growing considerably as it reverses the understanding of the nature of the IT, its purpose, the attitude of the business to IT, its ability to provide a value to the business. As the ITSM concept evolves, it also changes the attitude towards IT – from a resource that helps an organization deliver its products and services to its customers, through a type of service useful for the business and associated with certain costs, to a strategic asset providing business benefits which expenses are considered by the organization as an investment.

The evolution of ITSM's ideas can be explored by following up the evolution of the ITIL library itself as a major source of knowledge and good practice for ITSM, as well as the ideas and concepts provided by other frameworks, methodologies, standards, and academic research. The main driver of ITSM's evolution is the development of the business and the need to reflect the modern challenges posed by the development of the information technologies.

ITIL, the most widely recognized framework for ITSM in the world, has evolved and changed its breadth and depth as technologies and business practices have developed. The process-based approach of ITIL was augmented with the service life cycle (ITIL Service strategy, 2011, p.3).

The very understanding of the content of such a basic concept as "service" is changing significantly. While ITIL v2 defines "service" as "one or more IT systems that enable a business process" (Service delivery, A.2 Glossary of ITIL terms), ITIL v.3. defines the "service" as "service is a means of delivering value to customers by facilitating outcomes customers want to achieve without ownership of specific costs and risks" (ITIL Service strategy, 2011, p. 13).

The concept of delivering value is complemented by new models- value chains and value networks (ITIL Service strategy, 2011, pp. 125-127).

Examining the business value of IT services helps IT begin to think about services in the context of value creation rather than components, technology and organization. The concept of aligning IT to the business has been further developed with the concept of a full integration of IT with the business where IT becomes an integrated strategic business partner who starts to seek the best possible solutions for the business (ITIL Service strategy, 2011, p. 292). This way the role of the IT division in organizations also changes from a provider of resources and technologies, through a service provider to a business solutions provider. The current development of ITSM related to the development of cloud computing and SOA defines a new role for the IT division - the role of a service broker and a service integrator. Therefore, the evolution of ITIL ITSM is characterized by the expansion of the concept, the change in the content of terms, the emergence of new concepts and models.

The philosophy of the concept of the role of ITIL and its use in practice has been clarified. ITIL frameworks are no longer seen as a rigid framework that need to be followed literally, but as a flexible structure containing good practices leaving room for self-organization and self-optimization by the organizations that implement (ITIL Service strategy, 2007, Chief Architect's foreword). The terms "ITIL adoption" and "ITIL adaptation" began to replace "ITIL deployment", i.e. the keywords in the implementation of ITIL are "adoption", "adapt" and "self-optimization".

Along with ITIL, the other ITSM frameworks, standards and methodologies are developing. The tendencies common to their development are:

- Integration between the different frameworks, standards and methodologies in their quest to achieve interoperability, which provides a basis for realizing a synergistic effect in their implementation.
- Striving to reflect adequately the development of information technologies and the ways of their management.
- Developing multiple tools in the form of products and services that are ready ITSM systems. These ready-made tools in practice are the carriers of ITSM knowledge and provide opportunities to overcome the complexity resulting from the numerous frameworks, standards and methodologies.

These trends determine the continuous growth of the role of ITSM as an approach to improving the IT management.

3 The management of ITSM (MoITSM). ITSM management model.

The examination of ITSM as "the implementation and management of Quality IT Services that meet the needs of business" raises the question of what exactly "management" means. ITIL clearly distinguishes between a "governance" and a "management".

The management deals with making decisions and executing processes. The governance deals only with making sound decisions and it is the framework of decision rights (The official introduction to the ITIL Service Life Cycle, 2007, p. 35).

The governance ensures that the policies and the strategy are actually implemented, and that the required processes are properly followed. The governance includes defining roles and responsibilities, measuring and reporting, and taking action to resolve any identified issues. Governance need to be able to evaluate, direct and monitor the strategy, policies and plans. (ITIL Service strategy, 2011, p. 25). Management is the execution of the rules and authority granted by governance (ITIL Service strategy, 2011, p. 287).

This distinction is also made in ISO/IEC 38500 "Governance of IT for the organization", according to which the "governance" consists of the system of organizations that are directed and controlled and the "management" consists of the exercise of control and supervision within the authority and accountability

established by governance (ISO/IEC 38500:2015). ITIL v3 references the concepts of this standard (ITIL Service strategy, 2011, p. 285).

Without denying the benefits of such division of management and governance, in the approach that we offer for IT services management, we will use the term "ITSM" as the application of the modern achievements of general theory of management of services life cycle (service concept, design, implementation, maintenance and elimination/improvement). Under the „general theory of management“, we will understand the concepts, categories, principles, methods and models established in cybernetics and in modern enough general management theory. A useful overview of the subject, methods and models of cybernetics is made by George F.H. (1977). An example of the benefits of considering management in terms of cybernetic categories is given in article of Zannetos and Wilcox (1972). The main categories of management according to modern enough general theory of management are given in “Enough general management theory” (2003). According to this theory, management is always conceptual. Hence the idea of creating and maintaining a conceptual model of a management system in an obvious way emerges.

In this way, we will introduce a holistic approach to the management of IT services, with the term "management" which will cover all management functions at all levels of strategic, tactical and operational management. This is the way, the problems associated with the occurrence of a gap between governance and business are prevented. We believe that in the case of a strict separation between governance and management and the failure to implement mechanisms to ensure their effective interaction, there may be a gap between governance and business, analogous to the gap between IT and the business when IT focuses entirely on technology.

In addition, management will be seen not only as an iterative process of repetitive action in managing functions, not only as an interactive process of interaction between the control system and the management system, but also as a recursive process, as a process of managing each one of the management functions, i.e. a management of the management. From this point of view, it is clear why our approach to ITSM is called "Management of IT Service Management" (MoITSM). The management in general can be considered as a process of deliberate influence of the management system (the subject of management) on the manageable system (the object of management) in order to achieve a certain state or behaviour of the management system. The common management functions can be defined and named in different ways, but they typically include the following functions: forecasting and planning, organization, coordination, operational execution, verification (monitoring, reporting), analysis and control. Taking into account the importance of the human factor, some authors add to these functions the function of motivation. In our opinion is more correct to replace the motivation by the more general **regeneration** function, which is considered as the process of restoring the quality of functioning of the

individual elements of the system and of the system itself as a whole organism. The creation of an additional function of regeneration management will be in particular useful for ITSM implementation as its implementation is a long and complex process in which it is not difficult to lose the original ideas, goals, concepts, principles, knowledge, motivation and enthusiasm. All these key drivers need to be regenerated during the protracted implementation and use of ITSM.

Therefore, the **common management model** of each management system needs to include a description of the concepts, principles, purpose, constraints, and resources; architecture of the subject and the object of management (structure, organization, interconnections including direct and inverse relations, functions and processes), the super system and the environment. Like any other management system, the IS changes under the influence of various internal and external impacts. The business requirements to the type and quality of IT services are constantly changing. A number of external environment factors (competing IT companies and IT service providers, achievements of IT divisions of similar organizations, good practices, IS methodologies and standards, legal requirements, development of outsourcing and cloud computing, etc.) also exert enormous pressure on the IS to make such changes. They need to make their own IT department of organization to become a competitive supplier of high quality IT services. These changes are so comprehensive, root-based and fundamental that they can rightly be defined as a transformation of the whole system of the IS management. This transformation describes the transition from the existing state of the management system (MS) of the information service (IS) to its new target state, from the existing IS management model to the new client-centric management model based on a service delivery and built on using the theory and practice of ITSM as a strategic asset. ITSM is an approach to improving information service by orienting it to providing IT services. This approach can be further expanded by spreading the Service Oriented Architecture (SOA) concept to the entire IS of the organization. This could be achieved by proposing to create a model to transform the IT service management to a service management model, in which all the IT services such as organization, functions, technologies, applications, infrastructure, processes, activities and results can be described, designed and implemented as a service. This transformation of the entire IT service (IS) to IT service as a Service leads to a management model that is considerably wider than the cloud model "IT service as a Service, ITaaS". The transformation of the IT service management to an IT service management model must affect all the main components of the IT service management system in accordance with the above defined common management model.

Some of these changes are given in Table 1.

Table 1: Changes caused by the transformation of the management of the Information Service to a service management model

Element of the management system	Direction of change
Business strategy of the organization	Focusing on the customer and delivering quality new products and services to meet the customers' needs
Information Service (IS) Strategy	Focusing on the customer and delivering quality IT services, responding to business needs and supporting business strategy.
Goals of the IS management	Optimal management of IT services provided to businesses
Concepts of the business management and the IS management	Integrating the ITSM concept into the existing business and IS management concepts.
Business and IS management models	Integrating the ITSM management model into the existing business and IS management models.
The role and place of IS in the organization	Conversion of IS from an auxiliary service unit into a specialized unit that automates all the functions of the organization and is a strategic partner of the organization's leadership. Transforming IS from a cost center to a value created center for the organization.
Functioning of IS	Functioning of the IS as a "business in business". Turning the IS from a resource management subdivision into a IT service provider, broker and integrator of delivering of IT services and solutions provider.
Functions of the IS management system	New management functions of the ITSM system are arising.
Organizational structure	Establishment of a Service Desk Center and other structural units for the management and implementation of the ITSM system.
Functions of IT employees	Allocation of employees' responsibilities and rights in accordance with the roles resulting from the deployment of ITSM processes.
Functions and processes of IS and organization	Integration of existing functions and processes with the functions and processes of ITSM system
Information Technology	Integration of existing IT with IT and the applications automating ITSM
Interaction of IS with customers	Implementation of a single point of contact of the customer with the IT through implementation of Service desk.

Source: own created

For the effective implementation of ITSM in a particular organization, it is necessary to develop a methodology based on an appropriate system of principles.

4 Basic principle of MoITSM

For implementation of service management system (SMS) has developed a special ISO/IEC 20000 series of standards. ISO/IEC 2000-1: 2011 is a part of this series of standards that provides requirements to the SMS. The purpose of SMS is to provide quality services for clients, so the principles for its construction must necessarily include quality management principles.

