Business Risk in Changing Dynamics
of Global Village 2

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Business Risk in Changing Dynamics of Global Village 2

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FOREWORD

"World is changing as we are thinking, and nations are reshaping as voters are changing. Current world affairs, and Presidential election's result in Ukraine, presents a new roadmap for changing Ukraine, Russia, and the European Union relations. Mr. Zelenskyi has said that he supports Ukraine's aspiration to one day join the European Union and NATO. He also wants Moscow to return Ukraine's annexed Crimean Peninsula. He said on Sunday the April 21st 2019, that Ukraine will continue talking to Russia in the Normandy format, the peace talks that include Germany, France, Ukraine and Russia.

Ukraine is changing which is increasing the expectations of the people of Ukraine for the better life and better society with less corruption and more opportunities.

It's a globalisation, which creates a concept of global village without border with equal opportunity for everyone. The dynamics of this concept is that minimize the restrictions and maximise the benefits. The recent event – BREXIT (exit of U.K. from E.U.) can be seen as one of the best example of such risk in the dynamics of the global village, as highest than ever before. The concept of sovereignty and sovereign states are increasing, borders are fenced, and migration policies are restricted, and new risks are generated in the global market. Predictions are presented by the analysts for short and long term effects, but the risk in businesses in the current context of globalisation is remain in suspicion.

Thus, we've decided to bring BRCDGV (Business Risk in Changing Dynamics of Global Village) second edition at Ternopil Ivan Puluj National Technical University, Ternopil, Ukraine. It is great opportunity for research scholars, business elites, lawmakers, governmental and nongovernmental organizations, and society at large, to come and share your concerns in order to find the best solutions for creating a better world, better Ukraine".

Dr. Pradeep Kumar

The monograph is prepared based on the presentations and discussions made at the **II International Conference "BUSINESS RISK IN CHANGING DYNAMICS OF GLOBAL VILLAGE (BRCDGV 2019)",** November, 7th-08th, 2019, in Ternopil, Ukraine.

CONFERENCE AIM

The aim of this scientific international conference is to provide a platform for professional debate with the participation of experts from around the globe in order to identify & analyze risks and opportunities in today's global business, and specifically in Ukraine. The conference will provide a framework for researchers, business elites and decision makers to uplift the business ties and minimise the risk for creating a better world and better Ukraine.

SCALE OF THE CONFERENCE

The Conference is designed to call experts around the globe from different sectors of practices which are effected by globalization and watching changes in Europe as well as in Ukraine. It is an excellent platform for interactions and communication between academicians, corporate representatives, policy makers, representatives of organizations and community, as well as individuals being the part of this globalized world.
The 1st edition of this conference was held at the University of Applied Sciences in Nysa, Poland (2017); the 2nd edition took place at Ternopil Ivan Puluj National Technical University, Ukraine (2019); the 3rd edition will be organized at Patna University, India (2020) in cooperation with Indo-European Education Foundation (IEEF, Poland) and its partner universities from Poland, India, Europe and other part of the world.

BRCDGV 2019

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PREFACE

Under modern conditions of globalization nowadays, economic activity is undergoing changes. Innovative technologies, new forms of business, dynamic changes taking place in the world today result in the emergence of the necessity to minimize risks in order to maximize benefits.

The cooperation between experts from different fields with the aim to ensure sustainable growth – policymakers, scientists, universities representatives and business elites is essential nowadays. With the purpose to bring them together and discuss the main issues of todays' global world this conference took place in Ternopil, Ukraine. As Ukraine is now passing through a dynamic period of changes, recommendations coming up from such discussions can be very beneficial for building stronger society and meet the risks globalization brings up.

This monograph provides a useful review of economic, financial and policy issues in the context of globalization processes and has proven extremely popular with practitioners and industry advisors. This edition is given the continued high demand and interest for experts form different areas working on diminishing of business risks wishing to keep abreast of current thinking on this subject.

According to many experts process of managing risks is currently one of the most relevant business technologies and at the same time it is a complex process which requires ground knowledge in the research field and practical experience. The popularity of business risks management is due to objective reasons such as dynamics of society, interconnections and interdependence between different players in the society, increasing role of human capital in the country's sustainable development.

The monograph includes four main sections:

❖ **Economics**

provides a review on International Economics, Welfare Economics, Labor Economics, Economic Development, State and Household Finance, Economic Policy, Regional Economic Development, Public Economics

❖ **Business & Tourism**

contains discussions on the Entrepreneurship, Banking and Insurance, Accounting, E-Commerce, International Business, Human Resources, Science and Business, Education and Business, Healthcare Administration, NGO Activities, Tourism, Investments Opportunities

❖ **Management & Marketing**

analyzes Organizational Management, Governance and Effective Leadership, Strategic Management in Public Sector, Change Management, Trends and Future of Strategic Management, Social Corporate Responsibility, Marketing Theory and Applications, Marketing Strategies, International Marketing, Customer Relationship Marketing, Consumer Behavior, Market Structure and Pricing

❖ **Technologies & Innovations**

is devoted to Artificial Intelligence, Big Data, Data Mining, Innovations Management, It, Social Networks, R&D, Web Technologies, Engineering

The monograph covers a wide range of economic topics in today's global world and recommendations of how to overcome problems and meet challenges.

BRCDGV 2019 was initiated by the Indo-European Education Foundation (Poland), hosted by Ternopil Ivan Puluj National Technical University (Ukraine) in cooperation with University of Applied Sciences in Nysa (Poland), ABS Institute (Poland), Savitrabai Phule Pune University (India), Patna University (India), University of Galati (Romania) and other partners from different countries.

We believe that discussions held within the suggested topics produce new recommendations in the process of managing business risks in changing dynamics of global village.

Organizing Committee

ECONOMICS

*International Economics * Welfare Economics * Labor Economics*

*Economic Development * State and Household Finance * Economic Policy*

*Regional Economic Development * Public Economics*

INTERNATIONALIZATION OF HIGHER EDUCATION AND IT'S IMPACT ON ECONOMY: CASE OF INDIA AND POLAND

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Abstract
Education is a basic tool for the development of a society which accelerate the growth in many fields. And it keeps growing at all levels. By changing demands of industries to get skilled and qualified employees has also effects the model of education to be supplied by the higher educational institutions. For the fulfillment of such gap many pre-dominant and powerful multinational corporations (MNCs) getting involved for providing services to the private and public higher educational institutions, with interest of profit making business. Since, GATS (general agreement on trade in services) covered in the WTO (world trade organizations), education has been traded as service. And many countries are exporting higher education as tools for profits making. The United States is the largest exporter of education services in the world followed by France, Germany, the United Kingdom, and the Russian Federation, inspiring many others to be open for internationalization of higher education. The trend of treating higher education as tradable commodity has effected the economy and education system of may developed and developing countries including Poland, and India.
Impact of demography on higher educational institutions in Poland imposed the government of Poland, to bring new changes in the existing laws for the development of higher education system, and use it as commodity for trade services for profit making which will help to sustain private and public universities/educational institutions as well as maintain the quality of higher education. India with largest number of consumers for higher education, treating higher education as a tradable private good, and bringing many changes for the system of higher education to be accessible for all. For Corporates, education as a business sector is a trillion dollars industry, where the students are treated as consumers, teachers are experts, the institutions or companies are service providers, and the teaching-learning process is a business for profit making.

Keywords: internationalization, higher education, trade, economy, India, Poland.

INTRODUCTION

Education is the key to development of any society, state or country. Because education and society are interconnected with each other in many fields, and education system always keeps changing, based on society's needs. With such changes, today the world becomes a global village because of the globalization and all countries help one another in the process of development. Internationalization of higher education became the part of globalization and trade services, since education entered in the General Agreement on Trade (GATT) in Service sector, being negotiated under auspices of the World Trade Organization (WTO). As a member of WTO associated with GATT agreement became the part of this global village by opening doors for others to trade in education sector – education as a service product.

International trade in higher education services – a trillion dollar industry has grown rapidly in recent years in a variety of forms, including recruitment of international students, establishment of university campuses abroad, franchised provision and online learning. The main factor of this industry which is enhancing business growth in education service is 'the excess demand for domestic higher

education and the need for internationally recognized qualifications in emerging regional and global markets for highly skilled labor'. Several countries have also deliberately encouraged foreign collaborations to improve the quality of domestic higher education, through bringing many changes as per today's need – India and Poland is among them.

Unfortunately, education is facing difficult times in Poland, India, and many countries. There are problems with budget shortfalls, increasing enrollment demands, escalating educational costs, and a reduction in foreign aid.

Counting bilateral trade India and Poland are not very significant economic partners. From April 2000 to March 2019, India recorded over $672 million of foreign direct investment (FDI) from Poland, just 0.16 percent of its total FDI inflows in that period. As per Polish statistics, India's exports to Poland had a total value of 2.17 billion Euro in 2017 and 1.79 billion Euro in 2018, while the trade in the reverse direction was valued at 635 million Euro and 694 million Euro in the same years. India's exports to Poland, while steadily growing, have been usually less than 1 percent of Poland's total annual imports in previous years. Polish exports to India have been minuscule both as a percentage of total exports from Poland and India's total imports in the same period[1].

In higher education total number of foreign students studying in Poland (2018) was 72 743 from 170 countries, over 6 950 more than a year ago (over 10% increase) in the academic year 2017/2018. Foreign students currently make up 5.63% of the total number of students in the country (ten years ago the figure was only 0.71%, in the academic year 2016/2017 – 4.88%)[2]. Students from Ukraine and Belarus are the dominant group at Polish universities. In the academic year 2017/2018, 37 829 Ukrainians and 6044 Belarusians were studying in Poland. The third largest group of students studying in Poland are Indians (2987), i.e. 849 students more than in the previous year. Compared to the academic year 2016/2017, increase with 138%. A rapidly growing population in India and at the same time not enough places in Indian higher education institutions make them more and more considering studying abroad, including Poland[3].

It is clearly understood that as students mobilities are increasing from India to Poland – trade possibilities to improve business relations are opening new doors. Evidently, recent visit of India's external minister, Dr S. Jaishankar to Poland[4] on August 28 2019, and launching direct flight on September 11th 2019, Warsaw-Delhi, by Polish state airlines (LOT), shows growing interest from both sides.

Therefor it was necessary to investigate the possibilities for economic development through educational cooperation. Research is presenting a concept that

[1] Krzysztof Iwanek (2019). Revising Warsaw-New Delhi Ties After Indian the Foreign Minister's Visit to Poland, India's economic ties with Poland are not very strong, but relations have potential [Online]. – Available at: https://thediplomat.com/2019/09/revising-warsaw-new-delhi-ties-after-indian-the-foreign-ministers-visit-to-poland/

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[3] Foreign students in Poland - numbers and facts 2018 (perspective market) [Online]. – Available at: http://www.studyinpoland.pl/en/index.php/news/85-foreign-students-in-poland-numbers-and-facts-2018

[4] https://economictimes.indiatimes.com/news/politics-and-nation/indian-foreign-minister-visits-poland-ahead-of-direct-delhi-warsaw-flight/articleshow/70882976.cms?from=mdr

education is not only a service product to be traded but it is a key factor for international trade as well as bilateral relations for two countries. Presenting Poland and India – growing trade is not hat much significant as significant is the number Indian students growing at Polish universities (from 209 in 2014 to 5500 in 2019). So the author has selected a sample of questionnaire for research scholars, educational institutions and recruitment agencies working with India and Poland in order to analyze the process of trading education services for economic benefits through internationalization of higher education. It's an ongoing research and final outcome of this research will be presented in the form of a text book.

Objective of the study. The main objective of this study is identify following possible areas towards internationalization of Higher Education and its impact on economy:

1. To find out the possibilities for educational cooperations between India and Poland.
2. Current status of Polish universities – private and public funded.
3. Procedure established by universities – for student's recruitment.
4. Foreign branches of Indian/Polish universities.
5. Education as commodity product for service sector.
6. Identifying the barriers – visa restrictions, language etc.
7. By removing/reducing identified barriers trade will grow.

Hypothesis of the study

Both countries – India and Poland have potentials to improve trade volume by identifying the barriers, and make new changes for removing/reducing barriers in order to improve trade flows. It can only happen when both countries should realize the importance internationalization of higher education, and fulfill each other needs. Polish universities are laking number of students to be admitted for their courses, who will be paying full tuition fee and continue full circle of higher education in Poland; Indian students have not much options to select best universities in India due to less number of universities and high numbers of applicants. Thus hypothesis is emphasized that by following demand-supply model of business equation between Poland and India, trade flow will be increased. And internationalization of higher education can play a wider role to improve economic growth of both the entities.

Sample selection

In the present study students from various levels – bachelor, master and PhDs, research scholars, faculty members, university authorities and educational agencies from various departments of partner universities of IEEF[5] (Indo-European Education Foundation), were selected as a sample. Sample was decided in 3 types:

1. Research Sample for university/institution's authorities.
2. Research scholars/faculty members.

[5] http://www.ieef.pl/p-59-Indian-Universities

3. Students – bachelor, master, PhDs.

There were 53 universities/educational institutions, 31 research scholars/faculty members, 200 students from bachelor and master level, and 15 students of Ph.D studies. Hence the total number of sample students was 299.

Data collection

Research participants were given some necessary instructions to fill up the questionnaire. There was time limit of 21 days to return the questionnaire. One and average fifteen minutes participants for this research filled the questionnaire. Most of the participant institutions, research scholars and students are associated with Indo-European Education Foundation, Warsaw, Poland. The students participating from bachelor and master level are mostly from India, Nepal, Ukraine, Belarus, Uzbekistan, Kazakhstan, and the Russian Federation.

RESEARCH RESULTS AND DISCUSSION

A. From the study of Appendix 1. Sample for All categories

Results show that there is huge gap between Polish and Indian education system (Figure 1).

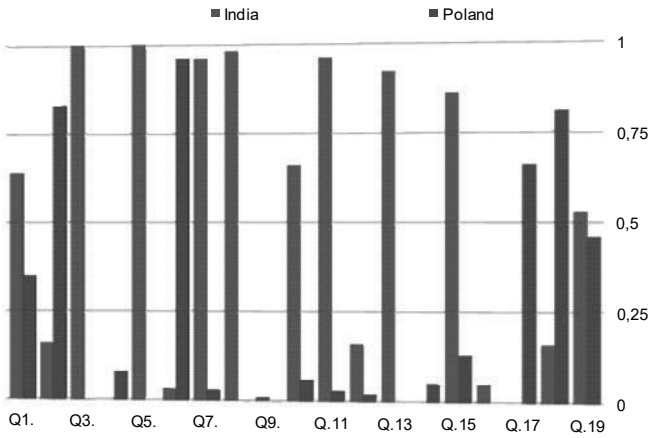

Figure 1. Results of the study of Appendix 1. Sample for All categories

In India were people would like to be associated with public funded universities rather than private universities, when it's a question of internationalization of higher education and youth participation. And more attractive towards private universities when it's about modern education for skill development, to be eligible for competitive market. In other hand, Polish private universities are more open for internationalization of higher education rather than public universities. Polish public universities in are only depending on public grants and EU fundings. But private universities are struggling for survival with no fundings and no students. They are in need to get anyone who pay them for their courses and let them to survive for few more years. It has been also analyzed that most of the private universities in Poland,

are not running any specific procedure for recruitment of students in order to check their abilities and skills including language proficiencies and financial stability, which is effecting quality of education in Poland; opposite to that Indian universities are well established for checking students eligibilities by conducting several layers test such as CET (common entrance test), group discussion, and personal interviews.

Polish universities are not yet internationalized in terms of opening their own branches abroad; but Indian private universities are very much involved to open foreign branches for foreign students. In general Poland and India – public funded universities are more focused to provided education to the people based on funds received by governments as well as individuals, but private universities are more commercialized and providing education as commodity product for service sector. In poland still language is one of the biggest barrier where many faculty and administrative staffs are not able to speak English; other had India in the second largest English speaker in the world (after USA). For international students to be admitted at Polish universities – visa procedure is another biggest challenges for incoming students in comparing to the students going to Indian universities. Examples of perceived 'barriers'in the trade in higher education services might include visa restrictions, taxation that disadvantages foreign institutions and accreditation arrangements that privilege domestic institutions and qualifications.

B. From the study of Appendix 2. Sample for University/Educational Institutions towards Internationalization of Higher Education (Figure 2)

Sample 2 shows that Internationalization of higher education helps to bring latest knowledge to the country, it would lead to expansion of higher education, it can increase the quality of higher education, it will remove the technological backwardness, benefits of foreign visiting faculties can help to develop the global

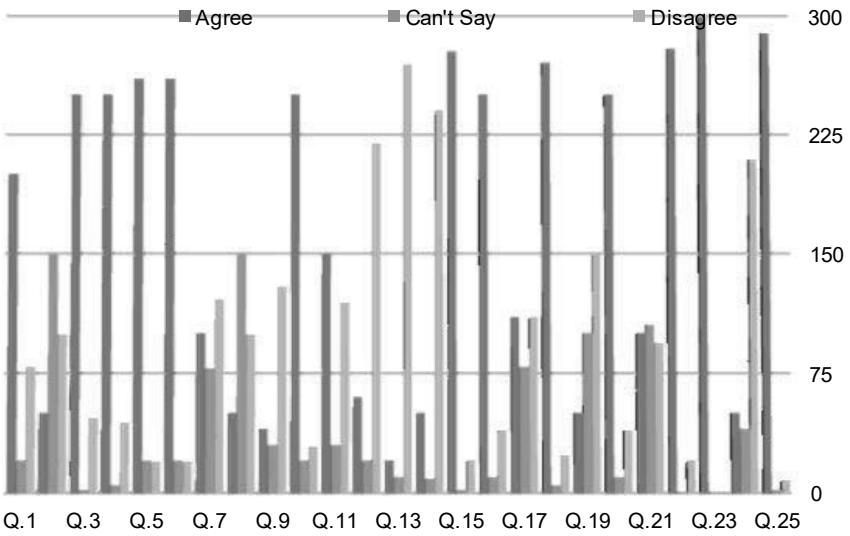

Figure 2. Results of the study of Appendix 2. Sample for University/Educational Institutions towards Internationalization of Higher Education

competencies, education will become the profit generating product. Internationalization will be beneficial to poor and middle class people, and doesn't effect to fee increases at international level, it will help to develop international values as well as cross border understanding and help to decrease the social gap. It won't effect of Indian/Polish status as means of liberation, it is also helping to improve many skills rather then dominating English language.

It is also presented in this research that internationalization of higher education will increase the gap between different social classes, and higher education will become a commodity and business services.

Watching India Poland cooperation for Poland India is one of the largest market for Polish universities, but Polish universities are not most preferable destinations for Indian students. Indian students may choose Poland due to low tuition fee offered by Polish universities and low living cost in EU countries. The result shows that growing population of India is not able to be accommodated by Indian universities, and they'll be looking forward to go abroad for higher education, in this case Polish universities must establish a proper screening process to check qualification of Indian students to be admitted. Also participants presented their concerns that because of internationalization of higher education, education will become a commodity and most powerful countries will control the educational agenda of the world.

C. From the study of Appendix 3. Sample for Research scholars/faculty members towards Internationalization of Higher Education

Research shows that internationalization of higher education will be enhancing researcher and faculty members to become the part of international culture (Figure 3).

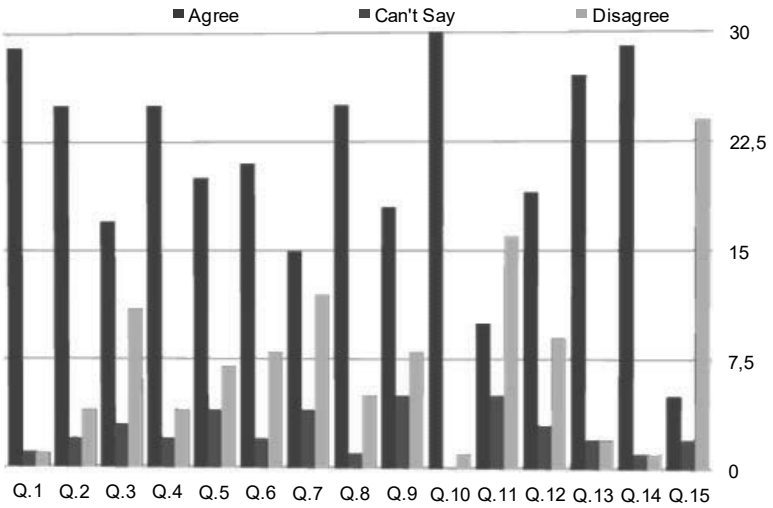

Figure 3. Results of the study of Appendix 3. Sample for Research scholars/faculty members towards Internationalization of Higher Education

It'll hep to improve their skills up to international standards. It'll also help them to conduct joint research projects, improve language skills (English as medium of

instruction), through mobility of faculty and staffs will improve cross-border understanding and it'll help to promote home as well as at host universities. Internationalization will also help to establish new contacts for professional linkages.

Opinion concerning India, Poland cooperation is very positive but working experience with Polish universities are not appreciated, in contrary Polish scholars experience working with Indian universities are much more appreciated, and showing their willingness to go further for university cooperation. About Indian students admitted to Polish universities – opinion about the quality of Indian students are very high and willing to get more students from India.

D. From the study of Appendix 4. Sample for Students – bachelor, master, and PhDs towards Internationalization of Higher Education

Research shows that the value of participating student' are getting higher qualification with international exposure (Figure 4). It makes them more self independent as well as best solution finders in different situations in cross cultural communication. It helps them to improve their language skills and interactive capacity with students from different part of the world, which makes them a global citizen. As universities are becoming more internationalized, more opportunities to get international scholarships are available for participating students. It's giving an opportunity to get experience from many different universities as well culture by getting dual diploma certificates by paying even low tuition fees at the home universities.

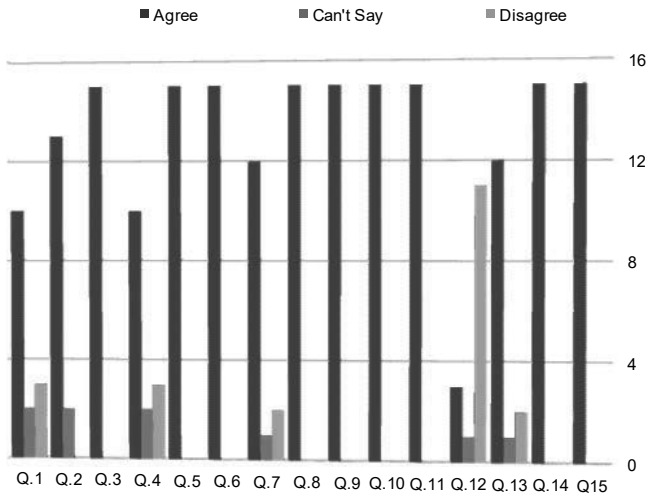

Figure 4. Results of the study of Appendix 4. Sample for Students – bachelor, master, and PhDs towards Internationalization of Higher Education

Internationalization of higher education is very much beneficial for students towards his/her personality development with international skills which helps them to find better job opportunities.

CONCLUSION

All participants in this research are related with education sector and contributing for building nations with their long life learning experiences. They are the shapers of the new knowledge in different fields. So it was very important to know their opinions about the changes which occurs in higher education. From the results it can be said that researchers have a positive attitude towards internationalization of higher education. There are some threats also but overall picture is clear and the new generation is ready to accept the new challenges in the field of education.

There are various reasons for arguing that internationalization will become increasingly important in higher education and it's impact will be visible for national economy. There are three widely recognized arguments which have so far served as main driving forces for internationalization:

1. Academic and professional requirement for graduates increasingly reflect the demands of the globalization of society.

2. The recruitment of foreign students has become a significant factor for institutional income and of national economic interest.

3. The use of new information and communication technologies in the delivery of education and the involvement of private sector in this mean that national borders and the role of national government in education become blurred.

Thus we can say that the process of internationalization and globalization have become salient features of the contemporary world.

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5. http://www.ieef.pl/p-59-Indian-Universities

A. Appendix 1. Sample for All categories

Sr. No.	Statement	India		Poland	
1	2	Yes	Percentage	Yes	Percentage
1	Are you associated with public funded university?	193	0.64%	106	0.35%
2	Are you associated with private university?	50	0.16%	249	0.83%

Sr. No.	Statement	India		Poland	
3	Do you've any specific procedure student's recruitment at your university to check ability of admiring student?	299	100%	0	0%
4	Common Entrance Test or any standard test is organized for selecting your students to get admitted at your university, in Poland?			25	0.08%
5	Common Entrance Test or any standard test is organized for selecting your students to get admitted at your university, in India?	299	100%		
1	**2**	**Yes**	**Percentage**	**Yes**	**Percentage**
6	Are you admitting student on the basis of obtained grades/marks on 10+2 std./ graduation?	10	0.033	289	0.96%
7	Do you have any special tools to check student's ability for language test before admitting them at your university?	290	0.96%	9	0.03%
8	Your university's admission office is also checking the financial eligibility of a student, before admitting to the specific course of study?	295	0.98%	0	100%
9	Your university have it's own foreign branch ?	3	0.01%	0	0%
10	Are you taking education as commodity product for service sector?	200	0.66%	2	0.006
11	Do you think visa is still a biggest barrier ?	290	0.96%	9	0.03%
12	Positive experience working with Polish/Indian universities	50	0.16%	8	0.02%
13	Language is also a barrier at Polish universities	276	0.92%		
14	Language is also a barrier for Indian universities			15	0.05%
15	Your university is running all courses in English study programs and all teaching as well as administrative staffs are able to communicates in English?	259	0.86%	40	0.13%
16	All degrees/diplomas offered by Polish universities are recognizable in India ?	15	0.05%		
17	All degrees/diplomas offered by Indian universities are recognizable by Poland?			200	0.66%
18	Internationalization of higher education is a tool to generate financial support through foreign students?	50	0.16%	244	0.81%
19	Is internationalization supportive for educational business?	160	0.53%	139	0.46%

B. Appendix 2. Sample for University/Educational Institutions towards Internationalization of Higher Education

Sr. No.	Statement	Agree	Can't Say	Disagree
1	2	3	4	5
1	Internationalization of Higher Education will bring in latest knowledge from the developed world to the developing countries	200	20	79
2	Internationalization would lead to expansion of higher education	50	150	99
3	Internationalization of Higher Education will help the research activity for finding a new partner	250	2	47
4	Internationalization of Higher Education would help to increase the standard and quality of higher education	250	5	44
5	It will eliminate the technological backwardness from the system of higher education	260	30	9
6	Foreign visiting faculty will develop the global competencies	260	20	19
7	Internationalization of Higher Education would result in a profit generating product	100	78	121
8	Internationalization of Higher Education will deprive those who do not have capacity to pay	50	150	99
9	Internationalization of Higher Education will increase higher fee structures	40	30	129
10	Internationalization of Higher Education will result in good student teacher relationship	250	20	29
11	Cross-border understanding will be promoted as a result of this system	150	30	119
12	It threatens existence of own traditions, social and cultural values	60	20	219
13	Education will lose its Indian/Polish status as a means of liberation	20	10	269
14	It is threat to the long term sustainability of linguistic diversity specially through the dominance of the English language	50	9	240
15	Higher Education will become a commodity and business	277	2	20
16	It will decrease the gap between the different social classes	250	10	39
17	The most powerful countries will control the educational agenda of the world	110	79	110
18	India is one of the largest market for Polish Universities	270	5	24
19	Polish universities would be one of the best destination for Indian students	50	100	149
20	Poland is a favorable country among Indian students due to low price of tuition fee offered by Polish educational institutions for foreign students	250	10	39

Sr. No.	Statement	Agree	Can't Say	Disagree
21	Indian universities are mostly crowded with lowest choices for foreign students	100	105	94
22	Highest demands of higher education in india due to fastest population growth is enhancing Indian students to go abroad for higher education	279	0	20
23	Lowest growth of population/ demography impact in Poland making Polish universities to be more open towards internationalization of higher education in order to attract foreign students	299	0	0
24	Polish recruitment agencies or admission offices are maintaining standard to get local as well as international students	50	40	209
25	Indian universities/educational institutions are maintaining standards to get qualified local as well as international students	289	2	8

C. Appendix 3. Sample for Research scholars/faculty members towards Internationalization of Higher Education

Sr. No.	Statement	Agree	Can't Say	Disagree
1	**2**	**3**	**4**	**5**
1	Internationalization will enhance faculty/research scholars to participate in International culture	29	1	1
2	Internationalization would lead individual faculty/ scientist to improve his/her skills up to international standards	25	2	4
3	It'll help to conduct joint research projects	17	3	11
4	It'll enforce to improve language skills and specially to be fluent for English rather than local/regional languages	25	2	4
5	It will increase the value of cross culture in research studies	20	4	7
6	Foreign visiting faculty will develop the global competencies	21	2	8
7	Cross-border understanding will be promoted as a result of this system at home and host universities	15	4	12
8	Internationalization of Higher Education will help to improve skills those are not familiar with international requirements	25	1	5
9	Internationalization of Higher Education will help to increase financial gain and knowledge expansion	18	5	8
10	Internationalization of Higher Education will result in good networking and establish new professional linkages	30	0	1
11	Experience working with Polish universities	10	5	16
12	Experience working with Indian universities	19	3	9

Sr. No.	Statement	Agree	Can't Say	Disagree
13	Potential cooperation for Poland and India to develop trade relations through education	27	2	2
14	Do you've positive opinion about Indian education system and standard of Indian students	29	1	1
15	Do you've positive opinion about Polish education system and standard of students	5	2	24

D. Appendix 4. Sample for Students- bachelor, master, and PhDs towards Internationalization of Higher Education

Sr. No.	Statement	Agree	Can't Say	Disagree
1	**2**	**3**	**4**	**5**
1	Internationalization values will develop in the students due to Internationalization of Higher Education	10	2	3
2	Internationalization will offer to become a part of international culture	13	2	0
3	It'll help to meet new challenges with best possible solutions	15	0	0
4	Internationalization will help students to more adoptive for different culture	10	2	3
5	It will improve language skills and specially to be fluent for English along with other languages	15	0	0
6	Becoming a global citizen	15	0	0
7	Cross-border understanding will be promoted as a result of this system	12	1	2
8	More opportunities for scholarships or support through international funding	15	0	0
9	Opportunities for Dual degrees programs	15	0	0
10	International exposure through mobilities	15	0	0
11	Several options to select best universities around the world with less fee structure and more valuable degree/diplomas	15	0	0
12	Internationalization will lead to increase of tuition fee to the home university	3	1	11
13	Internationalization of higher education is very much beneficial for students towards his/her personality development with international skills	12	1	2
14	It'll help to find better job opportunities with higher qualifications	15	0	0
15	It'll provide globally recognized degrees/diploma with international standards	15	0	0

INSTITUTIONAL COMPONENT OF COMPETITIVENESS RISKS AND DEVELOPMENT OF SOCIO-ECONOMIC SYSTEMS

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Abstract
The problem of competitiveness of socio-economic systems is inseparable from the problem of their development – to restore/enhance competitive advantages. Such benefits are provided either by innovations in the internal environment system constituents sensitive to changes and the market context requirements, or by the significant preferences in key aspects of its functioning, obtained as a result of their interests lobbying in the legislative (or regulatory-executive) process. In both cases, the implementation of the decisions is costly and fraught with risks. It has been argued that for macro-systems predominance of the first scenario of the micro-level subjects activities is more valuable, since it provides a multiplier effect and a positive synergy of joint activity. The actions according to the second scenario carry significant risks of negative synergy – if the micro-level subjects receive unjustified preferences. This weakens the competitiveness of macro-systems globally. On the basis of the analysis of dynamics of Ukraine industrial enterprises innovative activity it has been proved that the first scenario is favored by fewer and fewer micro-level subjects, resulting in a decline of their ability to create new consumer values. It has been confirmed by the deterioration of the export structure of Ukrainian machine-building enterprises products in 2011–2018, as well as a general decrease in the Economy Competitiveness Index of Ukraine. It has been stated that the behavior scenario choice by the participants of economic processes depends on the motivational characteristics of the institutional environment, the action total vector of which should ensures the development of the socio-economic system in the direction determined by the governing bodies. A model of such a choice has been presented, it generalizes the incentives formation principles and anti-incentives in terms of their influence on ways of gaining competitive advantages by participants of economic relations. It has been argued that the problem of economic agents behavior scenario choice in behalf of the socially useful can be solved in the plane of institutional change – by eliminating the discrepancy between formal and informal components of the institutional environment. It has been modeled in the form of an algorithm the process and directions of institutional changes for the development of the institutional environment, the total motivational vector of which will increase the role of innovative factors in the formation of competitive advantages and balanced development of business structures.

Keywords: institutional environment, motivational imbalance, corruption, institutional changes, innovations.

INTRODUCTION

Maintaining a positive and sustainable dynamic of socio-economic systems development is a key task of decision makers at all levels of management – macro-, meso- and micro-. Significant changes in the socio-historical context in an era of accelerating processes of globalization have increased the variability of scientific views on key sources and motives for development, and hence on the development of mechanisms for managing them in the context of goals. As the level of globalization of the business entities economic interaction space grows, it becomes increasingly

clear that the process of managing the development of a socio-economic system of any hierarchical level must be subordinated not only to the goals of ensuring its ability to exist, but also to improving its competitiveness.

The problem of competitiveness of socio-economic systems is inseparable from the problem of their development. They are dialectically interrelated and interdependent, because it is the development of system (as a process of qualitative improvement of its components or connections between them) provides recovery/increase of its competitive advantages due to significant changes in the market context. At the same time, the high level of competitiveness of the subject of economic activity is the key to its quantitative growth and strengthening of market positions. In particular, through the attraction of new investments and the development of strategic partnership, this allows us to reach a new stage of qualitative development. In the presence of a significant number of competitive enterprises, the competitiveness of the national economy as a socio-economic system of the highest level is also growing. As a result, the improvement of the overall economic dynamics creates conditions for solving social and environmental problems of the country, that is, ensures its sustainable development.

In the modern world, the concept of sustainable development is recognized by civilized society as such, which meets the requirements of preserving life on a planetary scale. Its key idea of "meeting current needs without compromising the ability of future generations to meet their needs" [20] every year is supplemented by new arguments confirming its relevance. The main components of the concept of sustainable development (positive economic dynamics combined with social development and environmental security) are structured according to the levels of management – macro-, meso- and the level of individual corporations and smaller business structures. This ensures a balanced development of socially-economic systems at all levels-both in the functional context (the level of business structures) and in the sectoral or regional (the level of the national economy, where the state economic policy is formed in close connection with the solution of socially-cultural and environmental problems of the country and regions).

Each socio-economic system operates according to certain rules, which more or less regulate the behavior of its structural elements, outlining the field of optimal solutions choice. These rules, together with the mechanism of their protection, form the institutions whose action vector is intended to ensure the development of the system in the direction determined by the governing bodies. They create certain constraints on the acquisition of significant competitive advantages by particularly aggressive market participants who neglect the public interest and, on the contrary, give certain preferences to those whose activities are socially valuable.

PREVIOUS RELATED RESEARCH

The significant influence of institutional factors on economic processes is now a universally recognized fact, which is confirmed by the conclusions of many well-known scientists. By definition of D. North, "institutions are the rules of the game in society or, more precisely, the limitations invented by people, which direct human interaction in a certain direction. And as a consequence, they structure

motives in the process of human exchange – political, social and economic" [11, p. 11]. In the post-Soviet space, many well-known scientists are engaged in active research of institutions, which, based on the fundamental work of D. North [11], began to consider the possibility of designing institutional changes to improve the dynamics of socially-economic systems. For example, G. Kleiner [7], G. Nureyev [12], Y. Olsevich [13], V. Volchik [22], in their works focused on the analysis of the motivating force of institutional factors from the standpoint of ensuring overall economic growth, as well as in the context of regulating social processes; V. Polterovich analyzed the causes of institutional traps and the possibility of their prevention [15]; V. Dementiev more deeply investigated the influence of institutions on the formation of the power system [1]; G. Kirdina, also based on the methodology of neo-institutionalism, proposed the theory of "institutional matrices" [6]; A. Gritsenko carried out his research in the same way, and developed recommendations for improving the "institutional architectonics of economic systems" [3].

In the researches of modern scientists, attention was paid to the relationship between the components of the institutional environment and the competitiveness of national economies. In particular, in Ukraine, this scientific direction is investigated by N. Harashchenko and V. Lavrenenko [2], I. Irtyshcheva and D. Krylenko [5], P. Leonenko [9], Ye. Polishchuk [14], V. Zapuhljak [25], O. Zubchik [26] and many others. However, today a significant part of the issues related to the impact of institutional factors on the competitiveness and dynamics of the national economy, remain insufficiently studied. For Ukraine, these issues are particularly relevant, since the current stage of its development is characterized not only by a change in the vectors and priorities of economic cooperation due to the European integration processes, but also by a radical redesign of the institutional environment, which is carried out by the new political players who came to power in 2019.

RESEARCH RESULTS AND DISCUSSION

In developed market economies, the institutional environment was formed gradually and for a long time, during which improving changes were made to the laws governing entrepreneurial behavior, inconsistencies were eliminated, manifested in the course of practical interaction of market participants, the instruments of state influence on the course of economic processes were polished and improved, and so on. Given the fact that in Ukraine the business environment (through its short history of establishment) did not form such stereotypes of economic behavior, which are typical of countries with developed market economies where the institutional setting supports parity of individual and social benefits, the logic of the research requires the analysis of the components of the institutional environment that are in conflict with the targets of state economic policy priorities is Ukraine's transition to innovative model of organization of economic activity that is consistent with the concept of sustainable development.

Unfortunately, innovative factors in the process of Ukraine industrial enterprises competitiveness formation play an increasing role every year. Thus, over the last 10 years, the share of innovative products in total industrial sales has decreased from 5.9% (2008) to 0.8% (2018) (Figure 1).

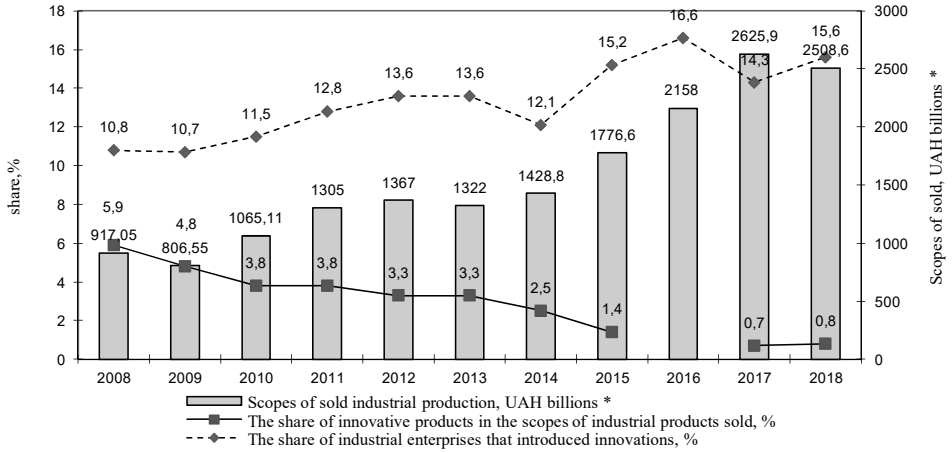

Figure 1. Dynamics of indicators of innovation activity and its results in the activity of industrial enterprises of Ukraine

* Excluding the temporarily occupied territories of the Autonomous Republic of Crimea, Sevastopol, and from 2014 the parts of the territories of Donetsk and Luhansk regions of Ukraine

Source: developed by the authors on the basis of [19; 20]

According to official statistics, the revenue from the sale of innovative products in 2018 only marginally exceeded the figure of 2017 and was below 40% from 2011, while the figures given in absolute terms do not take into account inflation which has significantly progressed during this period, and should lead to an increase in sales volumes in monetary terms, even in the unchanged sales volumes in physical units. Therefore, they do not reflect the critical state that has developed in the field of innovation management at the industrial enterprises of Ukraine. Indeed, the dynamics of the contribution of innovation in the performance of industrial enterprises can be seen by the indicator of the innovative products proportion in the total scopes of its implementation (a relative indicator that offsets the error on inflation processes). As can be seen from Fig. 1, it is constantly decreasing, from 3.8% in 2011 to 2.5% in 2014 and up to 0.8% in 2018. Statistical data on the introduction of product innovations also indicate a serious deterioration in this area, especially in 2017, when their number has decreased almost twice, including the samples of new technology. And this is despite the fact that many industrial enterprises still have a real task to enter new markets instead of the lost markets in the Russian Federation [24].

This task is strategically important for machine-building enterprises, which mainly worked on the Russian markets and are now forced to diversify their activities by resorting to an innovative product portfolio update. Confirmation of the need for such diversification is the data on the dynamics of volumes and structure of exports of machine building products (Table 1).

The export capacity of machine-building enterprises is one of the important indicators reflecting the ability of the national economy to carry out its expanded reproduction in the world economic space as the machine building products serve as a basis for updating production systems of enterprises of other industries.

Table 1. Scopes and structure of the export of machine-building products in Ukraine*

Groups of products	*Indicators by years*							
	2011	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*
Exports of machine-building products, billions, USA dollars								
Total for machine building, including	*11,70*	*12,94*	*10,38*	*7,36*	*4,78*	*4,35*	*5,09*	*5,54*
- machinery, equipment and devices; electrical equipment	*6,63*	*6,87*	*6,82*	*5,66*	*3,94*	*3,64*	*4,28*	*4,66*
- machines of land, air and water transportation	*4,79*	*5,78*	*3,27*	*1,47*	*0,68*	*0,56*	*0,63*	*0,67*
including aircrafts	*0,32*	*0,92*	*0,31*	*0,25*	*0,19*	*0,08*	*0,03*	*0,06*
- optical and photographic instruments and devices	*0,28*	*0,29*	*0,29*	*0,23*	*0,16*	*0,15*	*0,15*	*0,15*
*Structure of export of machine building products by main groups, %***								
Total, including	*100,00*	*100,00*	*100,00*	*100,00*	*100,00*	*100,00*	*100*	*100*
- - machinery, equipment and devices; electrical equipment	*56,67*	*53,09*	*65,7*	*76,9*	*82,42*	*83,68*	*84,09*	*84,12*
- machines of land, air and water transportation	*40,94*	*44,67*	*31,51*	*19,97*	*14,23*	*12,87*	*12,38*	*12,09*
including aircrafts	*1,34*	*2,74*	*7,11*	*2,99*	*3,40*	*3,97*	*1,84*	*0,59*
- optical and photographic instruments and devices	*2,39*	*2,24*	*2,79*	*3,13*	*3,35*	*3,45*	*2,95*	*2,71*
*Export volumes compared to the previous year, %***								
Total for machine building, including	-	*110,60*	*80,22*	*70,91*	*64,95*	*91,00*	*117,01*	*108,84*
- - machinery, equipment and devices; electrical equipment	-	*103,62*	*99,27*	*82,99*	*69,61*	*92,39*	*117,58*	*108,88*
- machines of land, air and water transportation	-	*120,67*	*56,57*	*44,95*	*46,26*	*82,35*	*83,35*	*84,35*
including aircrafts	-	*287,50*	*33,70*	*80,65*	*76,00*	*42,11*	*37,50*	*200,00*
- optical and photographic instruments and devices	-	*103,57*	*100,00*	*79,31*	*69,57*	*93,75*	*94,75*	*95,75*
The share of machine building products in the total volume of commodity exports								
Share, %	*9,8*	*10,1*	*11,0*	*10,5*	*10,3*	*10,0*	*9,9*	*9,8*

* Excluding temporarily occupied territories of Ukraine; ** own calculations

Source: developed by the authors on the basis of [18]

And if these products can compete with analogues in the markets of other countries, then it meets the requirements of the present time. In the structure of commodity exports of Ukraine, the share of machine-building products was almost always (with the exception of the period of the global financial and economic crisis) higher than 10%. Even not counting the temporarily occupied territories, as shown by statistical data with an appropriate adjustment (see Table 1). However, in 2017-2018, this figure dropped below 10%. This confirms the stability of the negative trend in the work of machine-builders in Ukraine, the beginning of which can be considered the year 2014 (see Table 1). Moreover, the most significant deterioration occurred in the most technological engineering sector. As can be seen from the above data, in 2015, aircrafts were exported only for the amount of 190.6 million US dollars, and in 2016 this amount decreased to 78.9 million US dollars, accounting for only 0.2% of total exports. In the years 2017-2018, the situation has improved somewhat, but given that Ukraine's airplane engineering is high-tech and competitive, exports of its products should be significantly larger. And this means that it is not enough to be able to create

competitive products; efforts must be made to confirm its consumer value for the target and perspective markets of other countries.

Overall, according to The Global Competitiveness Index in 2018, Ukraine ranked 81st out of 180 countries [4]. This is despite the fact that it ranked 43-rd position out of 126 countries (38.5 points) in 2018 according to the Innovation Index, ahead of Russia (46-th position, 37.9 points) for three positions. In 2019, Ukraine lost several positions and ranked 47-th position out of 129 countries, gaining 37.4 points (Switzerland being first with 68.4 points).

If we analyze the components of the Global Innovation Index of Ukraine, it will become clear that the main positions that significantly lower the rating lie in the institutional field – legislative, organizational and regulatory. These are the rule of law (107th position) and the effectiveness of government (95th position). Directly steming from the imperfection of the institutional environment is political and operational stability – 125th position, investment – 115th position. And the best positions are in the field of intellectual property (intangible assets, patents, inventions – 17th, including utility models – 1st place) [23].

In our previous research, we emphasized that the key to maintaining the competitiveness of the socio-economic system of micro-levels (enterprises, companies) is the ability to create consumer values for target markets [16, p. 17]. And, as can be seen from the relevant positions of the Global Innovation Index, this ability of Ukrainian inventors to materialize ideas into consumer value has been preserved. However, their industrial development is not high enough, which once again confirms our conclusion that business is not sufficiently motivated to use innovations to create competitive advantages. This gives reason to claim that in Ukraine there is an urgent need for institutional changes to enhance the effectiveness (motivating force) of legislative preferences in areas that play an important role in shaping competitiveness and sustainable development.