One of the definitions of a "principle" is a basic belief, theory or rule that has a major influence on the way in which something is done. "Quality management principles" have a set of fundamental beliefs, norms, rules and values that are accepted as true and can be used as a basis for quality management. These set of principles including: Customer Focus, Leadership, Engagement of People, Process Approach, Improvement, Evidence-Based Decision Making and Relationship Management QMPs can be used as a foundation for the organization's performance improvement (ISO. Quality management principles, 2015).

We believe that for the effective implementation of ITSM based on the proposed MoITSM approach, it is necessary to extend this system of principles to the following principles:

- **Holistic viewpoint at the management.** The principle of a holistic approach to managing IT services is looking at the management of IT services as a common management system with common management functions.

It can be assumed that this approach largely opens the door to the ITSM cybernetization, i.e. to the application of well-developed theories, methods and models of cybernetics as a science of management of any kind of systems. As the tendency of the welfare of the economy grows, we can see the formation of a new direction in economic cybernetics, namely "service cybernetics".

- **Recursive management.** The principle of recursive management, considering the management as a recursive function, in which each of its essential functions needs to be managed through the implementation of all the main management functions i.e. the planning must be planned, organized, coordinated, operationally implemented, reported, analysed, controlled, regenerated etc.

Thus, the management function can be described by a recursive function $U = F(U, Z, t)$; Where U is the management function which is dependent on the management goals vector Z and the time t . Of course, this designation is only conditional because it does not account for many other important factors (resources, capabilities, processes etc.), but it clearly illustrates the management view as a recursion unfolding in time of the implementation of the individual goals of the management goal vector. Like any recursion, this deployment must end when reaching an elementary activity from a process that does not need special management.

We believe that the principle of recursive management reveals the cyclical nature of the management and may be extended, in some cases even replace

the Deming PDCA cycle (plan, do, check and act) in many of the methodologies and standards used in ITSM.

- **Integration.** The principle of integrating appropriate ITSM frameworks, methodologies, standards, best practices, legislation and regulations into a single common IS management model in order to achieve a synergic effect from their co-implementation. For example, it seems appropriate to integrate into a common model ITIL ITSM, Control Objectives for Information and Related Technologies(COBIT 5), Capability Maturity Model Integrated (CMMi) frameworks; quality, information security and service management systems in accordance with ISO 9000, ISO/IEC 27000 and ISO/IEC 20000 standards, and some specific legislation as General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679) .

Integration of frameworks can take place in three different scenarios:

1. Integration of ITSM management systems with already implemented management systems regulated by the standards for quality management, security management, etc. Typically, organizations implement quality management systems in accordance with ISO 9000 and information security management system (ISO / IEC 27000) before service management system (ISO / IEC 20000).
2. Integration of an initially integrated kernel from processes belonging to one or another frameworks system (eg ITSM Service desk) with other subsequent implementations of the same or another frameworks system .
3. Implementation a comprehensive management system that integrates the quality, security, services and other appropriate management systems. Of course, under this scenario, it is also possible to start from a properly formed core of the integrated system.

Each of these scenarios has its positive and negative sides. But in the three scenarios, an integrated system can be built if it maintains an up-to-date integrated management model.

- **Multi-tiered model.** The principle of the different abstraction levels of the IS management model. The IS model is multi-tiered and encompasses different levels of conceptual, logical and physical abstraction that allow a transition from the overall IT service model to implement the ITSM concepts to the specific IT service model reflecting the specificity of the particular organization in which it is deployed ITSM system.

In the database (DB) design process there are three levels of description of the data- external level, conceptual or global logical level and physical level (Martin, 1977, p. 74). The conceptual, global logical DB model is formed, consisting of the set of data requirements of the different users with their local external views, after which the model is normalized and transformed into the specific physical model of the DB (Martin, 1977, p. 240). Similarly, a conceptual management model consisting of the set of concepts, objectives, principles, methods, and requirements of the different frameworks and

standards (external local views at ITSM) that will be developed in the context of the integration of the individual ITSM frameworks and standards, as well as other frameworks and standards, that can be drawn up, deployed and used simultaneously. This model should then be normalized (aligning the used terms, removing the duplicates, to ensure semantic integrity etc.) into a more detailed logical model that also contains different layers (goals, functions, processes, etc.), which at the end of the physical implementation process must be transformed into a physical model that takes account of the particular organization's context. The role of the conceptual model is to describe at a high level and preserve the basic ideas and principles of the various frameworks. The role of the logical model is to describe the realization of concepts from the conceptual model at the same time in a more detailed form of objectives, functions, processes and to ensure independence from the concrete realization at the physical level.

The implementation of ITSM into particular organization is usually seen as an adoption and adaptation process. We prefer to use the term „integration“ to “adaptation” and to consider the adaptation process as a process of integration between the conceptual, logical and physical models of the different ITSM frameworks with the conceptual, logical and physical models of the existing organization. This implies the existence of a such models of the organization itself and an authority to support it.

Unlike the DB design process, process normalization can be done at any level – conceptual, logical and physical. But at the different levels, normalization should be distinguished by its goals, objects and techniques. The transformation of the logical model to the physical model besides normalization also includes optimization of the activities of the various interrelated processes.

- **Organization's context.** The principle of taking into account the individual characteristics of the organizations that will implement ITSM and assessment the level of maturity of both the organization and its IS.

Collectively, these principles together form the basis for the effective implementation of ITSM in a specific organization, building its own IT SMS in the organization, its effective management and the successful IS transformation to a service management model.

Conclusion

The modern IT technologies transform the business effectively, which naturally leads to a need for transformation of the Information Service to new management models that allow providing quality and efficient IT services to customers on time and in line with the changing business needs and requirements. For the successful implementation of this transformation, it is possible to find a common approach based on the defined basic principles and a methodology. There should be considered the deployment and development of ITSM system as

a project for transformation of the Information Service to a service management model. There should be integrated the strengths of the individual frameworks, good practices, standards and tools, taking into account the specific context of organization, its resources, capacities, level of maturity, the scope and the completeness of the implementation of the processes of ITSM.

References

1. An IDC whitepaper, 2017. Excellence in the Digital Economy: a blueprint to success. 6 p. IDC, 2017. [online] Accessible from <http://www.idc.com/promo/thirdplatform/RESOURCES/ATTACHMENTS/DXBlueprint.pdf>
2. Enough general management theory, 2003. (in Russian : Достаточно общая теория управления). St. Petersburg State University, 2003. [online] Accessible from <https://storage.googleapis.com/dotu-154621.appspot.com/20040623-DOTU.pdf>, pp. 14-25
3. GEORGE, F.H., 1977. The foundations of cybernetics (in Russian: Основы кибернетики), Moskva : Radio i sviaz, 1984, pp.13-54
4. ISO. Quality management principles. 2015, ISBN 978-92-67-10650-2. [online] Accessible from <http://www.iso.org/iso/pub100080.pdf>
5. ISO/IEC 38500:2015. Information technology — Governance of IT for the organization. [online] Accessible from <https://www.iso.org/obp/ui/#iso:std:iso-iec:38500:ed-2:v1:en>
6. ITIL Service strategy, 2011. London : TSO, 2011, 483p. ISBN 9780113313044
7. ITIL Service strategy, 2007. TSO, 2007, 483p. ISBN 9780113310456
8. LAUDON , K.C., LAUDON, J.P. 2013. *Management Informaton Systems. Managing the digital firm*. 12-th edition. New Jersey : Pearson Prentice Hall, 2013, pp. 11-12, ISBN-13: 978-0-13-214285-4
9. MARTIN, J. 1977. *Computer Data-Base Organization*. (in Russian : Организация баз данных в вычислительных системах). Second edition, Mir, 1980; 662p.
10. Service Delivery, 2003. Best practice. ITIL-The key of managing IT services. Version 2.0 TSO, 2003, [CD-ROM]
11. The official introduction to the ITIL Service Life Cycle, 2007. London : TSO, 2007. 238 p. ISBN 9780113310616.
12. VARBANOV, R. et al. 2009. *Information technology in business*.(in Bulgarian: Информационни технологии в бизнеса) . V.Tarnovo : Faber, 2009, p. 50, ISBN: 978-954-400-133-9
13. ZANNETOS, Z. S., WILCOX, J.W. 1972. The management process, management information and control systems, and cybernetics. [online] Accessible from <https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19730005266.pdf>

About the author

Alexander Petrov

PhD student

Direction “Application of informatics in the economy”

Academy of Economics “D.A.Tsenov”, Svistov, Bulgaria

Email: alpebg@yahoo.com

HEALTH AND HEALTHCARE AS A PART OF WELL – BEING INDICATORS IN EU

Katarína PETROVČIKOVÁ – Jana NAŠČÁKOVÁ – Vanda LIESKOVSKÁ

Abstract

The proposed paper is concentrating at one of the elements regarding measuring the quality of life in EU. EU is taking great effort to contribute to its inhabitants' well-being. To be able to do so; certain indicators need to be picked and measured as a necessary tool for the further steps toward long and yet prosperous life of individuals. Quality of life in EU is measured by indicators defined by nine different groups of them: material living conditions, productive or other main activity, health and healthcare, education, leisure and social interactions, economic security and personal safety, governance and basic rights, natural and living environment and overall experience of life. We will further focus at health and healthcare dimension and their main characteristics for the EU and for the individual states as well. The aim of the paper is to introduce the quality of life indicators according to EU and to analyze one of their components: health and healthcare.

Keywords:

quality of life, well-being, indicators, health, healthcare

Introduction

How measure the individual's own perception of health and well-being has been in radar of many research groups. To be able to measure what is the subjective perception of individual's health; specific indicators must be taken for their assessment. For an individual the perception of health might be viewed from different points of view. Some consider indicators related to quality of life as important. Murgaš and Klobučník (2016) introduced in their work the gold standard of quality of life. In their research this standard consisted of these indicators and ways to measure them:

- wanting to live can be expressed by the absence of the will to live, i.e., suicide. Expression of the indicator is suicide mortality rate,
- long life can be expressed by the indicator of life expectancy,
- living in a complete family can be expressed by its absence; indicator is divorce rate,
- having children can be expressed by the indicator of birth rate,
- being healthy can be expressed by the absence of health; indicator is mortality,
- living in a healthy environment can be expressed by the environmental pollution,
- being educated can be expressed by the indicator of the share of university graduates,
- having a job can be expressed by the indicator of unemployment rate,
- being a good person can be expressed by the indicator of generativity.