To evaluate the effectiveness (efficiency) of incentives and antistimulants in the scientific literature proposed the use of so-called “Markov’s chains”, which reflect the dynamics of the process of acquiring the desired behavioral stereotypes in the socio-economic system in response to a specific set of incentives [10, p. 86–89; 8, p. 119–121].

Such dynamics have stochastic nature and based on an assessment of securing likelihood degree of the desired for the management subject reactions of the control object on it’s stimulating actions (that is, it takes into account the risks of the force of the motivating factor which is not equivalent to the expectations of the control object. Regarding behavior of entrepreneurs in a particular institutional matrix, such risks occur when the benefits / losses of choosing different business strategy scenarios are inadequate. The losses from compliance with existing institutional constraints are compared with benefits from the breach of those constraints in the case of corruption facilities (by representatives of authorities) or transferring part of the business to the illegal sector.

To reflect this process is assumed that such a probability (p_{n+1}) is coming only after $n+1$ iterations of certain stimulating actions. The probability of occurrence (p_{n+1}) depends on what the control object previous reactions to the stimulus complex

were, and it will be greater the greater the likelihood of the same reaction after the *n*-th repetition of stimulation is, such dependence can be approximated as linear and written as an equation:

$$p_{n+1} = a + mp_n \quad (1)$$

The probabilities p_{n+1} and p_n range from 0 to 1; Value $m \geq 0$, because it is expected that consistent repetition of stimulation increases rather than decreases the likelihood of the desired reaction. The parameters *m* and *a* are set experimentally for each type of socio-economic system.

In order to capture the desired behavior of the control object, it is important to establish a reasonable relationship between incentives (preferences) and anti-incentives. The latter in the form of various penalties (both at the national economy and internal corporate management levels) should be sufficiently tangible in comparison to the possible benefit of such behavior which is harmful to the system as a whole and is prohibited or disapproved by the management subject.

The process of fixing the desired behavior of a control object using incentives and antistimulants based on equation (1) can be investigated more thoroughly by entering parameters *a* and *b*, which are meaning the measure of the intensity of action on the control object, respectively, of the incentives and antistimulants. Introducing them into the parameter *m: (*$m = 1 - a - b$), needs some clarification and restrictions, in particular, $a \geq 0$ i and $b \geq 0$; because $m \geq 0$, то $1 - a - b \geq 0$.

Then equation (1) will look like:

$$p_{n+1} = a + (1 - a - b)p_n \quad (2)$$

After the transformations, formula (2) becomes finite (4):

$$p_{n+1} = p_n + a(1 - p_n) - bP_n \quad (3)$$

$$p_{n+1} - p_n = a(1 - p_n) - bp_n \quad (4)$$

Equation (4) shows what determines the improvement of the control object's response to the stimulus, that is, progress in the self-learning process. This improvement reflected in the expression $(p_{n+1} - p_n)$ in the left side of the equation. The expressions of the right side of the equation correspond to it: $a(1 - p_n)$ and $-bp_n$

The first one determines the maximum possible degree of improvement, and the second - the maximum possible degree of deterioration of process results, as the best of the possible outcomes that can be achieved by the management object is $p_{n+1} = 1$, and the worst is $p_{n+1} = 0$. Therefore ($p_{n+1} - p_n$), that is the actual achieved improvement in the results of the stimulating action (as we can see from the equation) is equal to the weighted sum of the maximum possible degree of improvement and the maximum possible degree of deterioration of the behavior of the control object. The significance of the additives in this sum are the parameters *a* and *b*, the parameter *a* depends on the totality of circumstances contributing to the maximum improvement of the results of stimulation of the desired behavior, and the parameter

b depends on the circumstances causing the maximum deterioration of the behavior of the control object. Thus it is affirmed, and it is obvious, that the speed of gaining the desired behavior by control object depends on the absolute value of the incentives and antistimulants, and on their correlation (motivation structures) the result of the regulatory actions. These incentives and a antistimulants should correspond to the essential characteristics of the control object and to acquire more individualized features as they move from the macro-level to the meso-level (individual industries or spheres of activity) and to the internal organizational and individual level.

The need to comply with the same rules of economic conduct for all has long been recognized as a prerequisite for the development of the competitiveness of the national economy. After all, the forms and vectors of competitive confrontation, as well as their effectiveness, largely depend on the parameters of the market environment, which are formed under the influence of institutional factors, in particular – in the legislative field of the country.

Accepted at the legislative level decisions are objectified in the activity of supervisory and regulatory bodies, which are designed to regulate economic relations in society. Thus, the institutional matrix of the national economy development is formed, which determines the formal rules of economic behavior of the subjects of market relations and should be not only regulatory, but first of all – motivating basis of this behavior

However, the institutional field of economic activity covers not only its formal component, which legally determines the rules of the game, but also informal (customs, traditions, mentality, behavioral stereotypes, etc.). Some of its components may contradict the rules of the "economic game" formalized in laws or by-laws and, in the absence of effective control by the state, distort their practical implementation.

In a perfect institutional environment that creates the same business environment for all market participants, competitive advantages are acquired through innovations that ensure consumers meet their needs better than in other ways. In the imperfect – competitive advantages are formed due to the received benefits and preferences.

Both cases of gaining competitive advantage is costly and fraught with risks. However, it is more valuable for the national economy predominance of the first scenario of the enterprises since it provides a multiplier effect and a positive synergy of joint activity. The actions according to the second scenario carry significant risks of negative synergy - if the micro-level subjects receive unjustified preferences. This weakens the competitiveness of the national economy at the global level. The algorithm for choosing the entrepreneurial structures of one or another scenario of maintaining their competitiveness, including through the initiation of institutional changes, is presented in Figure 2.

The discrepancy between the formal and informal components of the institutional environment "complements" the existing institutional gaps in the legislative field with new content, distorting the motivational basis of economic activity participants-both in the field of acquiring competitive advantages and in attracting investments for quantitative growth and qualitative development**.**

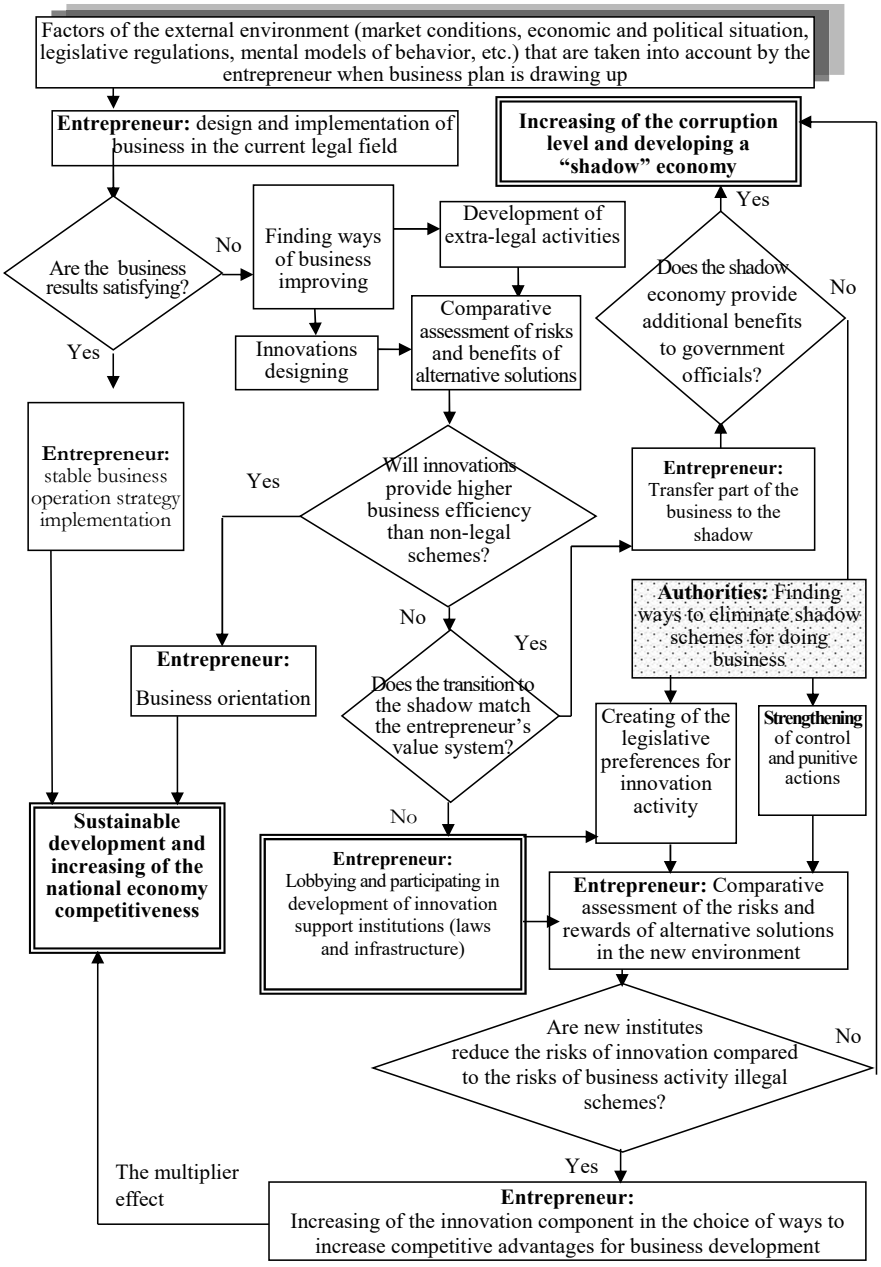

Figure 2. Interaction between entrepreneurs and the state (authorities) in reducing of the institutional risks of competitiveness and sustainable economic development

It can be argued that this discrepancy is one of the reasons that determine not only the high level of corruption in the relations between the state and business, but also the high risks of market transactions between the subjects of partnerships. As a

result, the level of shadowing of the national economy is growing, the conditions for deepening the integration processes in the chains of consumer value creation are deteriorating and the resultant implementation of strategies for the integration growth of small and medium-sized business structures is decreasing, what is an important condition for increasing their competitiveness. As we have noted in our previous work [17], the processes of disintegration in the Ukrainian economy are a reaction of business to the deterioration of its operating conditions, especially in the field of taxation.

Corruption is a specific component of the institutional environment, predetermined by its imperfection. It's not only the gaps in the current legislation that are made possible by the ambiguous interpretation of some of its norms, but also the result of a deliberate distortion of the legislative field in favor of particular interest groups.

It causes imbalance between the development of individual industries or regions, which violates the self-sufficiency and competitiveness of the economic system as a whole. This is manifested, in particular, in the deformation of the export potential towards the commodity turnover, which leads to environmental problems and does not contribute to the growth of intellectual capital of the country, and vice versa – increases the risk of further degradation of labor force.

In the legislative field, under the influence of shadow lobbying, there are constantly appearing systemic "holes" that are quite legal, although not obvious to the general public. And it frees from legal liability those who see their corruption opportunities and can use them themselves or advise to others. At the same time, it creates favorable conditions for further "legislative ingenuity", expanding and nourishing the field to design new revenue schemes that can only be conditionally attributed to honest ones.

Thus, in Ukraine, the vast majority of entrepreneurs are trying to "optimize" taxes by moving part of their businesses into so-called "gray zone" and not legally recruiting employees.

And the regulatory functions of the institutions, which are supposed to ensure compliance with the current legislation, are not fulfilled – because as a result a corruption compromise is reached between representatives of these institutes, business and the public. This makes it impossible to solve many social problems – from social welfare in case of disability (at the level of an individual employee) – and to the development of such socially important spheres as education, health care, law and order (financed from the budget)Another important factor of the development of corruption is low effectiveness of the institutional regulatory mechanism, when there is no or poorly traceable link between the actions of the executive of regulatory functions and his responsibility for the result of the implementation of these functions. This irresponsibility, combined with the low level of remuneration, compels the regulated entity (civil servant) to make decisions based on his or her interests. And this generates significant risks for business development, because it creates conditions for unjustified interference in its activities by representatives of law enforcement and other controlling institutions of authority, which violates the rhythm of business processes

The scale of these processes in Ukraine and the low efficiency of existing measures to fight with them predetermine necessitate an in-depth study of the institutional nature of the market transactions risks from the standpoint of their impaction the formation of the motivational basis for the choice of business structures strategy behavior in competition and in the context of increasing competitiveness and sustainable development of the national economy. The urgency of this task for Ukraine, which seeks to join the countries that are able to develop dynamically, professing civilized forms of market relations, is obvious

Today, there are different opinions on the instruments and directions of institutional support for the development of the national economy, but it is indisputable that it should ensure the growth of its international competitiveness. This means that in the process of institutional restructuring in Ukraine should form an institutional environment conducive to active entrepreneurial behavior, because this environment forms the potential for the development of the national economy.

CONCLUSION

The growth of the progress and level of globalization of the world economic space makes the problem of social-economic development of each country subordinate to the problem of its economy competitiveness. Based on the methodology of neo-institutional economic theory, the connection between the competitiveness of social-economic systems and the perfection of the institutional environment, which forms the matrix of development of social and economic relations between the participants of economic activity by economic agents, is proved. The latter include not only direct producers and consumers of goods and services, but also representatives of the authorities exercising the functions of control and regulation of economic processes. The motivational component of their behavior is determined by comparing the risks and benefits that each of the economic agents assesses at decision points. It is argued that in the imperfect institutional environment, which generates a motivational imbalance between the vectors of formal and informal institutions, institutional risks of improper choice of economic agents scenario of economic behavior. It has been noted that this discrepancy increases the risks of market transactions, which cannot be reduced in the current institutional space of Ukraine due to absence of legal institutions of collective action (lobbying institutes, elements of innovative infrastructure and creates the basis for corruption. The main reason for the development of corruption (as a shadow service sector) has been called the motivational imbalance between the scope of authority and responsibility of participants in illegal schemes. As a result, the real course of economic processes does not correspond to the planned ones.

This is confirmed by the results of the analysis of the dynamics of innovative activity of industrial enterprises of Ukraine and its effectiveness, as well as the structure of products exports of Ukrainian engineering enterprises in 2011-2018. In both cases, there is stable negative dynamic, which is accompanied by a General decline in the competitiveness Index of the Ukrainian economy.

Using economic-mathematical modeling we see the formation of effective institutions that serve as incentives and disincentives for behavioral choice. It is noted

that the total vector of action of institutions should ensure the development of the social-economic system in the direction determined by the governing bodies.

Taking into account the key role of innovative factors in the formation of the competitiveness of the national economy, a graphical model of institutional changes for the development of the institutional environment, the total motivational vector of which will increase the role of innovative factors in the formation of competitive advantages and sustainable development of business structures.

ACKNOWLEDGMENT

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DEVELOPMENT OF THE SUPPLY CHAIN MANAGEMENT CONCEPT UNDER THE CONDITIONS OF GLOBAL ECONOMIC TRANSFORMATIONS

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Abstract
The article covers the development of conceptual provisions for improving the supply chain management system in terms of ensuring the competitiveness of supply chains in the context of global economic transformations. It is emphasized that due to intensification of international division of labor, acceleration of scientific and technological progress and other dynamics of modern civilization, the scale, degree of association and interdependence of the development of productive forces are increasing. An increasing number of world economic structures are turning into open, and then sheer systems. In contrast to the closed systems typical of the industrial era, they reveal an objective tendency to transform into more complex infra-systems, which include, first of all, integrated logistics chains. It is in such logistics chains that the obstacles that separate the production and non-production areas of management in technological and economic relations vanish. This is due, on the one hand, to the unity of production and infrastructure flow processes, and on the other, to the revival of autonomy, mobility, flexibility of all elements and parts of such chains. The necessity of making adjustments to the classification aspects of the supply chain management concept is justified, as they are considered from the point of view of the object approach (i.e., the totality of organizations interacting in material and other flows from the source of raw materials to the final consumer), as well as in the context of process approach (i.e. systemic totality of flows and processes necessary to satisfy the requirements of consumers in goods and services). This creates the conditions for the formation of clearer classification approaches for the purposes of studying certain categories of supply chains (for example, by the number of levels of suppliers and consumers in the supply chain; by the type of products manufactured, etc.).
The need for a clear demarcation of conceptual approaches in a traditional and integrated logistics concept is also confirmed. It is emphasized that the content of the latter consists in the implementation of the integrated coordination of the logistics chains and their links at the micro, meso and macro levels, both in material, information, financial, and other flows.

Keywords: global economic transformations, infra-systems, logistics, supply chain management, logistic concept.

INTRODUCTION

Under the influence of intensified international division of labor, accelerated scientific and technological progress and other factors of modern civilization, the scale, degree of assosication and interdependence of the development of productive forces are increasing. An increasing number of world economic structures are turning into open, and then sheer systems. Unlike closed systems, typical of the industrial era, they reveal an objective tendency to transform into more complex infra-systems, which are primarily associated with supply chain management.

It is in such chains that the obstacles that separate the production and non-production areas of management in technological and economic relations disappear. This is due, on the one hand, to the unity of production and infrastructure flow

processes, and on the other, to the revival of autonomy, mobility, flexibility of all elements and parts of such chains.

Supply chains formed as a result of globalization take the form of integrated associations in the form of corporate and associative market structures and require for their effective development new forms and methods of management based on modern logistics and information technologies.

Integrated logistics in these conditions has a special place. On its basis, supply chains are created that are adequate in complexity and structural diversity to modern management facilities – transnational (TNCs) system entities in the global and national economies. Under internationalization of global economic processes, global supply chains allow:

– effectively coordinate the multi-purpose activities of economically and legally diverse as well as independent structures for the manufacturing of products and services based on the use of process-oriented management methods;

– include numerous market participants in a single network information space;

– unite the logical activities and potentials of market participants in order to achieve a tangible synergistic effect from their partnership supply chain activities.

As a result, competition between the participants of the goods distribution (supply chain) being destructive for the society and the structures themselves is replaced by productive alliances aimed at the final result.

Thus, all of the above emphasizes the particular relevance of systematic scientific research in the context of supply chain management in global economic processes.

PREVIOUS RELATED RESEARCH

A significant contribution to the development of the theory and methodology of logistics and the concept of supply chain management was made by such well-known Ukrainian and foreign scientists as D. Bowersox, D. Closs, I. Takahara, M. Christopher, J. Chevalier, T. Van, S. Karnaukhov, E. Krikavsky, R. Larina, D. Novikov, M. Oklander, O. Protsenko, A. Smekhov, N. Chukhrai, V. Shcherbakov, etc.

However, a set of scientific and practical problems related to the development, primarily, of the concept of supply chain management, is not covered enough even in foreign literature. In the Ukrainian economy, the spread and practical use of supply chain logistics is just under way. Many theoretical and methodological provisions of this science are debatable and evolve as it is approved in the practice of Ukrainian entrepreneurship. This is expressed both in a different interpretation of the essence of the concept of supply chain management, and in varying strategy, forms and methods of its practical use.

In this regard, the purpose of this article is to generalize the scientific approaches to the formation of supply chain management systems in countries with an evolutionarily smoothly running economy and to develop on this basis the concept of supply chain management in the context of global economic transformations.

RESEARCH RESULTS AND DISCUSSION

At the turn of the XX-XXI centuries logistics has undergone significant changes both in the implementation of logistics technologies, and in the field of goal-setting. The new quality of logistics was demanded by high competition in world markets, the introduction of products with relatively short life cycles, as well as by constantly growing consumer expectations for product quality and logistics services. Accordingly, an additional line characterizing the situation at the beginning of the 21st century should be added to the previously proposed chronology of the company's competitive policy formation (Table 1).

Table 1. The main stages of company`s competitive policy

Period	Paradigm	Main criterion	Main function	Goal-setting science	Main resource
The early XX century – late 1920s	Production	Volume and costs of production	Production	Production organization. HOT	Technical
1930s	Sales	Sales volume	Sales and marketing	Sales organization and management	Spatial and organizational
Late 1940s – late 1950s	Product	Product quality	Control and management	Enterprise economics	Technological
The early 1970s	Market	Consumption	Marketing and after-sale service	Marketing	Informational
Mid 1970s – late XX century	Resource	Resource potential of the company, distribution costs	Production and commerce	Logistics	Institutional and management
XXI century	Competition	High quality delivery	Business integration	Supply Chain Management	Economic and communicative

Source: systematized by the authors based on [2; 8]

For the last couple of decades, primarily due to the introduction of modern high technologies, production costs have decreased, as far as the current stage of scientific and technological progress has allowed. The deepening of specialization as a necessary factor in this phenomenon, in turn, assumed a reasonable development of cooperation and integration of business entities. However, despite the introduction of logistics as a functional management responsible for controlling the material flow and relevant information and finances within the reproduction cycle of individual firms, the sphere of distribution could not provide a level similar to the sphere of production.

That is why, as the development of such a logistic concept – LeanProduction (LP) and the Just-in-Time principle, in the 1990s emerged the concept of Supply Chain Management (SCM), defined as the integration of key business processes starting from the end user and covering all suppliers of goods, services and information that add value for consumers and other interested parties. Moreover, the supply chain is seen as three or more economic units (organizations or individuals) that are directly involved in external and internal flows of products, services, finances and information from source to consumer [2].

Initially, the term “supply chain management” was understood as a synonym for the terms “logistics” and “logistics management”. In recent years, the interpretation of the SCM category has undergone a change in its interpretation as a new business concept. We believe that both of these interpretations fail to reveal accurately the meaning of this phenomenon. We will try to prove this and offer an independent interpretation of the problem.

When considering supply chains, there are three difficulty levels, various options of which are presented in the figure. A chain consisting of a focal company (manufacturing or commercial firm), as well as its supplier and consumer, is called a direct supply chain.

If at least a II-level supplier and consumer are added to them, then it is called an expanded supply chain. The maximum supply chain includes the entire set of business entities from the initial supplier to the final consumer (Figure 1).

Consideration of the SCM-concept only as a type of integrated logistics carried out outside the focal company and including consumers, suppliers and contractors, to a large extent disavows the idea of logistics and provides “non-integrated” logistics just as an ordered set of transport and storage operations. It should be noted that logistics remained like that for quite a long time. It took a twist due to the situation at the close of the twentieth century, when the issue of total control over resource and commodity distribution within the framework of direct supply chains turned out to be practically unsolvable.

A positive perception of the SCM concept has led to the revision and definition of logistics itself. According to the definition of the Logistics Management Council (USA) in 1998, logistics is defined as part of the supply chain process during which it is possible to plan, implement and control efficient and productive flow of goods, their inventories, service and related information from the point of origin to the point of absorption (consumption) in order to meet the requirements of consumers [6].

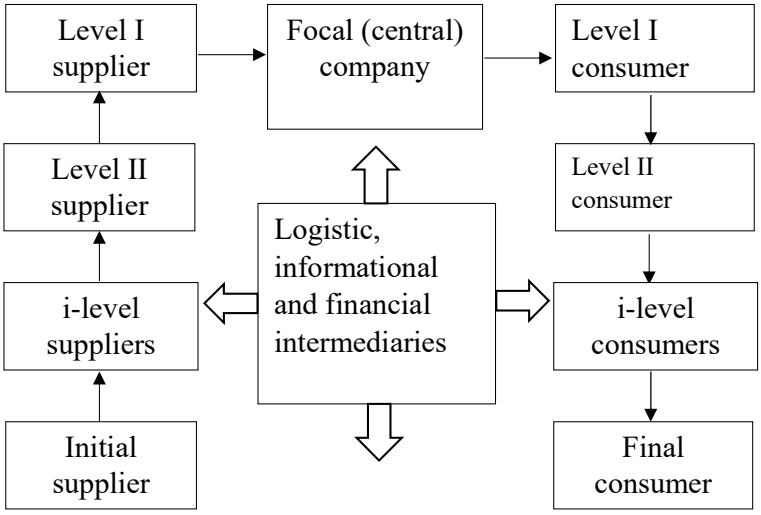

Figure 1. Generalized view of the supply chain

Source: developed by the authors based on [8; 9]

Thus, supply chain management appears to be a more global category than logistics. SCM key business processes are no longer disputed:

– customer relationship management;
– customer service;
– demand management;
– order fulfillment management;
– production operations management;
– supply management;
– product design management and bringing it to commercial use;
– return material flow management.

A close examination of these business processes makes it appropriate to consider another definition of SCM [9]. According to the definition of the European Logistics Association, supply chain management is an integrated approach to business, revealing the fundamental management principles in the logistics chain, such as the formation of functional strategies, organizational structure, decision-making methods, resource management, implementation of supporting functions, systems and procedures. This approach allows us to conclude that SCM, significantly exceeding the level of competence of "non-integrated" logistics, really poses new challenges for the company`s logistics management. Their solution will require a new level of interaction between logistics management and other types of functional management of the company. However, SCM does not offer anything going beyond private logistic concepts, but a logistic paradigm.

The ambiguity in the relationship between the logistics categories and SCM, in our opinion, is the result of an incompletely clarified relationship between categories such as concept and paradigm.

A paradigm is referred to be as a set of prerequisites that determine a specific scientific research (knowledge) and are recognized at this stage. The dominance of a certain paradigm is a period of normal (extensive) development, which ends when the paradigm "explodes" from the inside, under the pressure of contradictions and problems that cannot be solved within its framework. A crisis comes when new paradigms that compete with each other are created. The crisis is resolved by the superiority of one of them, which means the beginning of a new normal period (cycle, stage of development), and the whole process is repeated anew [4]. The table above gives an idea of a number of paradigms in the field of economic activity.

In the generally accepted sense, a concept is a leading view, a certain way of understanding, interpreting a phenomenon; the birth of an idea, a basic thought. Numerous literary sources describe analytical, technological (informational), marketing, and integrated logistics concepts. The content of the latter consists in the implementation of the integrated coordination of logistic systems and their links at the micro, meso and macro levels, both in material and in information, financial and other flows. Herein, strategic management, business process reengineering, system analysis, general system theory, and synergetic economics are used as scientific tools.

Comparing the contents of the integrated logistics concept and the SCM concept, one should note their qualitative similarity and quantitative difference in the scale of tasks (with the clear superiority of the SCM concept). These quantitative

differences will undoubtedly lead to qualitative changes. If direct supply chain management is possible within the micro-logistics system, then the transition to an expanded supply chain will require meso-logistics systems integration. Effective management of the maximum length-wise supply chain will require mandatory integration on the scale of the macro-logistic system, while many problems will outgrow the logistical aspect and take on a macroeconomic character.

Logistics, in our opinion, at this stage will retain its paradigm character as a resource-saving algorithm of entrepreneurial activity and will functionally include logistics management and supply chain management.

However, we do not exclude the appearance of the SCM paradigm in the future, and, therefore, the new direction of the company's functional management.

As stated above, the supply chain is, first of all, a set of organizations: suppliers, manufacturers, consumers and intermediaries, interconnected by a technological chain.

The definition of the supply chain can be based on both object and process comprehension.

The supply chain (object approach) is “a set of organizations (manufacturers, warehouses, distributors, 3RL and 4PL providers, freight forwarders, of wholesale and retail trade) that interact in material, financial and information flows, as well as service flows from sources of raw materials to the final consumer.”

Essentially, supply chains are a combination of suppliers and consumers who are consistently interacting with each other: each consumer then becomes a supplier for the following, and so on until the finished product arrives to the final user. In the general case, the goal of supply includes a focal (central) company, which determines the structure of the chain, suppliers and consumers, as well as various intermediaries. Several levels of suppliers and consumers are distinguished depending on their position in relation to the focal company.

Suppliers and consumers of the first level are those organizations that interact (buy or sell goods and services) directly with the focal (central) company. Suppliers and consumers of the second level are suppliers of suppliers and consumers of consumers of the first level, etc. up to the initial supplier (supplier of natural resources) and the final consumer. Each company can build its own supply chain, because its management sees its company as the central one and therefore considers potential participants in the network structure, according to the interests of its company.

The supply chain (process approach) is “a set of flows and the corresponding cooperative and coordination processes between the various participants in the value chain to meet the requirements of consumers in goods and services” [9].

It is advisable to classify supply chains according to the following criteria:

1. By the number of levels of suppliers and consumers in the supply chain.
2. By the type of products manufactured.
3. By nationality.

1. According to the number of levels of suppliers and consumers, supply chains can be direct, extended or maximum.

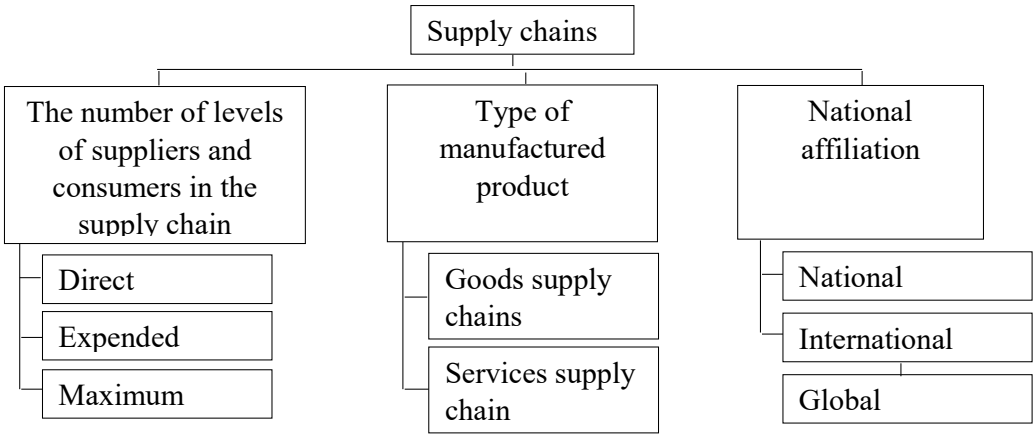

Figure 2. Classification of supply chains

Source: developed by the authors

A direct supply chain consists of a manufacturer, which, as a rule, becomes a focal company (the central supply chain company, around which the goal of supply is built), a first-level supplier and consumer who interact directly with the focal company in the process of moving goods, information and financial flows.

The number of suppliers and consumers in the supply chain may vary. The maximum supply chain consists of a focal company and all its contractors on the left (up to suppliers of raw materials and natural resources), and a distribution network on the right – up to final consumers, as well as various intermediaries. Essentially, the maximum supply chain is an extensive network of suppliers and consumers at various levels, as well as intermediaries with whom participants in the supply chain interact at various stages of the goods distribution process.

2. According to the type of products manufactured, the supply chains are divided into the supply chain of goods and the supply chain of services. Supply chains can function both in product markets and in service markets. From the point of view of carrying out commercial activities, a product is an object of sale.

A service is the result of labor activity, in the process of which "a new material product that did not exist previously is nor created, but the quality of the existing product is changed. In other words, it is a value provided not in material form, but rather in the form of activity. Thus, the very provision of services creates the desired result. "Services include the implementation of the following kinds of activities: transportation, storage, insurance, paperwork, repair and warranty services, domestic services, medicine, sports and fitness services, etc.

The service market is the sphere of exchange of services that are the result of labor of non-productive enterprises.

A number of factors differ the service market from the product market. General features that arise when managing supply chains in the markets of any services are based on differences in characteristics between goods and services. The following

features are the most significant ones among these differences that arise when managing supply chains in the service markets:

– intangibility of services, since it is difficult for service providers to explain and give specifications for the types of service, and it is also difficult for customers to evaluate them;

– the buyer often takes a direct part in the production of services;

– services are consumed the moment they are produced, i.e. services are not stocked or transported;

– the buyer never becomes the owner when purchasing services;

– a service is an activity, and therefore it cannot be qualitatively determined before the buyer buys it.

These features affect the overall appearance of the supply chain of services. Since the provision of a service is often associated with a tangible product, counteractors to the left of the focal service manufacturing company (providers of various levels) can represent an extensive network, while counteractors to the right of the focal company are absent, since the services are produced and consumed at the same time, they are neither stored nor transported.

3. By national affiliation, ie depending on whether the supply chain is limited to the territory of one state or not, there are national and international supply chains.

National supply chains are limited to the territory of one state; all links in such a supply chain are located within the same country, including suppliers and consumers. This means that goods or services produced by counteractors of the national supply chain are made from raw materials extracted or received in the territory of a particular country. All consumers, including final ones, are also located within this specific country.

International supply chains are not limited to one state; various links of such a chain can be located in the territory of one or more countries. Global supply chains are a form of international supply chain, since most supply chains are currently geographically dispersed networks that reach far beyond the territory of one country. The formation and development of such supply chains was particularly influenced by the process of globalization, which is the creation of a single global economic space (Table 2).

It should be emphasized that supply chain management involves the search for such an integration of business processes from the manufacturer to the final consumer that will allow all participants to get the desired level of profitability, and the final consumer - the product with the desired properties (quality, price, quantity, location, time).

The basis of integration processes in this case is the search for favorable (first of all, minimum for the end consumer) logistics costs. However, it is known that the goals of each individual participant in the supply chain can have, and most often do have a different focus. Increasing the level of some costs leads to a decrease in others. For this very reason the approach to the formation of the supply chain should, in our opinion, be based on an iterative procedure, taking into account the interconnection and mutual influence of two functional areas of logistics: transport and storage (Figure 3).

Table 2. Brief description of supply chains

Classification feature	Supply Chain Types	A brief description
The number of levels of suppliers and consumers in the supply chain	Direct	A direct supply chain consists of a manufacturer, supplier and consumer and first-level consumers directly interacting with a focal company in the process of moving goods, information and financial flows
	Expanded	Expanded supply chain from the focus company, suppliers and consumers of the first and second levels
	Maximum	The maximum supply chain consists of a focal company and all its contractors on the left (up to suppliers of raw materials and natural resources), and a distribution network on the right – up to final consumers, as well as various intermediaries
Type of product manufactured	Product supply chain	Supply chains of goods consist of a focal company-producer of goods, suppliers of raw materials and supplies needed for their production and consumers of various levels
	Service supply chains	Service supply chains consist of a focal company-producer of services, suppliers of goods necessary for their production and final consumers of services
National affiliation	National	National supply chains are limited to the territory of one state; all links of such a supply chain are within the same country, including suppliers and consumers
	International: - direct international; - global	International supply chains are not limited to one state; various links of such a chain may be located in one or more countries

Source: systematized by the authors on the basis of [6; 8]

The formation of the supply chain, thus, assumes that the result obtained at each stage is not only the initial one for the next stage in the block under consideration, but should also be taken into account when solving problems in the neighboring block. For instance, the choice of mode of transport depends on the intended location of the warehouses and their infrastructure, and the choice of vehicle is largely determined by the optimal order lot. In its turn, the size of the order will depend on the cost of transportation, that is, on the type of transport, type of vehicle. At the same time, it is common that when tightening the fulfillment of the requirement “right on time” or increasing the speed of delivery, the cost of transportation soars.

The interdependence of decisions does not allow to uniquely form a supply chain, it should have a fairly mobile structure that will quickly respond to changes in consumer needs. In this regard, you can refer to the marketing section, which is associated with the construction of network organizations [1; 5].

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Among the distinctive features of network organizations, the following ones are considered the most significant:

1. Multilateral contractual relationships between network participants.

2. The principle of openness for each other, mutual trust and shared responsibility for the final result of the network.

3. Sharing of assets, resources, capabilities of several enterprises included in the network.

4. Orientation to market mechanisms for coordinating the activities of network participants, and not to administrative mechanisms.

5. Drive to the use of information technology and the exchange of information online.

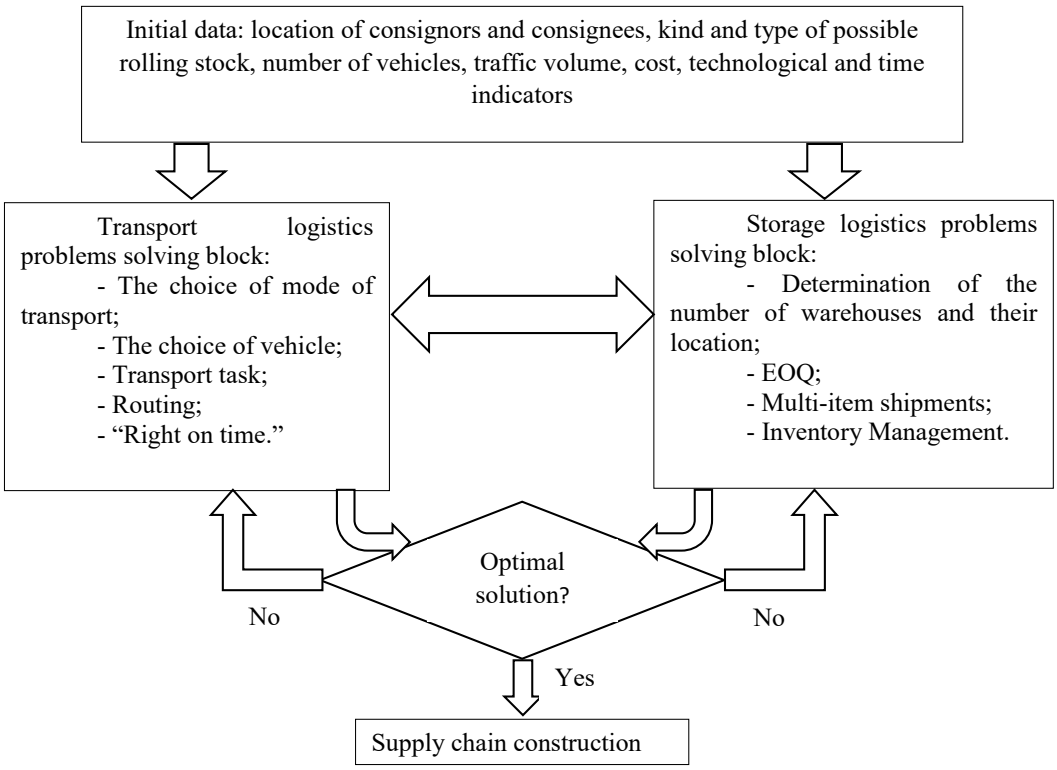

Figure 3. General approach to the formation of the supply chain

Source: developed by the authors based on [5; 7]

However, it should be noted that in the theory of relationship marketing the greatest attention is paid to the formation of a common goal, i.e. functioning of the network, the form of integration of participants, etc. Whereas issues of designing the supply chain, the formation of a system for promoting the material flow that is optimal for the final consumer, transportation tasks, etc., are gaining importance for logistics. Thus, it can be argued that the basis for building the optimal supply chain can and should be the mutual penetration of theories, but with regard to the specifics of the tasks being solved.

The supply chain management process should be considered as a whole, regardless of the functions performed and the influence of a single participant in the supply chain and its contribution to increasing the aggregate value of all its participants. The purpose of integration is to manage and improve a complex network

of relationships through the integration of links, the sharing of technology, information and resources.

There are several reasons to why cooperation and interaction within the supply chain should be developed:

– participants in the supply chain recognize the presence of common: interests in relation to the development, implementation of innovations and the creation of products of value to the consumer;

– individual companies believe that they cannot afford to invest in the innovations they need;

– risks can be shared between several organizations;

– the ability to gain access to new markets;

– cooperation with other companies located in another country or region can reduce the level of political risks, and therefore, avoid additional costs.

One of the most important categories in logistics is logistic costs, the optimization of which allows us to assess the feasibility of transforming the logistics system. In this case, we are talking about "total costs" for the implementation of individual processes in the framework of a specific business process.

The concept of "total costs" means that the system should not strive to minimize costs at all stages of the process. Moreover, cost reduction in one area can lead to higher costs in another area of activity. It does not matter, for example, what the structure of the costs of warehousing or transportation will be if the enterprise as a whole fulfills its tasks with minimal total costs, since in the market system "price of the service and its quality" the logistics services for a minimum price are not the most competitive, but on the contrary those companies that provide the maximum beneficial effect in the economy, due to the use of logistics.

Thus, the main idea of the interaction of counteractors in supply chains is to consider the process of movement of material, financial information and other flows not individually, but in the system, from the point of view of a single process.

The construction of such a system requires a system of reliable information on the movement of products, i.e. not just operational support of material flows by information, but real-time operational communications, guaranteed by the use of operational information services for material flows in the logistics system. To solve these problems, a specialized structural unit of the company (logistics department, logistics coordination center, etc.) is required, which is responsible for managing and coordinating information and material flows.

However, when developing logistics systems, it is necessary to strive to ensure that they are organically integrated into the natural practical activities of the enterprise and ultimately become their integral part and means of solving strategic problems.

CONCLUSION

Thus, intra-company and inter-company logistic interaction in activities leads to the following:

– allows to minimize total costs of organizing material flows within the enterprises themselves and beyond, thereby increasing the competitiveness of this economic structure;

– helps to improve the quality of the set of operations performed, which is important from the point of view of relations with the consumer and satisfaction of their requirements in a competitive environment;

– contributes to the optimization of the enterprise management system, which increases competitiveness and economic stability, reliability, both of individual enterprises and their combination within the framework of strategic alliances;

– largely determines the development trends of integration processes between commercial organizations, municipal and state structures within regions and at the federal level of government;

– provides a positive impact on the formation, development of the logistics infrastructure and innovative processes in various business structures, companies and in the process of their interaction for the purpose of supply.

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TRANSFORMATIONAL PROCESSES OF THE COUNTRY'S ECONOMIC DEVELOPMENT

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Abstract
The article describes the basic concepts of the transformation definition and on the generalizing of scientific research substantiates. The general definition of the transformation concept – qualitative transformations or formation of economic system of various scale, allowing to move to a new level of functioning and development through timely adaptation of the laws through changes, programs, changes, goals and technologies for resolving contradictions that are accepted and function consistently and cyclically at all levels of the economic system. The main features of transformation are identified and presented. It is proved that the course of transformation processes (sequential changes of objects and phenomena occurring in a regular order, the combination of a series of sequential actions aimed at achieving a certain result, a consistent change in the state of the object in time) and their impact on the functioning and development of economic systems due to internal or external factors, among which can be distinguished: factors of state regulation of the economy, factors of structural transformation of the economy, factors of spiritual and moral restructuring of society, objective and subjective factors determined by the effects of economic laws, exogenous and endogenous factors. Transformation of the country's economic development process is only possible if it is necessary to strike a balance between the social, environmental and economic development of the country. The definition of social transformation, environmental transformation and environmental transformation is given. It has been proved that the transformation process is a complex and contradictory process, which depends on the consistent change of the object of the object of study in time, the consistent change of objects and phenomena, which occurs in a regular order. Studying the causes of occurrence of transformations in systems of different nature and content of characteristic features, it is useful to understand their course in time and space, and to ensure the controlled nature of such transformations. The analysis of transformation processes in the economy should be based on their empirical manifestations and theoretical basis. The list of the main levers of transformation processes of economic development of the country are presented, among them: development of small and medium business; increasing demand for Ukrainian products; expansion and diversification of foreign economic relations, concluding agreements on the functioning of free trade zones with individual countries; pursuing an active employment policy; functioning of export-credit agency that will facilitate transition to export of high-tech innovative products for sustainable development of the country; pursuing a policy of inflation targeting and floating exchange rate targeting by the National Bank of Ukraine; active cooperation with international financial institutions (including the IMF, the World Bank, etc.) within the framework of joint programs. development of small and medium business; updating and optimization of the system of state management of enterprises; raising social standards; implementation of educational, pension and medical reform; improvement of investment climate, deregulation and development of entrepreneurship; implementation of new production standards, etc.

Keywords: transformation, transformation process, economic development.

INTRODUCTION

To date, Ukraine has come a long and thorny path, and its economic development has always been on the verge. It so happened historically that the economic development of the country has masked the notion of "economic survival" which was the cause of significant globalization process in economy, military confrontation and external aggression against the country, as well as deepening crisis in various spheres of life.

The economic development of a country is possible only under the condition of a smooth transition from an economically inefficient administrative-command model to the transformation of economic processes through liberal-capitalist and socially-oriented models.

RESEARCH RESULTS AND DISCUSSION

In the context of transformation of the Ukrainian economy under the term "transformation" or, in a single-function process, "structural shifts" should be understood as the process of adaptation (quantitative and qualitative adaptation) of elements of economic systems at the macro-, meso- and micro-levels and their interrelations respectively to the patterns of functioning and development of a market economy, which leads to the formation of sustainable socio-ecological and economic development [22].

Transformation in the broad sense (systematic changes) is not a time-limited process of transformation of the system, its elements, relationships and relationships between them [9].

Having conducted a rather broad analysis of scientific researches, the most relevant definitions of the concept of "transformation" were highlighted (Table 1).

The analysis of scientific thoughts before interpreting the definition of "transformation" can identify the following basic features [3].

1. Transformation is a process. Although there are multivariate approaches to consider this category, we remain adherents of the process approach to interpreting this definition, since other approaches to its analysis also emphasize in general the particular set of actions that must take place to effect transformations, which is a process approach in its essence. In particular, the interpretation of transformation as a particular moment of development is also directly linked to the study of it from the point of view of the process, since it is not appropriate to study the static state of the economic system and to argue for transformation.

2. Transformation is a qualitative process. In fact, all scientists agree that positive changes in the development of the object under study are characteristic of transformation as a universal process. and economic. In general, transformation contributes to the movement of a particular phenomenon to a better version of it in space and time in harmony.

3. Transformation is a dynamic qualitative process that is subject to constant change of an object that is in a state of change and certain turbulence. In fact, there is no transformation without dynamism, because an economic entity realizes a movement in a certain positive vector.