The indicators in their study did not include prosperity. The reason for its absence is the knowledge which led to formulating of the notion of quality of life: prosperity does not equal quality of life.

From the practical point of view, the results of the contribution of this research can be evaluated at two levels. From the methodological level, the approach based on the identification of indicators comprising the gold standard of quality of life has proved suitable for quantification of the quality of life index at various hierarchical levels. This means that the concept of the gold standard can undergo a critical analysis in terms of its potential for unifying the methodology of quality of life.

On the other hand, Decanq, K. and Schokkaert, E. (2016) introduced in their study the usage of equivalent incomes to measure well-being in Europe. They illustrated the possibility to calculate measures of the level of well-being and its inequality in a coherent way by making use of data that can easily be collected with a representative questionnaire study. They emphasized throughout the paper that the choice of a well-being measure for policy evaluation was an ethical and political question. Normative views might diverge, and it is therefore meaningful to compare and discuss the results obtained with different approaches. They proposed that this should result in a political debate about the content of the arguments within a coherent theory of justice.

Health conditions presumably highly depend on social cohesion and are crucial to well-being of an individual. Delhey, J. and Dragolov, G. (2015) attempted in their study to bring together the new Bertelsmann Cohesion Index and survey data on life evaluation and psychological functioning for 27 European countries. Their multilevel analyses revealed the following new insights:

1. Over and above national affluence and the income distribution, social cohesion enhances Europeans' SWB (social well-being). It generates better psychological functioning (strongest effect) and boosts happiness and life satisfaction.
2. All three domains of social cohesion—social relations, connectedness and common good orientation—are conducive to SWB.
3. The positivity of cohesion is felt more strongly in Europe's richer part (the Western part). In the poorer part (largely ex-communist Eastern Europe), cohesion enhances life evaluation, but not psychological functioning.
4. Both the more vulnerable and the less vulnerable social categories benefit from living in a cohesive society.

In EU one of the objectives agreed by all the member states was to create a complex indicator that would sufficiently identify the real quality of well-being of its inhabitants.

In September 2010 The DGINS Conference in Sofia came with the European Statistical System Committee endorsed the final report of the Sponsorship Group.

The Stiglitz-Sen-Fitoussi Commission (2009) pointed that well-being and quality of life are multidimensional concepts. Building on this vision, the Sponsorship Group endorsed a framework encompassing 9 dimensions:

1. Material living conditions
2. Productive or other main activity
3. Health (healthcare)
4. Education
5. Leisure and social interactions
6. Economic security and personal safety
7. Governance and basic rights
8. Natural and living environment
9. Overall experience of life

In our paper we will focus at health dimension of the well- being and its main characteristics for the EU and for the individual states as well. The aim of the paper is to introduce the quality of life indicators according to EU and to analyze some of their components: outcomes, determinants of health and access to healthcare.

Eurostat, the Organisation for Economic Cooperation and Development (OECD) and the World Health Organisation (WHO) have established a common framework for a joint healthcare data collection. Following this framework, EU Member States submit their data to Eurostat on the basis of a gentlemen's agreement. The data collected relates to:

- healthcare expenditure following the methodology of the system of health accounts (SHA);
- statistics on human and physical resources in healthcare — supplemented by additional Eurostat data on hospital activities (discharges and procedures).

In the paper to fulfill its main objective standard methods as analogy, comparison, deduction, and synthesis are used.

1 EU Health dimension indicator

Health is an important priority for Europeans, who expect to have a long and healthy life, to be protected against illnesses and accidents, and to receive appropriate healthcare. Health issues cut across a range of topics — including consumer protection (food safety issues), workplace safety, environmental or social policies. As such, health policy within the European Union (EU) is principally under the control of the Directorate-General for Health and Food Safety and of the Directorate-General for Employment, Social Affairs and Inclusion.

The competence for the organization and delivery of health services and healthcare is largely held by the EU Member States. The EU has a mandate to complement national action on health. This consists mainly of:

- protecting people from health threats and disease,
- promoting healthy lifestyles and
- helping national authorities in the EU cooperate on health issues.

Physical and mental problems, as well as ill health, undermine the quality and shorten the length of people's lives. They also inhibit economic and social development by stripping countries of valuable human capital. Poor health conditions mean that a significant part of a given population is unable to benefit from the general progress of society or actively engage in civic activities. Long and healthy lives are therefore not just an overarching personal aim for most people. They are also considered as an almost universally acceptable measure of societal well-being, incorporated in relevant indices on quality of life, such as the United Nations "Human Development Index".

Improving health conditions by preventing and treating injuries, ill health and diseases, accounts for a significant part of government and private expenditure in Europe. The state of people's health in Europe is measured using a combination of objective health outcome indicators such as life expectancy, and self-evaluations of health status and subjective perceptions regarding access to healthcare. These indicators also include elements that constitute risk factors for health resulting from lifestyle such as hazardous behaviors (e.g. smoking) likely to have an impact on future levels of health, and thus the well-being of European societies.

Available data show that although health conditions are related to GDP, they are not completely dependent on the wealth in a given economy. Although poorer countries are generally far worse than richer ones, e.g. in terms of reducing the number of preventable deaths (e.g. infant mortality), the marked differences between countries can also be attributed to other factors, including the effectiveness of national healthcare systems, inequalities in access to healthcare, the living environment and individual and cultural choices (e.g. dietary habits). For example, more money per capita is spent on healthcare in the United States than in any European country. Yet according to the World Health Organization, life expectancy in most EU Member States is higher than in the US. This suggests that the way in which the provision of healthcare is organized (if the providers are private or public organizations, for example), the quality of healthcare services, environmental factors and cultural choices also affect health outcomes.

In the framework of indicators on quality of life, the health dimension is described using demographic indicators such as life expectancy and from an individual perspective by self-assessed health status, behaviors that can influence someone's health, exposure to unhealthy situations and possibilities of receiving timely and relevant treatment in case of need. All these contribute to the general assessment of the health situation in the society.

This health and healthcare dimension covers three topics: outcomes, determinants of health and access to healthcare.

Outcomes: life expectancy (at birth) and health status – healthy life years, self-perceived health and self-reported mental health.

Life expectancy at a certain age is the mean additional number of years that a person of that age can expect to live, if subjected throughout the rest of his or her life to the current mortality conditions (age-specific probabilities of dying, i.e. the death rates observed for the current period). Life expectancy at birth refers to the age of 1. Gender differences are of particular importance for this indicator, given the difference in life expectancy between women and men.

The health status of a population is difficult to measure because it is hard to define among individuals, populations, cultures, or even across time periods. As a result, the demographic measure of life expectancy of populations at different ages has often been used as a measure of a nation's health status because it is based on a characteristic that is simple and easy to understand — namely, that of death. Mortality rates have declined overall for all socioeconomic groups but still there are significant differences in individual's mortality rates strongly influenced by social factors such as education, economic activity (employed, unemployed) and income level.

The indicator healthy life years (HLY) is very relevant for the assessment of the quality of life by focusing on those years that may be enjoyed by individuals free from the limitations of illness or disability. Chronic disease, mental disorders and physical disability become more prevalent in older age and often result in a lower quality of life for those who suffer from such conditions, while the burden of these conditions may also have impact on healthcare and pension provisions. This indicator focuses on the quality of life spent in a healthy state, rather than the 'quantity' of life measured by life expectancy.

Healthy life years may have positive economic consequences. Increase of healthy life years would increase work productivity and other activities which may push economic growth. Moreover it would reduce health care expenditure.

An increase in healthy life years is one of the main goals for European health policy. And it would not only improve the situation of individuals but also result in lower levels of public health care expenditure. If healthy life years are increasing more rapidly than life expectancy, it means that people are living more years in better health.

The indicator of healthy life years (HLY) measures the number of remaining years that a person of a specific age is expected to live in healthy conditions (without any severe or moderate health problems). The indicator is also called disability-free life expectancy (DFLE). HLY is a composite indicator that combines mortality data with health status data — long-term limitations in usual activities due to health problems. The notion of health problem for Eurostat's HLY is reflecting a disability dimension and is based on a self-perceived situation.

The question in the survey aims to measure the extent of any limitations for at least six months because of a health problem that may have affected respondents about activities they usually do.

Self-perceived health is a subjective measure of overall health status. Health encompasses not only the absence of disease but also a state of well-being and the capability to function in the face of changing circumstances. Moreover, this subjective state has important consequences. For example, persons who consider themselves to be in poor health may be more likely to be depressed, to have impaired function, and to lead less productive and fulfilling lives. In addition, self-perceived health status is an important determinant of perceived need (and demand) for health care and other health-related services.

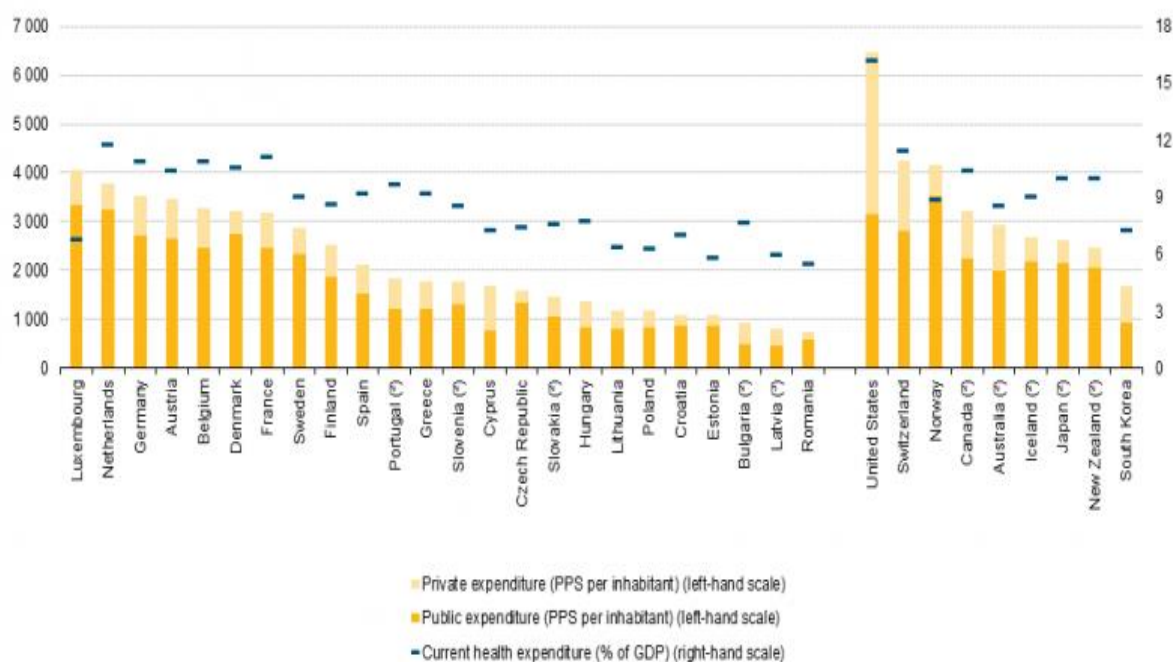
Self-reported mental health is based on the Patient Health Questionnaire (PHQ-8) which encompasses a subset of the mental health problems. It is an instrument for assessing and monitoring the prevalence and severity of current depressive symptoms and functional impairment and to make tentative depression diagnosis.

Determinants of health (healthy and unhealthy behaviors) - Body Mass Index, Daily smokers, Hazardous alcohol consumption, Practice of physical activity and Consumption of fruits and vegetables. The set of indicators on health determinants covers the most common and measurable behaviors that influence people's health. These indicators provide information about risk factors for individual's health resulting from lifestyle and individual and cultural choices (e.g. dietary habits).

Access to healthcare: the concept of healthcare used refers to the sum of activities carried out by public and private institutions to prevent and cure illness, reduce premature mortality, care for the sick and promote public health. Medical examinations and treatment are obviously the most important aspects of healthcare.

2 Healthcare statistics

Total current healthcare expenditure (both in relative and absolute terms) varied significantly among the EU Member States in 2012. The following data are from 2012 and are the latest available in suitable form for the relevant comparison of all the EU countries.



(*) Countries are ranked on total (public + private) healthcare expenditure in PPS per inhabitant. Denmark, Cyprus, Portugal, Iceland, Norway and Switzerland: provisional. Ireland, Italy, Malta and the United Kingdom: not available.

(*) 2011.

(*) 2010.

Source: Eurostat (online data code: hlth_sha_hf)

Figure 1: Current healthcare expenditure in EU countries in 2012

Source: [http://ec.europa.eu/eurostat/statisticsexplained/index.php/File:Current_healthcare_expenditure,_2012_\(%C2%B9\)_YB15.png](http://ec.europa.eu/eurostat/statisticsexplained/index.php/File:Current_healthcare_expenditure,_2012_(%C2%B9)_YB15.png) (20. 10. 2017)

Figure 1 shows the share of current healthcare expenditure exceeded 10.0 % of gross domestic product (GDP) in six EU Member States (the Netherlands, France, Belgium, Germany, Denmark and Austria), which was almost double the share of current healthcare expenditure relative to GDP recorded in Latvia (2010 data), Estonia and Romania (6.0 % or less).

Table 1: Healthcare indicators in EU between 2002 and 2011/12

	Practising physicians (*)		Hospital beds		Hospital discharges of inpatients (excluding healthy new born babies)	
	2002	2012 (*)	2002	2011 (*)	2002 (*)	2012 (*)
Belgium	286	293	758	635	15 958	15 851
Bulgaria	352	391	649	645	..	26 060
Czech Republic	350	367	776	684	20 449	19 293
Denmark	304	..	429	350	16 138	..
Germany	334	389	887	822	20 204	24 069
Estonia	314	328	607	531	18 567	17 376
Ireland	..	271	578	295	13 714	13 661
Greece	458	614	471	485
Spain	303	369	354	309	4 038	9 906
France	..	308	771	637	16 904	15 734
Croatia	238	299	567	579	14 237	14 552
Italy	..	385	443	342	16 089	12 124
Cyprus	262	304	435	351	6 809	7 953
Latvia	276	314	776	588	19 742	17 575
Lithuania	368	422	804	744	22 233	23 818
Luxembourg	226	276	..	537	17 191	14 489
Hungary	319	309	785	719	24 354	19 944
Malta	..	329	748	446	6 871	13 592
Netherlands	258	313	457	466	9 088	11 574
Austria	403	490	781	765	26 392	27 029
Poland	230	221	..	655	16 799	15 630
Portugal	318	410	358	338	..	15 084
Romania	196	239	766	612	..	21 825
Slovenia	223	254	509	462	15 472	16 627
Slovakia	320	..	757	606	19 634	17 672
Finland	253	..	735	552	21 045	18 001
Sweden	329	392	313	271	14 782	15 165
United Kingdom	208	276	398	290	12 419	12 789
Iceland	358	357	..	332	17 170	..
Liechtenstein	190	316	279	215
Norway	327	423	431	332	16 266	16 456
Switzerland	..	392	595	487	14 646	16 213
FYR of Macedonia	225	279	481	451	8 604	..
Serbia	..	309
Turkey	133	173	214	253	..	15 350

(*) Greece, the Netherlands, the FYR of Macedonia and Turkey: professionally active physicians. Portugal: licensed physicians.

(*) Greece, Luxembourg, the Netherlands, Romania, Sweden, the United Kingdom and Serbia: 2011. Estonia, Spain, Croatia, Latvia, Hungary, Malta, Poland, Slovakia, Liechtenstein and the former Yugoslav Republic of Macedonia: break in series.

(*) Denmark and Luxembourg: 2010. Greece and the Netherlands: 2009. Belgium, Ireland, Hungary, Malta, the Netherlands, Poland, the United Kingdom and Liechtenstein: break in series.

(*) Estonia and Poland: 2003. Latvia, Hungary, Malta and Slovenia: 2004.

(*) Bulgaria, Estonia, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Poland, Slovenia, Slovakia, Finland, the United Kingdom, Switzerland and Turkey: 2011. Portugal and Sweden: 2010. Germany, Ireland and Iceland: break in series.

Source: Eurostat (online data codes: hlth_rs_prs, tps00046 and hlth_co_disch2f)

Source: [http://ec.europa.eu/eurostat/statisticsexplained/index.php/File:Healthcare_indicators,_2002_and_2011_12_\(per_100_000_inhabitants\)_YB15.png](http://ec.europa.eu/eurostat/statisticsexplained/index.php/File:Healthcare_indicators,_2002_and_2011_12_(per_100_000_inhabitants)_YB15.png) (20.10.2017)

An analysis of current healthcare expenditure by provider for 2012 is shown in Table 1. Hospitals generally accounted for the highest share of current healthcare expenditure, ranging from 25.8 % of the total in Slovakia (2011 data) to more than 45.0 % in Denmark, Estonia, Sweden and Greece. The second most important category was usually that of ambulatory care providers, its share ranging from 14.5 % of current healthcare expenditure in Romania to more than 30.0 % in Poland, Germany, Belgium, Luxembourg, Portugal (2011 data), Cyprus and Finland. The share of various retail establishments and other providers of medical goods in current healthcare expenditure varied by a factor of three, with the lowest shares, below 15.0 %, being recorded in Cyprus, Sweden, the Netherlands, Denmark and Luxembourg.

Table 2: Hospital beds in Czech Republic, Hungary and Slovakia between 2002 and 2011

	2002	2011	Index
Czech Republic	776	684	0,881443
Hungary	785	719	0,915924
Slovakia	757	606	0,800528

Source: own processing

When we look at specific expenditure item: hospital beds in Table 2, we can see the decrease trend in all the countries across EU except for Croatia. Index counted for Slovakia, Hungary and Czech Republic shows that in Slovakia the number of beds in hospital decreased to the 80% of the level in 2002 due to the savings on health expenditures. Decreasing the number of “beds” in EU countries is one of the most visible steps the government can take to show the effort to build an effective healthcare system primarily built on prevention through ambulance health services. And as the trend shows there is a significant decrease of expenditures.

The final Figure 2 will point at one of the most visible signs of health state heterogeneity among EU states according to very specific cardiovascular health problem: ischaemic heart disease. As shown; the everyday lifestyle, eating habits, the climate and generally even the individuals' attitude toward life might result in dramatically arising differences among EU member states with the worst situation in the middle and eastern part of Europe.