Table 1. The essence of the “transformation”concept

Author	Description of the concept
Steblyakova L., Ivashchenko N., Ismailova M. [21]	- the action or process of changing the form, appearance, essence of a society or a separate structure - transformation of essential components of society, all aspects and spheres of social life
Pochenchuk G.M. [15, p.125]	- transformation of a social system of different scale, depth, orientation, caused by internal or external factors, or a combination thereof
Steblyakova L.P. [19, p. 21]	- the objective-subjective process, on the one hand, takes place in accordance with objective laws, and on the other - initiated and regulated by the subjects in order to accelerate it and give it a certain direction
Kirilluk E.M. [10, p. 18]	- both subjective and objective process of development (evolution) of economic systems - a process that involves deep qualitative transformations of the system
Boyko A.I. [2, p. 24]	- the moment of development of the object reflects the transition state from what is no longer to what is not yet, but what should or may be
Kuharskaja N.A. [12, p. 11]	- a constant form of life activity, a movement in which the old and the new coexist, are born and innovative trends survive and develop in certain conditions
Toffler E. [20]	- transformations, versatile tumultuous events, changes, impulses into a new system, which are not a continuation of development in the current direction, but radical changes that may negate previous experience
Pochenchuk G.M. [15]	- is a complex process of transformation, which changes the quantitative and qualitative parameters of systems and their components
Grazhevskaya N.I. [4]	- a form of economic systems development associated with evolutionary and revolutionary changes, the constant transition of economic systems from stable to fragile and vice versa
Kornukh O.V., Turilo A.M. [11, p. 190]	- the economic category, which is related to the economic sphere, inherent in different levels of management, reflects the complex process, which is carried out simultaneously in space and time, occurs under the influence of objective and subjective factors and a key feature of which is the totality of change, which ultimately lead to a new economic state, new economic results, and the setting of new economic goals and objectives
Mochernyi S.V. [6, p. 687]	- the process of transformation of one economic system to another, which is accompanied by the extinction of some elements, features, properties and appearance of others
Petrishina N.V. [14, p. 32]	- a complex process of transformation of the economic system, which involves quantitative and qualitative changes in the components of the system and spheres of public life
Bell D. [1]	- measured and elaborated measure of necessary changes, within which the selection of the most important and perspective continues, society adapts to the changes of the environment through the formation of programs, projects, goals, technologies for solving contradictions, etc.
Grischenko G.O., Golovko M.I. [5, p. 359]	- are qualitative transformations of the economic system, going beyond the limits of stable functioning and transition to a state of imbalance, quantitative and qualitative changes of different intensity and orientation.
Zavoloka Yu.M. [7, p. 176]	- qualitative transformations of the economic system, its going beyond the limits of stable functioning and transition to the state of imbalance, quantitative and qualitative changes of different intensity and orientation
Markovich I.B. [13]	- an immanent feature of national economies, which is constantly occurring and is a phenomenon of continuous change of form, as the moment of cardinal transformations, as a result of which the structure, features, system of relationships are completely changed
Ivashina S.Yu., Ivashina O.F. [8, p. 310]	- deep transformations caused by changes in technology and occurring at the level of economic relations, institutions of economic and social sphere, as a process that is consistently and continuously carried out at all levels of the economic system

Source: compiled by the authors on the basis of [1; 2; 4-15; 19-21].

4. Transformation is the cause of non-equilibrium states in the system, which is caused by the gradual destruction of old elements of a certain system, their renewal, the appearance of other components, which is dictated by time and reality. In fact, during the transformation, the economic system is in a non-equilibrium state, due to the presence at the same time of old elements and the birth of new ones, which are not always in agreement with each other. The presence of such discrepancy and lack of consistency and causes some conflicts.

Summarizing the definition of transformation, these are the qualitative transformations or emergencies of an economic system of various scales that allow us to advance to a new level of functioning and development through timely adaptation to changes through the formulation of laws, programs, projects, goals and technologies for resolving and contradicting consecutively and cyclically all levels of the economic system.

The course of transformational processes (sequential changes of objects and phenomena occurring in a regular order, a set of series of sequential actions aimed at achieving a certain result, a consistent change in the state of the object in time [16]) and their impact on the functioning and development of economic systems due to internal or external factors: factors of state regulation of economy, factors of structural transformation of economy, factors of spiritual and moral restructuring of society, objective and subjective factors that are determined economic laws, exogenous and endogenous factors.

Transformations of the country's economic development process are possible only if the balance between the transformation processes of the country's social, environmental and economic development is indispensable.

Social transformation: the process of significant change of society as a whole or of its system-forming elements, characterized by multi-vector, relatively high rate of change and increased influence of subjective factors (the main cause is the deep systemic crisis of society); a special type of social change, alternative to the revolutionary and evolutionary types, which reflects the fundamental regularity of the shift of natural-historical processes towards the socio-historical, when social factors and human potential play a decisive role in the development of society [17].

Ecological transformation is a process of becoming ecological security of the country, through rational use of components of the biosphere in the process of environmental management, reduction of air pollution, surface and groundwater, as well as control of waste and use of non-renewable mineral resources.

Economic transformation is a continuous process of change, one of which is discrete, discrete and systematic. Transformation in a narrow sense (one-time and discrete changes) – a transition period (a transitional economy, a transformation economy "in a narrow sense") – a time-limited process, which is determined by turning events in society, consists in the transition from one equilibrium state to another. Whereas transformation in the broad sense (systematic changes) is not a time-bound constant process of transformation of a system, its elements, connections and relations between them [9; 17].

The importance and depth of transformation processes is determined by the extent to which real changes take place in the economic development of a country, and the extent to which structural shifts affect its system-forming relationships, transforming the old economic system of sustainable development into a new one.

Important for the transformation of economic development of the country are the real and financial resources of the country: natural resources (land, water resources, air pool, minerals, etc.); labor resources (working age in working age); logistical resources (fixed and working capital in real form); information resources (databases, intellectual information services, design estimates, technical

documentation, etc.). In substance, transformation leads to certain changes, and by its consequences its nature is that it affects the state of different systems. Transformation can result in not only pure changes, but also the genesis of a new system, new relationships or phenomena.

Transformational process is a complex and contradictory process, which depends on the consistent change in the state of the object of study over time, the consistent change of objects and phenomena, which occurs in a natural order. Studying the causes of transformations in systems of different nature and the content of characteristic features is useful for understanding their flow in time and space, ensuring the controlled nature of such transformations. The analysis of transformation processes in the economy should be based on their empirical manifestations and theoretical basis.

Transformation processes in a country's economic security system must be considered as a subjective and objective process that takes place in space and is determined by an existing economic system [9].

The main levels of transformation processes of economic development of the country include: development of small and medium-sized businesses; increasing demand for Ukrainian products; expansion and diversification of foreign economic relations, concluding agreements on the functioning of free trade zones with individual countries; pursuing an active employment policy; functioning of export-credit agency that will facilitate transition to export of high-tech innovative products for sustainable development of the country; pursuing a policy of inflation targeting and floating exchange rate targeting by the National Bank of Ukraine; active cooperation with international financial institutions (including the IMF, the World Bank, etc.) within the framework of joint programs. development of small and medium business; updating and optimization of the system of state management of enterprises; raising social standards; implementation of educational, pension and medical reform; improvement of investment climate, deregulation and development of entrepreneurship; implementation of new production standards, etc.

CONCLUSION

Studying the empirical manifestations of the transformation processes of economic development of the country are extremely useful, although this is clearly insufficient to understand the nature and general patterns of transformation processes, so there is a need for their theoretical substantiation. This necessitates further study of the causes of transformation processes as a general scientific phenomenon.

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THE INTERACTION OF MONETARY, MACROPRUDENTIAL AND FISCAL POLICIES

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Abstract
This article presents an overview of developments in the economic literature related to interaction of monetary, macroprudential and fiscal policies. The combination of fiscal and monetary policies in Ukraine and other world between 2005 and 2018 has been analyzed. After several years of a synchronized expansionary mix, monetary policy has been the most aggressive tool across countries. In response to the global financial crisis, approaches to identifying the policy mix have been reviewed. This gave rise to a new paradigm for macroeconomic and financial stability. This has also been the effect of financial stability becoming a new objective in the policy mix. In Ukraine, high economic growth is accompanied by a relative increase in inflation. Under modern conditions in Ukraine, the coordination of monetary, fiscal and sectoral policies needs to be improved: a monetary policy targets inflation; while using fiscal and sectoral policies create the preconditions for structural support and stimulation of economic growth. In other words, coordination of monetary, macroprudential and fiscal policies should ensure that inflation is reduced and GDP grows. Based on the findings of empirical and theoretical studies the lack of clear impact of monetary policy instruments on financial stability has been established. There is contradiction of goals between inflation targeting and ensuring economic growth. This fact necessitates the use of monetary policy instruments to curb inflation, macro-prudential policy instruments to ensure financial stability, and fiscal policy instruments to promote economic growth. The priority objective of monetary policy is the level of inflation, while the level of business activity can be provided with instruments of both monetary and fiscal policy. In addition, the limitation of systemic risk in the banking sector of the economy and ensuring financial stability are achieved by the macroprudential policy instruments. It has been established that the optimal balance between policies depends on the state of the economy and the business cycle stage. Under certain circumstances, macroprudential and monetary policy tools can be used together. The principles of coordination of goals and objectives of macroprudential, monetary and fiscal policies have been formed. They are scientific validity, priority of goals and consideration of mutual influence.

Keywords: monetary policy, macroprudential policy, fiscal policy, monetary and fiscal restriction (expansion), policies coordination.

INTRODUCTION

The consequences of the global financial crisis 2007–2008 have formed in the scientific environment the opinion that price stability does not provide macroeconomic financial stability. The accumulation of financial imbalances occurred even in the face of low inflation and small GDP gaps. That is why such goals of central banks as ensuring financial stability (counteracting systemic risks) and price stability should be distinguished. The goal of financial stability is achieved through the effective use of macro-prudential policy tools that limit excess growth and mitigate the effects of cyclical fluctuations in the economy.

There is a plethora of research on the rational organization of macroprudential policies in the modern economic literature. However, a number of issues, related to

the interaction of macroprudential, monetary, fiscal and structural policies, remain underdeveloped.

That is why theoretical and methodological issues of interaction will be considered in this research:

– macroprudential and monetary policies;

– monetary and fiscal policies.

Conducting such research aims to develop principles for coordinating the goals and objectives of macro-prudential, monetary and fiscal policies on the basis of maintaining financial stability by strengthening the resilience of the financial sector and preventing systemic risk.

Apparently, macroprudential policy should ensure financial stability, while monetary policy should ensure price stability. At the same time, the effective use of the tools of both mentioned above policies requires the forecasting and evaluation of their potential mutual impact.

Taking into account the lack of experience of using macro-prudential policy instruments, there is a possibility that they will be implemented inefficient. In the case of macroprudential policy instruments being inefficient, monetary tools may be additionally used. In this case, it is necessary to increase the role of monetary policy in ensuring financial stability. At the same time, in the case of limited monetary policy effectiveness (for example, for most small open economies), enhance the role of macroprudential instruments would be the most appropriate decision. However, the effectiveness of macroprudential policy instruments in ensuring price stability is debatable.

It should be added that the optimal organization of macroprudential policy is very important to ensure its effective interaction with other government policies. Policy coordination can improve the results of achieving the goal of financial stability. Therefore, it is rational to delegate the function of ensuring financial stability to one authority – the central bank. At the same time, possible contradictions in achieving policy goals require the separation of two policy functions through separate decision-making, accountability and communication structures.

Consequently, achieving the objectives of the study requires identifying the transmission channels of monetary policy impact on financial stability. They are: borrower balance sheet (default) channel; risk-shifting channel; exchange rate channel; risk-taking channel; asset price channel [24].

In the case of a borrower default channel (balance sheet channel), monetary policy may impair financial stability by affecting borrowing restrictions and increasing the risk of default. First, tight monetary policy increase the debt load for floating lending rate borrowers. Second, restrictive monetary policy affects economic activity, which has a negative impact on borrowers' income flows and loan repayment. Third, the increase in interest rates reduces the cost of the loan due to falling asset prices, which further reduces access to credit. In other words, tight monetary policy leads to an increase in the likelihood of borrowers default, a decline in banks' profits and an increase in non-performing loans. According to Allen and Gale (2000), the deployment of such a mechanism could eventually lead to a financial crisis [2; 13]. Similar conclusions are reached by scientists in empirical

studies. For example, in Spain during 1884-2006 the increase in central bank rates had a negative impact on the likelihood of borrowers default and the quality of bank loan portfolios (Jimenez and others, 2009). [17]. In the case of securitization of loans, an increase in default rates may lead to a fall in asset prices, which could further cause a financial crisis [12; 15; 22].

Given the above, it can be concluded that restrictive monetary policy can lead to a deterioration in financial stability as a result of increased debt load on borrowers and an increase in non-performing loans.

The mechanism of the next transmission channel – risk shifting – is similar in nature to the previous one, but has a fundamental difference: in this case, the source of instability is restrictive monetary policy and rising rates. Rising central bank rates may lower the margin of financial intermediaries and cause them to seek increased risk. Bhatacharya argues that financial institutions with higher leverage and lower margins will choose more risky assets (Bhattacharya, Sudipto, 1982) [5].

The effect of rising interest rates on interest margins is explained by banks providing short-term floating-rate funding and long-term lending by fixed rates. Lowering the margin in this case can lead to investing in more risky assets and increasing leverage to maintain the level of return on equity, thereby shifting value from depositors and lenders to bank owners. The effect of such a channel is usually amplified immediately before a crisis. This channel was empirically confirmed for the crisis in the United States in 2004 [11].

Another channel that confirms the negative impact of restriction on financial stability is the exchange rate channel. In open economies, monetary policy can affect the exchange rate and capital flows that determine the existence of the exchange rate channel: higher central bank rates cause foreign investment to flow into the country and lead to excessive credit expansion [14; 21].

In banking systems, capital inflows can lead to credit expansion and credit leverage increase. This creates a situation where raising domestic interest rates can lead to excess capital inflows and increasing lending. Given the low monetary rates in developed countries, this dilemma is faced by developing economies (eg Brazil, Peru and Turkey). However, it should be added that this channel was also relevant after the crisis: in Iceland, high interest rates stimulated capital inflows through the banking sector and overheated economy. In Iceland, inflation has led to a rise in central bank rates, which in turn has led to an increase in capital inflows, thereby creating a so-called “negative feedback loop” [18]. Many countries in Central and Eastern Europe have also faced this dilemma before the crisis. At the same time, in some empirical studies, the rise in financial instability has been linked to expansionary monetary policy. This negative impact is related to the implementation of the channel of excessive risk taking and the value of assets. In the case of the excessive risk taking channel, monetary policy may affect the incentives for financial intermediaries (primarily banks) to take risk. In the case of expansionary policies (with low interest rates) banks’ spreads will shrink. This may encourage banks to look for other sources of profit growth. They are increasing financial leverage and simplifying credit standards. It is associated with taking additional risks [6; 8]. Scientists also identify factors that may exacerbate a transmission mechanism of risk-taking channel: low

interest rates reduce the likelihood of borrowers default and capital requirements [1]. It should be emphasized that empirical confirmation of this mechanism has been obtained in studies based on micro-level balances of individual banks [16]. However, in the case of macro data analysis, there was no significant effect of rates on leverage and credit growth [8; 25; 21].

The expansion of the next channel (asset price) is also driven by expansionary monetary policy. As central bank rates decline, the value of creditors' assets and the net worth of borrowers will increase. In response, supply and demand for credit are increasing. This leads to a further increase in asset prices through the financial accelerator mechanism [4]. At the same time, it should be noted that this mechanism has not been properly validated in empirical studies. So, Del Negro and Otrock (2007) believe that the impact of monetary policy on US housing prices has been relatively low compared to other factors [7]. It has been proved that interest rates were relatively low in some developed economies (Ireland, Spain), while Australia, New Zealand and the United Kingdom had relatively high real rates, but excessive house prices were characteristic of all economies [24].

The generalized characteristics of the above-mentioned transmission channels of monetary instruments' impact on financial stability are shown in Table. 1.

Table 1. Transmission channels of the impact of monetary instruments on financial stability

Channels	Mechanism	The source of instability
Borrower balance sheet (default) channel	Rising Rates → Declining Business Activity and Revenue → Rising Non-performing loans	Credit restrictions
Risk-taking channel	Lower rates → Increase in activity and leverage → "Overheating economy"	The behavior of financial institutions
Risk-shifting channel	Rising Rates → Declining Margins → Seeking sources to increase profits (leverage and credit risk)	
Asset price channel	Decrease in interest rates → Purchase of assets for credit → Increase in asset prices	Externalities
Exchange rate channel	Rising Rates → Reinforcing Exchange Rate → Foreign Investment Inflow → Credit Expansion	

Source: [24]

Therefore, as Table 1 shows, there are controversial effects of monetary policy on financial stability. Borrower default, risk shifting or the exchange rate channels are associated with rising rates, excessive risk-taking or asset price channels are related to easing of monetary policy conditions.

In view of the above, there is a need to further justify the delineation of the objectives of maintaining financial and price stability. Further evidence of the need for such a distinction is the results of studies (Table 2).

The main arguments in favor of the distinction between monetary and macroprudential policies are as follows:

1. In Ukraine, despite some positive developments, monetary policy transmission mechanisms are not well-established and predictable, and given the transformation processes in the economy, the final formation of such mechanisms can only be expected in the mid-term perspective.

Table 2. Review of empirical research on monetary and macro-prudential policy coordination

Author and year of study	Period and country (s)	The main results
M. Gertler and S. Gilchrist (1994) [24]	USA (1960-1990)	Small firms are more sensitive to economic fluctuations (cyclical and monetary) and are more dependent on lending conditions. Increasing the rate leads to a deterioration of firms' financial stability and stability in the market.
Jiménez and others (2009) [16]	Spain (24,052 observations 1884-2008)	The effect of overnight rates on banks' risk appetite was assessed. Lower rates cause banks to take more risk in lending, more so for low-cap banks.
Merrouche and Nier (2010) [21]	OECD (1999-2007)	The claim that a state where the "interest rate stays low for too long" affects the accumulation of imbalances is refuted. Overall, monetary policy instruments have had little impact on instability.
Landier, Sraer, Thesmar (2011), Sengupta (2010) [20]	USA. 192,973 loans provided by New Century Financial Corporation в 2004 р.	In 2004, Fed rates were raised in response to rising real estate prices. Instead, the company providing sub-prime mortgage loans (New Century Financial Corporation) has increased its level of risk and focused its activity on aggressive growth of the loan portfolio.
Hahm, Mishkin, Shin, Kwanho Shin (2012) [14]	Open developing economies	Monetary and macroprudential policies goals should be distinguished. For example, monetary rates can not be raised to mitigate asset price bubbles. Macroprudential policy tools should be used instead.
Altunbas, Gambacorta and Marques-Ibanez (2012) [3]	A sample of 583 European banks	Well-capitalized and highly liquid banks suffered less from the crisis in 2007-2009. However, the effect of capitalization and liquidity was lower for countries with a long low interest rate period before the crisis.
Frait, Malovaná, Tomšík (2015) [9], Adrian, Liang (2016) [1]	Czech Republic	Macro-prudential and monetary policy instruments should be distinguished, as their interdependence is difficult to predict. Macroprudential instruments are more prolonged, so monetary policy instruments can only be used to maintain financial stability when a more flexible instrument is required.
IMF (2013) [24]	A number of countries in the world	The costs outweigh the benefits after a monetary shock, so monetary policy instruments should be used for excessive credit growth. Although, on the whole, the interaction between politics depends on a number of circumstances: the unemployment rate, excessive credit growth, etc.
Aino Silvo (2016) [23]	–	Using only monetary instruments to smooth cycles will lead to a contradiction between inflation and output. Macroprudential tools allow to solve this problem.
Gambacorta and Murcia (2017) [10]	Argentina, Brazil, Canada, Chile, Colombia, Mexico, Peru and the United States (1990-2012)	Macroprudential tools are more effective when used in conjunction with monetary (one-way) tools.
Soyoung Kim and Aaron Mehrotra (2017) [19]	Australia, Indonesia, Korea and Thailand (Q1:2000–Q2:2012)	Macroprudential and monetary policy tools can be used to achieve the same goals. In this case, their "double effect" and interdependence must be taken into account.

Source: own elaboration

2. There is no clear impact of monetary policy instruments on financial stability. Borrower default, risk-shifting or exchange rate channel are associated with an increase in interest rates, while excessive risk-taking or asset pricing channels occur when monetary rates drop.

3. There is a contradiction between meeting inflation targets and ensuring the required level of economic growth. The priority objective of monetary policy is the level of inflation, while ensuring the level of business activity can be provided with tools of both monetary and fiscal policies. And the limitation of systemic risk to the banking sector of the economy and to ensuring financial stability is achieved through the tools of macroprudential policy.

4. Under certain conditions, macro-prudential and monetary policy tools may be used together. Such conditions are keeping priorities of the goals and taking into account mutual influence.

Another area of research is to evaluate the coordination of monetary and fiscal policies. It should be noted that the global financial crisis of 2008-2009 has led to a revision of approaches to fiscal and monetary policy coordination. Monetary instruments have shown poor performance during the crisis, that is why most current research focuses on intensifying the use of fiscal instruments. In particular, interest in the Keynesian fiscal multiplier is returning.

Fiscal and monetary policies have been shown to have some differences depending on the region (Figure 1).

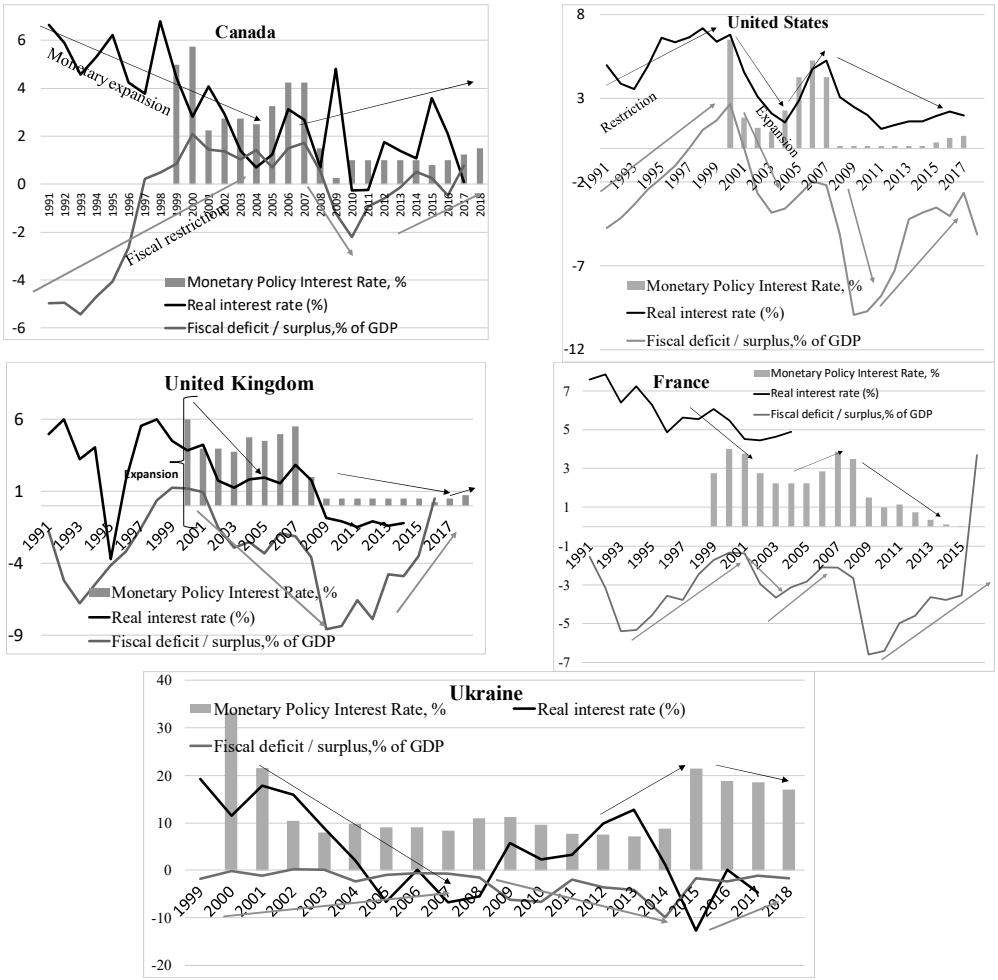

Figure 1. Dynamics of key indicators of monetary and fiscal policies of individual countries during 1999–2018

Source: own development based on statistics from the World Bank, IMF and the Bank of France

In Canada, the central bank pursued expansionary policies until 2004, followed by increases in rates in 2005-2007 and a further decline until 2015. At the same time, the gradual increase in monetary and real rates, in our view, cannot be attributed to restrictive policies, but rather reflects a possible positive trend towards the banking system's exit from the so-called “liquidity trap”. Canada’s fiscal policy focused on the surplus budget until 2007, and the aftermath of the 2008-2013 crisis necessitated an expansionary fiscal policy with a resumption of positive values in 2014-2015.

In the United States, the emergence of the so-called dotcom bubble and the subsequent collapse of the stock markets necessitated an expansionary fiscal policy. And the decline in monetary rates began in 2001. The period of 2004-2006 is identified as period of restriction, both monetary and fiscal. However, in response to the crisis, both policies could be described as expansionist since 2007, but since 2013, the budget deficit has been narrowing with a slight increase in the monetary rate.

The combination of fiscal and monetary policies in the UK and France is similar to the situation in the US: since the crisis began, monetary policy has become more aggressive, while fiscal policy has become restrictive since 2009.

In Ukraine, almost all years are characterized by budget deficits, but in stable periods, it is reduced with a significant increase in the realization of systemic risk. The relationship between the main variables that characterize Ukraine's fiscal and monetary policies is illustrated by the data in Figure 2.

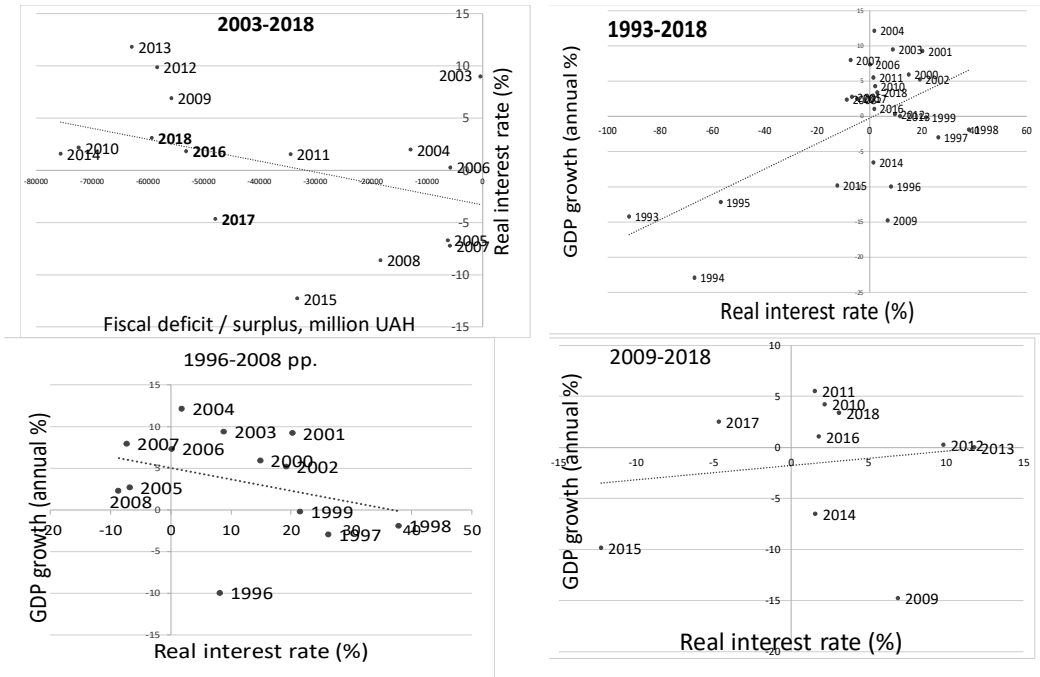

Figure 2. Relationship between the main variables characterizing the fiscal and monetary policies of Ukraine

Source: own elaboration based on statistics from NBU

As data in Figure 2 illustrates, there is slight negative relationship between the fiscal deficit and the size of the real interest rate: the instability of the economy also affects the financial sector, i.e. periods of significant deficit are characterized by high inflation and low real rates.

Comparing the relationship between GDP dynamics and the real interest rate suggests the following: lower interest real rates are associated with GDP growth in times of stable economic conditions (1996-2008), but in case of crisis, low real interest rates mean high inflation and are accompanied by the negative dynamics of GDP.

This indicates a significant difference between the Ukrainian economy and the developed ones, where high economic growth is accompanied by a relative increase in inflation. Under the modern conditions, the coordination of monetary, fiscal and sectoral policies needs to be improved: monetary policies aims at targeting inflation, while fiscal and sectoral policies should be focused on creating the preconditions for structural support and stimulation of economic growth. In other words, coordination of monetary, macro-prudential and fiscal policies should bring about a reduction in inflation and GDP growth.

CONCLUSION

Based on the results of the study, we can conclude that there is no proper and reasonable coordination of the government's fiscal policy with the monetary policy of the central bank in Ukraine. Government's social-oriented policy result in household's income growth. At the same time, income growth is much higher than the economy and labor productivity growth. These factors stimulate the growth of demand, credit expansion of banks and lead to an increase in inflation.

The need to overcome the negative impact of systemic risk on the banking sector and the economy of Ukraine as a whole requires formulating principles of effective coordination of macroprudential, monetary and fiscal policies:

– scientific validity – the implementation of the instruments of each of these policies should be carried out in accordance with scientific developments and conducted empirical studies on the basis of macroeconomic forecasting, taking into account national specificities;

– priority of goals – in order to avoid conflict of goals, it is necessary to maintain their priorities (price stability – for monetary policy and financial stability for macroprudential);

– consideration of mutual influence – applying the tools of individual policies it is necessary to take into account both their possible "double" or controversial effect.

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BALANCED DEVELOPMENT OF REGIONAL ECONOMIC SYSTEMS ON THE BASIS OF SMART SPECIALIZATION: EUROPEAN EXPERIENCE AND OPPORTUNITIES FOR UKRAINE

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Abstract
In the conditions of increasing integration processes, significant changes are taking place at the regional level of administration in Ukraine. Concession of greater autonomy to the regions, delegation of appropriate authorities concerning organization of the process of socio-economic development increases the complexity of managing regional economic systems. The state has transferred the powers and considerable resources in the sphere of regional development to the regional authorities. It requires the use of modern methods of regional administration that would meet not only a new status of regional economic systems, but also the environmental conditions characterized by a high level of instability. Smart specialization is a new tool of the European Union, which can help Ukraine to build up regional capability, taking into account two important approaches: local conditions and the knowledge economy. These approaches envisage identifying the competitive advantages and assets of the region, use of its innovation and scientific potential. The key to success of launching smart specialization strategy in Ukraine is real cooperation of the local authorities, the scientific community, the civil society and business, which will help Ukraine get an access to collaboration with European subregions, to increase the number of joint projects with the EU, to attract investors and to ensure "smart" use of manpower. System reformation of functioning regional economic systems of Ukraine, in the view of significant political and legal changes that have taken place in the country in recent years, becomes an area of special strategic importance at the national, regional and local levels and requires comprehensive scientific research and substantiation. The *purpose* of the article is to consider modern strategic methods of planning and management of regional economic systems of Ukraine, which implement the function of strategic vision of their development, shape the innovation and investment attractiveness of individual territories, facilitate their conversion into economic and social benefits for the residents of the region. The *methodological* basis of the research is the fundamental principles of the theories of regional and local economic development and administration, scientific elaborations of foreign scientists and the works of national researchers, which relate to the problems of regional development management. The article uses general scientific and special methods of research, in particular, logical, statistical that of system and comparative analysis and others. The *results* of the research are the presentation of the priority directions of regional and local policy, specific strategic goals and tasks (within the framework of implementation of the regional strategy) concerning development of types of economic activity which have an innovation potential, taking into account the competitive advantages of the region (community), which contribute to the transformation of economic sectors into more efficient ones. The value of the obtained results is that the considered approaches to the use of regional smart specialization as a modern effective tool to build up the regional capacity of Ukraine, are brought to the level of methodical and practical recommendations and can be used in the context of increasing innovation and investment attractiveness of individual regional economic systems, which will enable them to be converted into economic and social benefits for the residents of these territories.

Keywords: regional economic systems, strategic planning, smart specialization, local economy of knowledge and innovation, cooperation of the government, business, science and community.

INTRODUCTION

The modern world is developing according to the principles of introduction of new technologies, urbanization and relocation of labor resources, increasing the share

of public funds available on competitive terms and reducing the share of taxes from large companies through optimization of their taxes, increasing competition between regions and communities for the resources.

In the conditions of increasing integration processes, significant changes are taking place at the regional level of administration in Ukraine. Concession of greater autonomy to the regions, delegation of appropriate powers concerning organization of the process of socio-economic development increases the complexity of managing regional economic systems. The state has transferred the powers and considerable resources in the sphere of regional development to the regional authorities. It requires the formation of regional administration methods that would meet not only a new status of regional economic systems, but also the environmental conditions characterized by a high level of instability. Therefore, the new status of regions determines the need to develop strategic management and planning methods, which realize the function of strategic vision of their development.

RESEARCH RESULTS AND DISCUSSION

According to the national normative documents, smart specialization is an approach that envisages well-reasoned definition of individual strategic goals and tasks within the framework of regional strategy of development of the economic activities which have innovation potential, taking into account the competitive advantages of the region (community), and which promote transformation of the economic sectors into more efficient ones [1; 2].

The main characteristics of smart specialization as a strategic planning approach are shown in Figure 1.

In general, there are two terms used in the scientific literature for concept: “smart specialization strategy” (abbreviated – S3) or “research and innovation strategies for smart specialization” (abbreviated – RIS3).

RIS3 in the EU are plans developed at the regional and national levels that define the priorities for the development of regions and individual territories in research and innovation spheres, as well as those sectors of the economy which may become the most promising in the future.

The purpose of RIS3 development is to concentrate funds for research and development.

The concept of RIS3 is relatively new – it originated approximately in 2008-2009. Its popularity in Europe is due to the adoption of Regulation No. 1303/2013 by the European Parliament and the EU Council, that has made the development of RIS3 to be a pre-requisite for countries which wish to obtain means for research and innovation from the EU Structural Funds.

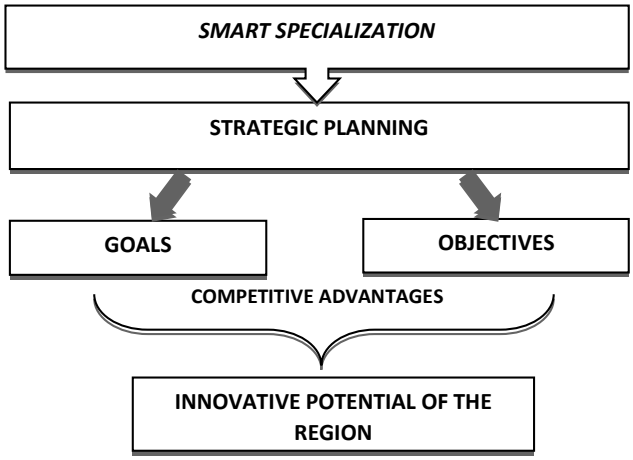

Figure 1. Smart specialization as a strategic planning approach

Source: [3]

In total, 120 smart specialization strategies have been developed at the regional and national levels in the European Union countries. These activities have attracted EUR 67 billion and created 350,000 jobs. This approach is already being implemented in more than 10 countries. As a result, for example, in Poland, 16 regional strategies, one national one, including 20 priority areas, have rapidly emerged.

In Ukraine, this approach is currently being tested only in the form of pilot projects in some selected areas.

The logic of the EU was not to copy other regions, but to determine the amount of support for the whole region, not just for a few parts of it. But instead of one specialization of the region, as it was initially foreseen by the European Commission, the regions identified much more priority areas for investment. That helped to avoid duplication.

Therefore, RIS3 is a strategic approach to innovation development in regions, aimed at avoiding duplication of competencies and fragmentation of means for their support. The main result should be to increase the innovation and investment attractiveness of individual territories that will make it possible to convert it into economic and social benefits for the inhabitants of the region.

The distinct features of these integrated economic transformation programs are that they:

– are knowledge-based;
– create competitive advantages;
– support innovation and stimulate investment;
– involve stakeholders in the implementation processes;
– are reasoned and have substantiated monitoring and evaluation systems.

Requirements for Formation of RIS3 Priorities:

– concordance with priorities of the national level and avoidance of duplication;
– development of complementary specializations;

– involvement of a wide range of participants in the process;

– interdisciplinarity (unique competences of regions must be on the verge of the branches, be superposed with new scientific spheres in which the region is the leader);

– focus on solving a number of social problems facing the region;

– use of broad boundaries not only for stimulating innovation but also for structural changes in the regional economy.

A four-dimensional partnership spiral should be formed in the process of RIS3 development, which must involve 4 parties: government, business, science and public.

Priority areas for smart specialization application are power engineering, healthcare, culture and creative industries, services, leading manufacturing systems, tourism, development of rural territories, food industry, security and others.

In addition, smart specializations can serve as tools to level the global challenges facing countries and regions, among which there can be demographic decline and urbanization, increasing competition among regions of the world, increasing role of digital technologies and shifting quality jobs in manufacturing and marketing into the digital realm, unwillingness of investors to invest in certain industries, etc.

The sources of funding RIS3 may be:

– state budget of a country;

– regional budgets;

– co-financing from local budgets;

– co-financing by private project promoters;

– EU structural funds;

– EU specific programs, for example HORIZON 2020, COSME.

It is interesting to consider the experience of Poland, which, after joining the EU, has achieved a considerable progress in applying a new approach to development planning.

First of all, it should be noted that the strategies are coordinated at the national level (NUTS1), although at the voivodship level (NUTS2) there is a direct relationship with relevant EU programs.

Like any new activity, Smart Specialization Strategies in Poland are characterized by both positive aspects and problematic areas, which are shown in Table 1.

Taking into consideration both positive and negative Polish experience, it can be prognosticated that the effectiveness of RIS3 in Ukraine will depend on a number of factors, in particular:

– introducing the selection of the most creative and promising entrepreneurs, together with whom strategic problems of the region can be later analyzed;

– the level of communication between the European Commission and regional administrations;

– use of motivational tools for entrepreneurs who are actively involved in search and identification of smart specializations;

–introduction of a constant cooperation of "business-power-science-public" and not only at the moment of strategy development;

Table 1. Positive and problematic aspects of Smart Specialization Strategy in Poland

POLAND	
Development planning based on application of Smart Specialization Strategies	
positive aspects:	**problematic aspects:**
– the government-business-science-public cooperation forms the basis of the process; – embodiment of subjects of both national and local scales into the process; – changing the approaches of entrepreneurs to the vision of the innovation component of their enterprises activities; – real impact of smart specializations on the development of regions (for example, the "Informatics and Telecommunications" direction in the Subcarpathian Voivodeship showed significant growth, having taken the 2nd place in the EU after Lisbon); – achievement of the goal of prioritizing development spheres and logical argumentation of expenditures (it is considered that many funds were used inefficiently before 2014 despite the fact that Poland received the biggest assistance from European funds compared to other countries that joined the EU after 2004); – active participation in the process of cluster representatives - the main drivers of changes in the innovation economy.	– at the national level, the list of smart specializations includes almost all sectors of economy, which causes dissipation of resources and complicates the choice of development priorities; – involvement of experts at the national level on a volunteer basis, which does not facilitate their full involvement in the process; – dissatisfaction of entrepreneurs with the constraints of the European Commission, which insists on exclusive funding of only researches and innovations, leaving without support clusters which are the locomotive of smart specializations; – the public and youth are not involved in the process of small business; – imperfection of the project evaluation system (projects, similar in their essence, were funded in some regions and rejected in others); – over-focus on RIS3 has led to some deviation from advancement towards the strategic vision of regions – such support is envisaged in regional and national strategies, but it is hardly noticeable in regional programs; – the procedure for changing smart specializations and rejection of those which have not shown significant progress in the development is not fully understood; – despite the postulate tenet of support to researches and innovations, the EU gives preferences in financing standard, less-risk and less complicated ideas which are easier to be implemented and monitored.

Source: developed on the basis of [3]

–development of a mechanism for updating, modifying and introducing new spheres to RIS3;

– stimulation of cooperation of the regions similar in the structure of economy, while identifying smart specializations;

– formation of effective monitoring mechanisms at regional and national levels.

The main question for Ukraine is how to use the obtained European experience in the complicated realities of the present days, when, in most cases, smart specializations are not determined on the terms of getting funding from definite programs. The most important items are:

– to try to apply the "entrepreneurial discovery" approach in order to maximize the involvement of entrepreneurs from promising areas, including those that are partially "in the shadow";

– to promote the creation of effective government-business-science-public communication platforms;

– to adopt the idea of prioritizing expenditures to support the development of innovations and researches;

– to provide funding the best ideas that can be included in the operational plans of new regional strategies for 2021-2027.

The Association Agreement of Ukraine with the EU envisages that by the end of 2025 Ukraine should approximate its legislation as much as possible to the EU legislation and implement the provisions of about 350 EU directives, regulations and decisions into the national legislation.

One of such changes is the introduction of smart specialization into the strategic planning system for regional development, which has already been defined by the relevant normative legal framework. The decision-making process on smart specialization in regional economic systems is shown in Figure 2.

It is considered that at least one strategic objective of the regional strategy should be defined on the basis of smart specialization and aimed at innovation development of a limited number of economic activities of the region. The selection of such priorities should take into account the world market and technological trends of innovation development and facilitate the search for those areas of economic activity that are competitive at the national and international levels [4; 5].

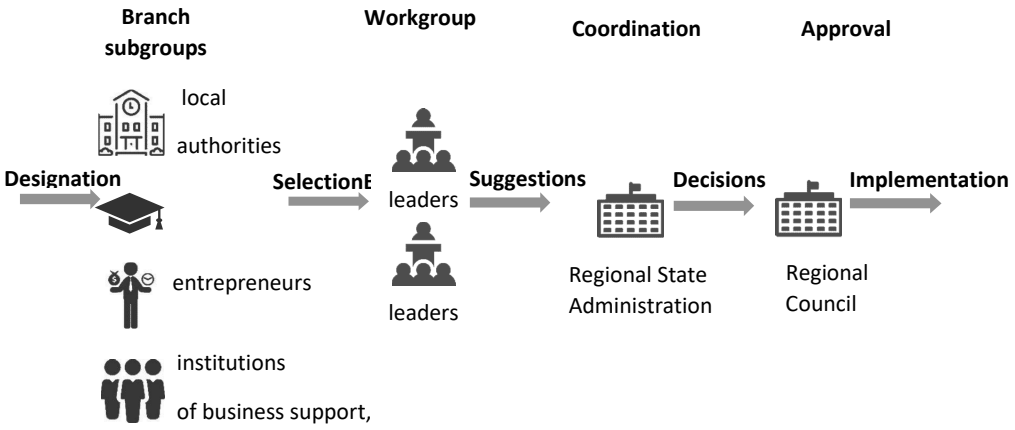

Figure 2. The decision-making process on smart specialization in regional economic systems

Source: [3]

Thus, smart specialization or smart decentralization is a new tool of regional policy for Ukraine, which envisages development of local knowledge economies and innovations, with further competition between them.

Its main peculiarity is formation of strategies from below in close collaboration and cooperation of the authorities, business, science and community which share the vision of economic, innovation and scientific potential of the region.

In our opinion, the first steps to develop regional smart specialization strategies should include: analysis of the regional context and potential for innovations; application of a reliable and inclusive administration structure; development of common vision for the future of the region; selection of a limited number of regional development priorities; creation of the appropriate policy combination, and integration of monitoring and evaluation mechanisms. Funding sources should include national and regional budgets, co-financing from local budgets, private project promoters, structural funds and EU special programs.

The project cycle of implementation of smart specialization strategies in regional economic systems is shown in Figure 3.

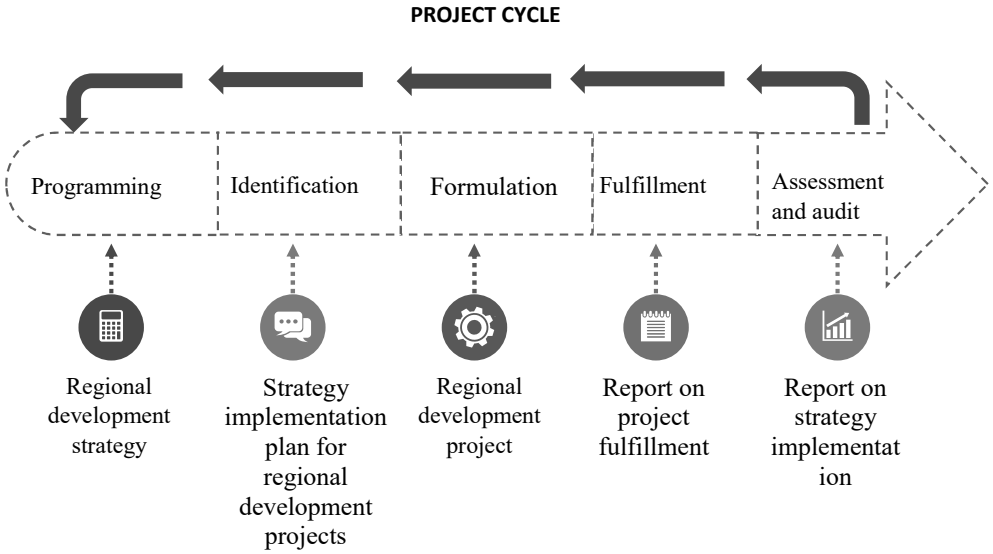

Figure 3. Project cycle of implementation of smart specialization strategies in regional economic systems

Source: [3]

It is very important to develop an administration system in regions as well as in individual communities with maximum involvement of the public in decision-making. It is not only public discussions, it is an opportunity to include topical suggestions, advice of the external expert environment in the community development strategy. After all, the key principles for building up smart specialization strategies are trust, communication and collaboration among regional stakeholders.

CONCLUSION

If Ukraine is determined to integrate economically with the EU common market and join the global added value chains, the task of implementing the idea of regional smart specialization is one of the key priorities.