Standardised death rates from ischaemic heart disease, by NUTS 2 regions, 2011–2013
(per 100 000 inhabitants)

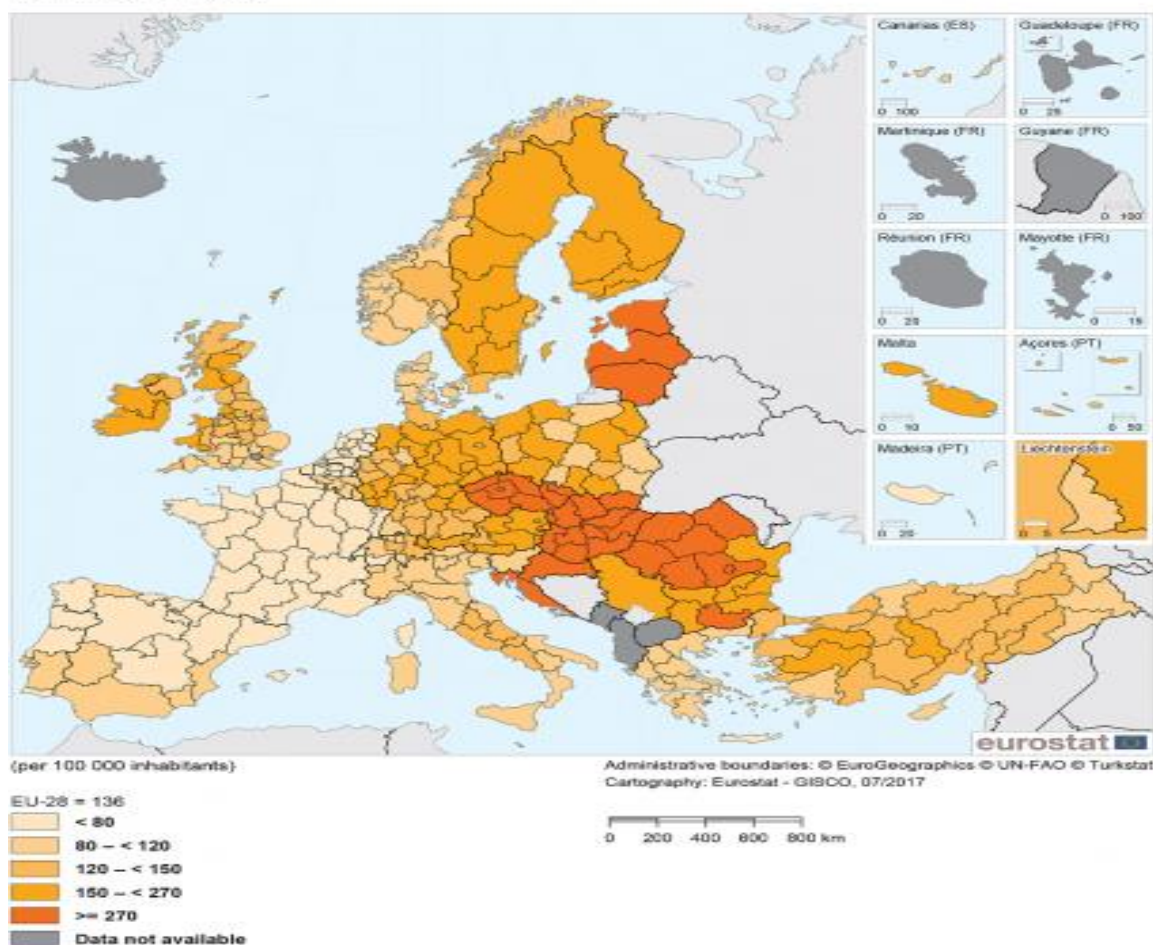


Figure 2: Standardised death rates from ischaemic heart disease, by NUTS 2 regions, 2011–2013 (per 100 000 inhabitants)

Source: [http://ec.europa.eu/eurostat/statisticsexplained/index.php/File:Standardised_death_rates_from_ischaemic_heart_disease,_by_NUTS_2_regions,_2011%E2%80%932013_\(per_100_000_inhabitants\)_RYB17.png](http://ec.europa.eu/eurostat/statisticsexplained/index.php/File:Standardised_death_rates_from_ischaemic_heart_disease,_by_NUTS_2_regions,_2011%E2%80%932013_(per_100_000_inhabitants)_RYB17.png) (20.10.2017)

All 32 regions where the standardized death rates from ischaemic heart disease reached or exceeded 270 per 100 000 inhabitants in 2011–2013 were in the Baltic Member States or eastern EU Member States.

3 Healthcare expenditure

Healthcare data on expenditure are based on administrative (register-based) data sources and various surveys, as well as estimations made within the EU Member States, reflecting country-specific ways of organising healthcare and different reporting systems for the collection of statistics pertaining to healthcare.

Total current healthcare expenditure quantifies the economic resources of both the public and private sectors dedicated to healthcare, with the exception of those related to capital investment. It reflects current expenditure of resident units

on the final consumption of goods and services directed at improving the health status of individuals and of the population.

The SHA provides a framework for interrelated classifications and tables relating to the international reporting of healthcare expenditure and financing. The set of core SHA tables addresses three basic questions:

- i) who finances healthcare goods and services;
- ii) which healthcare providers deliver them, and;
what kinds of healthcare goods and services are consumed.

Consequently, the SHA is organised around a tri-dimensional system for the recording of health expenditure, by means of the international classification for health accounts (ICHA), defining:

- healthcare expenditure by financing agents (ICHA-HF) — which provides an analysis of public and private units that directly pay providers for their provision of healthcare goods and services;
- healthcare expenditure by provider (ICHA-HP) — which classifies units contributing to the provision of healthcare goods and services such as hospitals, various outpatients' settings, diagnosis centres or retailers of medical goods;
- healthcare expenditure by function (ICHA-HC) — which details the split in healthcare expenditure following the purpose of healthcare activities - such as, health promotion, curing illnesses, rehabilitation or long-term care.

Data coverage is close to 100 % for the first-digit level of each of the three core classifications, but ranges between 75 % and 85 % at the second-digit level. However, it is possible that despite relatively high rates of coverage, there may be departures from the standard classifications. Expenditure reported under some of these ICHA categories may be under or overestimated and it is recommended to refer to specific country metadata before analysing the data.

Conclusions

Health outcomes across the EU are strikingly different according to where people live, their ethnicity, sex and socioeconomic status. The EU promotes the coordination of national healthcare policies through an open method of coordination which places particular emphasis on the access to, and the quality and sustainability of healthcare. Some of the main objectives include: shorter waiting times; universal insurance coverage; affordable care; more patient-centred care and a higher use of outpatients; greater use of evidence-based medicine, effective prevention programmes, generic medicines, and simplified administrative procedures; and strengthening health promotion and disease prevention.

The paper aimed its attention toward the introduction of the current stage of the research into this field. It has shown the main dimensions being covered by EU in terms of health indicators: outcomes, determinants of health and healthcare. Statistical results reveal the increasing ratio of health expenditures in relation to

GDP which is visible the most in the richest EU countries according to GDP per capita. The paper stresses the need to further analyze the well-being of EU inhabitants.

Acknowledgements

This paper was supported by Grant Agency “VEGA”. This contribution is the result of the projects implementation VEGA No. 1/0936/15 – *Economics and Environmental Studies and experimental verification of the possibility of reclaiming tailings ash mixture in SE-EVO Vojany* and VEGA No. 1/0376/17 – *Marketing as a tool of the health policy support*.

References

1. Decancq K., Schokkaert E. 2016. Using equivalent incomes to measure well-being in Europe. In: *Social Indicators Research*, Vol. 126, Iss. 1, p. 21-55, ISSN 1573-0921 (Online)
2. Delhey, J. – Dragolov, G. 2016. Happier together. Social cohesion and subjective well-being in Europe. In: *International Journal of Psychology*. Vol. 53, Iss. 3, pp. 163-176, ISSN 1464 – 066X
3. Döpke J., Knabe A., Lang C., Maschke P. 2016. Multidimensional Well-being and Regional Disparities in Europe. In: *Journal of Common Market Studies*, Vol. 55, Iss. 5, p. 1026-1044, ISSN 1468-5965
4. Murgaš, F. – Klobučník, M. 2016. Municipalities and Regions as Good Places to Live: Index of Quality of Life in the Czech Republic. In: *Applied Research in Quality of Life*, Vol. 11, Iss. 2, pp. 553-570. ISSN 1871-2576
5. OECD (2013) Guidelines on Measuring Subjective Well-being (Paris, OECD Publishing)
6. Eurofound (2013): Third European Quality of Life Survey – Quality of life in Europe: Subjective well- being, Publications Office of the European Union
7. Final report of the expert group on quality of life indicators. Population and social conditions. *Statistical reports Luxembourg: Publications Office of the European Union*, 2017, ISBN 978-92-79-66085-6
8. Stiglitz J.E, Sen A., Fitoussi J.P. (2009) Report of the Commission on the measurement of economic performance et social progress.
9. <http://ec.europa.eu/eurostat/>

About the authors:

Katarina PETROVCIKOVA, Jana NASCAKOVA,
Vanda LIESKOVSKA

Assistant professor, Associate professor, Professor
University of Economics in Bratislava

Faculty of Business Economics with seat in Kosice

Department of Commercial Entrepreneurship

e-mail: katarina.petrovcikova@euke.sk, jana.nascakova@euke.sk,
vanda.lieskovska@euke.sk

UKRAINIAN AND SLOVAK RETAIL CONSUMERS' BEHAVIOR

Iryna RESHETNIKOVA – Erika DUDAS PAJERSKA – Mykhailo SAHAIDAK

Abstract

Retail represents a significant segment of the economy in each country. Its development or the behavior of its articles has impacts on other spheres of the economy as well. The paper focuses on analyzing consumer behavior in two economies. On the one hand, it is the Slovak economy as an EU Member State and, on the other hand, it is a Ukrainian economy that is not an EU Member State but has a key connection to this integration group (not only due to its geographical position). The consumer is examined through key indicators showing his behavior and, in particular, his expectations. Based on this the paper presents conclusions and recommendations for both selected economies.

Keywords:

retail, consumers' behaviour, consumers' choice, Slovak consumer, Ukrainian consumer,

Introduction

Retail is a sector of the economy whose development influences the operation of the whole economy. For this reason, retail could be defined as the very important area of research. Monitoring and analysing of its assessment indicators have the ability to predict the operation of the entire economy of the state, the community or other economic configuration.

The paper is devoted to analysing the position and mainly behaviour of retail consumers in two economies. The first economy is the economy of Ukraine as a state that is not a Member State of the European Union but has strong relations with this integration group of economies (not only because of geographical location of Ukraine). The second economy is the Slovak economy, which is a member state of the European Union and therefore the retail of this country is involved in the retail sector of the whole community.

1 Methods

The paper focuses on retail analysis in Ukraine and Slovakia. It uses current data to assess the position of this sector in the economies of these countries. The paper also works with indexes that assess the position and mainly consumer behaviour in these economies.