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SOCIO-ECONOMIC DEVELOPMENT OF UKRAINIAN REGIONS IN THE CONTEXT OF EUROPEAN INTEGRATION

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Abstract
Main directions of the social and economic development of Ukrainian regions in the context of European integration are determined in the research. The idea is that the main task today is to provide not only development but prosperity of the region. Although the Ukrainian economy has reached an up growth of 2.5-3% in 2018, this level is not sufficient. European analysts believe that it is necessary to ensure growth at least at the level of 5-6%. This can only be possible through the formation of a competitive economic environment and by developing innovative entrepreneurship.
Speaking about innovative entrepreneurship it was emphasized the role of start-ups. One of the main reasons for the creation, successful development and the continued existence of start-ups was marked the slowdown of large firms (on the example of Ternopil region) which use existing products, and the development and creation of new ones are not nearly done. Therefore, start-ups due to their mobility in terms of new ideas implementation successfully compete with them.
The article deals with the key elements of an effective start-up implementation. Among them are defined: an idea, a team of innovators, resources and marketing of innovations. The implementation of the business projects is accompanied by a high degree of risk. In Ukrainian conditions it's not only the venture one, due to the lack of completely new products introduction and the lack of objective information about the market and future consumers. But it was underlined a great impact of the political and social risks both on the regional and national levels.
Due to the fact that interactions of small and medium-sized enterprises are often informal and based on trust, the area of interaction and support of SMEs innovative activity should be formed in the region (or based on the cluster model or based on regional innovation systems). To make small and medium-sized enterprises fully exploit the regional potential it was proposed creation of "regional innovative laboratories" as models of virtual business – education – science partnership, stimulating networking in innovative regional and cross-border clusters as a voluntary partnership of market participants. And also "regional innovative ecosystem" policy as a set of conditions that ensure the successful establishment and development of enterprises, provided by scientists and researchers, the scientific community, innovation managers, and investors must be developed and implemented.

Keywords: regional development, Euro integration, ecosystem, innovations, entrepreneurship.

INTRODUCTION

Regional development is extremely important for Ukraine today. As the experience of the European Union shows, the economic prosperity of the country can be ensured only by the strongest regions. At the same time, it is necessary to strike a balance between the internal and external regional and national interests. Local and regional development is now an integral part of the activities of local authorities and territorial organization in the countries of the European Union. As the EU attaches great importance to regional policy, it is important for candidate countries to move in

this direction and adapt their legislation in accordance with the regional component of international and cross-border cooperation.

At the same time, the Ukrainian regional authorities are actively working on the development of strategic guidelines based on the EU experience. While developing effective Strategies for the regional development for the period 2021-2027, it is important to place emphasis properly to ensure not only sustainable but also rapid socio-economic development of Ukrainian regions. Only this approach will allow successful implementing Ukraine's European integration intentions in the nearest future.

PREVIOUS RELATED RESEARCH

The globalization processes in the world economy have changed the position of its main subjects. Previously, the region was defined only as the place of business providing; nowadays the regions become main players.

The nature of regional competition is different from the competition of national economies (M. Porter, 2002) [20]. The regions are not characterized by the use of appropriate governmental economic policies (monetary, fiscal, customs, tax, etc.). Regional competition is also different from the competition of companies due to the lack of a single decision-making center in the regions, which develops and implements a regional competition strategy aimed to maximize profits. He also marks, that the main factor for regional competitiveness is the innovative capacity. His aphorism “There are no low-tech industries, only low-tech firms” can be determined as the slogan for modern regional development.

Regions compete by creating a favorable regional business environment, which is now determined not by geographical characteristics, but purely economic (business climate, investment attractiveness, protection of property rights, availability of scientific and educational centers, highly qualified personnel, positive demographic trends, etc.).

The regions are considered to become the growth poles of the national economy, play a leading role in the processes of decentralization and regulation of the economic (including industrial) policies of the world leading countries.

There were studied some effects from the region and its subjects joint activity on the global markets. The synergy effect for Ukrainian regions as the multiplication of the result from joint activity in the process of competition and EU integration was considered by Yu. Saveliev (2010 [23]), Zhalilo Ya.A., Zhuk V.I., Snihova O.Yu., Filipenko A.O., Shevchenko O.V. (2017) [17], study “Synergy of Cross-border Cooperation and Regional Development Strategies in Ukraine” (2018) [25]. The economic convergence as a process of regional economies approximation due to common factors in Ukraine is considered by Naumenko Zh.H. [16], Storonianska I.Z. [24].

RESEARCH RESULTS AND DISCUSSION

Regions have to solve two related but contradictory tasks: ensuring economic growth; improving the quality of life of the population [14].

The object of regional competition is the conditions of living and doing business, the investment attractiveness and other conditions of regions activity. An important stage in the competitiveness of the regions is the competition for human potential, which will further embody an innovative strategy, which today is the only key to success in international markets.

The priorities for regional development in the EU are concentrated in the areas of R&D support, increasing the number of clusters of SMEs, formation of support regional infrastructure and ecosystem, development of public-private partnership.

In this context, leading concepts of regional development are considered below:

- Cluster concept – M. Porter (1998, 2016 [19; 21]), Ch.Ketels (2006) [11]. Business cluster is a geographic concentration of interconnected businesses, suppliers, and associated institutions in a particular field. Clusters are considered to increase the productivity with which companies can compete, nationally and globally Michael Porter claims that clusters have the potential to affect competition in three ways: by increasing the productivity of the companies in the cluster, by driving innovation in the field, and by stimulating new businesses in the field.
- Ecosystem – James Moore (1993) [15], Iansiti and Levien (2004, [10]), Bakushevych, I., Goshchynska, D., Martyniak, I. (2019) [5]. Business ecosystem – is the network of organizations – including suppliers, distributors, customers, competitors, government agencies, and so on – involved in the delivery of a specific product or service through both competition and cooperation. The idea is that each entity in the ecosystem affects and is affected by the others, creating a constantly evolving relationship in which each entity must be flexible and adaptable in order to survive, as in a biological ecosystem. Ecosystems create strong barriers to entry for new competition [9].
- Smart-specialization – Barca (2009) [6] Ahner & Landabaso, (2011) [2]. Smart-specialization an innovation policy concept that aims to boost regional innovation, contributing to growth and prosperity by helping and enabling regions to focus on their strengths. Smart Specialization is based on partnerships between businesses, public entities and knowledge institutions. This approach is realizes under the current European Cohesion Policy.

The cluster and smart-specialization concepts are based on the regional specialization defining. They are aimed to stimulate innovations on the regional level to provide international competitive advantages. The ecosystem is a wider concept ‘cos it connects both competitiveness and cooperation instruments.

Statistics on social and economic developments in Ukraine and European Union

While we are talking on the European integration processes, it would be useful to identify the main gaps between EU and Ukraine in the sphere of the social and economic development. Ukrainian economy can be characterized as high risk with permanent crises. There are a lot of non-economic factors that must be considered while prognosticate the future development: the war, 5-year political changes, Ukrainian mentality and historic connections.

Since 2003 there were two deep crises, connected: the first one with the World financial crisis 2008 and the second one 2014-2015 with the Revolution of Dignity and military conflicts in the East Ukraine and in the Crimea. As it is shown on the figure below the most negative factor for Ukrainian economy was the Hryvnia devaluation in 2015. This critical mass of factors denied the development for 15 years back.

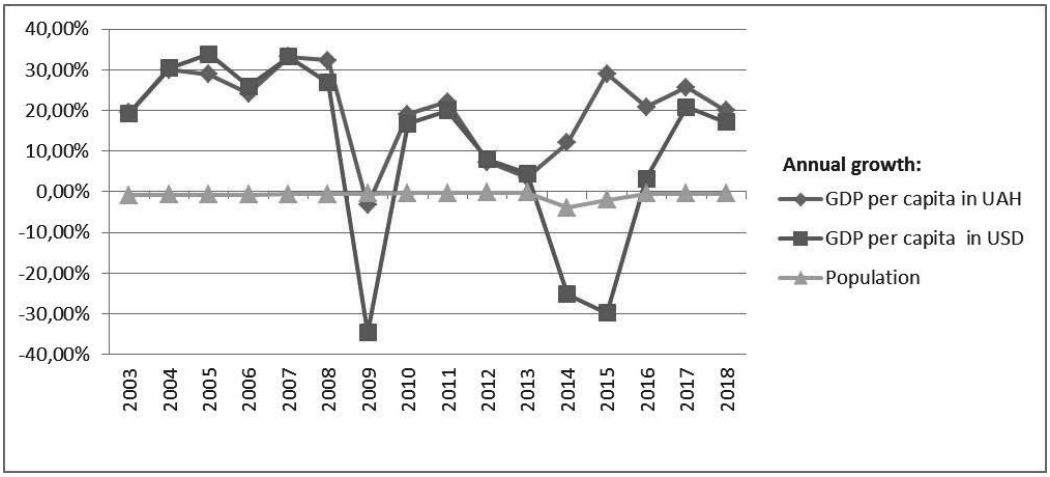

Figure 1. The evolution of GPD per capita and population in Ukraine during 2003-2018

Source: [8]

The growth of the GDP of Ukraine in the second quarter of 2019 was a record for recent years 4.6% (when National Bank of Ukraine expectations were at 3% and Bloomberg analysts had forecast 2.7%). But these are the first steps and the great impact on the people incomes cannot be expected in the nearest future. The long stagnation period caused the economy to be one of the poorest in the Europe.

As we can see (Table 1), the gap between richest (Denmark) and poorest (Bulgaria) EU countries is 8.6. At the same time the gap between the EU average and Ukraine is almost 8.8.

Despite the low level of income, the level of wage taxation in Ukraine is not the lowest compared to the EU. It is considered on the level of such great economies as Ireland (20.87%), United Kingdom (20.34%) or stable economies of Spain (20.10%) and Portugal (20.12%). The structure of wage deductions[6] (2018) consisted of two parts: 18% – personal income tax, 1.5% – military fee.

Comparing with 2014 the tax structure was changed from 18.6% to 19.5%. To reduce the tax charge the 3,6 % personal pension insurance or the so-called Single social contribution has been abolished.

[6] Wage taxes - are deducted from the amount of income paid to the employee, but their proper budget transfer is the responsibility of the employer

Table 1. European Union and Ukraine Salary and Tax (2018)

Rank	Country	Gross	Net	TAX
1	Denmark	€5,191.00	€3,270.00	37.01%
2	Luxembourg	€4,412.00	€3,159.00	28.40%
3	Sweden	€3,340.00	€2,570.00	23.05%
4	Finland	€3,380.00	€2,509.00	25.77%
5	Ireland	€3,133.00	€2,479.00	20.87%
6	Austria	€3,632.00	€2,324.00	36.01%
7	Germany	€3,703.00	€2,270.00	38.70%
8	France	€2,957.00	€2,225.00	24.75%
9	Netherlands	€2,855.00	€2,155.00	24.52%
10	United Kingdom	€2,498.00	€1,990.00	20.34%
11	Belgium	€3,401.00	€1,920.00	43.55%
12	Italy	€2,534.00	€1,758.00	30.62%
13	Spain	€2,189.00	€1,749.00	20.10%
14	Cyprus	€1,779.00	€1,658.00	6.80%
15	Slovenia	€1,626.00	€1,062.00	34.69%
16	Malta	€1,379.00	€1,021.00	25.96%
17	Estonia	€1,221.00	€957.00	21.62%
18	Portugal	€1,158.00	€925.00	20.12%
19	Greece	€1,092.00	€917.00	16.03%
20	Czech Republic	€1,149.00	€873.00	24.02%
21	Croatia	€1,081.00	€802.00	25.81%
22	Poland	€1,102.00	€784.00	28.86%
23	Slovakia	€980.00	€748.00	23.67%
24	Latvia	€1,013.00	€738.00	27.15%
25	Lithuania	€885.00	€693.00	21.69%
26	Hungary	€955.00	€635.00	33.51%
27	Romania	€787.00	€565.00	28.21%
28	Bulgaria	€586.00	€457.00	22.01%
	Average EU	€2,143.50	€1,543.32	
29	Ukraine	₴7810.88 €243,03[7]	₴6287,76 €195,64	19,50%

Source: [4; 18]

The level of personal income tax was raised from 15% to 18% and from 2015 a military fee was introduced. The best places for capital taxation are Cyprus (6.80%) and Greece (16.03%).

Considering economic and geopolitical changes, especially the depreciation of UAH against EUR currency (average exchange rate about UAH 1050 in 2010-2013; UAH 1572 in 2014 and UAH 3214 for 100 EUR), net incomes in Ukraine are on the same level for past 5 years (EUR 195.64 in 2018 vs EUR200.47 in 2014).

[7] The calculations made on the average annual rate according to the NBU [3]

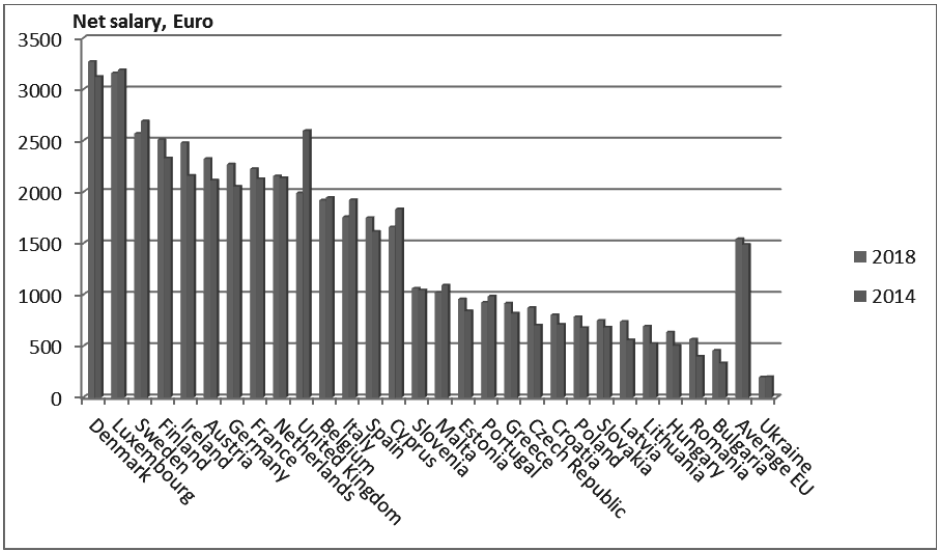

Figure 2. Net income (after taxes) average wages in Europe and Ukraine in EUR currency (2014 vs 2018)

The interesting fact is the Gini coefficient evolution in Ukraine. The Gini coefficient measures the inequality among the levels of income within the population. A Gini coefficient of zero expresses perfect equality where everyone has an exactly equal income, while a Gini coefficient of one expresses that one person has all the income. After the 2015 review Ukraine (25.50) is at the same level as Netherlands (25.10), Finland (25.40) and Belgium (25.90).

There is no common European tendency for incomes and welfare growth (Figure 2). The most significantly was the income growth in Ireland (€319.00), Germany (€216.00), and Austria (€210.00). The most affective is UK negative average salary growth for more than € 600.00. There is negative average salary growth in 8 EU countries as well as Ukraine. Firstly, this can be explained because of national currencies been volatile against EUR and USD currencies during the past years. Such countries like Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden and the United Kingdom, Sweden, United Kingdom use their national currencies instead of EUR. Second mark is a political aspect, like BREXIT. But there are a lot of examples for economy growth as a reason for net income growth.

Some aspects of decentralization reforms in Ukraine

According to one of the ideologues of decentralization in Ukraine, Anatoly Tkachuk (2017), as it indicates in *Decentralization in Ukraine…* (2017), the reform embodied in Ukraine, is unique one, and does not copy the experience of any other country. It has three components: 1. the reform of the territorial organization of power, 2. the reform of local self-government, 3. the reform of regional policy. The

main goal of the reform is to create conditions for the development of communities and bring services closer to people through the formation of wealthy communities, the transfer of most of the power and responsibility from central to the basic level of management, and clear delineation of functions on each level of management. Local government bodies in newly formed amalgamated territorial communities are forcing to solve many new tasks related to the formation of regional development policy, including search for models of innovative development of the communities, creation of entrepreneurial infrastructure for the development of sustainable regional ecosystems, as well as guaranteeing the resource support of local governance.

Summarizing the experience of decentralization reforms in European countries Koryavets (2013) certifies the synergetic approach that is optimal in normalizing and improving the system of governance. In the process of creating a new decentralized management system, the necessary element is the combination of national, regional and local interests, taking into account the local specifics of socio-economic, political and cultural development. He concludes that Regional Development Offices will face a difficult task of managing the border areas: simultaneously to solve both differentiation and integration problems. The effectiveness of decentralization decision-making process is directly dependent on the differentiation of interests. Socio-economic differentiation of a highly developed society implies the interweaving of interests of various actors of society because of social exchange.

Thus, the task of self-government reforms in Ukraine is to provide not only decentralization process in central regions but also prosperity of the local communities of remote and bordering regions. Local government must eliminate institutional and legal obstacles and encourage innovative forms of solving local problems.

New regional policy should be targeted to development of social entrepreneurship activities in the "amalgamated hromadas" (AH) with the participation of citizens that allow them planning of their entrepreneurial ecosystem, solving their common problems. Hromadas have a range of issues that are difficult to solve on their own. For instance, search and implementation of innovation technologies in collection, disposal and recycling of waste, provision of high quality centralized water supply and sewage, roads' repair and cleaning, organization of passenger transportation, maintenance of fire safety brigades, e-governance etc. It is easier to solve them in cooperation – combining funds and efforts with the neighboring hromadas that are also interested in it. *The Law "On Cooperation of Hromadas"* (2014) envisages the mechanism of such intermunicipal consolidation. Thus, 192 agreements on cooperation of territorial communities have already been registered, as of June 15, 2018 [22]. Since then, hundreds of hromadas have improved the quality of services provided on their territory by concluding cooperation agreements.

In the plan of integration of the hromadas on border regions, this Law does not provide a mechanism for regulation of cross-border and international cooperation initiatives of local communities. Obviously, need to be refined new legal and financial instruments of such cooperation?

In the Action Plan on the implementation of the Association Agreement between Ukraine, on the one hand, and the European Union, on the other hand, for the years 2014-2017 [1], the particular Chapter 6 provides actions for the establishment of joint ventures, international trade in services and electronic commerce between our countries. Thus, one can hope that the entrepreneurial potential of the border and adjoining territories will be used to accelerate the decentralization reforms in Ukraine.

A. Pavlyuk (2017) analyzed the dynamics of the formation of united territorial communities, the development of legislative, normative and institutional support for the implementation of the reform of the territorial organization of power on the principles of decentralization. He established that during years 2016 - 2017 a number of legislative and normative acts were work out resolving the problematic issues of the formation and developing of capable territorial communities. These steps have provided significant dynamics for the practical component of the reform - the formation of united territorial communities, so-called 'amalgamated hromadas' (AH).

Thus, 159 AH there formed that united 793 territorial communities in year 2015. At the beginning of 2017, there were 366 AH in Ukraine that united 1740 local councils, in which the first local elections were held. Then in May 2017, there were formed 413 AHs that united 5258 settlements, and in which the first elections of local self-government took place. Most of them are in Ternopil and L'viv regions.

The significant difference between regions according to the dynamics of the formation of AHs still exist (A. Pavlyuk, 2017), primarily due to different attitudes of local state administrations and local governments in the regions before the introduction of decentralization reform. The main direction solving this problem is legislative improvement of the process of 'capable amalgamated hromadas' (CAH) formation and strengthening them with expert, methodological, and resource support for entrepreneurial ecosystem development.

Most citizens will be ready to initiate their creativity and the entrepreneurial contribution to local development projects (programs, strategies), when they can participate in decision-making and feel that the project improves specific living conditions. By allowing local communities to determine how to plan a particular development project, local self-governments thus reinforce their sense of leadership and responsibility of the community developing programs trying to attract entrepreneurs, scholars, and experts to the decision-making process. It also creates the personal interest of a particular citizen in the successful completion of the community developing programs.

For example, amalgamated hromadas of the Cherkasy Oblast have signed the cooperation agreement, which in the long - run perspective will enable more than 10 thousand residents of 12 settlements of the Korsun-Shevchenkivskyi Rayon to count on prompt and efficient services of local fire brigade. According to H. Pererva (regional development adviser of the Cherkasy Local Government Development Centre, (established with the support of the U-LEAD, Europe Program and MinRegion), the emergence of new agreements for intermunicipal cooperation was made possible due to the cycle of "Workshops of Cooperation of Hromadas in the Cherkasy Oblast", held for the hromadas of the region *("Cooperation workshops"...,*

2018) [7]. This confirms the importance of creating a soft, namely, a knowledgeable, component of the infrastructure for decentralization reforms.

One of the challenges in the area of decentralization is the lack of a stable and upgraded (innovative) infrastructure of reforms. Despite the opening of Reform Offices in the regions, support for regional development in terms of creating the Association of territorial communities, newly formed communities or emerging communities are confronted with a large number of problems, including gapes in local government – science – business cooperation, local budgeting and financial reporting, creation of e-government infrastructure for local community development.

The results of financial decentralization demonstrate its impact on the level of local infrastructure development projects. From the State Fund for Regional Development (SFRD) in 2015, the Government allocated 2.9 billion UAH, from which were financed 876 projects. In 2016, the State Budget provides 3 billion UAH for the SFRD, 1 billion was a subvention for the development of the AH' infrastructure and 1.94 billion subventions for the socio-economic development of certain territories. The initiative of the Ministry of Regional Development to increase the State Fund for Regional Development from 1% to 1.5% of State Budget, as well as - shortening the time for decision-making on allocating funds from the SRDR (for 80-120 days, but nor for year) was included in the Government Priority Action Plan for 2016. Vice Prime Minister - Minister of Regional Development, Construction, Housing, and Communal Services Gennadiy Zubko (2016) announced this decision [28].

Revenue growth to the general fund of local budgets and number of established amalgamated hromadas in the corresponding regions (for the I-st half-year 2016) not allowed to conclude the significant impact of financial decentralization on the process of infrastructure of AHs creation, which should support development of local entrepreneurship and business cooperation among communities and regions (Yurchenko, 2017). This may indicate two aspects. The first is the lack of own funds and funds received by newcomers AHs from SFRD, and the second is the lack of relevant knowledge and competences of self-government leaders on how to dispose of finance and how to apply for assistance to relevant European funds and local investors. Hence, our hypothesis is about correlation between system approach of decentralization processes and entrepreneurial ecosystem development on the regional level. This confirms also the need to develop a concept of supporting mechanism for decentralization processes through the creation of appropriate entrepreneurial ecosystem in the border and adjacent regions of Ukraine.

CONCLUSION

The great success of some world countries is determined by effective regional strategies nowadays.

To stop migration of economically active population (firstly for low-paying professions in Italy, Spain, Greece, and now the professions of skilled workers and specialists in the Czech Republic, Poland, Sweden etc.) we have to change the regional policy through the formation the internal investor, skilled workers who had access to innovative technologies abroad and have returned to stay in Ukraine. The

last ones often have both a psychological will and a financial opportunity for professional realization by opening their own businesses in the region. As the illustration: we can see the spread of agrarian cooperatives for the berries and fruits cultivation skills obtained in Poland (e.g. strawberries in Kremenets, raspberries and currants in Kozowa, apples in Chortkiw and Borshchiv). Even 5 years ago, the main opportunity to sell them was the canning plant in the town of Skala-Podolsk or the Deep- freezing station in the Ternopil. Today, the combination of the experience in fruit drying for the army need and ancient Ukrainian recipes in the dried fruit drinks cooking contributed to the emergence of industrial capacity for fruit drying. As well as the experience of Ukrainian workers in building spheres contributed not only to the application of new technologies, but also to the construction of factories for the dry building mixtures manufacturing.

Based on the EU programs and Framework, the most effective ways are considered the formation of a competitive economic environment and by developing innovative entrepreneurship. Although the Ukrainian economy has reached an up growth of 2.5-3% in 2018, this level is not sufficient to increase the entrepreneurship. European analysts believe that it is necessary to ensure growth at least at the level of 5-6%. So the main question is how to increase the amount of entrepreneurs in the present conditions.

Very often, economists speaking about innovation entrepreneurship emphasize the role of start-ups. One of the main reasons for the creation, successful development and the continued existence of start-ups are the slowdown and slowness of large corporations that successfully use existing products, and the development and creation of new ones are not nearly done. Therefore, start-ups due to their mobility in terms of new ideas implementation compete with large corporations [12].

Start-up starts with the idea of a product that underlies business. However, only one idea is not enough to implement a successful start-up. Among the key elements of the start-up success, we will define the key: an idea, a team of innovators, resources and marketing of innovations. World-wide competitiveness means the completely new products and the lack of objective information about the market and future consumers. In our region we can talk mostly about regional innovations. The main goal is to transfer points from copying innovations to new products. The next important reason is the effective team formation. The effective team means effective management, planning and development strategy providing the necessary resources, etc. but not only on the domestic market. As the smart specialization says it must be export oriented. The third part is financing. Very often we mean only the so-called venture capital investment. However, in practice, such investment is rare. Statistics shows that in the United States every year is launched on average 600 thousand companies, but only 300 of them receive funding. Accordingly, 95% of startups are funded from other sources. Approximately 97% of the funds are invested in venture capital firms at a later stage (3-3,500 companies receive funding each year) when the risks are less [26]. Often, the first investment in a startup project is from the founders themselves, their friends or relatives. So the next goal is formation of internal investor but not only for R&D, but also for the commercialization of innovation via stabile and clear legislative and tax regulation. These can include Public investment

funds for the financing of small and medium enterprises (SMEs) (Finland, Belgium); Co-financing projects for the innovative SMEs - providing state guarantees to creditors by the state and private capital (Germany); state or regional preferences system introduction – for innovative manufacturing enterprises.

In addition to financial support, it is also necessary to focus on the processes of information exchange and knowledge dissemination. Most small and medium-sized enterprises practically do not interact with knowledge providers from the business sector (for example, universities). The next stage is Regional strategy that allowed creating the innovation ecosystem.

Today, the term "innovative ecosystem" is mostly used [13] as a set of conditions that ensure the successful establishment and development of enterprises, provided by scientists and researchers, the scientific community, innovation managers, and investors. An innovative ecosystem has specific functions (exchange and critique of ideas, search for investors, commercialization of innovations or the creation of structures that will implement these innovations) and the purpose - the type of innovation cooperation [27].

The Ternopil region has tools for building an innovative ecosystem. After all here operate the business incubator and the techno park, the program of training and stimulation of the innovation entrepreneurship Tempus is realized, technical university is operating. At the same time, the depressiveness of the region, the absence of strong economic ties with the real business, and incompleteness of the technology park brand as an innovative leader offset the opportunities.

The best ways to create innovative interactions are innovative labs and business clusters. Both innovation laboratories and innovation clusters determine the main task of stimulating the information exchange between individual participants in the regional market.

Residents should be interested in the development of dynamic regions that are able to overcome the obstacles associated with the uncertainty and the increasing risks posed by global challenges.

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VALUE CREATION AS THE MAIN PRINCIPLE OF CONSTRUCTION COMPANY EFFICIENT FUNCTIONING

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Abstract
Some main aspects of value assessment in the accounting system dealing with the imperfection of conventional methods of property assessment have been taken into consideration in the article. The factors assessing enterprise value have been specified and substantiated. It has been found out that most scientists use different conceptions while studying the enterprise value, namely: economic profit; net assets formed by cash flows; market price; investment cost, etc.
It has been proved that due to the development of economic relations in society it is necessary to assess new accounting entities. It has been substantiated that the accounting estimate is a basis for the economic one. The use of such instrument as enterprise value assessment appears under some specific conditions or their combination, namely: when an enterprise is being reorganized; under an enterprise, bankruptcy or liquidation conditions; when an enterprise was sold as a whole property complex, etc. Value criteria is a logic development of strategic planning as the main requirements of any party concerned can be valued. Value indices are unique as they allow reaching compromise between main business stakeholders making the balance of their interests possible and approaching in this way economic growth, and what is the most important, social stability.
We have found out that there are some conflicts of laws on the issue under discussion, namely the legal system of Ukraine has a tendency of ambivalent approach to interpreting the essence of an enterprise. It is taking place due to the law enforcement of corporate and civil laws.
Four main value standards are used during the construction companies' value creation implementation: balance, liquidation, fair (market) and value while using (use-value).
Modern techniques of business assessment are developing quite intensively both in theory and in practice, already existing methods are being modified, the synthesis of different methods is taking place, new techniques are appearing. The conventional techniques in some way or other are based on the hypothesis dealing with the existence of two sources of money flow for the owners of invested capital: the money flow, integrated by the functioning business and the money flow gained on the disposal of assets involved into the particular business.
Some problems of assessment and calculating (value measuring) have been defined in the modern accounting system, namely: initial and further evaluation and re-evaluation of the accounting entities, their depreciation, and amortization, the use of normative and non-normative methods of expenditures calculating, the use of numerous methods of calculating and others.

Keywords: value creation, assessment, construction companies.

INTRODUCTION

Knowledge about the cost of institutional units can effectively organize and, consequently, function management economics of modern type. Obviously, without knowing what you own, it is impossible to account for, control, analyze and make effective management decisions. Maximum approximation to accuracy in determining the value of the company allows the use of mathematical and analytical

resources, to make optimal decisions in each specific situation of the management economy.

One of the main problems in the system of national accounting is the determination of the value of the enterprise as well as those companies whose shares are undervalued on the stock exchanges. This situation is generally triggered by the opacity of the market and the imperfection of the property valuation methods used.

The method of valuation of the enterprise has always attracted the attention of scholars in the field of accounting, as well as accountants-practitioners. However, the key question about this problem has always been the factors that determine the value of the enterprise.

RESEARCH RESULTS AND DISCUSSION

Prominent scientist A. Smith focuses attention on the labor theory of value. The author states: "It was not by gold or by silver, but by labor, that all wealth of the world was originally purchased." [2, p. 77]

It is not completely possible to agree with this statement, because not all the wealth in the world a person can physically reach, especially for work. Therefore, finding a measure of value has led to the emergence of the abstract absolute as gold or silver. Wealth in such circumstances, in which it is not relevant, is measured in gold ounces, which are used as a measurement of value or accumulation.

Authoritative edition – Ukrainian dictionary, in 11 volumes given the following interpretation of the term "value":

– any price for something uttered in money;

– positive quality, value;

– the economic categories that are proper for commodity production, which is materialized and embodied in the product of socially necessary work [12, p. 294].

One of the answers was expressed by American scientist Eugene F. Brigham that in order to determine prices, the following key conditions such as a system of hypothetical balances that will generate expected cash flows; discount rate or cost of capital to be applied to estimated cash flows are necessary [5].

By hypothetical balances, a scientist understands derivative balances based on a specific hypothesis, such as the use of market prices, risk. However, E. F. Brigham does not provide a mechanism of its execution, guided only by general scientific approaches.

In the process of researching the value of the enterprise, most scientists are centered on the use of different concepts, in particular: economic profit (A. Smith); net assets generated by cash flows (ES Hendrix and MV Van Breda); market value (M. Miller, F. Modellani); investment value (GS Harrison) and others.

I. Blank takes the measurement of value as a set of ordered actions appraiser, including the collection and analysis of baseline data, opportunities for application of the entire set of approaches and methods of evaluation for a particular object, a series of calculations and results of examinations for the conclusion enterprise value [3, p. 445].

According to A.P. Rudanovsky, valuation is the basis of accounting, the application of which on assets, capital and liabilities allows to determine the volume

of net assets, that is, the property of the enterprise and to solve the following market problems: to protect the interests of the contractors of the enterprise in the event of its insolvency; to provide interests of owners [11].

As rightly A.G. Zavgorodniy points out, the main requirement for evaluation is its reality, which is ensured by the accuracy of accounting principles and accounting business transactions [6, p. 617].

With the development of economic relations in society, it is necessary to evaluate new accounting objects. In this statement renowned scientist V. Paliy notes that the economy establishes new accounting objects that have specific valuation methods: intangible assets, securities, and financial investments, currency values. There is a need to account for differences in exchange rates, issue income, and to use other methods of assessment of such assets. [9, p. 3]

However, it should be noted that an assessment is fundamental to economic, based on provisional values of monetary assets and determine other rules for assessing liabilities. The calculation of the estimated value assumes either the calculation of "today's" amount in "tomorrow's" money – this is the so-called procedure for increasing or the calculation of "tomorrow" amount in "today's" money – a discounting procedure [8, p. 319].

Use a tool such as valuation occurs under certain circumstances or their combination in the process of reorganization; in case of bankruptcy and liquidation of the enterprise; provided the sale of the enterprise as integral property complex, etc.

Regarding this scientific and practical problems noteworthy is the opinion expressed by Professor O. Sobko, in particular the author states: "Businesses who want to modernize their competitive advantage in the direction of cost factors are forced to shift their focus to generators with an intellectual background: knowledge, competencies, information and communication technologies, intellectual property, which as a result enhances their creativity" [13, p. 6].

Using the latest control systems, which predominate in practice determine the effectiveness of the company, cost criteria is a logical development of strategic management. The main requirements of any stakeholder can be appreciated, in particular: the requirements of the owners with the discounted dividend value; requirements of state authorities - through the present value of tax deductions, etc. The uniqueness of cost indicators is to make a compromise between the main business stakeholders, which allows them to balance their interests, achieving economic and, most importantly, social stability.

However, in the course of the study, there were found certain legal conflicts in this matter. In particular, as Professor V.I. Borisov says, in the legislation of Ukraine traces the tendency of a dual approach to understanding the essence of the company, which is associated with the enforcement of economic and civil legislation. The author emphasizes that, unlike the Civil Code, the Economic Code of Ukraine (hereinafter referred to as the Civil Code), which regulates the procedure for the creation of legal entities under public law, attributes the enterprise to economic entities, and the integral property complex acts as the basis that allows the operation of sub-economic entities. In particular, the definition of the enterprise as an object of civil rights must consider the ratio of such concepts as "company" and "property

complex" because of the legal definition of enterprise given by a general (generic) category – a single property complex. The combination of civil rights objects that form the enterprise as a single property complex and the variety of modes of their legal regulation in their combination determine the specifics of the legal status of the enterprise itself, emphasizing its special position in the system of civil rights objects. [4].

It should be noted that the construction enterprise as a single property complex includes all types of property intended for its activity: land, buildings, and structures, equipment, inventory, basic and auxiliary materials, unfinished capital construction, claims, debts, as well as law trademark or other designation and other rights, unless otherwise stipulated by the contract or law (Part 2 of Article 191 of the CC).Given this legal rule, one of the main features of the enterprise is its complexity, which makes it possible to determine the enterprise property complex consisting of components (elements), each of which can act as an independent object of civil rights: things of immovable (land plots) , buildings, structures) and movable (equipment, inventory, raw materials, products); other property, including property rights (claim rights), property obligations (debts), intellectual property objects (trademark or other designation), information, etc., and their integration into a functional entity (integrative integrity) – the object gives the opportunity to use the enterprise for the intended purpose – for carrying out business activity. [14]

In the process of implementation of value creation of the construction company uses four basic standards of value: balance sheet, liquidation, fair (market) and value in use (consumer value).

Carrying value is defined as the difference between total assets (net of depreciation, resources used) and the total value of liabilities according to the balance sheet indicators. However, in practice, the use of this type of cost is a significant disadvantage because it depends on the characteristics of the accounting policies of the company. In turn, the residual value – a reasonable value of the sale of assets fewer total liabilities of the enterprise and the cost of their implementation.

Accordingly, the market value is the value at which the valuation object in the market of similar property can be alienated at the date of the valuation under the agreement concluded between the buyer and the seller after the relevant marketing, provided that each party acted with knowledge of the case, reasonably and without compulsion [10].

In international practice, the concept of "market value" is interpreted as the amount of money for which property must pass from hand to hand at the valuation date between a voluntary buyer and a voluntary seller as a result of a commercial transaction after adequate marketing; it is assumed that each party acted competently, carefully and without compulsion [1].

These market value definitions are based on the principle of efficiency of use, so their use is not appropriate in all circumstances. If the purpose of the valuation is to determine the value of an operating entity, the most efficient use principle cannot be applied, since it is determined not by the exchange transaction value but by the cost in use (consumer value) for the particular user. In highly developed countries with a developed stock market, there is such an indicator as to the product exchange stock

quotes on the number of issued shares. For domestic practice, this method is practically impossible. Therefore, the valuation of the enterprises of the construction complex is based on other principles: non-market types of value or value in use.

Consumer value is the value that a particular property has for a particular user at a particular use. The main feature of this type of value is the contribution that property adds to the value of the enterprise. It should be noted that the probability of a match consumer market and the cost is extremely low. On the contrary, the cost of ownership is generally higher because of the possession of the special rights, patents or licenses by the construction firm.

Quite often, the terms business value and firm value are identical, but these are different concepts. A business should be understood as specific areas of activity that are the object of assessment. In turn, a firm or construction company is a form of doing business, so it may belong to several of their types. That is, the value of the firm is exactly the value of its business.

In recent years, business assessment methods, both theoretical and practical, have been developing quite intensively, existing methods are being modified, different methods are being synthesized, and new techniques are emerging.

All current techniques are based in one way or another on the hypothesis that there are two sources of cash flow for owners of invested capital: cash flow integrated with a functioning business (cost of operating business) and cash flow from the sale of assets involved in this type of business. The existing methodology of value creation involves the use of three approaches: income, comparative and cost (Figure 1).

Besides, different methods of one approach may be considered in the application process. The group of income methods includes the following methods: capitalization of income, discounting cash flows, residual income. The group of comparative methods includes comparison multipliers, expert comparison methods, and statistical adjustments. The last of the selected groups include such methods as component separation, quantitative diagnostics, etc.

When considering the value creation of a construction business, it is important to take into account the brand, a special so-called “communicator” between the seller and the buyer, which reflects the unique features and features of the construction object or the enterprise as a whole. This set of tangible and intangible categories that form the consumer’s positive image of a construction product or company and a desire to buy a specific object, choosing from a variety of offers, despite the raised price of branded goods in the market.

As a rule, the brand influences customer decisions and can be the most valuable asset of an enterprise, so determining its value is an important task in the management process. Until recently, determining the value of the brand has been a problematic issue. However, the situation has changed with the implementation of the International Standard ISO 20671 “Brand Assessment. Principles and Guidelines”, which aims to supplement the ISO 10668 series of standards “Brand Assessment. Brand Financial Valuation Requirements, which focus on financial issues”. The latest approval date standard identifies approaches and techniques for increasing brand

value and combines both financial and non-financial measures and factors that affect brand success.

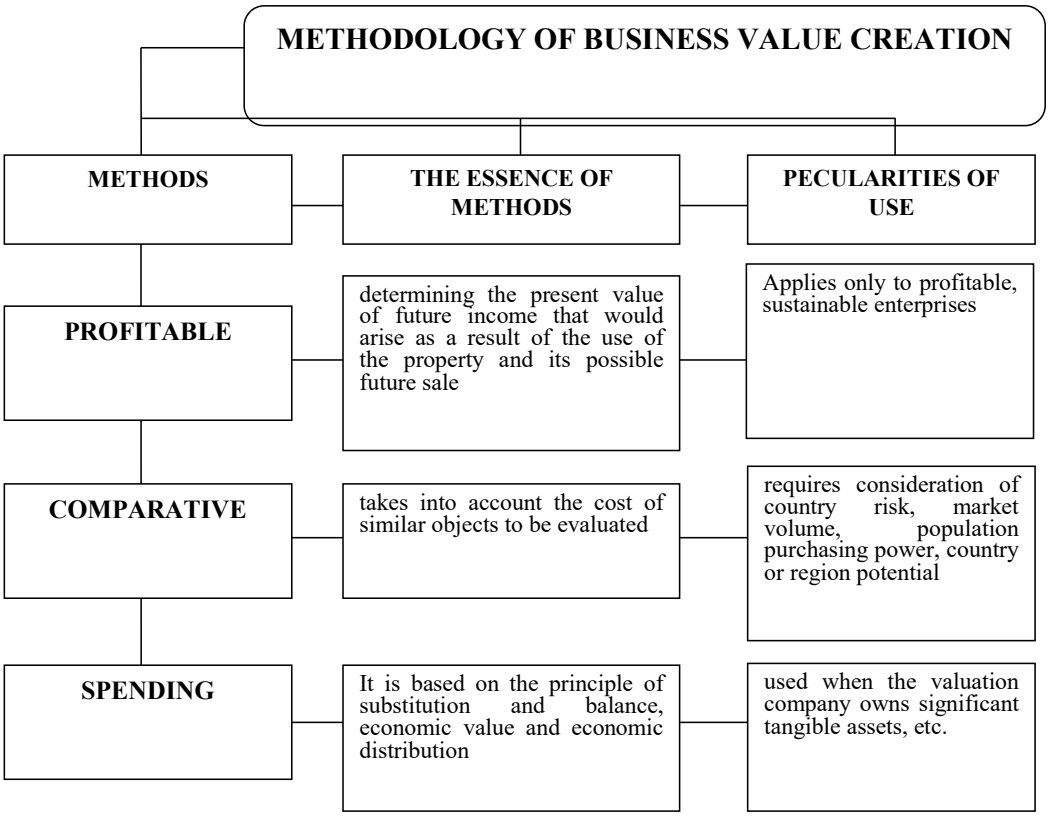

Figure 1. Characteristic features of methods of business creation

A special element in the construction of accounting systems is the evaluation. At this point, the researcher faces the dilemma of alternatives or no alternatives in choosing to evaluate a particular accounting entity. Both options depend on the regulatory framework in-laws, standards, instructions, etc. Because of no alternative, we get comparability of indicators by individual objects, their groups both within the individual enterprise and within enterprises of the whole industry or economy as a whole. The choice of valuation comparability causes loss of comparability of indicators; however, there is an opportunity for the management of the enterprise to influence the process of formation of financial result. Because, through such manipulation as an opportunity to increase (if finding an investor, etc.) and reduce the real value of financial results (under certain conditions by combining, acquisitions, etc.).

The Law of Ukraine "On Accounting and Financial Reporting in Ukraine" concerning quantification identifies two terms – "historical (actual) cost" and "single monetary measure" [7].

The system of accounting knowledge assessment can be considered in two main ways: as a method of combining different elements of capital into an integrated metric, as well as a way of reliably identifying available capital and changes in financial reporting over the reporting period [9].

Evaluation of accounting is nothing but a way of measuring in a particular measure of the components of capital in the process of its circulation. Undoubtedly, preference should be given to the monetary measure as the most versatile, which allows you to measure the most accurate elements of capital by reducing them to a single currency. As a result of such manipulations, the accounting functions become more efficient, which allows:

- control the preservation of capital;
- generate cost and profit information;
- receive data on the capitalization of the enterprise;
- to compare the value of the enterprise capital at different time intervals;
- summarize information about the value of the assets and liabilities of the enterprise.

Due to the spread of labor theory of value, the estimate of the actual cost (historical cost), which is still widely used in practice, has spread. Calculating the cost of all the items being accounted for has updated the development and deepening of existing costing techniques as one way of measuring value in accounting. This has become a prerequisite for the separation of such elements of the method of accounting as estimation and calculation.

Domination in the economy of marginal utility theory has led to the formation of a model for comparing the consumer value of goods for their usefulness to the seller and buyer. In this regard, accounting plays a declining role in the measurement of actual cost and the development of fair value measurement. Accordingly, the calculation as one of the accounting methods moves their focus on the management accounting system.

If we compare the methods used to assess the financial and management accounting, it is an immediately evident characteristic feature – the relativity of accounting information (data approximation), which consists, first, in building assessment methodology. In practice, accountants are convinced that, provided that the credentials are displayed correctly (without falsification), the documents reflect the absolute truth, which is not true.

CONCLUSION

Assessment of the enterprise, its property is one of the most difficult issues in the enterprise management system. In particular, it is possible to distinguish the value of the enterprise as a complete property complex and the assessment of the corporate rights of the entity. The value of an enterprise may be equal to the market value of its assets, but these concepts are different. In the first case, it is primarily about the value that can be created as a result of operating a business. The valuation of the enterprise

is usually based on the market value – the probable amount of money for which the valuation object can be bought and sold in the market.

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REGRESSION ESTIMATION OF AGRICULTURAL PRODUCTION OF CROPS IN THE WESTERN REGION OF UKRAINE

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Abstract
The results of the quantitative parameters analysis of agricultural crops production in the Western region of Ukraine have been presented. Deviations in the share of crops production (index) in the western regions of Ukraine in 2018 have been identified. A regression model of crop capacity estimation has been constructed. The research results testify that developed factor model is the proper one, and its use in the system of factors impact estimation on the resulting characteristics will make it possible for managers to make efficient immediate decisions on the business activity efficiency increase.

Keywords: agricultural production, estimation, model.

INTRODUCTION

Economic development of business entities depends on the efficiency of resources use providing the final result obtained in the sum of the expected income which is reinvested into the own capital. An essential aspect of such estimation is determination of the factors impact on the resulting economic indices taking into account the specific activity. A number of material, nonmaterial, labor, finance and other resources are involved in any sphere of the business entity activity. Each of them more or less makes impact on the efficiency level. Different results are caused by not only the increased number of resources involved but their rational balance and efficient use as well.

The rationality of the resources involved is estimated by the priority of its efficiency growth rate in comparison with its quantity change rate.

Every kind of resources is analyzed by the certain indices in dynamic aspect and characterizes a tendency of changes by means of ratios. Fluctuations in dynamics with positive (negative) characteristics according to the estimation indicator indicates the possibility of economic growth.

RESEARCH RESULTS AND DISCUSSION

The assessment of economic development type according to the changes structure – specific weight of the resources under assessment is taking place as a result of the business entity inclination to obtain the maximal results under additional investments use conditions or due to the intensive use of the existing investments.

For the general analysis of economic development of AIC of Ukraine in general and in its western region [1] the information data have been summarized in Table 1, Figure. 1.

The obtained results point at considerable share of crops production (73.7% in 2018, i.e. 2.36 percent more than in 2018) in the AIC of Ukraine. Although, due to the constant dynamic fluctuations the process of development is characterized as an unstable one (comparing to 2016 the rate of share increase is descending as it is 2.36% against 3.41% respectively).