Choosing of indicators is conditioned to availability of data for both of analysed economies. Due to this reason that Ukraine is not a member of European Union, there are not all comparing indicators for this economy. For both of the economies, we are using data from official state statistical office. In option with no compared indexes, we are using the most similar indexes from both of the economies to preserve the objectivity and comparability of data.

Mentioned analysis, in conjunction with the opinions of domestic and foreign experts, provides a basis for providing a conclusion on the status and power of the retail consumers in the economy of Ukraine as well as in the Slovak economy.

2 Status of retail in Ukraine and Slovakia

Firstly, paper provides brief analysis of retail sector in Ukrainian and in Slovak economy. In both analysed area, retail sector represents very important part of economies.

Due to the data of State Statistics Service of Ukraine, in 2016 the turnover of retail in Ukraine increased by 3.7% compared to the 2015 year (in comparable prices) by 1.159 trillion. UAH, although in 2015 it fell down to 20.7%.

Ukrainian retail turnover (excluding the temporarily occupied territory of Crimea and Sevastopol and the part of the counter-terrorist operation zone), increased by 5.8% in January-April 2017 compared to the same period in 2016.

For this period the largest growth of retail turnover which has included retail turnover of the enterprises (the legal and physical persons businessmen who are carrying out activities for retail trade) is recorded in Kirovohrad (for 9.3%), Lviv (for 9.2%), Poltava (for 8.4%), Odessa (for 7.9%) and Zhytomyr (for 7.7%) areas (Kovalska, Rechun, 2017).

Retail trade in Slovakia showed a similar trend as in Ukraine. Based on the survey of the Statistical Office of the Slovak Republic, the retail development maintained a growth tendency. Looking at the last period, the retail turnover in Slovakia in 2016 increased by 1.6% compared to 2015. Recently, the retail turnover obtain he growth trend from January to April 2017 compared to the same period of 2016 at 5, 7%. For this period, the largest increase in retail sales is recorded in the regions of Bratislava, Trnava, Žilina and Košice.

These numbers proclaim that there is a reactivation in retail both in Ukrainian and Slovak economy. Simultaneously, retail specialists confirm that the turnover is getting higher not because of sales increase but in order to inflation and devaluation. However, quantities of sales decreased (Pisariuk, 2016).

Besides almost every participant of the market agrees that drastic fall of purchasing power of population forces them to minimize their goods' surcharge. Discount networks are in the most pleasant state in spite of lower prices. Other forms of trade should correct their strategies and optimize the marketing complex counting consumers' behaviour.

2 Consumer behaviour

Retail consumers' behaviour represents multichannel object of research. On the one hand, consumers are affecting by rational indicators. It means that their behaviour reflects to prices, incomes and other objective aspects. On the other hand, behaviour of retail consumers' is influenced by irrational factors like for example emotions, lifestyle or recent feelings of consumer.

The other group of factors is localization of market where consumers use to purchase goods to satisfy their needs.

2.1 Rational or irrational consumers

The best way to see importance of rational indicators in terms of consumers' behaviour are surveys on real people. The company TNS made a survey¹ and polled residents of Ukraine in the age of 12 to 65 years that live in cities with more than 50000 people and it is said that consumers try to save some money on every purchase. Three of strategies of saving money are given:

- 1) reduce unplanned and spontaneous purchases:
 - this option was chosen by 44.9% of respondents in the first quarter of 2016;
- 2) cut their own needs by buying only necessary products:
 - this option was chosen by 42.2% of respondents in the first quarter of 2016;
- 3) put off expensive purchases:
 - this option was chosen by 40.8% of respondents in the first quarter of 2016.

In terms of Slovak republic, there were polled 500 residents of Slovakia in the age of 15 to 65 years by internet survey of Nielsen Admospher² asking about factors which are influencing retail consumers' behaviour in the way of spending money. The three most telling answers were:

- 1) increasing of purchase of goods with reduce prices:
 - this option was chosen by 54% of respondents in the first quarter of 2016 and mainly in women population;
- 2) purchasing according to retail chains brochures:
 - this option was chosen by 51% of respondents in the first quarter of 2016;
- 3) purchasing according to level of quality of goods:
 - this option was chosen by 33% of respondents in the first quarter of 2016.

Economists provide a lot of possibilities for presenting the role of irrational factors which are influencing retail consumers' behavior. Due to the theme of paper and according to availability of data, we are considering on Consumers' mood Index for Ukrainian consumers and Consumers' Confidence Index in terms of Slovak economy.

Consumers' mood Index is the most common complex indicator of a consumer correlation to his or her welfare and welfare of the whole family, the state of economics and state of a consumer market. It is wildly used in marketing

¹ According to data available on Ukraine: TNS Global. <http://www.tnsglobal.com/office/tns-ukraine> (2017-05-20)

² According to data available on RETAIL magazin.sk: Survey on Retail in Slovakia. <http://www.retailmagazin.sk/spotrebitel/prieskumy> (2017-05-20)

observations worldwide and it describes consumers' willingness to spend money currently (Grosul, Kruglova, Rachkovan, 2017). The points lower than 100 describe the dominance of negative consumers' mood in society (Figure 1).

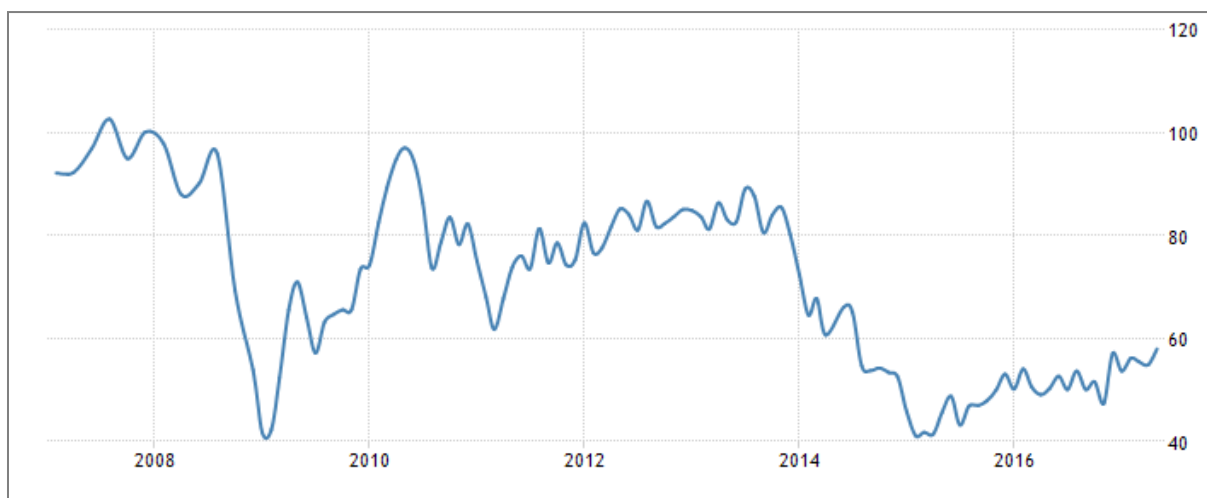


Figure 1: The Changes of Integrated Consumers' Mood Index in Ukraine

Source: According to own procession with data from Trading Economics: Ukraine Consumer Confidence. <https://tradingeconomics.com/ukraine/consumer-confidence> (2017-05-20)

In the period of last four years, the index has decreased from 88 to 55 in 2013-2017. In the first quarter 2017 it was gradually restored to 55, but this growth happened very slowly.

The results of the research in the beginning of 2016 (Figure 1) practically reflect a situation at the end of 2015, in which the top five most important factors in decreasing order of respondents attributed:

- low prices (53%),
- convenient location (46%),
- a wide range of goods (36%),
- availability of sales, discounts, special offers (20%),
- the quality of goods (19%).

Consumers' Confidence Index is an indicator designed to measure consumer confidence, which is defined as the degree of optimism on the state of the economy (in our paper in the state of Slovakia) that consumers are expressing through their activities of savings and spending. The consumer confidence index was started in 1967 and is benchmarked to 1985=100. This year was chosen because it was neither a peak nor a trough. The Index is calculated each month on the basis of a household survey of consumers' opinions on current conditions and future expectations of the economy. Opinions on current conditions make up 40% of the index, with expectations of future conditions comprising the remaining 60%.

In simple terms, increased consumer confidence indicates economic growth in which consumers are spending money, indicating higher consumption. Decreasing consumer confidence implies slowing economic growth, and so consumers are likely to decrease their spending. The idea is that the more confident people feel about the economy and their jobs and incomes, the more likely they are to make purchases. Declining consumer confidence is a sign of slowing economic growth and may indicate that the economy is headed into trouble (Figure 2).



Figure 2: The Changes of Consumers' Confident Index in Slovakia

Source: According to own procession with data from Trading Economics: Slovakia Consumer Confidence. <https://tradingeconomics.com/slovakia/consumer-confidence> (2017-05-20)

Comparing the trends of Consumers' Mood Index in Ukraine and Consumers' Confident Index in Slovakia, it could be said that they are copying the similar trend. On the other hand it's necessary to point on the last levels of these indexes. When we are talking about Consumers' Mood Index counting in Ukraine the value on the beginning of the year of 2017 is mostly on the same level as in the year 2009 where strong shock was. Seeing the last level of Consumers' Confident Index in Slovakia it could be mentioned that till nowadays the deepest point from 2009 was not reached.

2.2. Choice of market

Another way to analyse retail consumers' behaviour is from their view on retail market. Concretely speaking, the view in the meanings of the localization of retail shops.

Nowadays, when society is influenced by high level of motorization, high level of transport networks and many possibilities of buying things without personal moving to retail shops, localization of retail is analysing in different ways. If retail shops want to motivate retail consumers to come to their real stores (no internet stores), retail managers have to count with many factors which are influencing this area.

Paper represents factors that have strong impact on choice of market and also these that have less dependency on retail consumers' behaviour. To maintain objective base of paper, analyses is oriented factors influencing the choice of supermarket. It's due to reason that supermarket could be introduce as the best representative of modernization of retail in both analysed economies.

Results for both of the economies are very similar and copying same trend. Due to this reason, paper provides the average values counting from the results of both economies.

The set of mentioned factors, which are in the top five in order of importance, has already been traditional. Besides, since the end of 2014, the factor "presence of stocks, discounts, special offers" has been ahead of quality of goods (19%) (Urbonavicius, Dikcius, Reardon, 2016). In addition, for the last four years, the share of respondents for whom the convenient arrangement of shop is important has decreased from 50% to 46% (Figure 3).

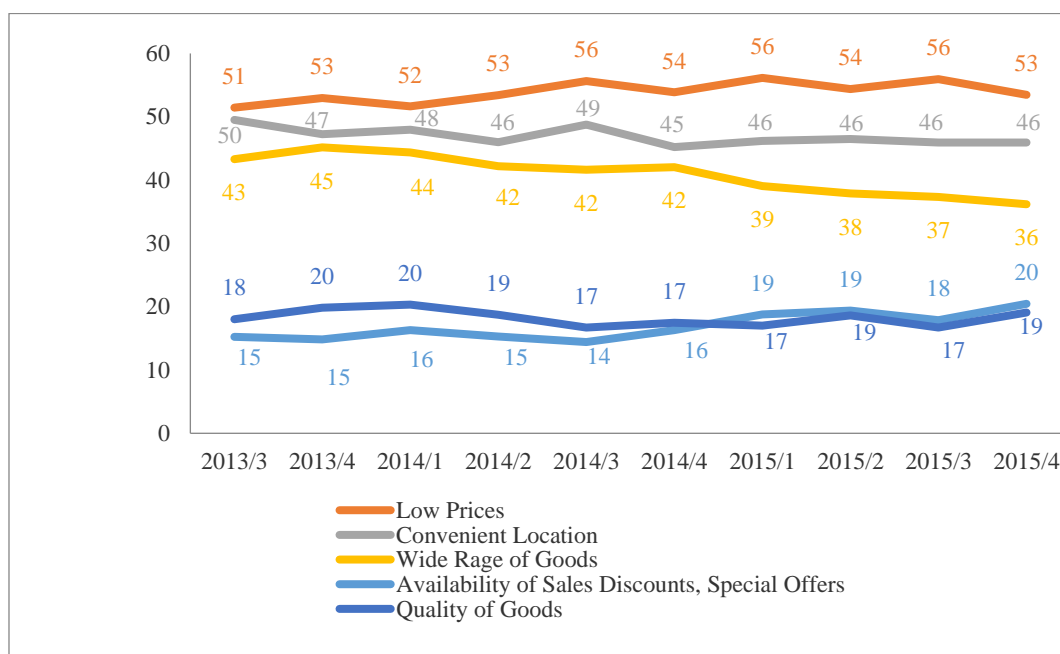


Figure 3: Top-5 Factors That Influence on Choice of the Supermarket

Source: own procession according to data from Ukraine: TNS Global. <http://www.tnsglobal.com/office/tns-ukraine> (2017-05-20) and GfK Global: Consumer Goods. <http://www.gfk.com/industries/consumer-goods/consumer-goods/> (2017-05-20)

That is, for the sake of low prices consumers are ready to go to the shops located at considerable distance from their accommodation and habitual infrastructure for the sake of economy of money (Dubovyk, Buchatskaya, 2017). Also, the number of respondents who consider that the wide range is an important factor has decreased in four years from 43% to 36%.

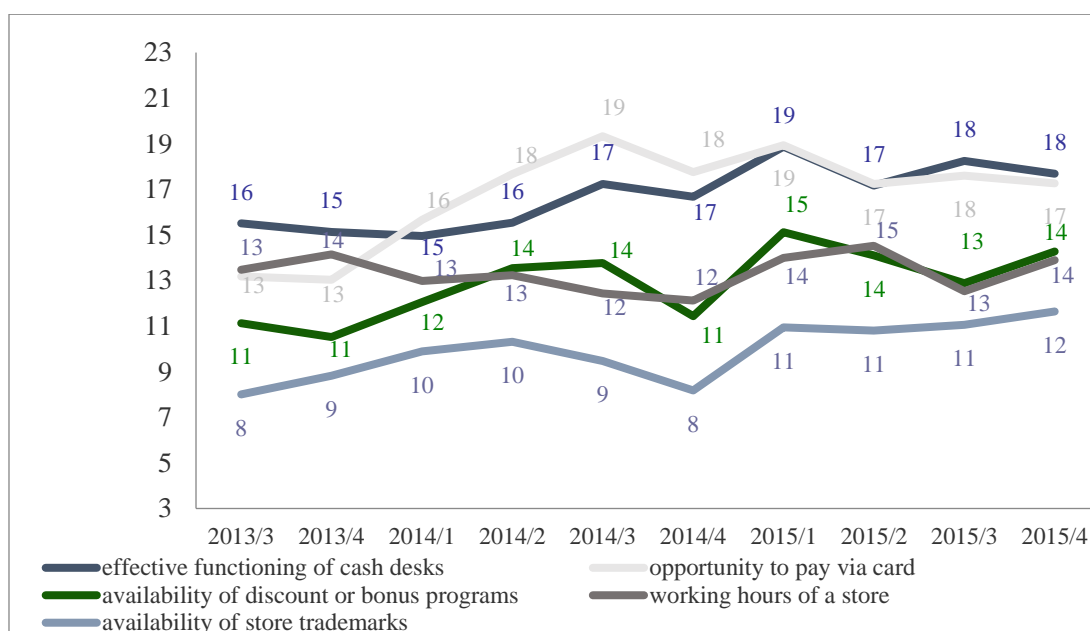


Figure 4: Secondary factors of importance influencing on a choice of a supermarket

Source: own procession according to data from Ukraine: TNS Global. <http://www.tnsglobal.com/office/tns-ukraine> (2017-05-20) and GfK Global: Consumer Goods. <http://www.gfk.com/industries/consumer-goods/consumer-goods/> (2017-05-20)

The next group of factors (Figure 4) are: effective functioning of cash desks (18% of respondents), an ability to pay via card (raised in two years from 13% to 17%), and availability of discount or bonus programs (from 11% to 14%), working hours of a store (14%), and availability of store brands (increased from 8% to 12%).

On the other hand, there is a last group of factors with less important role in influencing the consumers' choice of supermarket: spacious trade hall, polite staff, convenient packaging, availability of product packaging at the cash desk and advertising of the shop.

As we can see, trends of development of these factors are nearly on the same ways. There are no strong peaks or bottoms and during the years they are staying on the same levels in hierarchy of factors influencing the choice of a supermarket (Figure 5).

Taking everything into the consideration, the most important factors that will remain in the nearest future are price instruments of impact on consumers in spite of the low purchasing power of the latter.

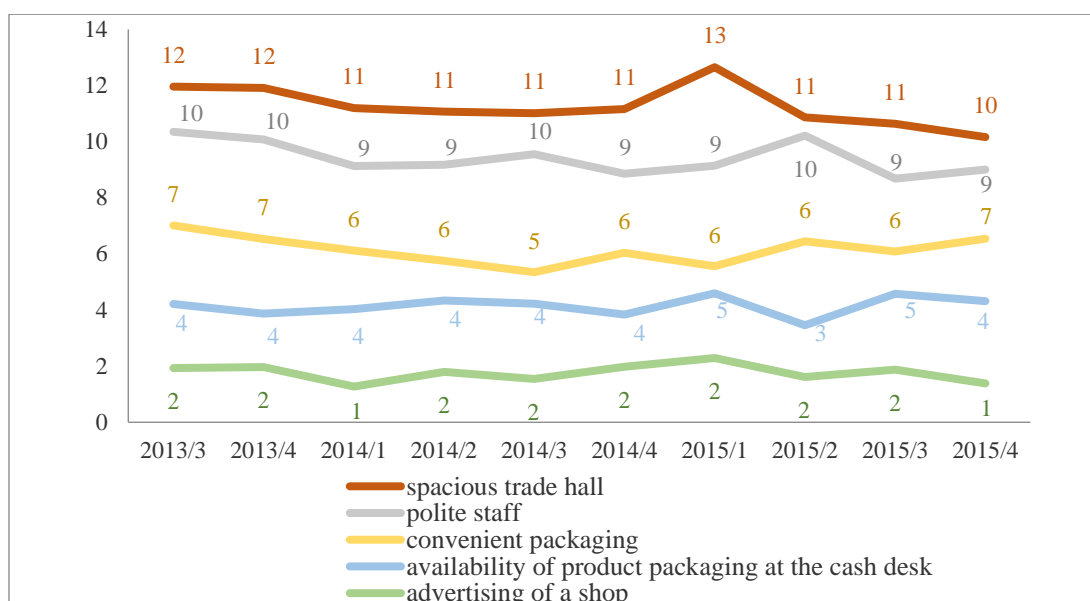


Figure 5: The less important Factors influencing on a choice of a supermarket

Source: own procession according to data from Ukraine: TNS Global. <http://www.tnsglobal.com/office/tns-ukraine> (2017-05-20) and GfK Global: Consumer Goods. <http://www.gfk.com/industries/consumer-goods/consumer-goods/> (2017-05-20)

Conclusions

Retail as the important sector of the economy of Ukraine and Slovakia has to be analysed due to its multichannel impacts on all sectors of society. According to data providing for one economy which is not the member state of the European Union and for one economy which is the member state we can mention some conclusions.

Factors influencing the retail consumers' behaviour could be defined into two groups: rational and irrational. It does not depend on the characteristic of the economies. It results from the personality of consumer. But according to characteristics of the economies one or second group of the factors could be using mostly. If the economy is defined by the high level of standards and well doing development, consumers can behave mostly by their irrational segment of their personality. On the other way, if economy is not so developed, consumers have to behave and to make decisions according to their rationality.

In this area, we can see little differences. But we want to mention that in terms of comparison the Ukrainian and Slovak economy is not due to the differences between the levels of economic development. Consumers in Slovakia are exposed to competition of goods from EU. It means that they can buy were qualitative products from more developed economies (France, Germany, Great Britain) and they can reduce their behaviour according to this and compare them with low price products (which are mostly not achieving so high qualitative standards).