Table 1. Dynamics of estimation of economic development indices of AIC in Ukraine

Years	share (%)		deviations (abs.)		deviations (%)	
	crop production	*animal production*	*crop production*	*animal production*	*crop production*	*animal production*
2010	64,3	35,7	x	x	x	X
2011	69,9	30,1	5,6	-5,6	108,71	84,31
2012	67,3	32,7	-2,6	2,6	96,28	108,64
2013	69,9	30,1	2,6	-2,6	103,86	92,05
2014	70,7	29,3	0,8	-0,8	101,14	97,34
2015	70,3	29,7	-0,4	0,4	99,43	101,37
2016	72,7	27,3	2,4	-2,4	103,41	91,92
2017	72,0	28,0	-0,7	0,7	99,04	102,56
2018	73,7	26,3	1,7	-1,7	102,36	93,93

Source: obtained by the author according to [2]

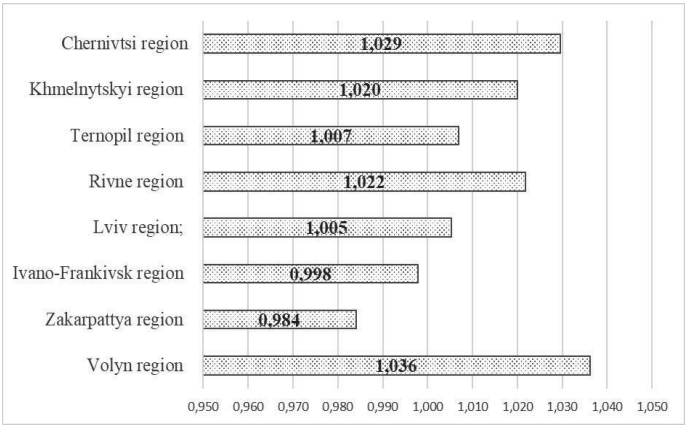
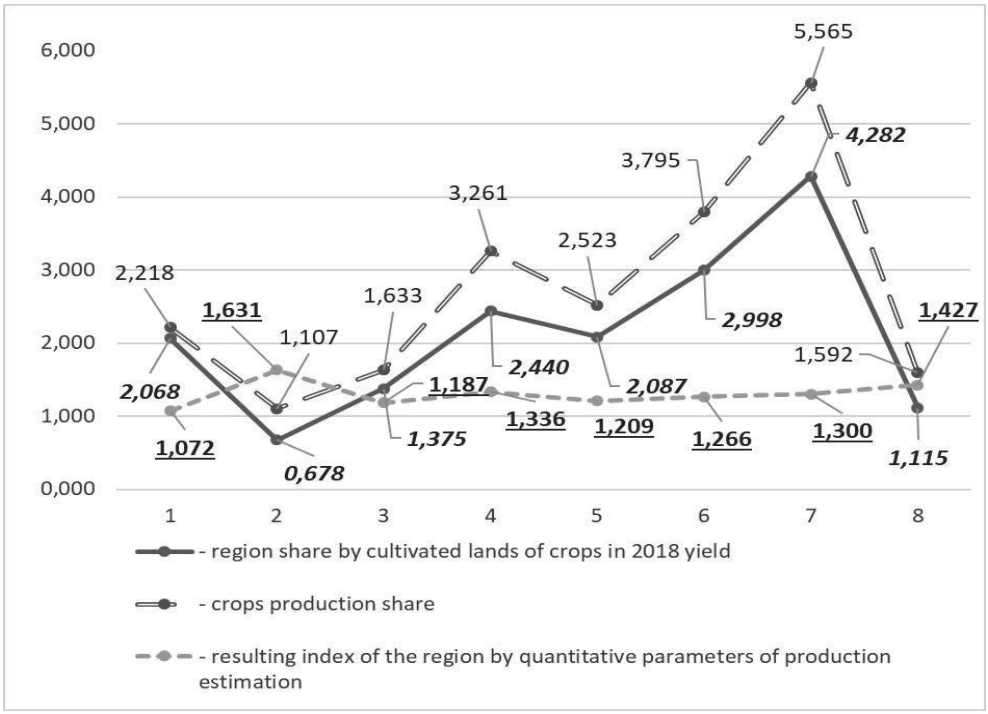


Figure 1. Deviations in the share of crops production (index) in the western regions of Ukraine in 2018

Source: obtained by the author according to [2]

The estimation of economic activity development dealing with crops production of AIC sector according to the qualitative criteria presupposes the use of efficiency parameter, namely a resulting index of the region due to the quantitative parameters of the production estimation.

The obtained results of the study have been summarized in Figure 2.



(1 – Volyn region; 2 – Zakarpattia region; 3 – Ivano-Frankivsk region; 4 – Lviv region; 5 – Rivne region; 6 – Ternopil region; 7 – Khmelnytskyi region; 8 – Chernivtsi region)

Figure 2. The share of resulting indices according to the quantitative characteristics of the estimation of western region of Ukraine in 2018

The results show that Zakarpattia region and Khmelnytskyi region are characterized by the best index of the development parameters ratio under estimation, and Volyn region has the lowest one though the share of cultivated areas of the region is not the worst. We should admit that the quantitative parameters of estimation can be broaden taking into account both the material factors of production and the labor ones as well aimed at more detailed resource aspect of production.

The qualitative criterion presupposes the use of efficiency parameter, namely the crop capacity index per 1 ha of cultivated area.

To build a factor model taking into account the topic of the research we have used the information data summarized in table 2 and we have applied the method of correlation analysis.

In order to study the impact of mineral and organic fertilizers use, share of labor payments expenses and quality of agricultural lands on the crop capacity index per 1 ha of cultivated area a multifactor model has been built by means of electronic spreadsheets MS Excel.

Table 2. Input data to build a factor model of agricultural production development efficiency in the western region of Ukraine

Western region	Mineral and organic fertilizers per 1 ha of cultivated area, t	Share of labor direct payment expenses	CISQ in points according to agrochemical survey [3]	Share of capital investments in production expenses	Crop capacity , per 1 ha of cultivated area
Volyn	2008,92	0,0216	49,0	0,0398	7,71
Zakarpattia	410,09	0,0709	45,5	0,0497	11,73
Ivano-Frankivsk	1347,37	0,0197	44,0	0,0319	8,53
Lviv	1867,94	0,0269	38,5	0,0416	9,61
Rivne	1830,35	0,0240	52,5	0,0421	8,69
Ternopil	2355,44	0,0315	57,5	0,0490	9,10
Khmelhytskyi	2254,00	0,0346	51,5	0,0414	9,34
Chernivtsi	893,42	0,0278	51,0	0,0274	10,26

Source: obtained by the author according to [2]

CISQ – complex index of soil quality.

Identification of variables:

X1 – use of mineral and organic fertilizers;

X2 – share of labor payment expenses;

X3 – quality of agricultural lands;

X4 – share of capital investments in production expenses (due to the depreciation amount)

Y – crop capacity per 1 ha of cultivated area.

The dataset MS Excel has been used to build the regression.

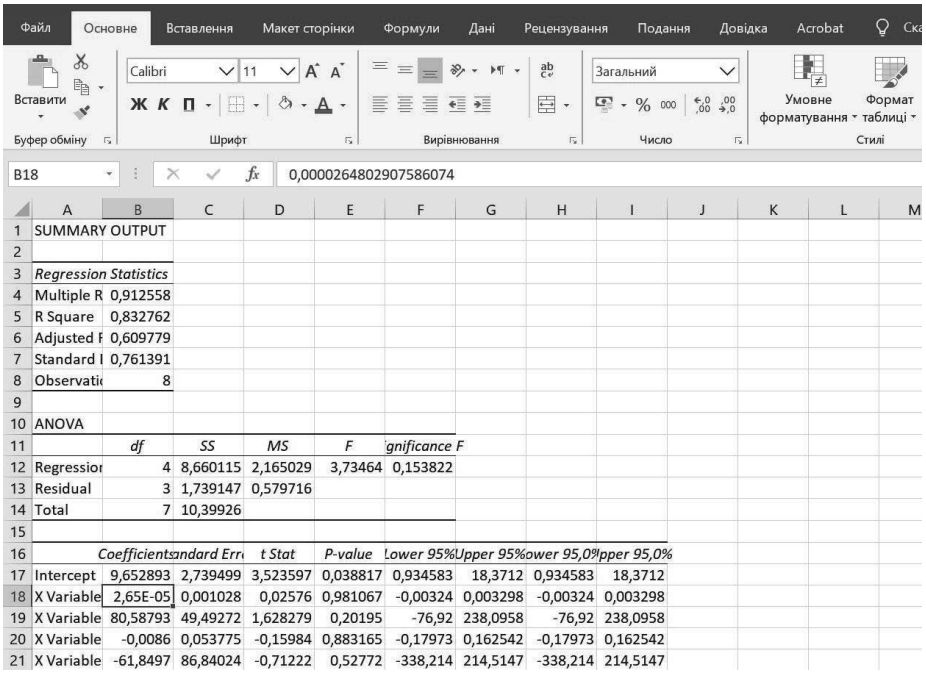
The conducted calculations using the package "Data analysis" have been resulted in the following parameters of the factor model and are shown in Figure 3.

Between the sets x_1, x_2, x_3, x_4, and y there is a linear relationship, which can be described by the equation:

$$\bar{y}_x = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4, \quad (1)$$

where b_1 b_2, b_3 b_4 – coefficient of regression,

b_0– parameter.



Файл Основне Вставлення Макет сторінки Формули Дані Рецензування Подання Довідка Acrobat

Вставити Буфер обміну Calibri 11 Шрифт Вирівнювання Загальний Число Умовне форматування Формат таблиці Стилі

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	A	B	C	D	E	F	G	H	I	J	K	L	M
1	SUMMARY OUTPUT												
2													
3	*Regression Statistics*												
4	Multiple R	0,912558											
5	R Square	0,832762											
6	Adjusted F	0,609779											
7	Standard I	0,761391											
8	Observatic	8											
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10	ANOVA												
11		*df*	*SS*	*MS*	*F*	*gnificance F*							
12	Regressior	4	8,660115	2,165029	3,73464	0,153822							
13	Residual	3	1,739147	0,579716									
14	Total	7	10,39926										
15													
16		*Coefficients*	*ndard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95,0%*	*pper 95,0%*				
17	Intercept	9,652893	2,739499	3,523597	0,038817	0,934583	18,3712	0,934583	18,3712				
18	X Variable	2,65E-05	0,001028	0,02576	0,981067	-0,00324	0,003298	-0,00324	0,003298				
19	X Variable	80,58793	49,49272	1,628279	0,20195	-76,92	238,0958	-76,92	238,0958				
20	X Variable	-0,0086	0,053775	-0,15984	0,883165	-0,17973	0,162542	-0,17973	0,162542				
21	X Variable	-61,8497	86,84024	-0,71222	0,52772	-338,214	214,5147	-338,214	214,5147				

Figure 3. The parameters of regression factor model of crop capacity estimate in the Western region of Ukraine

Due to the results of calculations the model parameters are as follows:

$b_0 = 9{,}652892618$
$b_1 = 2{,}64803E\text{-}05$
$b2 = 80{,}58793028$
$b3 = -0{,}008595274$
$b4 = -61{,}84966426$

Thus, the crop capacity estimation model in regional aspect is as follows:

$$\boldsymbol{Y} = 9{,}652892618 + 0{,}000026X_1 + 80{,}587930X_2 - 0{,}008595X_3 - 0{,}008595X_4$$

The correlation between factor characteristics and the resulting index is directly and inversely proportional.

The indices of the strength of relationship at multiple correlation are even, partial and multiple correlation coefficients and a multiple determination coefficient.

$$R^2 = \frac{\delta_o^2}{\delta_3^2}. \tag{2}$$

where δ_o^2 – variance of resulting index found by the equation of multiple regression;

δ_3^2 – total variance of the resulting index.

$$\delta_o^2 = \bar{Y}_x^2 - \bar{Y}_x^2. \quad (3)$$

$$\delta_3^2 = \bar{Y}^2 - \bar{Y}^2. \quad (4)$$

The results of calculations have proved that the strength of relationship between the impact factors and resulting index is the following:

$$R^2 = 0{,}83276.$$

CONCLUSION

As the index $R^2 > 0{,}83$, then the factor model is the proper one, and its use in the system of factors impact estimation on the resulting characteristics will allow the management make efficient immediate decisions on the business activity efficiency rising according to the qualitative parameter of agricultural production estimation, namely the crop capacity. The similar model estimation should be formed in further research in every region using different factor characteristics and the resulting index in time slot.

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IMPACT OF SHADOW ECONOMY ON FOOD SECURITY OF THE COUNTRY

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Abstract
The prerequisite condition for existence of human civilization is a supply of food resources with required quantity and quality. The shadow economy causes its special impact on the food security of the Country. First of all, it concerns the food supply and activities of private rural households as a part of the shadow economy. In its turn, the shadow economy has both negative and positive features. The impact on all systems and industries of the Country is negative, but the possibility of preserving the labor potential, solving the income problem, basic survival of the certain part of population can be considered as positive features. The problem of overcoming threats and minimizing negative impact of shadow economy requires a complex solution. Threats from shadow economy for the agricultural sector of Ukraine appear in many forms of negative nature. Today, virtually any shadow activity of business entities is associated with tax and other payments evasion. In the agricultural sector, at first, it concerns activities of private rural households, which today can be considered operating in a shadow economy. The article investigates the impact of shadow economy on food security of the Country. Increasing food security primarily relate to counteracting the shadow processes and the shadow economy, economic crimes and corruption in the agricultural sector. Ways to overcome the negative trends related to the shadow economy are suggested.

Keywords: food security, shadow economy, private rural households.

INTRODUCTION

For the development of human civilization, it is necessary to supply population with the required quantity and quality of food resources. In today's world, people have not been able to reach permanent access to various types of food supplies, and millions of people are starving to death on our planet. Food security is the ability of a state to guarantee satisfaction of food needs at a level that ensures normal functioning of its population. World food security is defined as the production of the necessary amount of food to meet the growing needs of people avoiding food crisis.

In Ukraine food crisis started after the collapse of the USSR, namely in the 1990s, when coupons (for butter, sugar, sausage, etc.) were canceled. Urban residents faced sharp increases in food prices and significant deterioration in their quality. Life of population was supported only through food assistance, usually from the United States and food production from subsistence farms. At the same time, the shadow economy gained significant momentum.

The shadow economy is a complex and multifaceted system, so in the history of world economic science, some aspects of it at various historical development stages have been reflected in the work of philosophers, sociologists, lawyers, psychologists, economists, political scientists and politicians.

PREVIOUS RELATED RESEARCH

Defining the essence, estimation of depth of problem of shadow economy, its peculiarities in Ukraine, search of a single and exact definition of the concept of "shadow" with all components, threats and methods of counteraction to it is devoted to a great deal of achievements of leading scientists of Ukraine, among them: V.I. Angelko [14], A.V. Antipov [2], A.V. Basiluk [4], Z.S. Varnaliy [16], V.I. Vasylinchuk, L.V. Gerasimenko, Y.I. Kirzhitsky [5], I.I. Mazur [6], T.O. Pozhueva [10], I.G. Savchenko [13], V.D. Sushchenko [15], O.V. Tikhonova, O.V. Turchinov [20], S.S. Cherniavsky [21] and others. Among the foreign ones it should be noted: F. Schneider, G. Abadinsky, J. Arvai, D. Blades, P. Gutman, B. Dallago, E. de Soto, L. Ebergard, R. Klitgaard, P. Mauro, S. Roz- Ackerman, S. Rottenberg, W. Tanzi, W. Thiessen, E. Feige, N. Bokun, V. Dadalko, L. Drexler. involved in the shadow economy studies.

Learning the methods of dealing with the shadow economy is impossible without defining this concept. In the scientific literature there are many definitions of the essence of the shadow economy, because it has many forms of its appearance. Analysis of economic literature shows that there are two main approaches in understanding the essence of the concept of the shadow economy: legal and economic. In the first case, a shadow economy is an economy operating outside the legal field. In another, it is an economic activity that, due to lack of reporting or underestimation of its value, does not reflect in official statistics when determining the value of gross domestic product. The difficulty of defining this phenomenon is that the same economic activity may in one case be shady, in the other, the usual part of economy.

As Skvortsov N.N. in his work "All About Taxes in Ukraine" the shadow economy is actually not controlled by society the production, distribution, exchange and consumption of material goods, that is, such socio-economic relationships between individuals, social groups on the use of existing forms of ownership in selfish personal and group interests, which are hidden from the public administration and the public. It contains all unaccounted for, unregulated, other than those specified in regulatory documents and rules of economic activity. From an economic and legal point of view, this means that the shadow economy encompasses not only selfish economic crimes, but also non-criminal selfish economic offenses and legitimate but unaccounted for or uncontrolled economic activities [17].

According to other researchers, the shadow economy is an economic activity that is not reflected in the accounting and reporting of business entities, and is not taken into account and is not controlled by government agencies and is aimed at obtaining uncontrolled income by the state, in violation of existing legislation from which the state does not receive tax revenue [8].

According to E. de Soto, "The shadow economy is a spontaneous and creative reaction of the people to the inability of a corrupt state to meet the basic needs of the impoverished masses" [18].

An important contribution to the study of the shadow mechanisms of economic activity was made by O.V. Turchinov, who defined the shadow economy as an economic activity that is not considered and is not controlled by official state bodies,

as well as activities aimed at generating income through violation of existing legislation. However, this definition can apply to all criminal offenses (theft, robbery, extortion), which can lead to the unacceptable expansion of the shadow economy [20, p. 46–47].

The shadow economy is the basis of a complex multi-level mechanism, to which all the shadow infrastructure belongs, which provides its functioning (legislative, judicial, political, ideological, cultural, ethical, values and behavioral norms), has an active influence on the condition of shadowing processes [21].

Mazur I.I. believes, that the shadow economy is a system of relations between economic entities that self-organizes and covers all stages of the social production process in order to obtain economic benefits, the results of which, or the means of achievement for different reasons, are either replaced, diminished, or completely hidden as from the immediate participants, and from the law [6, p. 68–75].

Despite the considerable achievements of scientists in studying the shadow economy, the question of its impact on food security remained unaddressed.

Task formulation. The shadow economy is primarily represent interest in its impact on most ordinary economic activities and processes: formation and distribution of income, trade, investment and economic growth in general. This is especially true of food supply and food security, as well as food producers.

RESEARCH RESULTS AND DISCUSSION

It is obvious that the shadow economy has both negative and positive features. The negative features include: reducing effectiveness of macroeconomic regulation, competitiveness of the country's economy, viability of the credit and financial system, destruction of social infrastructure, illegal export of capital abroad, loss of government leadership, control and other major social functions, negative impact on investing climate. Positive features can be considered: possibility of preserving labor potential, solving the problem of income, elementary survival of a certain part of population. Therefore, it is quite reasonable to think that “on the one hand, the shadow economy is a consequence and key economic basis of corruption, and on the other, a certain compensator for economic and financial shocks, especially for small and medium-sized businesses” [11].

The shadow economy is called criminal, unreflected, illegal, unregulated, unofficial, underground, hidden, shadowy, fictitious. At the same time, the essence of each of these names is the same and provides for income outside the legal framework and accounting for financial and economic activities. The types of shadow economy differ depending on its content. For example, a “secondary” shadow economy is a legally forbidden economic activity of workers of the “white” (official) economy, which leads to the hidden redistribution of previously created national income. From the point of view of society in general, this shadow economy does not produce any new goods or services: some people benefit from the "secondary" economy at the expense of the loss of others. The Gray Shadow Economy is a statutory economic activity for the production and sale of ordinary goods and services that are not registered (mainly small businesses). Unlike the “secondary” economy, which is directly related to the “white” (official) economy, the “gray” economy operates

autonomously. In this sector, manufacturers are either deliberately evading official accounting, unwilling to spend (such as costs associated with obtaining licenses, paying taxes, etc.), or not reporting this type of activity at all. The Black Shadow Economy (Organized Crime Economy) is a legally prohibited economic activity related to the production and sale of prohibited and scarce goods and services. These are activities that are completely excluded from normal economic life, as they are considered incompatible with and destroying it (for example, drug business, robberies, etc.) [10].

In view of the above, in our opinion the shadow economy can be divided into:

– "Hidden" economic activity, which in most cases includes legitimate economic activity, which is concealed or diminished by its subjects for the purpose of tax evasion, social security contributions or certain administrative or occupational safety duties, sanitary and other regulations.

– "Informal" economic activity, carried out mainly on a legal basis by individual producers or so-called unincorporated enterprises, that is, enterprises belonging to individuals, households, which are often not established in an established manner, based on informal relations between production participants and can (Fully or partially) produce products or services for their own consumption. Often, informal activity is based on secondary employment, in many cases it is unprofessional. Informal production is widespread in Ukraine in agriculture, trade, construction, and some other industries.

– "Illegal" economic activity. It is illegal, i.e. it covers those types of production of goods and services that are expressly prohibited by existing legislation. Currently, such activities include, for example, the production and sale of drugs; production and sale bypassing established rules, weapons; prostitution, smuggling.

– Shadow non-economic (non-productive) activity related to illegal distribution of income and assets; crimes against property (theft, robbery, fraud, etc.); economic crimes (deception of buyers and customers, violation of trade rules, etc.); job crimes (abuse of power or job duties, negligence, bribery, etc.).

In Ukraine there is a so-called "secondary" shadow economy, that is, forbidden by law the economic activity of workers of the "white" (official) economy, which leads to a hidden redistribution of national income.

The problem of overcoming threats and minimizing the negative impact of the shadow economy requires a comprehensive solution. In this regard, it is advisable to consider a methodology where the approach to defining the shadow economy looks complex and complete [7]. These Guidelines have been developed to assess the level of the shadow economy in the national economy as a whole and by particular economic activity by indirectly calculating at the macroeconomic level the value of goods (works, services), which is deliberately overstated or reduced by economic entities in the statistical reporting. Shadow economy – economic activity of an economic entity not registered in the established order, characterized by minimization of costs for production of goods, performance of works and provision of services, tax evasion, fees (compulsory payments), statistical questionnaire and submission of statistical reporting, as a result of which is a violation of statutory standards (minimum wage, working hours, conditions and safety, etc.).

The most common reason for the existence of a shadow economy is the contradiction between the ever-increasing and changing human needs and the limited production capacity.

Often people's desire to maximize benefits at minimal cost leads them to use any means, up to criminal ones, which is why the shadow economy is always self-serving, closely linked to corruption, economic crime.

The practice of transformation and liberalization of the domestic economy has shown that a low degree of state intervention in the economy, imperfection of laws and legal norms is one of the reasons for the development of the shadow economy. Usually, when regulating the economy, the state realizes the interests of some economic entities in contrast to the interests of others, then the latter move to informal activities, that is, a shadow economy. This situation appears because of the rigid requirements of licenses, forms of control and the severity of taxation.

Today, virtually any shadow activity of business entities is associated with tax evasion and other payments.

However, on the one hand, the more taxes the state collects, the better it can solve social problems, more actively support the country's defense capability. On the other hand, world experience shows that the weaker the tax pressure on the economy, the faster the economy develops. The mitigation of this contradiction depends on the effective legal policy of the state.

The weakness of state power leads to a significant increase in transaction costs, to a decrease in the competitiveness of domestic production, which occurred in all sectors of the economy, except for raw materials, most clearly shown in the agri-food sector. The weak state is especially vulnerable to the corruption that is currently observed in the Ukrainian economy, which, together with the underdevelopment of the main market structures, the lack of mechanisms and rules of the game in the market related to competition, market pricing, stock market, stock market activity, contributes to the development shadow relations in the economy.

The shadow economy depends on the previous socio-cultural heritage of the state, condition of the economy and standard of living of population for a given period of time.

In the USSR, under the conditions of command and administrative management of the economy, public ownership of the means of production, the shadow income consisted of deliberately distorted planning, so-called losses, overestimation of all kinds of expenses, notes, financing of non-existent projects, etc. As a result, fictitious capital was formed, which gave ample opportunity for irregularities. This "practice" is still used today, including in the agri-food sector.

According to the calculations of the Ministry of Economic Development (Figure 1), the indicator of the level of the shadow economy, calculated by the method of loss of enterprises, amounted to 22% of official GDP in January-September 2018, recording no changes compared to the level of 9 months of 2017.

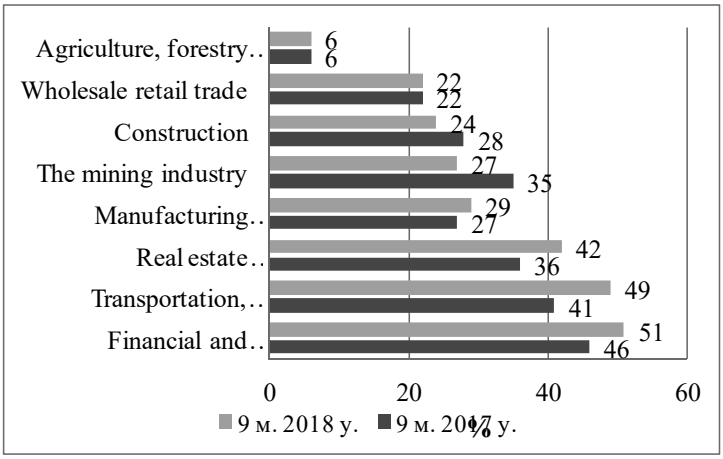

Figure 1. The level of shadow economy by type of economic activity, % of the volume of official GVA of the relevant SEA

Source: estimates of the Ministry of Economic Development [18]

According to the methodology of calculation by the method of loss-making enterprises, the tendency to increase the level of the shadow economy is formed in the conditions of increasing the volume of losses or reducing the volume of profits of economic entities.

The downward trend in the level of the shadow segment as of January-September 2018 remained in the two main aggregated economic activities - mining (by 8 pp compared to the corresponding period of 2017) and construction (by 4 pp).

Four types of economic activity showed an increase in the level of the shadow economy, obtained in the context of increasing volume of losses of enterprises of these types of economic activity (including due to insufficient work of enterprises with creditors and poor performance of enterprises obligations under contracts, which in particular had to fulfill the requirement to creation of a reserve of doubtful debts and payment of penalties). As a consequence, the level of the shadow economy "Transport, warehousing, postal and courier activities" increased by 8 pp. compared to the corresponding period of 2017; in manufacturing – by 2 pp. in accordance. Increase in the level of the shadow economy in the "Real Estate Transactions" led to 6 pp. (compared to the level of 9 months of 2017), in the economic activity "Financial and insurance activities" – 5 pp.

The level of the shadow economy in the wholesale and retail trade, as well as in the agricultural, forestry and fisheries sector, has not changed for 9 months of 2017.

At the same time, the list of the most shadowed types of economic activity was headed by "Financial and insurance activities" (51% of the volume of GVA in SEA).

Traditionally, the level of the shadow economy remained in the agricultural, forestry and fisheries sector – 6% of the volume of the GVA in the said sector. But in estimating the level of the shadow economy due to the lack of relevant statistical information, the volume of commodity exchange transactions, the use of which is

characteristic of agriculture, are not taken into account. However, it is precisely these operations that tend to evade taxation, which in turn is the source of a phenomenon such as the “shadow economy”.

Threats from the shadow economy of the agri-food sector of Ukraine have many forms of reflection of negative nature. From the standpoint of economic theory, usually the shadow economy is regarded as one of the socially deformed forms of market activity. Thus, the shadow economy is a destructive factor of economic security, hindering the sustainable development of the economy, including the development of the agrarian sphere of the economy. In this case, it is mainly related to the potential threats arising in the process of production, processing and sale of agricultural products, as well as in the field of production services, crediting and financing of rural producers, provision of social and other services to rural population. When shadow activity crosses the legal framework and damages the economy, it becomes a real threat.

Based on the foregoing, we define the shadow economy in the agroindustrial complex as the production, distribution, exchange and consumption of material goods and services that are uncontrolled by society, and as activities of a destructive, illegal nature, which, under certain conditions, bring harm, harm to the state, society and its members. In order to ensure food security, it is important to find out the causes, the main features and features of the shadow economy as a threat to the development of the agri-food sector, and the interests in the field of food security.

One of the most important features of the transition economy was the institutionalization of the shadow sector, which became a stable element of the economic system, a kind of complement to the legal economy. Of course, the modernization of agricultural production will be accompanied by shadow processes in all areas of agriculture.

In the agricultural sector of the economy, its shadow component develops under the same circumstances as in other industries, but at the same time has its own characteristics, which is due to the specific nature of agricultural production.

In private rural households, agricultural products produced for personal consumption (subsistence farming) and for the sale of surplus food on the market. Activities related to the conduct of personal farming, do not relate to entrepreneurial activity. That is, according to the Law of Ukraine “On Personal Rural Households” [9], these activities are not subject to mandatory registration and losses to the state due to non-payment of taxes on market turnover are not applied and can be called informal activities.

Today in Ukraine personal ancillary agricultural production occupies a significant share in the gross product. For example, in recent years, households have become active participants in the market turnover, producing over 50% of the main types of food. In 1990, agricultural enterprises produced 66.6% of gross output, and households - 33.4%; in 2000 - 38,4; 61.6 and agricultural - 2.1% of gross production, in 2017 the figures were 56.4; 43.6 and 8.7% (Tables 1 and 2).

Table 1. Structure of agricultural production by category of producers
(at constant 2010 prices; %)

Types of products	Years						
	2000	2005	2010	2014	2015	2016	2017
Agricultural enterprises							
Agricultural products	38,4	40,5	48,3	55,3	55,1	57,0	56,4
crop production	49,3	48,6	53,6	59,4	59,1	61,3	60,5
livestock products	21,0	26,2	38,8	45,5	45,5	45,6	45,8
including farms							
Agricultural products	2,1	4,6	6,1	7,6	7,9	8,7	8,7
crop production	3,1	6,7	8,7	10,0	10,4	11,2	11,3
livestock products	0,4	0,7	1,6	1,8	1,9	2,0	2,0
Private households							
Agricultural products	61,6	59,5	51,7	44,7	44,9	43,0	43,6
crop production	50,7	51,4	46,4	40,6	40,9	38,7	39,5
livestock products	79,0	73,8	61,2	54,5	54,5	54,4	54,2

Source: [1]

If in 1990 agricultural enterprises (collective farms, state farms, inter-farm enterprises) used 93.7% of agricultural land, and private households - 6.3%, in 2000 – respectively 84.9; 15.1 and farmers – 2.7%, in 2017 – 59.6; 40,4 and 12,3% respectively [3].

This agrarian sector has become one of the main determinants of ensuring the physical and economic availability of food to the public, i.e. food security.

Table 2. Structure of crop production by category of holdings
(as a percentage of total)

Types of products	Years							
	2000	2005	2010	2013	2014	2015	2016	2017
Private households								
Cereal and leguminous crops	18,4	24,3	24,2	21,2	21,9	22,7	21,3	22,6
Factory sugar beet	12,2	21,5	7,9	15,7	7,2	7,5	4,7	4,4
Sunflower	12,5	21,2	17,5	14,5	14,3	14,6	13,9	13,4
Potatoes	98,6	98,8	97,4	97,0	96,8	97,8	97,8	98,1
Vegetable crops	83,1	89,3	88,1	88,3	86,1	86,1	85,9	85,5
Fruit and berry crops	81,8	88,2	83,6	80,6	83,4	80,9	81,5	83,7
Meat (in slaughter weight)	73,7	63,2	44,9	39,7	38,5	37,0	35,9	36,0
Milk	71,0	81,2	80,3	77,5	76,2	74,9	73,9	73,1
Eggs	66,2	50,5	39,9	37,6	36,0	41,8	46,6	46,1
Wool	61,4	78,3	83,1	86,6	85,4	86,2	87,2	87,0
Honey	93,2	96,6	97,7	98,2	98,5	98,6	98,5	98,7

Source: [1]

If private farmers are to be registered as physical private-entrepreneurs or farmers, they must pay taxes. However, there are no standards, criteria for the transfer of PRHs, there is only limitation of the size of land plots, which is established by normative legal acts, the maximum size of the total area of land for maintaining a private rural household may not exceed 2 hectares.

CONCLUSION

In rural areas, informal economic activity also covers primary processing and marketing of agricultural products, construction and repair of private homes and other services, which is one of the sources of income for rural residents.

The second feature is related to the mistaken notion that in agriculture, the magnitude of the shadow economy, offenses and crimes is declining. On the contrary, it increases with active transformations of ownership, weak control over the use of financial support from the state, which creates conditions for abuse and crime.

The third feature of the development of shadow tendencies in agriculture is the use in the management of the economy of intentionally distorted statistical information. Thus, in the regional statistical authorities, the volume of agricultural production in personal peasant households is determined by calculation based on a sample survey of households using information from the books kept by the local self-government bodies of settlements. Maintenance of business books is carried out on the basis of information provided on a voluntary basis by citizens who lead a private household. Here, part of the economic activity due to incomplete coverage of the surveyed households or respondents' errors may not be taken into account. It may be the other way around, that is, economic activity is increased by reflecting non-existent activities ("notes") in the statistical reporting.

Non-existent, virtual economic activity leads to a violation of the structure of reproduction in the agroindustrial complex: in statistics, agricultural production in personal households significantly "increases", respectively, increases the gross agricultural product. At the same time, the production of personal farms in small quantities gets into the market turnover, the capacity utilization of the enterprises processing agricultural raw materials is reduced and the consumption of food products of own production decreases. Embellishing reporting, the true state of the economy leads to erroneous managerial decisions on the development of the agrarian economy.

Thus, improving food security is largely related to counteracting the shadow processes and the shadow economy, economic crime in the agri-food sector, which necessitates the study of this problem in the economic security system of Ukraine. This methodological approach is due to the processes of modernization of agricultural production with state support, associated with the development of financial and credit relations in the agroindustrial complex, with the development of reproduction processes in agriculture.

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TRANSFORMATION ASPECTS OF THE MODERN MIGRATION PROCESSES DEVELOPMENT IN THE SYSTEM OF LABOR ECONOMIC PROVISION

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Abstract
The article determines that the decisive manifestation labor resources transformation process in the conditions of globalization is the international migration of labor, which becomes one of the tools of professional and social self-realization for workers. The dynamics of migration processes constantly increases, and their intensity is much higher than the overall world population growth. A significant factor provoking transformational shifts in migration processes is the enhancement of incentives on the side of host countries. However, it is worth noting that the emphasis in these measures is on the qualitative characteristics of the workforce, and therefore there are clear "filters" in migration policy. It is found that due to differences in the level of economic development and wages, the vectors of migration flows remain unchanged. At the same time, global mobility – flexibilisation and standardization of employment, driven by the development of information technologies - is the newest tool for labor-intensive transformation on a global scale. At the stage of globalization, migration becomes an important factor in labor security: the impact of migration on employment, the quality of human capital, labor productivity, and the income level of the population increases. The most ambiguous consequences of labor migration are precisely in the context of labor supply to States: it is obvious that the shortage of skilled, especially highly skilled, labor will inevitably increase. That is why, at the present stage of development, all but one country solves the issue of attracting the most skilled labor force on the one hand and retaining existing and developing national labor resources on the other, adjusting national migration laws, educational programs, shaping levers to counteract brain drain.

Keywords: international migration, labor migration, international labor market, globalization.

INTRODUCTION

The current stage of the international labor market development is accompanied by the formation of international labor division system, the basis of which are the processes of international labor migration as one of the important factors for the reproduction of labor force and development of the labor market.

The large scale and intensity of labor flows in the global economic space determine the state of national labor markets, the level of their inclusion in the international labor supply system.

RESEARCH RESULTS AND DISCUSSION

International migration has become a global process in today's context. According to the UN, as of early 2018, 258 million people worldwide (3.4% of the world's population) live outside their countries of origin. Moreover, the dynamics of migration growth flows outstrips the population growth of the world. Thus, in 2018, the world population increased by 1.1% (Figure 1), and migration increased by 5.7%.

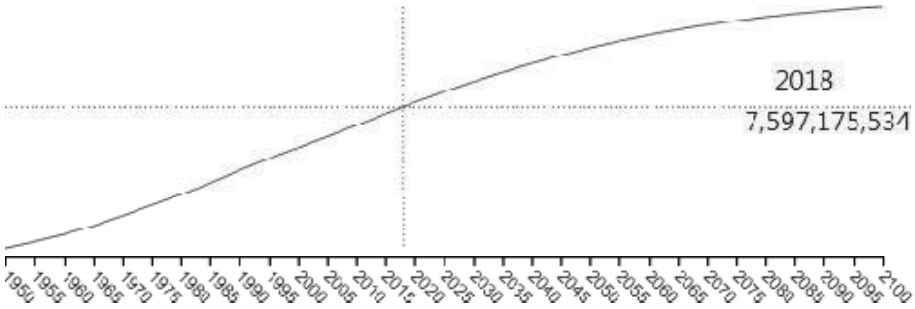

Figure 1. Dynamics of world population

Source: [6]

The increase in the number of migrants is a manifestation of a stable positive trend: if in 1970 the number of international migrants was 84 million, in 2000 – already 173 million people, in 2010 – 220 million people in 2017. 258 million people (Figure 2), compared to 1970 the number of international migrants has tripled.

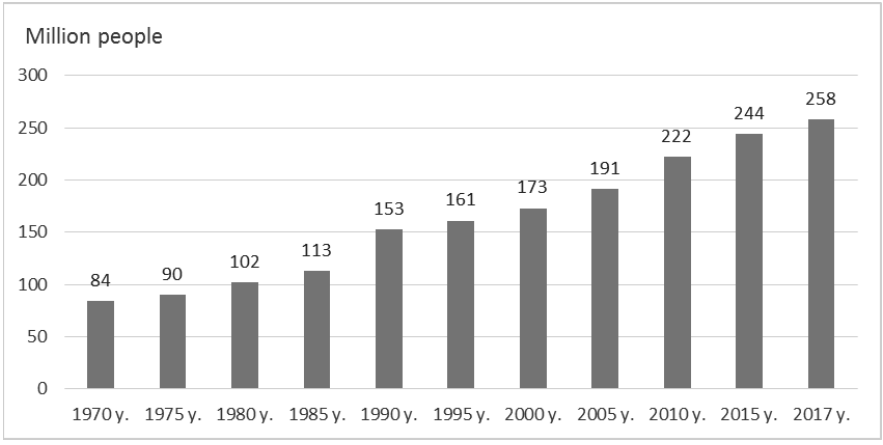

Figure 2. Dynamics of international migration in 1970-2017, millions of people

Source: [4]

The majority of migrants in 2000-2017, as can be seen from the table. 1, falls on the Asian region, the displacement amounted to about 30 million people (with an increase of 1.8 million migrants per year), however, the proportion of international migrants in Asia does not generally exceed 2% of the total population of the region (a similar pattern is observed in Africa and Latin America), while in regions such as Europe, North America and Oceania, the proportion of international migrants is more than 10% of the total population [3, p. 38].

Table 1. Number of international migrants by world regions in 2000-2017, million people

Region	Arrived		Dropped out		Balance	
	2000	2017	2000	2017	2000	2017
Asia	49,2	79,6	65,0	105,7	-15,8	-26,7
Europe	56,3	77,9	49,6	61,2	6,7	16,7
North America	40,4	57,7	3,2	4,4	37,2	53,3
Africa	14,8	24,7	21,6	36,3	-6,8	-11,6
Latin America and the Caribbean	6,6	9,5	24,8	37,7	-18,2	-28,2
Oceania	5,4	8,4	1,2	1,9	4,2	6,5

Source: [3]

The main component of migration in the modern world is resettlement as a result of economic factors manifestation, in which the comparison of life quality in origin countries and destination countries is crucial, as evidenced by the distribution of migrant destination countries by income: in 2017 compared to 2000 the share of high-income countries to which migrants went increased from 58% to 64% (Figure 3).

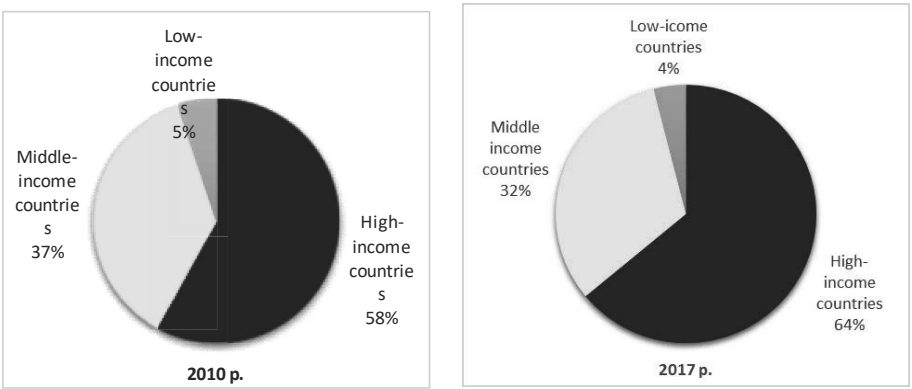

Figure 3. Distribution of migrant destination countries by income level in 2010 and 2017, %

Source: [7]

The main traditional migration corridors in the world economy are showing stable sustainability due to the gap in the economic development of countries, with increasing activation of migration movements from Mexico to the USA and from India to the UAE (Figure 4).

At the same time, the Top 20 countries account for almost half of the international displacement of labor due to economic factors (level of remuneration, working conditions, quality of life).

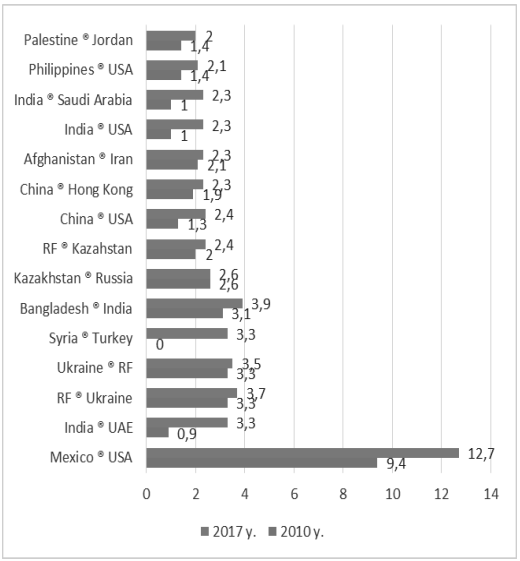

Figure 4. The largest migration corridors in the world in 2010-2017, millions of people

Source: [3, p. 14]

As of 2017, India (16.6 million people), Mexico (13.0 million), Russian Federation (10.6 million) were the leaders in the number of people leaving the country (Figure 5), although there have been some changes in the list of leading countries: to the leading countries compared to 2000. Countries such as Syria (6.9 million), Romania (3.6 million), Egypt (3.4 million) were included.

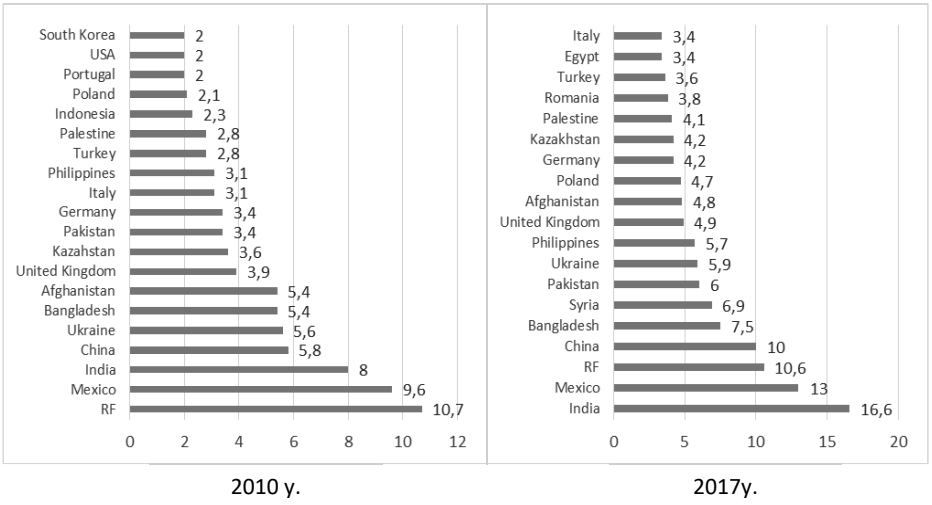

Figure 5. Top 20 countries, by number of international migrants origin, millions

Source: [3]

Despite the fact that they account for almost 70% of migrants, the United States is the undisputed leader in terms of attracting migrants (2017 – 49.8 million people, 2010 - 34.8 million people)) (Figure 6). In 2017, Spain (5.9 million people), Turkey (4.9 million people), South Africa (4.0 million people) were in the Top 20 in terms of migrants arrivals, Thailand (3.6 million people), Kuwait (3.1 million people).

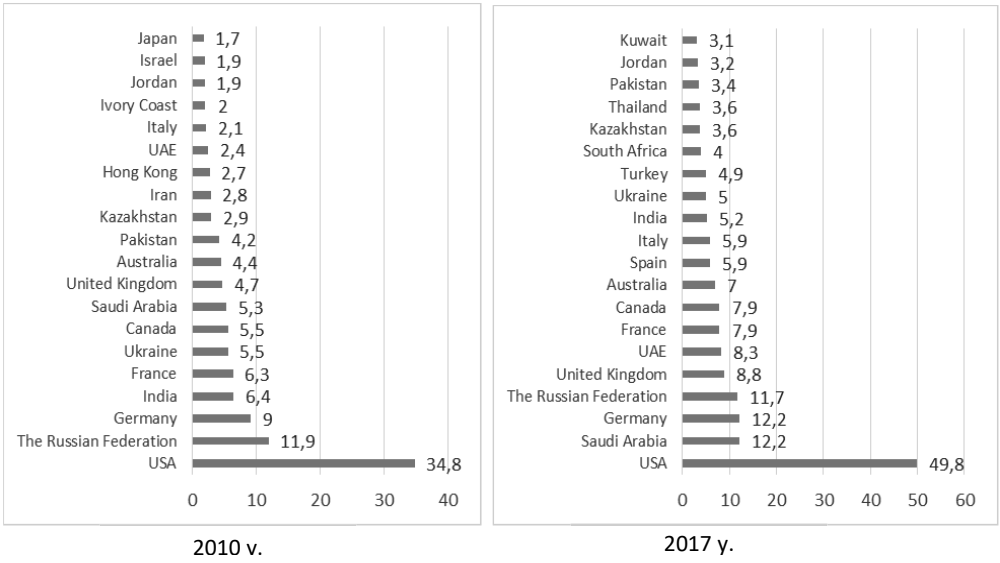

Figure 6. Top 20 countries by number of international migrants arrivals, million people

Source: [3]

However, not all migration occurs in positive conditions. As of 2017, 68.5 million people were forced to leave their homes as a result of conflict and persecution. 25.4 million refugees, 3.1 million asylum seekers and 40 million internally displaced persons. One third of all refugees went to the least developed countries, where opportunities for their reception and integration are often insufficient (in particular, in 2017, 85% of all refugees went to countries such as Iran, Lebanon, Pakistan, Turkey, Uganda) [4]. This creates the preconditions for further (delayed) international migration to more economically developed countries.

However, in spite of the increasing quantitative parameters of migration, it is becoming increasingly important to establish qualitative requirements for migrant workers in the migration policy of countries. In economically developed countries, the implementation of measures aimed at achieving the synergistic effect of their own economic development by attracting highly skilled and cheap labor is becoming increasingly important. Table 2 outlines strategies for attracting highly skilled migrants from a number of modern developed countries.

The content of these strategies is largely due to the fact that The main employment growth in developed countries is attributed to the professions of intellectual work (in the US – 85%, in the UK – 89%, in Japan – 90%) [7].

Table 2. Priorities, policy strategies for highly skilled migrants

Country	Political conditions	Strategy
Kanada	Migration as an element of the overall development strategy for professionals with a certain level of skills. Migration that compensates scarce specialties	Selection of highly skilled immigrants with family for permanent residence in the country. Assistance to international students
Australia	Migration as an element of the overall development strategy for professionals with a certain level of skills. Migration that compensates for scarce specialties. Assistance to international students. Goals are generally achieved	Selection of highly skilled migrants with family for permanent residence in the country
USA	Protecting local workers when considering employers' applications for hiring a foreign employee. Preventing the migration of low-skilled people and limiting immigration in general. Quotas for the most qualified categories	Required invitation to work. An extensive program for obtaining a temporary residence permit. A little help for international students. A huge number of applicants for existing programs, a big turn
Great Britain	Maximum free relocation. Allowing highly qualified personnel to enter while restricting the migration of low-skilled people. Rating system for processing applications for entry from highly skilled migrants, no quotas	List of scarce specialties requiring high qualification. Possibility of entry of foreign students of scarce specialties
France	Protecting local workers when considering employers' applications for hiring a foreign employee. Increased economic migration	Careful study of the labor market and the list of professions
Netherlands	Restriction of migration of people with low skills and insufficient knowledge of Danish. Exemptions from the labor market and language exam for migrants with high levels of skills and wages	Satisfactory use of high-skilled workers' entry permits
Germany	Permission to enter for highly qualified personnel while restricting the immigration of low-skilled people. Competition with other countries for highly qualified staff	Permanent residence for foreigners with high qualifications and wages. Hard restrictions for the rest of the categories. A number of opportunities for university graduates
Norway	Protecting local workers when considering employers' applications for hiring a foreign employee. Free relocation to meet the needs of employers. Required invitation to work	Quotas for the most qualified categories
Japan	Admission of highly qualified staff while restricting the immigration of people with low skills	Hard delineation of specialties requiring a high level of skills. Allowing international students to look for work
Czech Republic	Assistance to Czech employers in the recruitment of highly qualified foreign employees	Accelerated acquisition of the right of permanent residence for highly qualified foreign workers

Source: [2, p. 225–226]

In the context of globalization, international labor migration has become a significant economic, social and humanitarian development factor for both countries of origin and host countries. Each of the parties involved in the labor exchange process tries to gain a specific benefit. [1, p. 56] With regard to the empirical assessment of the effects of migration, especially for host countries, such effects are difficult to measure. In many cases, the short- and long-term economic impacts of migration vary widelyFor example, according to the theory of the question, labor markets respond in the short term to labor supply shocks by adjusting employment levels or wages, but in the long run, the impact of these measures gradually diminishes as local labor and businesses adjust to the new equilibrium status. However, it is empirically difficult to single out even the short-term consequences. Results of existing studies [5, p. 2-3] suggest that immigration can have both a negative and a positive impact on the future employment of local workers, but this data is highly dependent on the choice of methodology and timeframe.

CONCLUSION

Thus, at the stage of globalization, migration displacements become an important factor of labor security: the impact of migration on employment, quality of human capital, labor productivity, and income level of the population increases. Without exception, all countries address the issue of attracting the most skilled workforce on the one hand, and retaining existing and developing national labor resources on the one hand, adjusting national migration laws, educational programs, and shaping levers to counteract brain drain.

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UKRAINIAN LABOR MIGRATION: MAIN TRENDS AND RISKS

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Abstract
International migration, in particular, labor migration, is one of the defining features of today's globalized world. According to the UN Special Commission on Migration, Ukraine is among the Top 10 largest countries-suppliers of labor migrants to other countries in the world.
The objective of the article is to analyze the current state of external labor migration from Ukraine, to identify its main trends and the risks caused by the escalation and activation of migration processes. An analysis of the available sources, which contain data on contemporary Ukrainian labor migration, provides the following quantitative characteristics: the total number of migrant workers is around 5.9 million; 3.2 million Ukrainians work permanently abroad, 7-9 million work temporarily; from 2002 to 2017, 6.3 million people left Ukraine and did not come back; more than 2/3 of migrants (70.4%) are men; the level of education of migrant workers is mostly secondary (64%). Among the main trends of current labor migration from Ukraine are the following: the rapid increase in the labor migration of Ukrainians to the EU countries caused by the increased opportunities for moving after the introduction of the visa-free regime and the increased loyalty of the governments of the EU Member States to the Ukrainian labor migration; an increase in the number of migrants with higher education, highly qualified specialists, as well as young people, a significant percentage of whom stays for permanent residence; the annual increase in the funds transfers of labor migrants, which makes Ukraine the largest recipient of international transfers in the Europe and Central Asia region.
As a result of the study, we concluded that the impact of labor migration on the development of Ukraine is ambivalent. Moreover, in the short term, it can be characterized as mostly positive, though, the long-term consequences of labor migration carry serious risks for the demographic, socio-economic and socio-cultural development of the country. First of all, there is a risk of loss of skilled labor, including human, scientific and intellectual potential, provided that temporary labor migration leads to emigration and change of permanent residence. In order to minimize the negative effects of migration, it is necessary to build a competitive economy through the implementation of real economic reforms and to formulate an appropriate migration policy, which is based on the maintaining and improving the characteristics of labour potential in the national labor market.

Keywords: labor migration, Ukraine, trends, risks.

INTRODUCTION

International migration is one of the defining features of today's globalized world. Over the past 50 years, the number of international migrants has tripled. In 1970, only 84 million people lived outside their country of birth, at the beginning of the new millennium – 173 million, and by the end of 2017, the number of migrants was already 258 million, or 3.4 percent of the world's population [24]. According to UN experts, the number of international migrants in the world in 2050 will reach 405 million [13].

Labor migration has always been the largest migration stream in the world. 74% of all migrants are persons of working age from 20 to 64 years old, which gives

grounds to estimate the labor migration scope of 190 million people. Although most migrants do not belong to the category of migrant workers according to the law of their countries of residence, however, coming by other channels (family reunification, training, asylum seekers, etc.), they replenish the labor force [10, p. 22]. According to the UN Special Commission on Migration, Ukraine is among the Top 10 largest countries – suppliers of labor migrants to other countries in the world. In 2000 Ukraine was ranked 5th in the world among countries, and in 2017 – it is 8th. At the same time, in absolute terms, the indicator increased from 5.6 million to 5.9 million [22, p. 33].

Along with the rapid increase in the number of migrants, there is an increase in their importance as a powerful transnational force capable of influencing the development of national and global economic, political and social processes. Migration can be an economic good, but it can also become a critical issue for economic policy and political life, so international migration processes require considerable control and regulation by states involved in labor exchange. In this context, the study of current trends and risks associated with the continued growth of labor migration from Ukraine is of particular relevance.

RESEARCH RESULTS AND DISCUSSION

Labor migration and its consequences have become the object of research of many foreign and Ukrainian researchers. An important contribution to the development of the theory of international labor migration, regulatory and legal aspects of the regulation of migration processes was made by such researchers as O. Malynovska, A. Haydutskyy, O. Poznyak, O. Pikulyk, O. Sharov, E. Libanova, I. Klyuchkovska, and others. Researchers note both the positive and the negative impact of external migration on the development of host countries as well as countries of origin. Even though a significant number of important aspects of international migration have been reflected in research studies, the current trends of external labor migration from Ukraine require further study.

The objective of the article is to analyze the current state of external labor migration from Ukraine, to identify its main trends and the risks caused by the escalation and activation of migration processes.

In Ukraine, there are no accurate data on the scale, structure, directions of migration movements of the population. The reason for this is the long delay in conducting the demographic census (the last one was conducted in 2001), lack of incentives for proper record keeping, difficulties in organizing data collection on labor migrants, their employment, income, duration of trips, etc. [22, p. 18-19]. An overview of available sources on current Ukrainian labor migration provides the following data:

The total number of migrant workers:

– 5.9 million (Migration Report of the UN Special Commission for 2017) [27].

– 4 million people (16% of the country's population) – data from the Center for Economic Strategy (2017) [21].

The number of Ukrainians working outside the country at once is (among those who pay taxes in Ukraine):

– 3 million people (according to the Institute of Demography and Social Research of NAS of Ukraine [9])

– 2.6-2.7 million people (according to the Center for Economic Strategy [21]).

According to the Ministry of Social Policy (2019), 3.2 million Ukrainians work permanently abroad, and temporarily – 7-9 million [12].

Over 15 years (2002–2017), 6.3 million people left Ukraine and did not come back (3 million left via the Western border and 3.2 million left via the Eastern border) [17].

Regarding the directions of labor migration within the regional context, we can rely on sociological studies that give a fairly accurate picture of the preferences of Ukrainians. At the request of the All-Ukrainian Association of International Employment Companies, in 2016 and 2017, the sociological group 'Rating" conducted a series of studies that showed that Ukrainians went to work in Poland (36%), Russia (25%), 5% worked in the Czech Republic and Germany, 3% – in Italy, the rest – in other countries, mainly Western Europe. Almost 30% of respondents refused to answer this question, and it can be assumed that most of them work in Russia, but consider it unethical to talk about.

A key factor for the rapid growth of Ukrainian labor migration to EU countries, which has been well visible recently, is the expanding opportunities to move to work abroad after the introduction of visa-free travel and greater loyalty of governments of new EU member states to Ukrainian labor migration. The latter is reflected, in particular, in the rapid increase in quotas and the number of work permits issued. Poland alone issued 1.3 million job applications to Ukrainians in 2017 [14]. Moreover, under the visa-free regime, the Polish government allowed Ukrainians to work for up to 6 months during the year and also canceled foreign employment testing for most specialties. Similar visa exemptions have also been adopted by Slovakia, the Czech Republic and even Germany, where they reasonably expect to attract by higher wages those Ukrainians who currently work in Poland. According to V. Voskoboynyk, President of the All-Ukrainian Association of International Employment Companies, «Developed countries, especially European ones, are taking different steps to attract migrant workers. They are interested in having a skilled workforce come to work for them, and as well they are trying to assimilate migrant workers. This is due to the demographic problems that developed countries have, as well as the desire to maintain a steady GDP growth rate, which requires the constant creation of new workplaces and close the vacancies with the workers, which are lacking. The struggle for labor resources in the world is not weakening but has intensified during recent years. Therefore, developed countries will continue to do their utmost to actively attract labor resources, including those from Ukraine" [5].

Another worrying trend is that young people go abroad to study. According to the CEDOS Center, the number of Ukrainian students at foreign universities in the 2016-2017 academic year has increased by 56% compared to the 2012-2013 academic year [15]. In general, over the past nine years, the number of students with Ukrainian citizenship who studied at foreign universities has tripled – from 24 104 to 77 424 people. Poland, Russia, Czech Republic, Slovakia, Austria, Italy, Spain, Canada, and Bulgaria provided the largest increase. It should be noted that special

studies separately in each country of the Visegrad 4 Eastern Partnership Program showed, that young people who went to study abroad are more dissatisfied with the living conditions in Ukraine in general than with the state of higher education in particular. Young people view higher education in another country as a bridge to further life after graduation in better conditions outside Ukraine [18].

Four large-scale surveys conducted by the State Statistics Service of Ukraine with the technical assistance of international organizations in 2001, 2008, 2013 and 2017 are important sources for identifying qualitative characteristics of labor migration from Ukraine and comparing their results can show the dynamics of their changes.

According to 2017 data, more than 2/3 of migrants (70.4%) are men, which generally corresponds to the results of previous surveys (2001 – 69.2%, 2008 – 62.3%, 2012 – 65, 6%), however, it indicates a tendency for a slight increase in male migration under the influence of hostilities [10, p. 376].

Labor migration has unevenly spread among the population of the country. 69.4% of those who went to work abroad were recruited from the residents of the western regions. The share of labor migrants in Center Ukraine was 9.2%, the South – 8.6%, the East – 6.8%, the North – 6%.

The level of education of migrant workers is mostly secondary education (64%). However, according to 2017 data, the proportion of persons with full and basic or incomplete higher education has slightly increased compared to 2012 – 33.5% versus 30.5%. Most university graduates are employed in the United States (58.3%), Israel (52.5%), Portugal (35%), Germany (31.4%). In Belarus, Poland, Russia, and the Czech Republic, migrants with secondary education prevailed [10, p. 376].

Research of the factors of migration processes shows that they have great potential. Important motives for migration are: finding better jobs, higher incomes, improved working conditions, higher social security, ways to satisfy the consumer and investment interests of the migrants. According to an annual survey «Barometer of Happiness in Ukraine», conducted by the European Business Association, the majority of Ukrainians (51%) consider their income levels to be inadequate for a normal life [19]. Migrant earnings are the main motive and result of going to work abroad. It averaged US$ 722, according to a 2017 survey, which more than tripled the average wage in Ukraine at the time of the survey. Migrant women earn slightly less than men – $ 614 and $ 766, respectively.

The information on migration attitudes of representatives of the IT professions, published by experts and journalists of the NB channel is also of interest [16]. Even a rather general survey of profile Internet resources made it possible to find out that “among the subscribers of the Ukrainian dou.ua site, 4% are those who have already gone abroad, 9%, are actively preparing to leave, and 43% are thinking about it. Among the countries of destination, there are Poland – 26% of respondents, Germany – 19%, USA – 13%. Only less than 2% returned home after work abroad because they did not like it. In general, most people recognize that they are not going to come back, though they are skilled, young people. It is not the financial capacity that distinguishes representatives of the IT sector from other migrant workers. Outsourcing individuals in Ukraine may receive higher salaries than in Europe or the

US. The main reasons for the experts' moving abroad are not the income, but the quality of the living environment (education, health care), the prospects of the company development, as well as access to another culture, the opportunity to learn about other countries. Almost half of the experts take their family with them immediately. At the same time, representatives of the IT industry point out the conditions of coming back home – a significant improvement in the country (63%), family circumstances (39%), the end of the military conflict, an interesting offer from a professional point of view [22, p. 46].

The most obvious is the impact of labor migration on the economy due to the influx of migrant capital into the country. Estimates of the volume of remittances to Ukraine are even more ambiguous than estimates of the scope of migration. Here, the data may be 100 times different ($ 0.5 billion to $ 54 billion per year) [2]. According to clarified data of the National Bank in 2017, money transfers to Ukraine from abroad amounted to approximately $ 9.3 billion. This amount is more than five times bigger than the amount of foreign direct investment during the same year. National Bank estimated the foreign direct investment at $ 1.8 billion. In 2015–2017, labor migrants transferred $ 23.8 billion to Ukraine in total. This is more than all the foreign exchange reserves of the country, which at the beginning of 2018 amounted to $ 18.8 billion. Private money transfers to the country are growing steadily, and in 2018 they accounted for 8.4% of the country's GDP [6]. According to some Ukrainian researchers, the volume of transfers is much higher than the above official data. For example, according to A. Haydutskyy, these transfers amount to approximately $ 25.6 billion annually (in 2009 it was almost 20% of the country's GDP) [3, p. 139]. The share of official transfers is approximately 23%: $ 6.0 billion came through the financial and banking systems and $ 19.6 billion – through the informal channels [2]. The large volumes of money transfers by informal channels make it necessary to find effective ways of formalizing the migration capital market. Therefore, it is necessary to establish appropriate supervisory and regulatory institutions, promote migrants' access to international labor markets, improve information collection methods, reduce the cost of transfer services, sign interstate agreements on the liberalization of migration processes. Regulatory authorities should encourage banks, postal services, microfinance institutions to develop innovative programs for attracting migrant funds through official channels. It is important to create specialized non-governmental organizations and associations of market participants, which will accelerate the development and implementation of measures formalize remittances.

Despite different estimates of remittances related solely to labor migration, according to data provided by the World Bank, Ukraine is the largest recipient of international transfers in the Europe and Central Asia region, receiving a record $ 14 billion in 2018. The World Bank said that transfers to Ukraine were 19 percent higher than in the previous year, accounting for 11.4 percent of the country's GDP. The increase in funds transferred to Ukraine this year is explained in the World Bank, in particular, by the growing demand for foreign workers in neighboring countries. The lion's share of transfers to Ukraine comes from Poland [7].

As a result, migrants are currently the largest foreign investors for Ukraine. According to some researchers, based on economic and mathematical modeling, without such transfers, the Ukrainian economy could lose 7.1% of its potential. Light and food industries would suffer the most, the decrease in these spheres could reach 17% and 14%, respectively. Consumption would be reduced by 18% and household income by 14-21% [26].

Nevertheless, as noted by a specialist in the field of migration processes and migration policy O. Malynovska, it would be a mistake to believe that transfers automatically contribute to economic development. After all, for every thesis on positive results of transfers no less convincing antithesis can be found. Among the negative effects, the researcher notes the rise in prices, inflation, imports, and trade deficit [11, p. 89-90]. In particular, transfers from abroad have largely led to a rapid and economically unjustified increase in real estate prices in the regions affected by mass migration. Back in 2005, economists warned that transfers were one of the catalysts for the formation of a speculative "bubble" in the real estate market, which in turn threatened the stability of financial institutions and the reliability of citizens' savings [11, p. 30], which was fully confirmed during the financial and economic crisis. Investments from abroad made in housing also have a negative impact, such as the so-called “death” of capital, that is, construction costs in depressed regions where there are no workplaces and the new housing is left unused as a result. Some migrants spend money to buy housing in regional centers or the capital, which accelerates the migration of young people from their native places, with all the negative consequences for the development of the latter.

Transfers also increase the tax base, thereby providing additional funds that can be redistributed to the benefit of the magnates, financing an inefficient state apparatus. According to the researchers, funds, which are unjustly received by the state, can contribute to the deterioration of the government quality, the growth of corruption, the use of power in the interests of enrichment, causing the preservation of the bad economic situation and continued emigration [25, p. 3].

According to the findings presented in the analytical note prepared under the project "Migration from Ukraine after visa waiver agreement with EU" by the Institute for Economic Research and Policy Consulting, it is inappropriate to consider external labor migration in Ukraine as a tool for accelerating economic development, since the contribution of migration to the GDP growth is small. Given the marginal propensity to consume and propensity to buy imported goods and services, the contribution of remittances to Ukraine's GDP can be estimated at between 2.1% and 4.0%. This estimate does not take into account the impact of remittances on the increase in investment, as well as the effects of the reduction of domestic labor supply, which impact can be estimated as negligible. The main effect of migration is the poverty reduction in Ukraine [8, p. 15].

Labor migration abroad as the largest migration stream has a significant impact on various aspects of the country's life. First of all, migration directly affects demographic development. Thus, as early as 2008, according to a survey by the State Statistics Service, 14% of migrant workers did not plan to come back to their homeland [10, p. 380]. Today, this percentage is likely to be significantly higher.

Most Ukrainians, who work in countries with significantly higher legal income than in Ukraine, and can count on professional and social advancement, permanent resident status, will stay there forever, or at least until the end of their working careers. The spread of external labor migration in Ukraine, their partial transition to a permanent form, leads to a decrease in the number of the permanent population of the country. According to a survey conducted by PricewaterhouseCoopers, Ukraine was the first among European countries in terms of projected staff reduction due to the labor migration in 2019 (about 1.4%) [5].

The impact of migration on the labor market is ambiguous. According to estimates by specialists of M.V. Ptykha Institute of Demography and Social Research of NAS of Ukraine, in the absence of labor migration, the unemployment rate in Ukraine would be 1.6 times higher than the actual rate [28]. At the same time, there is already a shortage of medical and pedagogical workers, builders, welders, drivers, and oil production specialists in the regions of mass migration. Labor migration also increases the social burden on those who stay and formally work in the country (taking into account the Ukrainian solidarity pension system).

The most serious problem is the «brain drain», which causes a deterioration of the quality characteristics of the employed. The situation with the outflow of qualified personnel abroad is of considerable concern to representatives of Ukrainian business circles. Participants of the Kyiv International Economic Forum, which took place in October 2017 in Kyiv, already noted the lack of qualified staff for expanding their business [23].

Negative tendencies of «brain drain» are observed in the scientific field. According to official statistics, in the early 1990s, 1,344 organizations were performing scientific research and development in Ukraine, and there were 313,079 researchers. As of 2015, these figures decreased to 978 and 63 864, respectively. Now, we have one of the lowest rates in Europe concerning the number of researchers per 1,000 people. At the same time, the most active creative researchers, including young researchers, have left and continue to leave the scientific field. If this process is not stopped, Ukraine may be threatened with the extinction of entire branches of knowledge [28].

According to a survey in the National Academy of Sciences of Ukraine in 2016, 42.2% of young scientists stated their intention to migrate. In 2017, there were 51.2% of them, 15.7% wanted to leave Ukraine permanently, and 35.1% would like to work abroad for some time and come back. The reasons that encourage young scientists from NAS of Ukraine to think about possible emigration can be divided into three categories: low wages and poor financial and economic status of science in Ukraine (about 90%); unfavorable working conditions (60%) and difficulties of professional realization (about 20-30%). Respondents also complained about the lack of "social elevators" and career opportunities. In particular, the procedure for obtaining degrees is still bureaucratic and based on quantitative requirements instead of qualitative ones. Although the share of scientists in total migration flows from Ukraine is relatively small, it is significant for the industry [1].

It should be noted that the problem of lack of skilled workers is related not only to labor migration but also to the natural decline in the population. The UN estimates

that Ukraine is in the top five in terms of population decline. Thus, the UN estimates the population of Ukraine, including the Crimea, in 2017 at 42.2 million people, but by 2050 the country's population will decrease by 18% to 36.4 million. In any case, a significant decline in population in mid-term perspective is a threat to the national security of the country [4].

According to O. Ustenko, the director of the International Bleyzer Foundation, shortly, Ukraine will start to feel the effects of the massive outflow of the working-age population. Besides, recently has increased the movement abroad of educated and talented young people, on which largely depends the future success of our country. In such a demographic and migration situation, it will be extremely difficult for Ukraine to achieve sustainable economic growth in the long term [23].

CONCLUSION

As a result of the study, we concluded that labor migration is not only intensifying, but also acquiring new qualitative features. Analysis of the dynamics and peculiarities of current migration processes gives grounds to argue that the impact of labor migration on the development of Ukraine is ambivalent. Moreover, in the short term, it can be characterized as mostly positive, though, the long-term consequences of labor migration carry serious risks for the demographic, socio-economic and socio-cultural development of the country. First of all, there is a risk of loss of skilled labor, including human, scientific and intellectual potential, provided that temporary labor migration leads to emigration and change of permanent residence. In order to minimize the negative effects of migration, it is necessary to build a competitive economy through the implementation of real economic reforms and to formulate an appropriate migration policy, which is based on the maintaining and improving the characteristics of labor potential in the national labor market, which can improve migration trends, reduce the level of emigration, and facilitate the return of highly qualified staff and young people.

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BUSINESS RISKS IN THE CHANGING DYNAMICS OF 'GLOBAL VILLAGE' IN THE PERSPECTIVES OF INDO-UKRAINE RELATIONS

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Abstract
Earth remains being an abode for the human civilizations enabling them to survive, sustain, develop and grow amidst the vagaries of nature that often challenges their survivability from time to time. Quest of human asserting their socio-economic and political hegemony over others, in any of the areas of their habitation, have significantly results in the growth of the varied concepts of national interests, nationality, sovereignty, citizenship and alike. It still being a stark pragmatic reality emphasizing the fact that every of the sovereign entities have its own distinct 'specialties' which can invariably abet to benefit other nation excelling themselves in the related fields of growth and development. These eventually aid to further the notional doctrine of 'global village' for the ultimate development of global humanity itself. Cooperation and coexistence remain being the root concept of for the ultimate survivability, sustenance and the growth of human civilization. It also construes being the moot principle for the ethical doctrine of 'global village' taking its shape in reality. Under the ambit of it, humanity vies to inclusively develop, grow and excels with an aim making their livelihood better, secure and progressive. At the same time, exigencies of diverse need being met and the significant quest to assert hegemony, by the dint of one's inclusive caliber and economic growth, over other in any of the earth's region; the notions of nationality, sovereignty, national interest and alike emerged on the horizon of international sphere itself. However, nations need to undertake proliferating of their inclusive socio-political and economic interests into the territory of other nations through mutual cooperation and understandings for the same. But such endeavors do invariably involve business risks of varied dimensions, the nature of which ought to be ascertained. In fact, today, when we talk about the dynamics of business in an international perspective, then significantly an inherent fear concerning such risks about the security and profitability of the capital investments, in a foreign nation, eventually get reflected in the quantum of such capital made available towards undertaking any of the desired economic ventures there at. Pragmatically viewed, no country desires hampering its inclusive national interests at the business arena in the foreign land. Rather it vies protecting the same through its enhanced quantum of profits and return on the national capital assets invested for the same. Moreover, socio-political and economic instability; the issues of good governance; menace of terrorism & cyber-attacks; nature and extent of the rule of law and justice delivery mechanism; extent of development of the basic infrastructures in health social and service sectors; flexibility of constitutional provisions along with the related environmental issues of pollution, climate change and alike serves as some of the factors that often ascertains the extent of risks in doing businesses at the global level. Since the doctrinal notion of global village entails with it the basic ethical issues of trust and confidence; any of such risks ought to be addressed through mutual cooperation and discussions between the contracting parties so that their inclusive long lasting national interests are safeguarded for the eventual betterment of both of their nation and populace at large. Significantly, in the context of our inclusive cooperation between India and Ukraine at an international level, any of such business risks are viably addressed owing to the flexibility of our statutory administrative mechanism to tackle with any of such issues that may often arise through mutual cooperation and adequate understandings at the appropriate level so that long lasting relations between the two great sovereigns may prevail amidst the true spirit of the ethical notion of global village itself. The present paper put emphasis on the varied aspects of business risks that apparently exists at global level and the same is desired being mitigated through viable cooperation between the target parties for the ultimate wellbeing of humanity and human civilization here at.

Keywords: global village, cooperation, coexistence, survivability, sustenance, development, inclusive business risk factors, national interests, sovereignty

INTRODUCTION

From the times immemorial, earth remains being an abode for the human civilizations enabling them to survive, sustain, develop and grow amidst the vagaries of nature that often challenges their survivability from time to time. However, the dynamic nature of human instinct to their quest for excellence, in all spheres and domain in the arena of socio-economic, cultural, scientific, political activities etc., have abet them exploring the scattered remotest corners of this planet inhabiting human settlement and civilizations thereby bringing them closer enough to one another through the humane doctrine of humanism, rationalism, coexistence, cooperation, equity and alike. Such scenario does give life to the concept of 'global village' where humanity reign supreme and vouch for the borderless inclusive relations amongst the sovereigns across the world. The present digitalized space era has also facilitated the sovereign political entities coming together to ensure that the ascent of mutual socio-economic, political and cultural development be construed as a step forward towards their inclusive intellectual proliferations and growth.

However, pragmatically viewed, the domestic socio-political & procedural constrains, within an ecological set of a nation's domain, do put stumbling blocks towards any of its initiatives to active economic cooperation, in international field, through inviting for business investments from the other countries. In the present context, the sovereign republic of Ukraine is no exception vying positively to explore the prospects of ensuring inclusive economic development through positive cooperation, in the varied fields of human activities, with the foreign nations for the same. In this respect Indo-Ukrainian cooperation will significantly accord mutual benefits to both the sovereigns, under the ambit of globalization, and abet them proliferating expertise, in the economic, social, technological, intellectual and allied arena of their concern, beyond borders under the humane spirit of "Global Village" itself. The present IInd International Conference BRCDGV-2019 in Ternopil, Ukraine is indeed an opportunity for us exploring possibility to further our socio-political, economic and technological along with intellectual relationships to new heights.

We understand that Ukraine, with its transition economy, is vying to explore opportunities of businesses with cooperation of the world's established economic sovereign community, in the backdrop of their strong economic accomplishments and experiences, in accordance to adhering with the pragmatically humane notion of "global village". We as an Indian, do meticulously abide by our ancient scriptural ***upanishadic*** doctrines of ***'vasudhaiva kutumbakam'*** which implies "world is one family" whilst interacting with any of the international sovereigns. Significantly, India has the glorious tradition adhering to the ethical norms of 'global village' towards furthering the inclusive prospects of international community on the notion of 'coexistence' which only actively abet peace, tranquility and growth of our human civilization existing on this earth.

Basically, within the statutory ambit of our Indian constitution, where rule of law and justice prevails; inclusive interests of the contracting nations, towards undertaking certain initiatives and activities, could viably be expected being preserved and protected here in. Statutorily, Article 253 of our constitution invariably assigns the nation's Parliament, if specifically warranted, with the power to legislate,

either for the whole or any part of the territory of India for implementing any treaty, agreement or convention with any other country or countries or any decision made at any international conference, association or other body. It would significantly abet mitigating any of the procedural hindrances, which may often arise, whilst conducting businesses between the sovereign republic of India and Ukraine and also to promote inclusive positive cooperation between them in the varied arena of their concern. In this respect, even Article 51 of our Indian constitution, under the aegis of its Directive Principles of State Policy, invariably provides for the state to endeavor towards ensuring promotion of international peace and security; maintaining just and honorable relations between nations; foster respect for international law and treaty obligations in the dealing of organized peoples with one another and also to encourage settlement of international disputes by arbitration. Even concern for the protection of earth's environment is statutorily provided under Article 48A of our constitution whereby the state is ought to endeavor towards ensuring protection and improvement of environment vis-à-vis to safeguard the forest and wildlife of the country at large. Apart from the above, the inclusive fundamental rights pertaining to protection of life, equality, liberty, justice, and education and alike are statutorily guaranteed to the populace here at. Indeed these statutorily provisions in the country would effectively serve towards ensuring furtherance of cooperation between India and Ukraine, even in the backdrop of environmental sustainability and development, in their years ahead.

It is worth mentioning herein that in the recent month on 02nd April-2019, the 4th Meeting of India-Ukraine Working Group on Trade and Economic Cooperation (IU-WGTEC), under the aegis of India-Ukraine Inter-Governmental Commission on Trade, Economic, Scientific, Technical, Industrial and Cultural Cooperation was held in New Delhi in India. Even the signed protocol at the end of the meeting specifically dealt reviewing of the trade and cooperation not only in the fields of small and medium entrepreneurship along with those of technical regulation (standardization, metrology, certification, conformity assessment), public-private partnership (PPP) and investment, agriculture, facilitating the access of Ukrainian food products to the market of India, energy sector, finance, granting Ukraine market economy status within the framework of anti-dumping investigations, and banking but also the positive avenues for ensuing cooperation in tourism was mooted as well.

However, it squarely rests on our own zeal, potential and positive endeavor to making it better and progressive for the future generations to further develop the same. With the presence of active socio-economic and political dynamism in the present world order; every sovereign entity remains speculative about the nature and dimensions of 'business risks' that they might have to encounter while showing their economic interest in exploring the business prospects with any other country. Some of these factors could either be political, climatic, environmental, social, religious and alike. Often sheer religious conservatism put hindrances towards ensuring security of other nation's capital investment in such nations. The present paper emphasizes the varied dimensions of business risks that a nation ought to take into account whilst intending to ensure proliferation of their businesses into the other nation's territory as part and initiative towards vying to implement the doctrine of "Global Village" in the

realistic sense of the term itself. Somehow or rather these factors also guide our inclusive Indo-Ukrainian cooperation on a positive note.

'GLOBAL VILLAGE': concept and factors governing it

The concept of **'global village'** may construe resting on the inherent idea and humane notion of "***one world for humanity***" wherein the intention towards establishing a fenceless & unified state reigns supreme and the political mandating of 'sovereignty' being a state's distinct identity of its nationhood assumes an universal stature of ***'fraternity for humanity'***. Invariably, it is ascertained that "village" could be regarded as an initial stage of human civilization towards organizing themselves in a grouped behavior and vied sustaining against the vagarious of nature. The roots of sustenance development and human behavior for coexistence and cooperation amongst them could apparently be found being evidently present within the serene socio-ecological orders in such natural societal set up and gatherings. Significantly, the same notion could apparently be found present in an extended and universal concept of "***global village***" toward furthering the inclusive interests of humanity at large.

In our present world scenario when the global economy is indeed in the state of turmoil owing to varied socio-political, economic and natural factors; the ethical notion of "***global village***" do warrants that the countries, with their 'well to do" or viably strong economic infrastructures, to step forward helping the other fellow ones, that are either less developed with insufficient economic infrastructures or those that are in its transition stage of development vying to being one of the active entity amongst the other global sovereigns with an ultimate aim towards ensuring inclusive development of humanity itself. It is worth mentioning that there are poorest of the poor countries, existing within the Asian or the African continents, where owing to the negligible per capita income; the humanity struggles for their sustenance and survival amidst the rampant socio-political and economic issues like those of drought, malnourishment, diseases along with high rate of mortality, unemployment, political strife and alike. Well advanced or even marginally advanced infrastructures in the primary or secondary sectors in terms of health, industry, agriculture, education and other, equally viable, aspects of a progressive global economy continue being lacking. Significantly, in such economies, struggle for power domination continue to be one of the perennial issues claiming loss of innumerable precious lives of the destitute inhabitants and subsequently warrants not only being effectively tackled and the culprits for any of the heinous crimes like those of genocides, political murders to suppress the peoples voices against the authoritative and the dictatorial rule and alike are ought to be punished in accordance with the nation's penal codes that warrants for the same under the supervision of the international groupings of the nations at large.

Economic Significance of 'Global Village' Towards Risk Free International Business Environment

Basically, undertaking businesses in other states signifies the stature of a nation's economic sovereignty amongst the other nations across the world at large. It could either be within the domestic or international parlance where the latter remains

implies within itself the wide concept of inter-state cooperation where the national concern of either of the parties ought to be mutually respected by the corresponding partners to the same. Profit motive for a nation to further its own national economic strength remains the key that invariably vie keeping the contracting parties in its constant state of economic dependency. When correlating the nation's commercial interests and business priorities at a global forum; under the aegis of a well acclaimed "global village" doctrine, the notion of either seeking or providing cooperation and support as an integral part of the inherent concept of globalization and liberalization do reign supreme. Somehow or rather the issues relating to privatization as a business priority at an international forum do serve as one of the guiding factors to ascertain the inherent risks that are involved whilst conducting and doing businesses in a smooth manner with domestic government along with those of the business destination in such foreign nations providing cushions, through either adopting or providing the adequate business policies towards protecting the economic interest of both the target investors and the nations alike.

Under the aegis of twin economic doctrine of globalization and liberalization, easing of trade and business restrictions, through lowering of the tax rates under different heads, along with incentives for the foreign business entrepreneurs intend setting up business and furthering its economic interest in foreign country, do plays a significant role towards minimizing the risk of business for any of such entrepreneur nations in the global domain. As such, it may be ascertained that the national economic policy with an inherent positive trend aimed to minimize the risk of businesses thereat. Similarly, negative trend aimed discouraging foreign nations doing any business thereat invariably put such businesses at risk. The latter trend invariably defeats the very purpose of the global village in the economic arena.

It is worth mentioning that the conceptual doctrine of "*global village"* in the arena of economic activities, to a large extent, depends on the nature and trend of economic environment that prevails across the world at large. In fact, the international business environment get radically galvanized owing to the political events of yesteryears that witnessed the disintegration of USSR which eventually made the world a multi-polar entity paving way towards ushering in an era of global competitiveness amongst the sovereigns towards strengthening their economic might as a key to the growth, development and prosperity of its populace through undertaking business prospects in the economy of other nations as well.

Basically, technological advances, particularly those in the field of information technology have certainly abetted unifying the humanity across the world. Significantly, strengthening of the global economic institutions, particularly WTO, has also ensured nations sharing a common platform to discuss economic issues of their national interests justifying there by the notional concept of "global village" itself. However, the economic environment remains being the root driving force behind such developments where no business entity, irrespective of its nature and size, construe being left insulated from any of the global changes taking place pertaining to it where competitiveness amongst them reign supreme. The aforesaid notion emphasizes for adoption of the economics of interdependence and cooperation, amongst the sovereigns, instead those of protectionism that may serve as

an impediment towards ensuring proliferation of said doctrine itself. In the current scenario of the global economy and the issues pertaining to business risks so involved therein. We understand that the old rules of competition in business too are being subjected to transformation where a direct head on confrontation is often avoided and the economies are slated to develop niches where each of the players grows and excels; justifying the viability of the above mentioned doctrine to sustain here at.

In the present context, it is worth mentioning that India and Ukraine would significantly vied to mutually explore the prospects of businesses in the broad market available for their goods and services in their country inter se. Both sides would also avail the advantages of each other technological advancements, in varied fields, and expertise for the ultimate furtherance of their national interests, economy and the wellbeing of target populace at large.

Factors Governing Business Risks In The Global Perspectives

With the changing note of the dynamics of international politics, the moot concept of nationalism, sovereignty, socio- religious and political ideologies that governed the emergence of state across the world remains being a serious impediments to the proliferation of the concept and doctrine of 'global village' and subsequently also proves to be a guiding factor in the risk of business in the domain of foreign sovereign. Religious radicalism and conservatism along with the emotional fanaticism for the same that the world is witnessing today in the 'Taliban' dominated regime of Afghanistan, Iraq and other Middle-East countries. International business opportunities could not be expected to flourish and proliferate in such economies and the latter continues to remain in a state of shambles whereby the global economic interests along with those of the target populace eventually suffers thereby giving setback to the humane and rational notion of "global village".

Pragmatically viewed, every nation wants its economy to flourish both in its domestic and international arena. But at the same time, nations desires that its economic investments in the foreign countries remains secure and subsequently professes to deliver positive economic return back to its mother country. Positive gross domestic product (GDP) and growth of the national economy of such target nations do play a significant role in lowering down the business risks of the foreign economic players in such economies. For instance, some Asian nations like Pakistan, Myanmar etc, having the lowest GDP rate and the populace facing with an acute economic menace of inflation along with persistent vagaries of nature depleting economic and natural resources thereby remains being a negative destination for the nations taking risk business in such economies.

Business risks remain a prime concern for any sovereign nation desiring to get its economic and commercial interests proliferate on the global scale. Business initiatives does receive setback when the destined nation get struck with the violent acts of terrorism, civil strife and disturbances resulting government taking preventive and active policy decisions to curb such menaces. Eventually more security parameters are imposed on the movement of goods and services along with imposition of heavy duties on import and alike. Somehow or rather, these measures affect restraining the business opportunities in the international markets.

Its indeed a pragmatic politico-legal fact that any of the commercial activities within a nation are indeed guided in accordance to the economic and business policies, as per the statutory provisions provided under its constitution or even in the customary laws, that have been in practice for the same, It also serve as one of the factor that determines either the level and extent of the business risk, that are involved whilst pursuing undertaking any of such foreign ventures thereat or are absolutely restrained from doing so under the statutory administrative or executive orders for the same. For instance, owing to the special status, statutorily accorded to the Indian state of Jammu and Kashmir under Article 370 and Art.35A of the Indian constitution, whereby any of the foreign nationals willing to invest in India, especially in the state of Jammu & Kashmir, do speculate about the safety, security and favorable return on such investments there at. However, with the statutorily scrapping of these Articles, in August 2019, risk of doing business, in these Indian states, both for the domestic and international entrepreneurs remain minimized owing to the economic policies of the Indian government towards ensuring protection of any of the investments made there at. It may also open up avenues and possibilities for tourism industry in Ukraine to explore possibilities for its expansion here at.

It may further be envisaged that nations across the world vies to strengthen up their varied inclusive socio-political vis-à-vis economic and ecological interests amidst the apparent global turbulences pertaining to these as a key to ensure safeguarding its sovereign stature and identity from getting overlapped by the dominance of other sovereign entities in their quest assert hegemony in the concerned field of activities in the region at large. In fact, international trade and business remains being the potential means of ensuring a nation's economic health in terms of ascertaining gainful returns on any of such endeavors in the global perspective itself. The latter is significantly guided and influenced by the various socio-economic, political, regional or ecological factors that too eventually play a vital role in determining a positive return on the capital invested, in the foreign land, owing to the apparent risks that are involved in doing businesses amidst such back drop.

In this respect, it is worth citing the 2018 Report of World Economic Forum (WEF) on the global or regional risks of doing businesses across the world at large. The report did emphasize the vulnerability of our increasingly networked and interconnected world to the vagaries of volatility and occasional disruptions that that put hindrances in the pace of business dynamics at global level. It is also ascertained that the relevance of the risk perspectives, showing its evident presence along with the signs of strains, ranging from the environmental to the financial and societal to the geopolitical, in doing businesses across the world, has only increased with time.

In fact, amidst the multipolar and multi-conceptual world of today where the quest asserting global domination, in the economic scenario, continues unhindered amongst the sovereigns; the ethical norms and values pertaining to those of 'global village' remained compromised in one form or the other. In a broader sense, it may significantly be envisaged that the inclusive regional and economic interests of the sovereigns owing to the apparently enhanced level of growth and developments, taking place within their domain, invariably put its impact, in the risks involved in doing businesses, on the broader international system on the economic front itself.

Pragmatically viewed, none of the nation state could either be ascribed possessing its sole potential & commitment to manage or resolve the varied global challenges that the world faces in the socio-political and economic fronts owing to the apparent status of a nation whether being categorized as developed, developing, underdeveloped or even un-developed and in its transitional phase of economic & political stature before the world community at large. Here, the business risks of any sovereign, in the international arena, squarely depends on the prospects of return and profits on the investments of capital in the foreign soil. These could presumed be less in the developed or moderate or in either of the developing or transition economies in comparison to those of the undeveloped one where the level of investment is higher and the gestation period on the return of capital is long. Invariably, the notional concept of 'global village', where cooperation and co-existence is the key to humanity, warrants the latter being given economic assistance by their other economically viable and sustained sovereign counterparts.

Basically, business risks on an international forum, either globally or regional, are often being guided by many of the socio-economic, political, institutional or even environmental factors which somehow or rather affects the outcome of businesses in any of the sovereigns across the world. These also abet affecting the nature and dimension that become evident in our inclusive cooperation with the sovereign Ukraine as well. However, it would be pertinent mentioning some of these as hereunder:

1) Unemployment or underemployment
2) Failure of national governance, financial mechanism or institution
3) Energy price shock and Fiscal crises
4) Cyber-attacks
5) Profound social instability and
6) Failure of critical infrastructure and technological advancements
7) Failure of regional and global governance and
8) Interstate conflict and Terrorist attacks
9) Extreme weather events and natural catastrophes on account of climate change

The list mentioned above could further be envisaged exhaustive owing to the dynamic nature of businesses flourishing worldwide whereby the sovereigns consistently struggle to keep pace with the occasional global crises and subsequent transformations taking place cross the arena of their multiple fields of activities that ranges from those of economic, technological, and environmental to societal, geopolitical and alike. It may further be ascertained that even though many of the business risks often crystallize locally, but the same are experienced differently when these tend to affect the global trends of business that eventually pose threatening the national interests of the concerned. Significantly such risks also entail harming the lives and livelihood cutting across numerous dimensions ranging from wealth and nationality to those of gender and profession of the target populace.

Further owing to the inclusive dynamics of the 'global village' in a trans-economic arena; the aforesaid factors governing the business risks in one region could also ascribe rendering similar influence in other regions of the world as well. In

fact, the unemployment or underemployment situations in an nation's economy reflects existence of varied socio-political and economic challenges that the country consistently encounters owing to reasons like those of weak economic growth, inflationary pressures, low Gross Domestic Products (GDP); Purchasing Power Parity (PPP); Per Capita Income and alike along with the shortages of requisite talents or even the occasional disruptions in labour market caused by automation or the government's policy to encourage trends amongst the unemployed; both technical or non-technical towards getting themselves self-employed with less dependency on the government job for the same. Invariably, these issues put strains on the nation's political and economic system posing some concern over the issues of business risks in these sovereign economies. In fact, economic issues of unemployment or underemployment or even disguised unemployment remained one of the core business risk in any region across the world since these generates public unrests and subsequently reflects failure of the government's economic policy for the same. Somehow or rather socio-psychological issues of 'frustration' loom large amongst the prospective human resource, available in the country, which enter into the nation's labour market at a formidable young age of their individual build up and skill development through education and alike.