The paper focuses on retail analysis in Ukraine and Slovakia by using of indexes that assess the position and mainly consumer behaviour in these economies. Development of the consumers' mood in these states is affecting by the development of condition in these economies. In terms of Ukraine, it could be seen the deviation of development back to the decrease from economic crisis in 2009. It results from current condition of Ukraine and from the expectations of Ukrainian consumers.

Lastly, consumers' behaviour is also representing in their choice of place of purchase. Paper focuses on the segment of supermarket due to their important role in modern retail market. Factors which are more or less important for making decisions in this area are similar for both analysed economies. Their development not only in the future, but seeing the trends from the past could be very useful for retail managers to maintain important role of real retail stores against the increasing role of internet stores.

Comparing the various aspects of consumer behavior in the economies of Slovakia and Ukraine, it is necessary to point out the recommendations that follow. As regards the situation in Slovakia, consumer behavior has been exposed to the trend of the European Union since 2004. On the one hand, this stemmed from the planned synchronization of the Slovak legislation with laws of the European Union. On the other hand, the Slovak market was opened within the framework of the internal market for integration. As Slovakia is still a fully-fledged EU member state, consumer behavior is fully influenced by the trends of consumers from other member states. For this country, therefore, the recommendations are clearly profiled by this supranational institution. For the Slovak Republic, EU standards need to be introduced to increase the competitiveness of Slovak market, protect the consumer and, on the basis of recent events, ensure the same level of quality of products for the Slovak market of products from other EU countries.

As far as Ukraine is concerned, the recommendations stem from the possibilities of its future direction. Obviously, the public in this economy is divided into two counterparts. One is the proponent of Ukraine's direction towards the European Union, and the other is on the side of Russia as a mentor of the country's development. Following the current situation in the country, it is necessary to say that it will not even solve this controversial situation in the next few years. The occupation of Crimea, the problems with Russia or the poor integration talks with the EU do not target Ukraine either as a future member of the EU or as an economy whose development will depend mainly on Russia. Regarding the recommendations for market development and the use of consumer preferences, Ukraine needs to move towards the trends of advanced economies and economies, which are its largest trading partners. This means that, from a legislative point of view, Ukraine should be inspired by EU and Western economies legislation. From the point of view of the use of consumer preferences, it is also necessary to look at the influence and character of the population which

is also strongly influenced by Russia (also resulting from a strong common history and mutual interdependence).

References

1. DUBOVYK, T. – BUCHATSKAYA, I. 2017. Innovatsiyna spryamovanist' rozvytku pidpryyemstv rozdribnoyi torhivli [Innovative orientation of retailers development]. In *Marketing i menedzhment innovatsii – Marketing and Management of Innovations*, Vol. 1, pp. 30-40, ISSN 2218-4511.
2. GROSUL, V. – KRUGLOVA, O. – RACHKOVAN, O. 2017. Metodychni zasady otsynuyannya spryiatlyvosti zovnishn'oho seredovyshcha dlya adaptatsiyi pidpryyemstv rozdribnoyi torhivli [Methodological framework of external environment assessment for adaptation of retailers]. In *Aktual'ni problemy ekonomiky - Actual Problems of Economics Scientific Economic Journal*, Vol. 4 (190), pp. 62-74, ISSN 1993-6788.
3. KOVALSKA, L. – RECHUN, O. 2017. Proektuvannya lohistychnoyi systemy rozdribnoyi torhovel'noyi merezhi rehioniv Ukrayiny [Designing the logistic system for a retail trade network in Ukraine's regions]. In *Aktual'ni problemy ekonomiky - Actual Problems of Economics Scientific Economic Journal*, Vol. 2 (188), pp. 113-119, ISSN 1993-6788.
4. PISARIUK, S. 2016. Vliyanie faktorov mikrosredyi na effektivnost deyatel'nosti setevyih predpriyatiy roznichnoy trgovli [Factors of microenvironment affecting the retail enterprise activity effectiveness]. In *Aktual'ni problemy ekonomiky - Actual Problems of Economics Scientific Economic Journal*, Vol. 1 (175), pp. 119-128, ISSN 1993-6788.
5. URBONAVICIUS, S. – DIKCIUS, V. – REARDON, J. 2016. Credibility of a Salesperson in Retailing: Judgments on the Basis of their Demographic parameters. In *Marketing i menedzhment innovatsii – Marketing and Management of Innovations*, Vol. 2, pp. 49-58, ISSN 2218-4511.
6. GfK Global: Consumer Goods. <http://www.gfk.com/industries/consumer-goods/consumer-goods/> (2017-05-20).
7. MIND UA: Oborot rozdribnoyi torhivli Ukrayiny v I kvartali vyris na 5,8%. <https://mind.kiev.ua/news/20172191-oborot-rozdribnoyi-torgivli-ukrayini-v-i-kvartali-viris-na-58> (2017-05-19).
8. RETAIL magazin: Survey on Retail in Slovakia. <http://www.retailmagazin.sk/spotrebitel/prieskumy> (2017-05-20).
9. REUTERS: V Ukrayini zrostaye rozdribna torhivlya. <https://economics.unian.ua/finance/amp-1986536-v-ukrajini-zrostaet-rozdribna-torgivlya.html> (2017-05-28).
10. Statistic Office of the Slovak republic: Official website. <https://slovak.statistics.sk> (20.05.2017).
11. State Statistics Service of Ukraine: Official website. <https://ukrstat.org/en> (2017-05-19).

12. Trading Economics: Slovakia Consumer Confidence.
<https://tradingeconomics.com/slovakia/consumer-confidence> (2017-05-20)
13. Trading Economics: Ukraine Consumer Confidence.
<https://tradingeconomics.com/ukraine/consumer-confidence> (2017-05-20).
14. Ukraine: TNS Global. <http://www.tnsglobal.com/office/tns-ukraine> (2017-05-20) (20.05.2017).

About the authors:

Iryna RESHETNIKOVA

Doctor of Economics, Professor

SHEE “Vadym Hetman Kyiv National Economic University”, Ukraine

Faculty of Marketing

Department of Marketing

e-mail: reshet2002@gmail.com

tel.: +380506990719

Erika DUDAS PAJERSKA

Assistant professor

University of Economics in Bratislava

Faculty of Business Economics with seat in Kosice

Department of Commercial Entrepreneurship

e-mail: erika.dudas@pajerska.sk

tel. +421908316994

Mykhailo SAHAIDAK

Doctor of Economics, Associate Professor, Deputy director for research,
academic and education work

SHEE “Vadym Hetman Kyiv National Economic University”, Ukraine

Kyryvi Rih Economic Institute

e-mail: michael_p_s@ukr.net

tel.: +380678009059

Instructions for authors:

TITLE OF THE PAPER IN ENGLISH (TIMES NEW ROMAN, 16 pt, CAPITAL BOLD)

TITLE OF THE PAPER IN SLOVAK (TIMES NEW ROMAN, VEĽKOSŤ 14 pt, CAPITAL BOLD)

Name SURNAME (Times new roman, italic, 14 pt)

Abstract (Times new roman, 12 pt, bold)

Abstract in English – max. 10 lines. (Times new roman, 12 pt).

Keywords: 5 – 8 key words in English

Introduction (Times new roman, 14 pt, bold)

The editors of the journal welcome empirically (experimentally) founded studies, survey studies, contributions to “Discussion” (personal views and attitudes on controversial issues in economics as science, as a professional hpractice, etc.). Integrative studies documented by relevant data from central and east European regions and member countries of European Union are specially welcomed. Naturally, all contributions should be original. The publishing of the article is free of charge.

The editors accept only contributions written in English (grammatically correct). The manuscript should be no longer than 15 pages, single-space typed, basic text using font Times New Roman 14 pt. Illustrations, i.e. tables, diagrams, black & white pictures; text should mention their placement, numbering and titling. With all figures borrowed from other authors, the authors' names should be listed in figure legends. Please use the following format of the paper in MS Word. Page size A4 (21 cm x 29,7 cm), single spacing, all margins at 2,5 cm.

Table 1 Title of the table (Times new roman, 12 pt)

Source: XYZ (Times new roman, 12 pt)

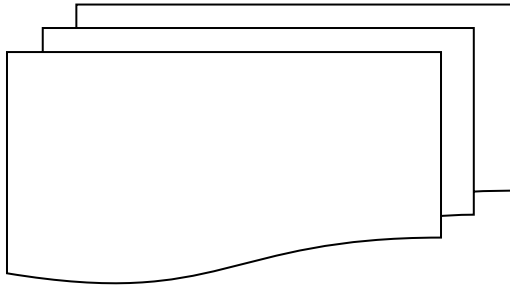


Figure 1 Title of the figure(Times new roman, 12 pt)
Source: XYZ (Times new roman, 12 pt)

1. Title of the chapter, numbered (Times new roman, 14 pt, bold)

Text text text text text text text text text text text text text text text text text text (Times new roman, 14 pt).....

1.1 Title of the subchapter, numbered (Times new roman, 14 pt, bold)

Text text text text text text text text text text text text text text text text text text (Times new roman, 14 pt).....

Conclusion (Times new roman, 14 pt, bold)

Authors should submit their paper as an e-mail attachment (in MS Word or Rich Text Format) to: acta@euke.sk. Submission to *Acta oeconomica cassoviensia* implies that the paper is not submitted to any other journal at the same time. Manuscripts are not returned to the authors.

References (Times new roman, 14 pt, bold)

Citations, including the author's name and year of publication should be in parenthesis; for instance: (Smith, 1990) or P. S. Smith (1990). The relevant works that are referred to in the text must be consistently quoted and included in the bibliography in alphabetical order). Authors should follow the norm STN ISO 690.

About the author

The author (authors) should give their first name and surname as well as the full address of the center where the work was originated. The information about the author, 50 words maximum, must be given at the end of the article.



ACTA OECONOMICA CASSOVIENSIA

ISSN 1337-6020