In this respect, it is worth mentioning that in many of the regions like those in sub- Saharan Africa, "unemployment and underemployment" continues to be most pressing concern and profound challenges for businesses particularly in light of the demographic changes that lie ahead. Even the UN projects that the working-age populations of Africa will be more than double to 1.6 billion by 2050, a trend that could often open up new economic opportunities for the continent, but only if jobs can be created in huge quantities for the same.

Further, according to World Bank data, Africa's official unemployment rate is just estimated being 7.3%. However, this figure do masks deep-seated problems that reflects the scenario where more than 70% of the region's workforce are in the state of vulnerable employment – compared to a global average of 46% – and the subsequent 37% are in extreme working poverty. The latter is defined by the International Labour Organization as income of less than $1.90 per day. Moreover, people in sub-Saharan Africa are still disproportionately likely to enter the labour market at a young age, and evidently the region has the world's lowest levels of access to higher education. And such an combination is likely to perpetuate a cycle of low skills and working poverty.

Economic vulnerabilities could also get reflected in a number of other risks cited by the businesses itself. These include "Fiscal crises", across the region, in the countries like Burundi, Chad, Eswatini, and Namibia. The region's debt-to-GDP ratio too has increased significantly over the past decade (from 23% in 2008 to 46% in 2017), and the high proportion of public borrowing also accounted for by foreign-currency debt (60%) against a backdrop of rising US interest rates.

However, since the human doctrine of "Global Village" rests on the positive ideology of cooperation and coexistence; warrants being addressed on an encouraged note. As such, these economic issues may significantly be viewed as one that construe reflecting the necessity for the growth, development, and establishment of

the potential infrastructural set ups either in terms of industries or any other allied fields of activities or avocations that could eventually abet to utilize, engage or involve the available human & capital resources towards ensuring the nation's economic build up for productive purposes in both domestic and global arena. In this respect, it may further be ascertained that the global entrepreneurs could evidently get an opportunity to invest their capital and expect minimum business risks owing to favorable economic policies of the destined nations for the same.

Failure of national government towards causing an inefficient allocation of resources resulting decline in economic welfare often serves as yet another factor along with the related issues of failed financial mechanism and institutions that eventually tantamount to business risks in any of the sovereigns across the world. Invariably, the government tries to combat market inequalities, pertaining to those of demand and supply mechanism of economic growth, through undertaking regulatory mechanism market forces, taxation, and subsidies and alike. The aim remains being those of not only promoting general economic fairness but also to ensure accomplishing some other goals pertaining to national unity and socio-economic advancement of nation as well. More or less failed financial mechanism and relate institutions monitoring the same could be found reflected in the scores of the prominent socio-economic issues like those of rampant corruptions taking place along with the failure of the concerned institutions detecting these earlier and the other administrative issues of red-tapes; inadequate system of ensuring rule of law and effective justices to the concern only bring disrepute to the nation's aspiration for being projected as an investment destination from the progressive economies. Undoubtedly, these shortcomings ought to be rectified not only to gain global confidence and trust over the might and institutional capability and capacity of the targeted nation as being the safe hub and destination for the capital investment thereat.

However these issues ought to be taken into consideration; since in the context of "Global Village", every sovereign are desired being acquainted with whilst ascertaining the extent & level of business risks evidently present in such economic endeavors. Often failure of the government to offer incentives for workers to raise productivity along with its system of poor quality control and the subsequent little innovations by firms in the absence of any viable profit motives for them do aggravates the business risks in such economies thereby discouraging any of the foreign investments from the erstwhile prospective nations into it.

It is worth citing examples of the "Common Fisheries Policy of the European Union" that was ascertained by many as a prime example of government failure; even though it was construe as a policy with good intentions that failed to achieve its objectives and caused much deeper problems for the European fishing industry. Basically, at the heart of the problem lies 'overfishing' whereby about 30% of the EU fish stock was considered as beyond safe limits. Basically, EU quota system does not work well in restoring fish socks and the EU fishing sector suffers from overfishing, fleet overcapacity, heavy subsidies and the subsequent decline in the volume of fish caught. In this respect, many of the European governments seek to protect the interest of their own fishing business rather than agree on such a policy that benefits the EU

Sea fishing industry as a whole. These issues indeed act as an impediment to the success of the "global village" concept where global interests are given priority alongside with furthering ones national interest itself.

In fact, overfishing is construed being a cause of market failure arising from a failure to enforce agreed fishing quotas and the absence of enforceable property rights for what is perceived as to be a common ownership of a natural and renewable resource. One key demand for reform is significantly to end dumping of discarded fish. Currently, up to all the sea food, the catch of some of the species are required being discarded because vessels often exceeded their quota, or the fish are found oversized. Business risks amidst such economic scenario is apparently grave for the foreign nations, that vie to explore their economic fortunes there at, since no nation wants to do business by knowingly compromising its economic national interests for the sake of simply exploring the viability of such prospective economic avenues that could be in existence owing to the notion of "Global Village" and alike.

Significantly, 'Severe Energy Price Shock' along with the related fiscal strain and crisis too represents being construed as yet another risk factor toward conducting businesses in foreign countries. Since almost every industrial set up are hydrocarbon based; the sharp price increase in the latter directly influences the extent of the profit level and return on the capital invested on any such avocations. It invariably affects the state of financial stability of the destined nation itself. As such high energy prices results lowering down the economic stability and profitability vis-à-vis the nation's economic growth as well. In contrast, lowering down of the energy prices enables a nation to withdraw many of the subsidies that it often gives to its target populace towards ensuring adherence to the nation's socio-economic welfare oriented fiscal policies. Somehow or rather the latter situation also results in the inclusive growth and development and the subsequent improvement of the nation's economic stability and an ideal state for initiating business from the foreign countries in a minimized risk free economic scenario as well.

It is worth mentioning herein that most of the countries in Asia-Pacific require significant investment in energy infrastructure to keep pace with the growing domestic demand for the same. This could construe being partly driven by the expansion of basic electricity access to more rural areas and partly based on the increased urbanization and a subsequent growing middle classes thereat. However, the majority of Asian governments cannot afford to fund these investments, and therefore invariably need to rely on private investment for the same. But, the European nations remain being a viable business destination with affordable risks involved thereat owing to the apparent favorable socio-political and economic infrastructures available for it.

It's indeed an ardent fact that the foreign investors often have significant reservations about investing in energy infrastructure, and infrastructure in general in developing Asian or African regions given the uncertainty of returns on the capital invested thereat. Another hindrance to investment in energy infrastructure is the high cost of capital in parts of Asia and the relatively slow rate of return. In this respect, it may be ascertained that in the United States, investors in shale in North Dakota can expect a return on their investment within seven to nine months. In contrast, Asia-

Pacific, investments typically take seven to nine years before their actual returns are realized. These combinations of factors often creates an unattractive investment for some key players and the resultant delays in necessary projects will only lead to greater shortfalls in supply over the long term. These scenarios are ought to be taken into consideration when issues pertaining to "global villages" are slated being correlated with the same.

In the same vein, as per the WEF estimates, **"energy price shock"** could slate being the biggest risk to doing business across the Eurasian region. Invariably, it reflects the huge importance of the energy sector across the region that accounts for up to 35% of GDP in some of the oil-producing countries, and the fiscal budgets of both exporters (such as Azerbaijan, Kazakhstan, the Russian Federation and Turkmenistan) and importers (Armenia, Ukraine, Georgia and the Kyrgyz Republic) remained vulnerable to sharp swings in prices. In fact, acute vulnerability to the energy-price volatility posed as a potent factor governing business risks that are eminently evident whilst exploring the economic and political scenario to proliferate a business endeavor under the aegis of 'global village' concept itself.

Apart from above, the growing global menace of **'Cyber-Attacks'** often poses a significantly important issues as a potential business risk that governs any of the initiatives taken by a nation towards exploring the possibility and viability to do businesses in the foreign country amidst the backdrop of global village concepts that calls for such proliferation for the cause of humanity at large. Since, cyber space signifies the revolutionized era of communication technology whereby vital and vulnerable information are reduced in a scientifically digitalized & encrypted form transmitting the same in a flick of seconds across the globe thereby interlinking the humanity in a true "global village scenario" towards making the world dynamic and progressive. But the same proves being a potent tool in the hands of cyber technocrats who often, through hacking, resort stealing the vital business and related data and unscrupulously harm the vital commercial interests of the potential investors intended doing businesses in a foreign country.

In this respect, it is worth mentioning that as per the WEF Report, a number of massive cyber- attacks took place in 2017 – notably WannaCry, Petya and NotPetya– causing extensive operational disruption and financial losses for organizations around the world. In fact, it was in the year 2017 that the world began taking seriously the potential extent of global businesses becoming vulnerable to cyber-attack disruptions. Basically, **"cyber-attacks"** significantly tended to be flagged as a concern even in the world's more advanced economies itself. Even across the European regions along with those in North American, Asian and Pacific, "cyber-attacks" emerged as the leading risk to doing business, largely as a result of its prominence in many of the region's most advanced economies. The aforesaid Wanna Cry ransomware attack badly disrupted the UK's health system and Germany's rail system –and even estimates suggest that the number of such cyber-attacks, across the region, increased by around a third in the first quarter of 2018, compared to the same period last year.

"Cyber-attacks" also pose a significant business risks even in India, one of the largest growing economy in Asia. According to Symantec, India ranks third in the world, after the USA and China, for the volume of cyber threats detected, and second

for targeted phishing attacks. Furthermore, there has also been concern in India about the protection of citizens' personal data in the Aadhaar system (the country's biometric ID database) following a breach across four government agencies involved in the process. It was in May 2018 that approximately 130 million accounts were exposed owing to such attacks. Similar attacks were also reported in the other Asian countries like Pakistan, Nepal and Bangladesh with computers running Microsoft products that report malware encounters. It is worth pointing that country like Bangladesh is still recovering from a cyber-attack that was carried out on its central bank in 2016 and that stole $81 million from its treasure. Basically, these factors warrant being addressed when initiatives are taken to make investment in a foreign country ensuring promotion of global fraternity in economic arena as part of the humane notion of "global village" itself.

In addition to above, '**profound social instability'**, that exists within the socio-political and ecological ambit of any nations across the world, too poses one of the potent factor determining the level and extent of risk perceptions involved in doing interstate businesses in any nations. Even though, the issues pertaining to social instability are often being viewed as an indicator of social dynamism that keeps the related activities in action to counter any of the menaces or the negative consequences of the same for the ultimate wellbeing of both the inclusive human and global interests at large. Moreover, these are also being considered as amongst the significant issues that remain in existence evidently even in the notion of "global village" (GV) that warrants socio-economic interactions amongst the target populace pertaining to the issues which affects their interest in totality.

Basically, social instability, either in the form of strikes, demonstrations or any other types of civil unrest, can invariably be construed having far-reaching and often unpredictable consequences for both the businesses and society as well. It also renders profound effect on any of the firms' performance. However, these could well be assessed and effectively mitigated thereby enabling companies and businesses functioning in a better position and even survive the negative socio-economic trends owing to it. In fact, there are varied factors that lead to the issues of social instability and significantly pose as risk for the positive outcome and output of any business, often undertaken across the world. Some of these included economic disparity, high youth unemployment, brain drain, rising food prices, lack of access to loans, political volatility, crime, corruption, poor social safety net protection, expropriation and human-rights abuses and alike. However economic disparity could be considered as one of the main ingredients of social instability and get aggravated with political volatility in the destined country for business establishments thereat.

Moreover, **failure of critical infrastructure and technological advancements** also serve as a potent factor that impedes the extent of any of the foreign capital investments taking place in the country. Pragmatically viewed, every nation clamors for a safe destined place in the foreign countries where they can expect their entrepreneur skill flourish through undertaking any of their business interests in the foreign nation itself. Even though the requisite infrastructures for such businesses, is not congenial for any of the international investment taking place thereat, yet entrepreneurs skills do finds the traces and vision of **"exploring opportunity amidst**

scarcity" and significantly plays a crucial role in bringing the dynamics of global village in its practical relevancy. In fact the notion of initiating 'turn-key" infrastructural projects is a viable option for a destined nation to benefit from the technological skills of the nation propose investing its capital thereat.

Further, an significant, **failure of the regional and global governance** along with the persistent state of occurring interstate conflict, economic struggles, social unrest and terrorist attacks also serves as a major factor that threatens the very root and nature of foreign capital being invested in any country towards ensuring adequate and efficiently setting up of businesses thereat.

In fact owing to these factors, it may be envisaged that most of the Asian, African and European countries rank low on the Marsh-BMI Political Stability Ratings. Recent terrorist attacks in India, New York, Paris, Afghanistan, Bangladesh and Jakarta and in other regions of the world are reminders of the growing influences of terrorist groups and factions, with their own conservative religious fundamental ideologies, like those of Lashker-e-Taiba, ISIS, Al-qaeda, Hizbul Mujahiddeen and alike, with the existing security infrastructure struggling hard to counteract the threat. Pragmatically speaking, the menace of terrorism is construed being a serious risk for any businesses that could be established in the country from the foreign capital input for the same. Moreover, these even projects a negative profile of a destined nation seeking foreign capital investment in the country for setting up business here at. It is worth mentioning that terrorism and interstate conflicts simply vouch for ensuring destruction of any creative endeavors that involves human technical skill high caliber, effort, merit and economic capital investments as well. World has witnessed destruction of world fame heritage "Bamian Buddha statue" in Afghanistan and even the world's engineering marvel of World Trading Centre (WTC) in New York owing to such terrorist activities. Even in both Israel and Jordan, "terrorist attacks" along with a profound humanitarian crisis has put a grave business risk for any nation intending to undertake its capital investment there at.

It's indeed a pragmatic fact that no country would afford to witness their economic infrastructures getting ruined owing to either of the terrorist activities or interstate conflicts. Consequently risks in businesses remained high in such region in comparison even to economically disadvantaged ones. Further, geopolitical tensions and interstate conflicts often keep the region in a state of consistent imbalance making it an improper and unprofitable destination for any businesses being set up by the foreign country. Profitable return on the capital invested therein continues to be in a state of uncertainty. It even involves the nation paying high insurances premium to cover risks on the capital goods invested therein and tantamount being an additional expenditure on the economic ventures in such of the strife ridden nations.

Geopolitical tensions along with "interstate conflict" are evidently being witnessed in the businesses within the Eurasian regions in its countries like those of Azerbaijan, Georgia, Armenia, Russia and alike. In this respect, it is worth mention that such risks in businesses in Russia do comes against the backdrop of increasingly fractious regional and global geopolitical affairs; even though Russia-Ukraine tensions are largely frozen, yet they remain a source of risk and are one of the factors that have contributed to a sharp deterioration in relations between Russia and many

Western countries in recent years. Elsewhere too, a flare-up of conflict remains possible in Nagorno- Karabakh, the contested territory at the heart of a decades-long dispute between Azerbaijan and Armenia. Basically, these issues remained to pose as a persistent risk in the region where often some nations even resort breaking down its diplomatic relations with the nation in conflict to its economic and national interests. These situations do negates the norms and ethical values of "Global Village" and economic endeavor of a nation in another one is suffered to a large extent.

Further, apart from the above risks, extreme weather events and natural catastrophes on account of climate change too pose business risk and also reflect the vulnerability of any of the geopolitical regions across the world. In this respect, The United Nations Economic and Social Commission for Asia and Pacific (ESCAP), too suggests that Asia-Pacific was one of the most natural disaster-prone regions in the world in 2015, accounting for almost half (47 percent) of the number of the world's disasters. The direct economic losses were estimated at US$45.1 billion for 2015, with indirect costs likely to be much higher. This state of affairs often set to deteriorate, despite 2015 being the hottest year on record for Asia-Pacific and the first few months of 2016 even saw new record temperatures which tantamount being a testament to the rising threat of global warming.

The "Global Catastrophe Review – 2015" by MMC's Guy Carpenter, a leading reinsurance intermediary, has even report that the twin earthquakes in Nepal at the beginning of 2015, were one of the most destructive and deadliest events of the year, causing 9,000 fatalities and leaving 500,000 homeless. 2015 was also reported as the third most active tropical season on record for the Northwest-Pacific basin, leading to catastrophic typhoons across the region, such as the Typhoon Noul in Philippines, Typhoon Soudelor in Taiwan and Typhoon Goni in Japan which in their wake have left thousands homeless and billions in economic losses.

Moreover, heavy rainfall and flooding, landslide and alike could be construed being one of the manifestations of the wide-spread climatic imbalances in any of the regions across the world. The heavy rainfall and resultant flooding in many parts of India is a regular feature that keeps the government devising efficient machineries to tackle issues of such natural disasters which often causes huge economic losses to the national exchequer. It may estimate to cost the economy US$1.5-2.25 billion in losses. In fact, many such situations do occurs in many regions of the world's geographical regions. In this respect, it is worth citing the instance of flooding in China in summer 2016, the worst the country has seen since 1998 that affected more than 32 million people in 28 provinces. The total estimated economic losses were slated to be a colossal US$44.7 billion.

Even the two Himalayan earthquakes in Nepal, in 2015, further highlight how the economic vulnerability of a nation can result in catastrophic consequences for its people in the event of such disasters whereby the economic activity get slowed down as a result of the earthquakes and powerful aftershocks; that had dragged Nepal's GDP growth down to 3.4 percent in fiscal year 2015 (World Bank 2016) which was 12 basis points lower than the 4.6 percent as forecasted in the ADB's for the same. (Asian Development Outlook 2015)

From the above, it may be ascertained that natural catastrophes often leave lasting impressions on economies, much beyond the immediate impact and can even tantamount acting as a potent factor that may eventually results crippling the overall growth of a nation posing as a business risk for the concerned in any related nations or regions alike. In this respect, it is worth mentioning that the studies undertaken by the University of Cambridge for Lloyd's too have suggested that the natural threats would often put US$2.43 trillion of the world's GDP at risk in the 10-year period until 2025. Basically, while the susceptibility of individual countries to such natural disasters could construe being merely a function of their geographical location, the impact of such events, in terms of loss of life and economic damage, stems principally from their level of socio-economic prosperity and eventually pose as a significant risk factor for a nation desiring to undertake businesses in these regions as well.

Foreign investments in the 'startups units' as part of the national initiative for self-employment could be preferred as an economic venture with limited level of risks involved since these are expected being protected by the government as a measure to lower down the rate of unemployment, poverty and other related socio-economic issues and thereby also abet preventing frequent socio-political unrest and instability taking place within the country itself.

However, in the context of "global village" doctrine, it may be ascertained that the aforesaid factors that often pose risks to the businesses being undertaken in any of the global region is slate to affect the prospective inclusive economic gains that could have abetted improving the ease of lives and livelihood for the targeted populace and region at large. In fact, with respect to ensure furtherance of economic investments & national economic interests in each other nationalities, both Ukraine and India vied working together and try to offset any of the socio-political hindrances, in their inclusive relationship and cooperation, through adequate legislative and administrative measures for the same. The latter would also abet enhancing the prospects of global trade amongst them.

Measures towards facilitating risk free businesses and cooperation between India and Ukraine under the aegis of "*Global Village*"

As mentioned above, both India and Ukraine are progressive enough to enhance the prospects of their mutual economic cooperation in enhancing the bilateral trade along with other socio-cultural arena that would significantly pose making them viable towards furthering the notion of global village as a concept for ultimate growth and development of their populace as well.

In this respect, as having been pointed out above, recently on 02nd April-2019, the 4th Meeting of India-Ukraine Working Group on Trade and Economic Cooperation (IU-WGTEC), under the aegis of India-Ukraine Inter-Governmental Commission on Trade, Economic, Scientific, Technical, Industrial and Cultural Cooperation was held in New Delhi in India. The protocol that was signed at the end of the meeting specifically dealt with reviewing of the trade and cooperation not only in the fields of small and medium entrepreneurship along with those of technical regulation (standardization, metrology, certification, conformity assessment), public-

private partnership (PPP) and investment, agriculture, facilitating the access of Ukrainian food products to the market of India, energy sector, finance, granting Ukraine market economy status within the framework of anti-dumping investigations, and banking but also the positive avenues for ensuing cooperation in tourism was mooted as well.

It is also worth mentioning that at the aforesaid meeting, Review of Status of Indo-Ukrainian Trade was also released on the basis of 'Trade Data' as furnished by both the sides. Accordingly, the total trade, (in USD Million) from India to Ukraine in the Year2017-18 & 2018-19 (Apr-Feb) (Prov.) was respectively estimated to 2686.07 and 2227.43. Similarly, the total trade, (in USD Million) from Ukraine to India during the same period was respectively estimated to 2 767.0 and 2791.6. [Source: Directorate General of Commercial Intelligence and Statistics (DGCIS)]

Significantly both Sides acknowledged that the bilateral trade between them was far below the potential and warrants stepping up their inclusive cooperation not only to enlarge the trade basket but also initiating effective measures to increase the bilateral trade and investment. Evidently, there was also trade deficit on the part of Indian Side and subsequently both Sides agreed to find out the modalities to reduce it further.

It may further be envisaged that in the aforesaid meeting, both sides have identified various potential sectors for bilateral trade which at present remains quite low as compared to those of the total trade made with the rest of the World. Subsequently, the following measures were also undertaken.

Primarily it was agreed to share the list of products for trade and also to participate in the major fairs/exhibitions in the identified potential sectors; the details of the same ought to be conveyed to each other sufficiently in advance to ensure equitable participation.

Further, towards promoting trade, both Sides are to share the mandatory inspections' / regulations' requirement that are to be fulfilled, at the time of exporting / importing of any product itself, so that any delay related to such inspections could effectively be reduced. The measure is also aimed creating a positive atmosphere for doing business.

Moreover, in a positive note, Indian side also informed about various Export Promotion Councils and other export related institutions from where one can get the details of exporters /importers and also agreed to share the list of such institutions. It even requested its Ukrainian counterpart to share similar list so as to facilitate mutual interaction amongst the exporters/importers from both Sides that would eventually slate enhancing bilateral trade between them. The exchange of similar information pertaining to banking and financial institutions was also mooted in order to expand cooperation to facilitate export-import transactions between the companies of Ukraine and India.

It was also agreed to share official information about identifying a single window cell in their respective countries for clarifying the queries of the exporters and in supporting them in identifying the market for suitable buyers/sellers.

Significantly, Ukraine also participated in the Partnership Summit 2019 that was earlier organized by Confederation of Indian Industry (CII). Positively, here also,

both Ukraine and India agreed to provide all possible assistance in establishing and maintaining cooperation between Chamber of Commerce and Industry of Ukraine, Ukrainian National Committee of ICC, Ukrainian Union of Industrialists and Entrepreneurs with Trade Associations and Export Promotion Councils of India as an effective measure towards establishing B2B contacts.

Moreover, measures were taken and even agreed upon towards ensuring viable cooperation between India and Ukraine in specific sectors which may be mentioned hereunder:

a) Cooperation in the field of Small and Medium Entrepreneurship

India took imitative informing its Ukrainian counterpart regarding the National Small Industries Corporation's (NSIC) activities and also requested them for identifying a nodal agency which can viably cooperate with NSIC in Small and Medium Enterprises (SME) sector on mutually agreed terms in the following fields:

- Implementation of Technology Incubation Centre in Ukraine for the development of micro and small enterprises.
- Facilitation in creating enterprise to enterprise cooperation.
- Exchange of Business delegations
- Consultancy in development of SMEs in Ukraine

In this respect, it is further worth pointing out that the Ukrainian Side was also informed regarding the Government's approval of the Strategy for the development of Small and Medium businesses for the period up to 2020.

b) Cooperation in Leather, Tobacco, Gems and Jewellery and Tea Sectors

i) Leather Sector

It is stated that India's market share in Ukraine's imports of leather goods and footwear is less than 1% ; mainly due to the **high rates of import duty in Ukraine.** As such, Ukrainian Side is requested to consider bringing down such import duties to a uniform level of 5% for leather goods for footwear.

ii) Tobacco Sector

In this respect, Indian Side cordially informed their Ukrainian counterpart about the fact that India is a large producer of tobacco and tobacco products and subsequently requested them for considering imports of tobacco and tobacco products as the Ukraine's annual imports of these products range from 60,000 to 79,000 MT.

iii) Gems and Jewellery Sector

It is pointed out that the duty structure for gems and jewelry products is on higher side in Ukraine, including a VAT of 20%; total duty for gold jewelry and cut & polished diamonds is also around 30%. In this respect, Indian Side requested their Ukrainian counterpart for duty reduction on gold jewellery and cut & polished diamonds.

iv) Tea Sector

In this sector also, it is stated that Ukraine is an important market destination for tea and subsequently India requested Ukraine for the removal of duty of 10% CIF value on packed teas towards ensuring promotion of its export to Ukraine itself.

c) Industry

In this respect, The Ukrainian Side proposed to their Indian counterpart to consider the possibility of the following proposals towards ensuing active cooperation between the two countries in the field:

- Continuing and deepening the development of bilateral cooperation in the industrial sphere.
- Supplying of the railroad and underground railway carriage products to the Indian market.
- Participation of Ukrainian enterprises in the implementation of energy projects for the construction, reconstruction, modernization of energy facilities in India.
- Modernization of existing and construction of new Indian metallurgical enterprises with the active involvement of Ukrainian scientific and technical institutions.
- To consider the possibility of equipping State Agencies and Airlines of India along with the regional passenger aircraft An-148/158 and helicopters and their required spare parts from the concerned industries in Ukraine.
- Cooperation with Indian public and private enterprises in the production of titanium and its products (titanium powder and titanium dioxide pigment).

In this respect, it is expected that the Indian Side would respond to the above proposals by the next IU-JWGTEC scheduled in early 2020 in Kyiv.

d) Cooperation in the field of Technical Regulation (Standardization, Metrology, Certification, Conformity Assessment)

In this respect, the Indian Side informed their Ukrainian counterparts that the:

- draft Agreement proposed by UKrNDNC is under process; and
- Counter proposal that was received by Bureau of Indian Standards (BIS) from Ukrainian Side on the draft MoU for cooperation in the field of Standardization is under examination.

Further, the Indian Side even requested their Ukrainian counterpart to provide the requisite information on the current role of Ministry of Economic Development and Trade in Ukraine with respect to those of **national standardization work**, subsequent to the decision dated 26th November, 2014 of Cabinet of Ministers of Ukraine for designing UkrNDNC as National Standards body of Ukraine.

e) Cooperation in the field of Public-Private Partnership (PPP) and Investment

In this respect, Ukrainian Side took note of the rapid development of the public-private partnership (PPP) mechanism in India over the last decade and expressed its interest in exchanging experience about PPP, in particular providing information on PPP legislation, the experience of implementing PPP projects and future plans for the development of the PPP mechanism.

It may be envisaged that the bilateral investment relations between the two countries have huge potential and more can be done to faster cooperation in other sectors like those of railways, aircraft, pharmaceuticals, metallurgy and tourism. Government of India has also put in place an investor friendly policy on FDI, under which FDI up to 100% is permitted under automatic route in most sectors and activities. Significant changes have also been made in the FDI policy regime in recent

times to ensure that India remains increasingly attractive and investor-friendly. In the light of the wide-ranging opportunities and recent initiatives like those of "**Make in India**", '**Ease of Doing Business**', '**Start-up India'** and other liberal FDI regime in process, there is lot of potential for FDI from Ukraine to India. Indian industry is also committed towards exploring the untapped potential and expanding economic partnership between the two sovereign nations itself.

f) Granting Ukraine Market Economy Status within the framework of anti-dumping investigations

It is worth mentioning that both the Ukrainian and Indian Sides discussed the application of Trade Defence Instruments ensuring compliance with relevant provisions of WTO Agreements.

In this respect, Ukrainian Side expressed a deep concern over the fact that Ukraine should also prove its market economy status in each of the anti-dumping investigations, taking into account the commitment to grant the market economy status to Ukraine made by the Indian Side during the Fifth and Sixth sessions of the Ukrainian–Indian Inter-Governmental Commission on Trade, Economic, Scientific, Technological, Industrial and Cultural Cooperation.

Given that Ukrainian Side has already provided to the Indian competent authority with all the requisite details on the market economy status of Ukraine, including those of the evidence whereby other WTO Members treat Ukraine as a market economy country.

However, in a positive note, Indian Side took note of the concern of their Ukrainian counterpart and further informed that the investigation into the anti-dumping issues are ***quasi-judicial in nature*** and in this respect, fair and transparent opportunity is provided to all of the stakeholders in accordance with the WTO provisions/guidelines to defend their case.

g) Cooperation in the field of Agriculture, facilitating the access of Ukrainian Food Products to the market of India

In this respect, it may further be ascertained that both India and Ukraine intend to continue their joint activities aimed at further expanding their bilateral trade in agricultural and food products and also agreed to hold bilateral consultations on possible approaches to ensure liberalization of trade in agricultural and food products. Ukrainian Side too expressed its gratefulness to the Indian Side for according them the opportunity to start trial shipments of apples and expressed hope for official inclusion of Ukraine to the list of apple exporting countries to India in the near future.

Further, both Sides also expressed their interest in cooperation in exporting agricultural items such as apples, bananas, cake of soyabeans, cotton, coffee, cucumber and gherkins, flour of wheat, grapes, groundnuts, lemons and limes, maize, oil of castor beans, onions, oranges, pepper, potatoes (fresh and frozen), raisins, rice, sesame seed, sorghum, sugar (raw and refined), tea, tobacco, tomatoes, frozen vegetable and wheat, for leguminous vegetables, sugar confectionery, chocolate and other food preparations containing cocoa, bakery and flour confectionery products, etc.

Moreover, Indian Side also observed that the ***Tilapia culture*** is coming up in Ukraine and requested the latter for exploring the possibility of technical

collaboration on the said culture. In fact considering the Market potential in Ukraine, Indian Side expressed its interest in popularizing and promoting its shrimp products and also supplying of the seeds of ***Rainbow Trout (Oncorhynchus mykiss).***

It is also observed that owing to the high level of tariff protection, the prospects of launching systematic mutual trade in processed food products get reduced, the Indian Side requested their Ukrainian counterpart to provide the detailed list of such items/tariff lines etc. on which Ukraine seeks reduction in tariff.

Moreover, the Ukrainian Side even emphasized the attention to a number of topical issues in the field of agriculture, in particular with regard to those of the trade in plant products (fumigation requirements of the Indian Party for imported cargoes), which ought being considered in detail within the framework of the profile Working Group, as well as at the level of the Intergovernmental Ukrainian-Indian Commission itself.

h) Cooperation in the field of Energy Sector

Basically, in an endeavor towards ensuring effective Cooperation in the field of Energy Sector, Indian Side emphatically informed their Ukrainian counterpart about the possibility of extending bilateral cooperation / assistance in :

- preparation of Feasibility Report (FR) / Detailed Project Report (DPR), technical consultancy in Design and Engineering during execution;
- training to Ukrainian engineers in the field of Hydropower;
- renovation and modernization of aging hydropower plants;
- Providing Technical Consultancy Services at all stages of Hydropower project development.

In this respect, the Indian Side also requested their Ukrainian counterpart for a site visit so that NHPC, a Public Sector undertaking, can provide comments on the technical feasibility of the hydroelectric schemes / renovation and modernization of aging hydro power plants provided the same are entrusted to NHPC.

i) Cooperation in the field of Finance and Banking

In this field also, the Indian Side informed its Ukrainian counterpart about several modifications, introduced recently, relating to the provisions of Indian Foreign Exchange Regime to facilitate cross border transactions between India and any other country.

j) Cooperation in Tourism

In this respect also, the Indian side requested their Ukrainian counterpart about prospect to consider on exchanging of the requisite information regarding conducting tourism events in both countries and explore opportunities of bilateral cooperation between them also in the field of tourism.

Indeed, in a positive note it is worth mentioning that both Ukrainian and Indian sides have agreed to hold the 5th meeting of the Working Group on Trade, Economic and Cooperation (IU-WGTEC) in Kyiv, Ukraine, in coming years. The dates of the proposed 5th meeting will slate being agreed through diplomatic channels itself.

However, it is worth pointing out that at the aforesaid consensus towards enhancing the varied arena of economic cooperation between India and Ukraine; root socio-ecological aspect of such cooperation remained untouched. In fact, in the arena of sustainable development, capital investment in the forestry, education, and health,

infrastructural development in the rural and un-accessed arena remains being a key towards ensuring economic entrepreneurship between both the countries. Annual or periodic exchange of faculties, from the disciplines of law, social & natural sciences, between the national universities of both the nations could be construed as a positive step towards ensuring intellectual proliferation of scientific ideas and research in rue spirit of 'global village' itself.

Measures proposed facilitating risk free businesses in the international perspectives

It is envisaged that any of the states aspiring to facilitate risk free businesses, as per the doctrine of "Global Village" in a global perspectives, warrants knowing about the varied economic environmental variables and adopt the requisite global policies of cooperation and coexistence to counter the negative trends that prevails there at. Even the benefits of the free market economy ought to be realized for the positive outcome of businesses amongst the sovereigns at global level. For a progressive world order, it is pertinent countering the risks perceptions that construe being an inherent issue and indispensible attribute of any of the businesses slated taking a realistic form towards ensuring accomplishment of a nation's economic strategy for the ultimate wellbeing and sustainability of both human populace and the nation itself. It is worth mentioning hereunder some of the measures that may abet to facilitate mitigating some of the business risks that one often encounters whilst undertaking any of the business initiatives in other nation.

It further warrants that the government should allay the speculations and perceptions of firms about any of the business issues and policy along with the risk involved in undertaking any of such ventures in foreign country. Inputs from the heads of the global corporations of the destined nation of investment prove beneficial, which in one way or the other impedes the speedy processes being taken up for implementing on the ground. In this respect, it is worth mentioning that in the recent days, Prime Minister of India, on the sidelines of his scheduled address to UNGA in New york, on *26th September 2019*, met separately with over 40 global CEOs of multinational companies and effectively addressed their issues pertaining to the Indian government's national economic policy relating to foreign direct investment in the country itself. {TOI Patna 27/09/19}. Here at, issues were raised pertaining to data localization which was indeed an issue of concern with some of the multinationals, who fear that they would face restrictions on transmitting data of millions of Indians and using the same commercially. It was suggested that there should be distinction in the treatment of personal and business data. In this respect, the Prime Minister of India suggested that individuals have ownership of their personal data and the government will strive to strike a balance between data security and privacy with openness. In fact, such initiatives of positive discussions on any of the issues of business concerns are desired towards ensuring the notion of "global village" coming into practice, at least in the intellectual forum and insight for the same.

Moreover, it was even suggested that easier rules for businesses are crucial and such arena of the same ought to be promoted which remained unexplored in the past

fearing the involvement of risks in such business endeavors in any country. These include, hospitality businesses along with those of the tourism industry, education, research and development, science and technology, health and social sectors and alike. Moreover, the policy pertaining to foreign investment ought to be liberalizing with incentives so as to boost businesses to flourish amidst lower risks towards their sustainability in such of the business economies.

In fact, taking risk for gaining some progressive fortune in future is the key to entrepreneurship that the prospective investor ought to undertake whilst initiating any of the business proposals in their destined country for investing capital therein. It is said, *"Scarcity breeds opportunity"* that ought to remain a guiding principle for any of the business prospective and proposals for doing businesses in any regions across the world irrespective of the inherent and apparent risks presents thereat for the same. As such in economies where business infrastructures are not well developed or suited for the same; investment in developing requisite business infrastructures under some specific and viable contacts and conditionality with the target nation could construe being an initiative towards cooperation and coexistence under the aegis of "global village doctrine" for the inclusive wellbeing of sovereign nations, irrespective of their economic stature and status either being developing, underdeveloped or undeveloped or alike. Basically, in the present global comity of nations, the later economic stature of any sovereigns are rarely being found in existence owing to the advanced scale of development initiatives that the nations in the vicinity of such sovereigns often initiates in the region itself.

Further, the country, for being an investment destination ought to undertake specific and adequate measures pertaining to ensure safety and security of the assets and capital invested there. Transparency in information should also be ensured and the same ought to be made available to the prospective investors intending doing business amidst the risk perceptions that are in existence there at. Such measure would eventually abet building confidence amongst the parties and would also prove beneficial for both in the long run and somehow or rather also be in consistent with the concerned root attributes of the notion of "global villages" in a pragmatic manner pertaining to it.

Strategically, the congenial socio-political vis-à-vis economic and ecological environment remains being the sine quo none to effectively cope with any of the business risks apparently present within a country. Invariably the government's policy of the destined nation, pertaining to abide by the political & economic notions of globalization, liberalization, and privatization, to a large extent, determines the overall nature of businesses expected being set up in the country through foreign collaborations. Political stability should also be ensured in such destined nation for doing businesses. Invariably, capitalist economy plays a vital role towards ensuring proliferating any businesses I the country in comparison to those of the socialist ones. Even the extent and quantum of capital ought to be invested by any of the interested nations, intend doing business in such economy, squarely depend on the positive status and outcome of the same .that eventually abet the extent of the foreign capital slate being invested thereat.

Moreover, companies can also work with the governments, of the destined nations for setting up businesses avenues, mainly to identify the requisite skills and jobs that are needed for setting up any such business endeavor so that funds made available for training and education could be put to the best possible use for the same. It further warrants that the nations should also need to focus on mitigating any of the business risk before it assumes unmanageable proportion in the detriment of the overall business interest and objectives. Even they ought to transfer some of their risk via insurance, such as political risk policies that offer coverage for losses due to political violence, expropriation, currency inconvertibility or even default of the government pertaining to it.

In this respect, it is worth mentioning that now a days, the parties to any of the business endeavor are increasingly ascertain the role that their captive insurance can viably expected to play towards managing these risks. In fact, the credit losses that comes out of the global financial crisis, along with the political risk insurance claims, have not only facilitate making the risk managers more aware about the apparent risk, but also of the value that such insurance can be expected to bring for the prosperity and success of their business. There are also ways to protect the supply chain as well whereby insurance, backup production or diversifying the supply chain into more stable countries could viably be assured.

It may further be argued that the companies warrants understanding not only the risks that they are slated being exposed to in their local markets, either directly and indirectly, but also ought to ascertain how these risks can mushroom into much bigger threats if not adequately addressed on time. In fact, having access to timely information and having adequate tools to monitor any of the apparent risks along with the ability to model future scenarios over time even ought to be construed being a part of every company's '*enterprise risk-management tool kit*' towards ensuring positively viable economic returns, to both the nations which are party to such business endeavor, on the capital invested for the same.

CONCLUSION

Economy of a nation, in its journey to present century and ahead, reflects the latter's sovereign stature to manage its overall socio-political and allied aspects towards ensuring sustenance, survivability and inclusive developments of its populace, through optimum utilization of available natural resources on this earth; amidst the global quest to assert dominance over the latter at large. With varied socio-economic, political along with other strategically viable factors in its backdrop, economy across the world remain in its consistent state of dynamism and with the proliferation of the nature of information technology; humanity across the world have surpassed their natural boundaries and resort interacting with each other under the aegis of ethical spirit of coexistence and aspiration to enhance the instances of cooperation, in allied sectors, for the ultimate viability towards ensuring successes to the humane doctrine of "global village" for the inclusive development of humanity itself.

Pragmatically viewed, no nation can claim itself to be absolutely self-reliant in isolation without having any ecological interactions from amongst the other nations

that exists beyond its geographical boundaries. Invariably intention and zeal to proliferate businesses in the territory of other reflects the dynamic nature of global economy at large. However such proliferations also warrants being taken into consideration the varied socio-economic and strategic factors along with certain inherent risks, within the destined country for such businesses, that somehow or rather impede the progressive nature and intent of human initiative towards exploring the viability of "global village" doctrine to taking a realistic stance for the ultimate wellbeing of humanity itself.

However, at present, coordinating at the global level appears increasingly fraught with potential tensions, such as differences of political values between some countries or the challenges of maintaining political legitimacy within others. Some of these tensions are often less pronounced at the regional level, and we expect regions to play an increasingly active and important role in the world in the years ahead. Invariably, there are various socio-economic, cultural, political and ecological factors that determine the extent of risks involved in undertaking any of the business initiatives in foreign country under the aegis of global cooperation for the same. These may range from apparently the socio-economic risks in the form of a nation's economic scenario which are visible in its real form in inflationary pressures on the populace along with the increasing state of unemployment, poverty, falling rate of the nation's GDP, political instability, lack of initiative for good governance leading to the menaces of rampant corruptions in the realm, improper adherence to the rule of law and judicial mechanisms, either insufficient or absence of basic infrastructures in the field of health, education , community development along with the basic mechanism of delivery of essential services to the target populace. These further get aggravated owing to the issues of cyber-attacks, terrorism, regional and global conflicts and alike.

In addition, social and political volatility, along with its number of components, is essentially found being different in every country; both in its proposition and extent. Quest to improve the quality of life and livelihood remain being one of the potent factors that pose risk for undertaking any of the businesses in those countries which are laden with the same. However, such challenge of risks could viably be mitigated through the processes of discussions amongst the comity of nations at an appropriate global forum where every sovereign nations, irrespective of their socio-cultural, economic and political statures, get an opportunity to freely express their views along with the measures to effectively tackle these issues for the ultimate sustenance of global coordination, coexistence, peace and security; somehow or rather adhere to justify the humane ethical doctrine of global village itself.

Pragmatically viewed, the menace of terrorism continue to put world in a constant state of turmoil where rampant loss of human lives and property becomes an order that eventually prove detrimental to the ultimate sustenance of peace, progress and survivability of our human civilization itself. Even in the arena of businesses, terrorism continues to be an everlasting risk that only serves furthering the vested interests of some nations against those of another and the same ought being taken into consideration whilst undertaking any of such ventures in a foreign country. Since, these issues are of global concern; the same warrants being effectively addressed by

the comity of nations at an appropriate international forum for the same. Indeed, such measures could construe being in consonance to the spirit of global village where concern for the safety and security of human society predominates. Albeit a humane measure to bring back the terrorist in the socio-political mainstream through imparting mass education and employment along with making them aware and conscious about the social values of humanity is vouched, yet the same will prove being a herculean and idealistic task for the world's civilization to accomplish it in totality.

Basically, while assessing the business risk in the present global dynamism, environmental issues should not be left untouched. Pragmatically, every nation desires to be economically advanced or developed but not at the cost of their natural ecological imbalances. Sustainable development ought to be practiced whilst ensuring bilateral cooperation between nations towards their inclusive development. In fact, cooperation between India and Ukraine should also be based furthering such concept for the ultimate wellbeing of both nation vis-à-vis target populaces itself.

Moreover, in the context of Indo-Ukraine socio-economic and academic cooperation, it would be worth setting up "*Chair of Legal studies*" in the Law institutes of both nations with an aim to explore the possibility of imparting '*lecture series'* by distinguished luminaries from the judicial stream of both the nations. Eventually it would also be beneficial for the law students to pragmatically know about the intricacies and principles of law within the ambit of its branch of 'international law' itself. In the same vein, research projects on the various socio-legal issues should also be encouraged and published in the reputed national Journals of both nations. Since, "global village" signifies conglomeration of talents; the same ought to be explored and developed for the furtherance of academic skills, amongst the concerned, which construes being the root of any economic endeavor.

It may further be asserted that future prospect of any business lies in the nature, gravity and dimensions of the risks associated with it since it abet keeping each and every sphere of businesses in a constant state of dynamism along with speculations involved there in. Invariably, where risk in business is apparent; prosperity and success await getting itself explored and manifested.

STRATEGIES FOR IMPROVING THE COMPETITIVENESS OF FRONTIER CAPITAL MARKETS

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Abstract
Capital markets of the Western Balkan countries have been predominantly classified as frontier capital markets. Above all, these markets are characterized by a low level of liquidity, small trading volumes, and a low value of market capitalization. Also, there are high transaction costs involved, inefficiency in terms of the efficient market hypothesis, problem of determining the right market prices of securities, lost credibility of the stock market, and the marginalization of the influence of investment funds. Due to these features, frontier capital markets have a low level of their competitive ability. Competitive ability of the frontier capital markets has only recently become interesting to the academic community, which has seen the importance of strengthening competitiveness in less developed capital markets. The connection between the overall economic development and the level of development of the capital market points to the importance of strengthening the competitiveness of the frontier capital markets in order to empower the economy in general. Improving the competitiveness of frontier capital markets implies improvement of the key determinants of these markets, bearing in mind the complexity and two-dimensionality of the competitiveness of the capital market itself.
The conducted empirical research focused on the frontier markets of the countries of the Western Balkans (Bosnia and Herzegovina, Serbia, Montenegro, and Macedonia). The research analyzed liquidity as the most important determinant of competitiveness of the selected frontier markets. Also, the research included potential investors as well as issuers on these markets. Based on the identification and analysis of the aspects critical to assessing the competitive ability of frontier capital markets, concrete strategies for improving the competitiveness of frontier capital markets have been created, which was the main goal of the research.

Keywords: frontier capital markets, competitiveness of frontier capital markets, strategies for improving competitiveness.

1. INTRODUCTION

Development of capital market in Bosnia and Herzegovina (BiH) and other countries of the Western Balkans started as a segment of privatization and transformation of public (state-owned) property into private. That is why such capital markets were mainly linked to stocks. Capital markets in the Western Balkan countries are characterized by the following: low value of market capitalization, trade illiquidity, appearance of hidden risks such as illiquidity, etc. (Bećirović, Kozarević, 2018). High transaction costs, lost credibility of the stock market, marginalization of the influence of investment funds, lack of more complex financial instruments as well as the lack of promotion of specific advantages of investment and finance through capital markets. According to their characteristics, capital markets in the Western Balkan countries are characterized as frontier capital markets, while certain classifications do not consider these markets as frontier capital markets. Capital markets are usually classified as: developed capital markets, emerging capital

markets, and frontier capital markets. The term "frontier capital markets" was introduced so as to classify capital markets that could not be categorized as emerging.

The subject of this research is the competitive ability of frontier capital markets in the context of identification of its key determinants, aimed at generating appropriate strategies for improvement of their competitiveness. The aim of the research is to create the appropriate strategies for the improvement of competitive ability of frontier capital markets, based on the theoretical identification of determinants crucial for assessing competitive ability of these markets and the empirical research conducted. The research included the frontier capital markets of the Western Balkan countries (BiH, Serbia, Montenegro, and Macedonia). The secondary empirical research was used for the analysis of aggregate statistical data for the selected frontier capital markets, while the primary research included potential individual investors as well issuers from frontier capital markets.

2. COMPETITIVE ABILITY OF CAPITAL MARKETS

Capital market is a part of the total financial market and stands as the organized market area where supply and demand for long-term financial instruments meet (most often stocks and bonds). Capital market as well as the entire financial system has the role of intermediary between the subjects with the excess (surplus) of financial resources and the subjects that need such resources (deficit subjects). The main function of such market is to improve the efficiency of money transfer in such a way that every single subject does not have to conduct search and analysis. Consequently, participants on capital market are: issuers (companies and public sector), investors (individual and institutional), stockbrokers (brokers and dealers), and state regulatory bodies.

Competitiveness as the term we usually and traditionally link to companies can be observed in the context of competitiveness of individual economic sectors but also of the economy of a state or region in general. Competitiveness can be defined as a relative capacity of a country, sector or micro subject to manufacture products or provide services better than other participants on domestic and/or international market (Škuflić, Kovačević, Sentigar, 2011, p. 2). Competitiveness can be seen as a set of characteristics of a subject (national economy, sector or individual economic subject) in relation to comparable subjects (benchmarks) on the market (Siudek, Zawojska, 2014, p. 94). The competitiveness of capital market needs to be observed in the same way as any other industrial or service sector or any other market. While doing so, account should be taken of the fact that financial institutions have specific responsibilities regulated by law. While analyzing competitive ability of capital market, one needs to take into consideration the outflow of capital on the side of demand for capital and inflow of capital on the side of capital supply (Lo, 2013, p. 501). One of the dimensions of capital market competitiveness is related to the opportunity for the subjects with money surplus to invest into various securities on capital market. Naturally, such subjects also have the alternative to invest into instruments on other markets such as real-estate, precious metals, currency, cryptocurrency, etc. Another dimension of competitiveness is related to the role of capital markets in financing the subjects with the lack of financial resources, whereby

other financial institutions such as banks provide options to finance such subjects. With all this said, competitive ability of capital markets may be observed as the potential for capital markets to provide access to financial resources for the subjects (companies and/or public sector) that need to secure them in efficient, effective and legally regulated way. At the same time, it enables the subjects with surplus financial resources to invest into capital market instruments and make the expected return on investment.

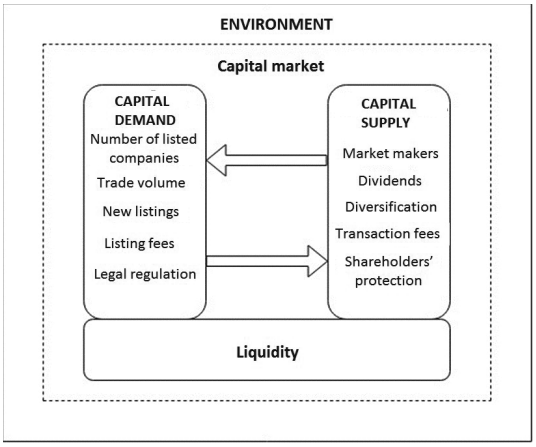

Figure 1. Model of capital market competitiveness

Source: Adapted from (Lo, 2013, pp. 501-509)

Figure 1 shows the criteria for the analysis of capital market competitiveness from the perspective of participants on financial market with the capital deficit (capital demand) and the perspective of participants on financial market with excess capital (capital supply). This is a complex model in which certain criteria cannot be observed uniformly. Capital market unites both dimensions. The subjects that need financial resources provide them by issuing securities thus increasing the potential for investment to the subjects with surplus financial resources. Competitive ability of capital markets depends on a series of factor and Urbšiene, Monkevičiūte, and Navikaite (2014, p. 122) reviewed the research dealing with market competitiveness and designated market size, liquidity, legal regulation, and cross listing as the most important factors.

Apart from these, capital market competitiveness can be perceived as the ability to successfully compete in the world while securing the most beneficial opportunities for investors and issuers (Urbšiene, Monkevičiūte, Navikaite, 2014, p. 116). Capital market attractiveness depends on profit potential or capital demand and supply. In light of these changes, companies and stock markets increasingly use cross listing meaning that they list its equity shares on their primary stock market as well as on other stock markets. Cross listing marks the number of foreign companies listed on domestic stock market as well as the number of domestic companies on foreign stock markets and is a significant factor of the assessment of capital market competitiveness. Pagano, Randl, Röell, and Zechner (2001, p. 780) analyzed the

listing of European companies on foreign stock markets, especially in the USA. Their results show that European companies are more listed on larger and more liquid markets, on the markets where the companies in the same industry are already listed, and on the markets with better investor protection, more efficient courts, and lower accountancy standards. The research points to the increased number of companies listed on stock markets outside their national market (Pocius, Stungurienė, Paškevičius, 2014, p. 1052). Urbšiene, Monkevičiūte, and Navikaite (2014, p. 118) believe that market attractiveness is closely linked to its competitive ability. The decision whether companies or investors would enter a certain capital market depends on a series of factors. Important information on markets are available based on the classifications of national capital markets by reputable international credit rating agencies such as Standard and Poor's (S&P), Morgan Stanley Capital International (MSCI), and the Financial Times Stock Exchange (FTSE). More developed markets are more competitive and the criteria of their classification indicate what makes competitive ability of these markets, which conditions different approach of investors when it comes to investment into securities on individual capital markets. Different criteria applied for capital market classification enable a clear distinction among various categories of capital market. At the same time, the analysis of those categories provides a large number of information on general characteristics of various capital markets and the level of their competitiveness.

Starting from the classification criteria (FTSE Country Classification Process; MSCI Market Classification Framework; S&P Dow Jones Country Classification Methodology), and the research conducted by Claessens, Djankov, and Klingebiel (2000, pp. 1-26), we can tentatively categorize criteria of capital market competitiveness into

– macroeconomic criteria of economic development,
– criteria related to regulatory and market environment, and
– criteria of business environment.

Apart from these criteria, the criteria of infrastructure development, technological in particular, is also an important criterion for capital market competitiveness. Hence, Boisvert and Gaa (2001, p. 28) conclude that the improvement of information and communication infrastructure had a positive effect on the improvement of competitive ability of capital markets in Canada.

Improvement of competitive ability of capital markets requires the implementation of strategies aimed at the provision of the fulfillment of the mentioned macroeconomic and microeconomic criteria. The fulfillment of macroeconomic criteria also means the increase in the level of economic development, which shows that these two processes are linked; capital market development needs to follow the development of the entire country's economy, and vice versa.

Competitive ability is impossible to achieve without a clearly defined strategy adjusted to the goals of the very strategy. Competitive strategy may be defined as the search for favorable competitive position within a certain basic environment where competition appears. Competitive strategy is aimed at establishment of a profitable and sustainable position within this environment (Porter, 2008, p. 21). The strategy

for the improvement of competitive ability of capital markets needs to be aimed at the expansion of the role of capital markets in financing business activities, whereby the market needs to be made more attractive for potential investors.[8]

The analysis of capital market development strategy for the countries with frontier capital markets shows that these strategies mainly imply the implementation of measures and activities aimed at market participants (such as financial mediators, infrastructure, regulators, etc.). Four key aspects can be sorted out, which are emphasized in these strategies[9]:

a) increasing supply and diversity of financial instruments;
b) attracting investors and internationalizing capital markets;
c) increasing capacities and information infrastructure, and
d) educating investors and improving financial literacy.

3. RESEARCH RESULTS AND DISCUSSION

The conducted empirical research consisted of two parts. In the first part, based on using the secondary aggregate data, liquidity was analyzed as a key determinant of competitiveness of the selected frontier capital markets in the Western Balkan countries. The second part of the research was based on the primary data and it covered the evaluation of obstacles to issuers' more active access to frontier capital markets and the evaluation of attitudes of potential individual investors regarding investment on capital markets in BiH as frontier capital markets.

3.1. Evaluation of the selected frontier capital markets liquidity

Within the evaluation of the selected frontier capital market liquidity, the following indicators were observed:

– overall annual exchange turnover;
– turnover of the volume, and
– the Amihud illiquidity measure (ILLIQ).

The research was conducted on the basis of the secondary data collected through official web sites of stock exchanges in the selected countries (Sarajevo and Banja Luka Stock Exchange, Belgrade Stock Exchange, Montenegro Stock Exchange, and Macedonian Stock Exchange). The ILLIQ was calculated for the sample that included the stocks in the benchmark of the Sarajevo Stock Exchange (SASX-10). This means that the Sarajevo Stock Exchange was taken to represent the frontier capital markets for the calculation of the ILLIQ.

Figures 2 and 3 show the annual turnover in the observed period and the turnover of the volume for every stock exchange selected. When compared to the same type of indicators for developed capital markets, the analyzed liquidity indicators for the selected capital markets of the Western Balkan countries point to extremely low liquidity. At the same time, the turnover on the Wiener Börse AG (The

[8] A previous survey regarding institutional investors' preferences, in the light of the global financial crisis, was conducted in: (Bećirović, Kozarević, Balić, 2017).

[9] The analysis included "Capital Market Masterplan", published in 2011 by the Securities Commission Malaysia, "Strategy for Development of the Capital Market in Bulgaria", adopted in 2016 by the Council for the Development of the Bulgarian Capital Market, and "Slovene Capital Market Development Strategy" from 2010 published by the Ljubljana Stock Exchange.

Vienna Stock Exchange) in 2017 was EUR 63.95 billion.10 The turnover of the volume on the Wiener Börse was 57%, which is way above the value of this indicator for the selected capital markets in the Western Balkan countries.

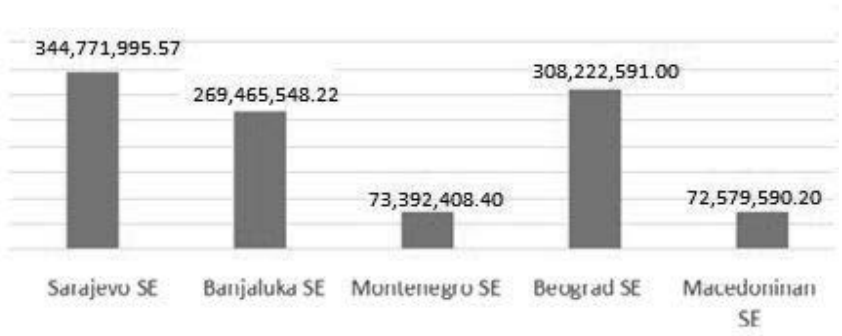

Figure 2. *Annual stock exchange turnover on the selected frontier markets in the period 2013-2017 (in EUR)*

Source: Authors' creation based on the stock exchanges' statistical data

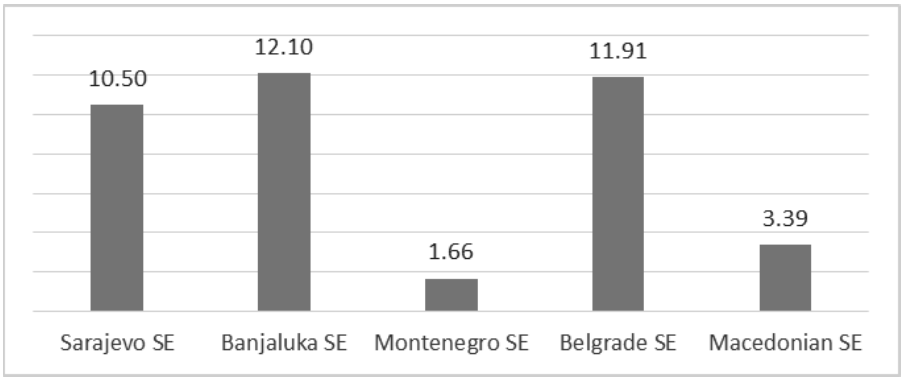

Figure 3. Turnover of the volume on the selected capital markets in 2017 (in %)

Source: Authors' creation based on the stock exchanges' statistical data

Table 1 shows average monthly values of the ILLIQ for every stock of the issuers within the SASX-10 Index.

The ILLIQ for the stock within the SAXS-10 Index shows extremely high values that suggest rather high illiquidity of all the SAXS-10 stocks.

[10] https://www.wienerborse.at/, Accessed: September 22, 2018

Table 1. The ILLIQ for companies with stocks involved in the SASX-10

Month	BH Telecom	Bosnalijek	Energoinvest	FDS	BiH Elektroprivreda	RMU Banovići	Solana Tuzla	Sarajevo osiguranje	Unioninvestplastika	GP ŽGP
VIII 2017	33.47	147.09	880.33	0.00	39.53	2,399.36	0.00	66.78	1.99	2,256.05
IX 2017	28.85	49.93	837.70	107.34	122.20	8,254.39	195.82		16.62	3,023.18
X 2017	11.97	66.38	126.65	0.11	14.46		6.62	40.09	0.00	5,473.38
XI 2017	135.82	36.71	5,415.19	3.26	7.22		24.91	37.15	0.00	5.91
XII 2017	36.87	323.28	4,412.50	0.34	282.74	493.44	40.41	2,559.63	1.16	34.25
I 2018	26.77	115.28	2,226.36	3.79	402.88	2,759.36	8.74	811.81	1.14	192.41
II 2018	69.52	106.10	165.57	9.23	2,027.67	2,911.64	164.31	381.36		22.53
III 2018	647.31	17.75	26,428.77	120.86	162.32	40.54	22.86	1,271.97	5.51	4.07
IV 2018	17.86	5.59	6,871.79	0.00	131.14	332.06		5,245.12	45.03	3,598.70
V 2018	57.72	21.21		0.01	242.53	12.17		1,643.12	20.16	0.00
VI 2018	17.75	55.91	9,107.47	3.33	976.20	54.41	0.43	259.34	0.24	28,937.50
VII 2018	10.87	65.73	14,430.01	17.66	166.11	1,017.25		102.40	0.25	57.59
VIII 2018	262.82	4.73		2.95	1.39	1,194.74	64.28	9.50	1.92	174.11
No. of months	13	13	11	13	13	11	10	12	12	13
Max.	647.31	323.28	26,428.77	107.34	2,027.67	2,911.64	195.82	5,245.12	45.03	28,937.5
Min.	10.87	4.73	126.65	0	1.39	12.17	0	9.50	0	4.07
Mean	104.43	78.13	6,445.67	20.68	352.03	1,769.94	52.84	1,035.69	7.84	3,367.67
Standard deviation	177.45	85.56	7,969.51	41.84	565.86	2,415.46	70.28	1,549.15	13.53	7,890.68

Source: Authors' development based on SASE official data

The monthly values of this index for the German capital market (Benić, Franić, 2008, p. 493) are in the range from 3×10^{-4} to 7×10^{-4}.

3.2. Evaluation of obstacles to more active access to the frontier capital markets from issuers' perspective

The evaluation of obstacles to more active access to capital markets on the side of issuers was performed using a problem-directed in-depth interview which is a qualitative research method. The research instrument was a semi-structured open-question interview. The representatives of the selected frontier capital markets were business subjects from BiH, which previously used the public issuance of debt securities (bonds) as the source of external finance.

The research was conducted on a sample that included four economic subjects (two subjects with the limited liability company organization, one shareholding company, and one local government unit).

Based on the research conducted, we were able to sort out certain common attitudes of the respondents which are given in Table 2, whereby the attitudes of the respondents were systematized for every category discussed. Most common attitudes could be extracted in relation to the difficulties in the process of securities issuance. On the other hand, terms of issuance (including interest rate specification, maturity, and other conditions) were identical for all the respondents.

Table 2. Research results represented through the mutual attitudes of the respondents

Category	Respondents' attitudes
Motivation	- Financing of investment in the business or infrastructural venture that should result in revenues which are enough for timely servicing of debt - Promotion
Difficulties in the process	- Continuance of process - High costs - Discouraging work of the Securities Commission - Passive attitude of the stock exchange - Legal regulation that protects state-owned capital in relation to private capital - Regulations that discourage company to change their organization form from PLC to joint-stock company (which brings them on stock exchange)
Advantages	- This type of financing does not require binding property through mortgage - Makes easier liquidity management of the company by defining different ways of payments and interest rates in case of debt securities
Conditions	- Terms of issuance (interest rate, maturity, method of payments, etc.) are determined by the conditions under which similar securities were issued and by the price and conditions regarding commercial loans
Sale	- Through investors with whom there is a long-term cooperation - Through brokers - Direct sale to business partners

Source: Authors' own research

3.3. Evaluation of individual investors' attitudes towards investing in frontier capital markets

A survey method was used to study the attitudes of individual investors related to investment on capital market. The instrument used in the empirical research was the original questionnaire with a 5-point Likert scale. The research included the owners and managers of companies in BiH, which was taken as a representative for frontier capital markets.

The overview of the categories and indicators used in analyzing the attitudes of individual investors towards investing in frontier capital markets in BiH (Sarajevo and Banja Luka Stock Exchange) is given in Table 3.

Table 3. Categories and indicators in the analysis of the individual investors' attitudes towards investing in the BiH capital markets

Category	Indicators
Financial potential assessment	Questionnaire attitudes of respondents
Assessment of knowledge regarding the capital market functioning	Questionnaire attitudes of respondents
Perception of capital market	
Legal-regulatory framework of the capital market	Questionnaire attitudes of respondents
Capital market functioning	Questionnaire attitudes of respondents
Liquidity and information efficiency of the market	Questionnaire attitudes of respondents
Investment process, goals, motives, and factors of investment decision making	
Investing in other forms of assets different from the capital market	Questionnaire attitudes of respondents
Investment motives and goals	Questionnaire attitudes of respondents
Factors of investment decision making	Questionnaire attitudes of respondents
Intention regarding future investing	Questionnaire attitudes of respondents
Obstacles to investment and capital market improvement activities	
Obstacles to investment on capital market	Questionnaire attitudes of respondents
Capital market improvement activities	Questionnaire attitudes of respondents

Source: Authors' own research

The measurement of the measurement scale internal consistency was made by the calculation of Cronbach's alpha (α) coefficient. Cronbach's alpha for the entire measurement scale, the assessment of knowledge regarding the capital market functioning, is 0.922. As this value is higher than 0.7, it points to the reliability of this measuring instrument. The average values of assessment of the respondents' knowledge regarding the capital market functioning are given in Table 4.

Table 4. Assessment of knowledge regarding the capital market functioning

Evaluation of the respondents' knowledge	Mean	Std. deviation
General economic knowledge	3.76	0.75
Knowledge regarding the capital market functioning	3.30	0.97
Knowledge regarding investing in securities	3.04	1.10
Knowledge regarding legal-regulatory framework of the capital market	3.02	1.08
Knowledge regarding the stock exchange functioning	2.91	1.06
Knowledge regarding technical and fundamental analysis	2.89	1.01

Source: Authors' own research

Table 5 shows the average assessment values for the respondents' perception of the selected indicators related to the analysis of capital markets in BiH.

Table 5. Perception of BiH capital markets

Statement	Mean	Std. deviation
Securities commissions on entity-level work well	2.90	0.62
Investors have good judicial protection	2.60	0.76
The rights of private shareholders are well protected	2.71	0.71
BiH stock markets work well	2.69	0.86
Government measures to attract investors are good	2.20	0.81
There are no significant obstacles to access to the capital market	2.66	0.75
I think that the capital market is liquid	2.48	0.78
The supply of securities is diverse	2.57	0.81
The financial statements of issuers are credible	2.83	0.80
The price of securities reflects all available information	2.65	0.67
The information about issuers is available to citizens	2.47	0.82
Legal framework of the capital market is good	2.72	0.72

Source: Authors' own research

Table 6 brings the average values of the respondents' perception of the indicators related to investment process, goals, motives and factors of investment decision making as well as the activities for improvement of capital markets.

Figure 4 illustrates relative frequencies of the obstacles to more prominent investment activity of individual investors on capital markets in BiH.

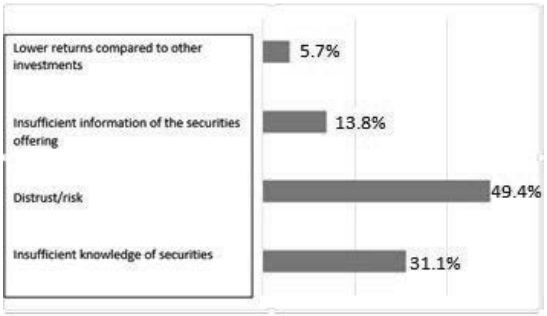

Figure 4. Relative frequencies of the obstacles to investing on capital market

Source: Authors' own research

Table 6. Preferences, goals, motives, and factors of individual investors' investment decision making as well as the activities for improvement of the capital markets

Preference for other forms of investment different from capital markets		
Type of assets	Mean	Std. deviation
Time savings in banks	2.96	1.14
Real estates	3.83	0.75
Noble (precious) metals	3.34	0.87
Life insurance	3.04	1.09
Importance of investment decision making factors		
Factors	Mean	Std. deviation
Overall business experience	3.69	0.73
Experience in investing in the subject asset form	3.57	0.86
Knowledge of investment	3.61	0.86
Using available information	3.65	0.82
Analysis of financial and statistical reports	3.48	1.00
Intuition	3.25	0.98
Motives for investing		
Motives	Mean	Std. deviation
Affirmation	2.28	1.14
Feeling of importance	2.18	1.04
Challenge	3.06	1.11
Following trends	2.53	1.02
Profit	3.98	0.79
Financial safety	4.08	0.72
Investment goals		
Goals	Mean	Std. deviation
Regular and stable revenues	4.05	0.80
Providing revenues for "third age"	4.05	0.84
Profit in short-run	2.91	1.03
Willingness of individual investors to invest in the capital market		
Statement	Mean	Std. deviation
I intend to invest in the capital market in the future	2.98	1.04
I rather invest in securities than other forms of investment	2.48	1.06
Activities to improve the capital market		
Statement	Mean	Std. deviation
Incentives from environment	2.65	0.93
Intensive (aggressive) promotion of investment on the capital market	3.85	0.74
Education of citizens regarding investment on the capital market	4.02	0.76

Source: Authors' own research

Almost half of the respondents see distrust or risk of such investment (49.9% realization) as the most significant obstacle to investment on capital markets. Although the level of general economic knowledge is valued somewhat above average, the knowledge related to individual segments of capital market functioning and investment into securities are valued relatively low. This is certainly an important limiting factor for potential individual investors to build a more active approach to investment on capital markets in BiH. The assessment of the indicators related to capital market perception are below average but a large portion of the respondents without any attitude regarding the statements indicate that they probably lack sufficient knowledge on capital market functioning. When it comes to the preference for other forms of investment compared to capital market instruments, the respondents expressed absolute preferences to real estate investment. Apart from real estates, the investors surveyed also prefer investment into precious metals although a large portion of responses without the attitude provide may suggest the lack of investment into underlying assets. Recent low interest rates on term depositing in banks are most likely the reason why this type of investment was given the least preference when compared to other types of assets. Overall business experience, knowledge of investment, and available information are marked as the most important factors affecting investors while they make decisions on investment into some type of assets. This point to the fact that, when it comes to investment on capital markets, it is important to provide investors with as much information and knowledge as possible on the types of investment and capital market functioning in general.

As expected, financial safety and opportunity to make profit are marked as the most important motives that guide investors when making decisions to invest financial resources. Subjective motives such as affirmation, feeling of importance, and following trends are marked as irrelevant motivational factors while making decisions to invest financial resources. The respondents mainly did not show clear intention to invest into securities in the future. The highest number of the respondents did not have an opinion on their future participation on the capital market. Apart from the assumed lack of understanding the market, this may also suggest the lack of interest of potential individual investors. Distrust into this type of investment or its risk was marked as the most significant obstacle to stronger involvement of individual investors on capital market. The respondents absolutely agreed with the statement that education of citizens on capital market investment is the activity that would improve capital markets in BiH. In addition, more intensive promotion of trading of securities and supply of these instruments on the market were also marked as the activities that might positively affect investment and development of capital markets.

4. CONCLUSION

A very important implication of the results of the research refers to the creation of the appropriate strategy for the improvement of competitive ability of frontier capital markets. In addition, bearing in mind the theoretical framework of the research, measures and activities were specified that are supposed to contribute to the

improvement of competitiveness of frontier capital markets on both, the capital demand side and the capital supply side. The very foundation of the improvement of competitive ability is the increase in supply and demand for securities on capital market, which directly affects the improvement of market liquidity as the most important determinant of its competitiveness.

Based on the theoretical and empirical research conducted, recommendations for the improvement of competitiveness of frontier capital markets involve the following activities:

- Issuers' experiences show that the attitude of stock markets is passive, which points that stock markets need to be more active in the promotion of trading of securities, not only on the secondary market but also on the primary market of securities, be they state or corporate.
- Introduction of simpler derivative financial instruments on the market, bearing in mind the level of development of frontier capital markets.
- Introduction on the market of corporate bonds of the companies with the majority state ownership. The bonds would have the additional option by which the government, as the majority owner, guarantees coupon payment and soft bullet.
- Introduction of market segment for small and medium sized enterprises.
- Change of legal regulations as a means for achieving incentives for the transformation of large and medium sized private enterprises from the organizational form of limited liability companies to shareholding companies.
- Listing on the stock market large state companies where this has not been done.
- Educating local authorities on the possibilities to finance infrastructural projects by issuing municipal bonds.
- Educating wider population on corporate management, capital market functioning, and financing by the issuance of securities. The bearers of these activities would be higher education institutions through the adjustment of the existing curricula, professional organizations, business organizations, stock markets, etc.
- Promotion of financing investment by issuing securities, promotion of good practices of the companies that issued debt securities, equities, etc.
- Promotion of good investment practices aimed at reducing distrust of individual investors, which was mentioned in the research as the main obstacle to more significant participation of individual investors on capital markets.
- Improvement of the existing legal regulations in terms of investor protection, which was recognized in the research as an important factor that limits the competitiveness of frontier capital markets.
- In order to strengthen the trust of investors, companies need to build their own systems of voluntary reporting so that investors would have at their disposal reliable and relevant information that would serve as the basis for making decision on investing into securities of these companies.
- Attracting foreign investors through the integration of regional capital frontier markets. Such integration includes strategic partnership with foreign regional stock markets, strategic partnership of the agencies in charge of the registers of securities,

development of common IT infrastructure, adjustment of legal regulations, monitoring, and taxes.

- Active and intensive promotion of domestic capital market abroad, whereby the government would have the leading role through participation at international economic conferences and forums and gatherings of business people, at the level of ministers and through the network of diplomatic and consular missions abroad.
- Establishment of a unique web portal for the provision of integrated services and information to domestic and foreign institutional investors.
- Elimination of legal obstacles (where they exist) to the entrance of foreign investors on capital market and rationalization of administrative procedures for entering the market.
- Bearing in mind the bank centricity of financial systems in the selected countries of the Western Balkans and the investment potential of banks, regulation of capital market, banks and insurance companies needs to be integrated (where this has not been done).

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SOME MODELS OF FINANCIAL DECISIONS

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Abstract
The article is devoted to risk modeling in prudent operators or investors, whose decisions are characterized by a trade-off between loss risk and reproduction function. Their attitude may be covered by the combined use of quantitative risk measures. Show the approach to risk modeling, which we will move to the traditional theory of maximizing the possibility of using service functions. Investors who engage their capital are always at risk because they make changes in the structure of their assets when investing. The risk of investing is identified with a possible threat or chance of achieving the expected benefits and is associated with the risk of an investment effect not being expected. This effect may be worse or better than previously assumed. The need to identify and verify the risk results from the possibility of achieving the expected benefits of the investor or avoiding losses. When making investment decisions, we can distinguish three types of investor behavior: Preference for risk and its effects (gambler) - the investor makes decisions even when the probability of loss exceeds the probability of profit. The investor is willing to incur higher expenses in order to make a decision about a higher risk. Risk neutrality - the investor does not make decisions when the probability of making a profit is too low. When making decisions, the investor does not pay attention to the amount of risk. Risk aversion - the investor expects the probability of profit to be greater than loss. An investor takes a risk when he expects to receive bonus compensation. Risk aversion also depends on the investor's resources. The richer the investor, the easier it will be for him to accept the loss. The models described in the article assume that investors act rationally and are characterized by risk aversion.

Keywords: utility function, risk, certainty equivalent, risk aversion.

INTRODUCTION

Nowadays, free market business is a natural space for entrepreneurs. The basic condition for the development of any enterprise in such an environment is the development of a proper investment strategy. It aims to bring improvement in business efficiency, strengthen the company's market position and improve its financial result [36]. Changes taking place in contemporary markets and the growing dynamics of their development do not make it easier for entrepreneurs to do the task. The final effect of the investment can be influenced not only by the internal conditions of the enterprise such as its structure, management staff, human capital, but also external factors. The most important of them are market globalization, information flows, very high competitiveness and finally the development of new technologies. Therefore, the process of identifying threats and effective attempts to reduce the adverse effects of decisions taken in an atmosphere of uncertainty are a prerequisite for the company's survival on the market. The profitability analysis of investment projects should therefore focus not only on micro- and macroeconomic factors, but also take into account global factors. Therefore, their identification is one of the basic tasks of the company. Making an investment decision is one of the most difficult tasks of the company. The investment implementation itself is the result of a long and arduous process of analyzing investment profitability. Guided by the subject

of investment, the following groups can be distinguished: material investments, financial investments and investments in human capital. This first class is the enterprise's fixed assets and includes purchases of machinery, technical equipment, land, real estate, etc. The second group includes purchases of securities or opening of bank deposits. Traditional investment profitability testing methods are always based on the assumption of stable investment conditions, i.e. future cash flows are based on projections that may prove out of date in the future. This is obviously due to the uncertainty or unpredictability of the market and concerns material and financial investments. The classical method of updated current value assumes that the basic criterion for choosing an appropriate investment project is to maximize the expected value of future discounted cash inflows related to the project implementation. However, this method ignores changes in investment conditions that make some investments no longer profitable and others become. Therefore, the article deals with issues related to the process of investment profitability taking into account risk factors.

RESEARCH RESULTS AND DISCUSSION

1. Utility functions

In this section will be considered an entrepreneur having the opportunity to invest his capital, or broadly some good. Of course, these possibilities affect the state of ownership at the end of the investment period. The investor's goal is to choose the alternative or option that would bring the highest possible level of good. This good can mean money, or financial profit, but it can also mean intangible assets (e.g. acquiring new business partners, ease of cooperation, raising employees' qualifications). If the results of these investments are known, then it is easy to determine the ranking of alternatives. However, in the random case, i.e. when the level of good at the end of the period is not known and can be described by a random variable, determining the best alternative is not obvious. Therefore, a method is needed that would help construct a certain ranking in the set of random variables. Such a tool is utility function. Formally, the utility function U is defined on a set of real numbers. Then the ranking list is created according to the von Neuman - Morgenstern criterion, i.e. the criterion of maximizing the expected value [16; 46].

The a alternative is no worse than the b alternative, if $EU(X_a) \geq EU(X_b)$; where X_i is a random payout or random profit at the end of the investment period after selecting $i = a; b$. The following designation is used [7; 11; 25; 39]:

$$X_a \succcurlyeq X_b \Leftrightarrow EU(X_a) \geq EU(X_b):$$

Thus, this operation allows you to determine the order in a set of random variables. Utility functions used by the entrepreneur or decision-maker depend on his individual risk tolerance, his financial background, psychological conditions and material situation. The simplest utility function is the linear function $U(x) = x$: The investor using this utility function is called the investor it risk neutral, because this function only takes into account the expected value of future revenues. The only

assumption that the function is a utility function is monotonicity (the function must be increasing) and continuity. Classical usability theory says that utility functions should be differentiable even twice [12]. These properties imply that the functions are convenient in calculations and the models based on them are used, e.g. in microeconomics, finance and analysis of consumer decisions [45]. Figure 1 presents the utility functions most commonly found in practice.

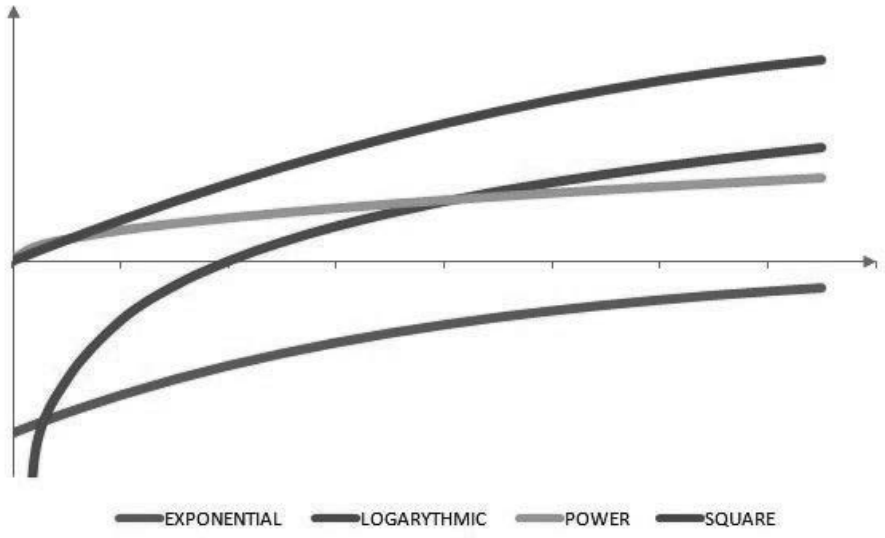

Figure 1. Examples of utility functions: exponential $U(x) = -2e^{-0,5x}$ *logarithmic* $U(x) = \ln x$*; power* $U(x) = 0,5x^{0,5}$*, square* $U(x) = x - 0,1x^2$.

Source: own study

The following are four classes of utility functions found in the [31] literature. The domain of this function, i.e. the set in which it is specified, is denoted by DU.

[A] The exponential function $U(x) = -\frac{1}{\gamma}e^{-\gamma x}$; where $\gamma > 0$ is a certain parameter $DU = (-\infty, \infty)$:

[B] Logarithmic function $U(x) = \ln x$, $DU = (0; +\infty)$:

It is easy to notice that although the function is specified for $x > 0$; in the event that the investor expects to be bankrupt with a positive probability, the use of such a utility function results in the expected usefulness of random withdrawal being $-\infty$.

[C] Power function $U(x) = \gamma x^{\gamma}$; where $\gamma < 1$ is a certain parameter. If $\gamma \epsilon (0; 1)$; $DU = [0; +\infty)$: If $\gamma < 0$ then $DU = (0; +\infty)$:

[D] Quadratic function $U(x) = x - \gamma x^2$; where $\gamma > 0$ is a certain parameter, $DU = (-\infty; \frac{1}{2\gamma})$. This function is increasing for $x < \frac{1}{2\gamma}$.

It is worth emphasizing here that, although the utility function is a useful tool for creating a ranking of investments with random payments, its numerical value has no interpretation. Therefore, adding a constant to a utility function or multiplying it by a constant $k > 0$ does not change the ranking of alternatives. Therefore, the functions $U(x)$ and $\widehat{U}(x) = k_0U(x) + k_1$ are considered equivalent because

$$X_a \succcurlyeq Xb \Leftrightarrow EU(X_a) \geq EU(X_b) \Leftrightarrow E\widehat{U}(X_a) \geq E\widehat{U}(X_b).$$

The rationale for using the criterion of maximizing the expected value from the utility function is the fact that this approach can be clearly described by the axioms [16]. It should also be mentioned that creating a ranking is only possible if the utility function is concave.

2. Risk aversion and utility function

The U function defined on the segment $[a;b]$ is concave [15, 29, 30], if for each $\alpha\epsilon\ [0;1]$ and $x; y \in [a;b]$ an inequality is satisfied

$$U(\alpha x + (1-\alpha)y) \geq \alpha U(x) + (1-\alpha)U(y).$$

This concave utility function U reflects the risk aversion of the decision maker. This property is illustrated in Figure 2.

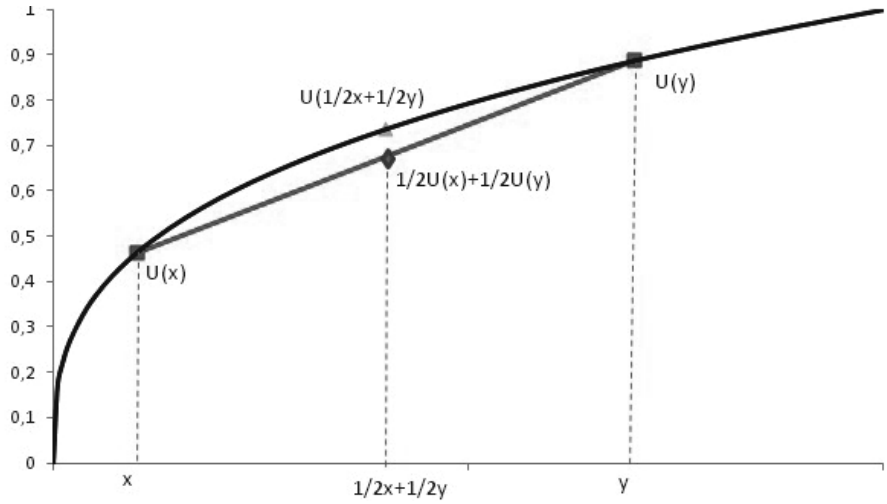

Figure 2 Concave utility function.

Source: own study

It was assumed that the decision maker has two alternatives to choose from:
(1) at the end of the period will receive x or y with probability $\frac{1}{2}$,

(2) receive $\frac{1}{2}x + \frac{1}{2}y$.

The expected utility of the first alternative is the weight of two utility function values $\frac{1}{2}U(x) + \frac{1}{2}U(y)$.The expected utility of the second option (not including risk) is equal to the value of the utility function in point $\frac{1}{2}x + \frac{1}{2}y$. This value is greater than the value of the first alternative when the utility function is concave. So the decision maker will choose the second alternative.

3. Risk aversion coefficient

The degree of risk aversion of the concave utility function is related to the fact how "strongly" such a function is concave. Formally, the degree of risk aversion is measured by a factor defined by Arrow and Pratt [2, 22, 31, 34]. To give the formula for the risk factor, it must be assumed that the utility function has a second derivative. If $U(x)$is concave then $U''(x) < 0$ [15, 29, 30].

The Arrow-Pratt absolute risk aversion coefficient (Arrow-Pratt index)

$$\hat{\gamma}(x) = -\frac{U''(x)}{U'(x)}$$

Table 1 presents the most common utility functions and the corresponding Arrow-Pratt coefficient. Factor $U'(x)$ appearing in the denominator plays the role of a normalizing factor. Coefficient $\hat{\gamma}(x)$ illustrates the change in risk aversion along with the changing level of good. Most often, the risk ratio decreases as capital (assets) increases. This reflects the situation that an investor is able to take more risks if he feels more financially secured.

Table 1 The Arrow-Pratt coefficient for selected utility functions

Lp.	Utility function $U(x)$	The Arrow-Pratt Coefficient	Coefficient properties
[A]	$U(x) = -\frac{1}{\gamma}e^{-\gamma x}$	$\hat{\gamma}(x) = \gamma$	constant for each value of x
[B]	$U(x) = \ln x$	$\hat{\gamma}(x) = \frac{1}{x}$	decreases with increasing of x
[C]	$U(x) = \gamma x^{\gamma}$	$\hat{\gamma}(x) = \frac{\gamma - 1}{x}$	decreases with increasing of x
[D]	$U(x) = x - \gamma x^2$	$\hat{\gamma}(x) = \frac{2\gamma}{2\gamma x - 1}$	decreases with increasing of x

Source: own study

If the parameter γ tends to 0, in the case of utility [A] and [D] in Table 1, the decision-maker becomes increasingly risk-neutral [3, 4, 5, 44]. The same situation applies to the power utility [C] if γ is very close to 1.

4. Certainty equivalent

Although the expected value of the usefulness of a random good doesn't matter except comparing it to another alternative, you can define new concepts that have an intuitive meaning. This concept is the certainty equivalent [33], which for random profit is defined as the constant c such that

$$U(c) = E[U(X)].$$

In other words, it is a guaranteed value of a good, without any risk, for which the utility is the same as the expected value of the utility of the random good X [23]. If U is an increasing function, then there is an inverse function U^{-1} to the function U and you can write that

$$c = U^{-1}(E[U(X)]).$$

The certainty equivalent of a random variable for equivalent utility functions is the same and is measured in units of good value. Let $U(x)$ be a concave function of utility. The c constant is such a number that $U(c)$ equals the expected value of $U(X)$. In other words, it is such a value that the decision maker or company treats as a guaranteed withdrawal without investing in the X portfolio (which can be a loss or a profit). By definition of the equivalent of certainty and from Jensen's inequality [28], the inequality occurs

$$U(c) = E[U(X)] \leq U(EX).$$

Since U is an increasing function, $c \leq EX$. This fact is shown in Figure 3.

It has been assumed that the following investment is under consideration. The decision maker receives z and y payouts with probability $\frac{1}{2}$. Thus, the value of $E[U(X)]$ is halfway between the points $U(z)$ and $U(y)$, and the utility of the certainty equivalent is the intersection point of the function U and the horizontal straight line passing through the point $E[U(X)]$.

$$U(c) = E[U(X)] = \frac{1}{2}U(z) + \frac{1}{2}U(y).$$

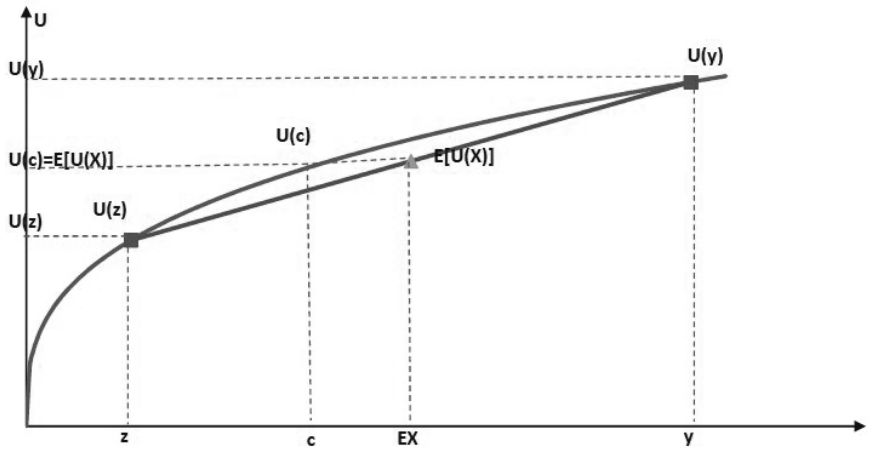

Figure 3 Certainty equivalent

Source: own study

Thus, it is easy to see that in the case of the concave utility function c is smaller than the expected value $E[X]$. It is clear that the stronger the function is concave (which corresponds to a more cautious investor), the number c lies further to the left of the value $E[U(X)]$ [17]. Mathematically, this is a consequence of Jensen's inequality. The value of $Premium = EX - c$ is called risk premium. In other words, the risk premium is an excess of return on investment over the risk-free amount [44]. In addition, [6] can be demonstrated that the risk premium is proportional to the random payout multiplied by a certain factor. More precisely, this coefficient is $\frac{1}{2}\hat{\gamma}(x)$.

The power utility function $U(x) = \gamma x^{\gamma}$ with parameter $\gamma \epsilon (0;1)$ was considered. Then $\gamma x^{\gamma} = \gamma E[X^{\gamma}]$; thus $c^{\gamma} = E[X^{\gamma}]$, or $c = (E[X^{\gamma}])^{\frac{1}{\gamma}}$. The certainty equivalent of this form is known in the literature as the Kreps-Porteus equivalent [27]. Example 1 shows the use of this equivalent for withdrawals with a uniform distribution.

5. Examples

EXAMPLE 1 It has been assumed that a random payment of X has a uniform distribution over the range of $[0;1]$. Then the utility function U

$$U(x) = x^{\gamma}; \gamma \epsilon (0;1);$$

is specified for $x \in [0;1]$. The g parameter expresses the risk aversion of the decision maker. Since

$$E[X^\gamma] = \int_0^1 x^\gamma dx = \left[\frac{x^{1+\gamma}}{1+\gamma}\right]_0^1 = \frac{1}{1+\gamma}$$

from Table 1 it was obtained that

$$c = \left(\frac{1}{1+\gamma}\right)^{\frac{1}{\gamma}} = \frac{1}{(1+\gamma)^{\frac{1}{\gamma}}}.$$

It's easy to see that if γ is close to 1, then c is approaching value $\frac{1}{2}$ and $EX = \frac{1}{2}$. This borderline case means that risk aversion disappears. On the other hand, if $\gamma > 0$ and γ is close to 0, then $\theta = \frac{1}{\gamma}$ becomes any value.

Hence

$$c = \frac{1}{(1+\gamma)^{\frac{1}{\gamma}}} = \frac{1}{\left(1+\frac{1}{\theta}\right)^{\theta}} \to \frac{1}{e} \approx 0{,}37,$$

when θ tends to infinity.

This means that for getting rid of randomness, the decision-maker is willing to accept a smaller payout, and this payout decreases with g: In other words, the smaller the $\gamma$the lower the certainty equivalent and the greater the risk aversion. For example, for $\gamma = \frac{1}{2}$ received

$$c = \left(EX^{1/2}\right)^2 = \left(E\sqrt{X}\right)^2 = \left(\int_0^1 \sqrt{x}dx\right)^2 = \left(\frac{2}{3}\right)^2 = \frac{4}{9} < EX = 0{,}5.$$

EXAMPLE 2 An investor was considered to decide on investment in a risky project. It has been estimated that this project will bring a profit of PLN 100,000 with a probability of about 5%, PLN 50,000 with a probability of 50%, will not bring a profit with a probability of 20% and with a probability of 25% will bring a loss of PLN 10,000. So let X be a random payout from this project.

$$X = \begin{cases} 10^5 \text{ with probability } 0{,}05 \\ 5 \cdot 10^4 \text{ with probability } 0{,}5, \\ 0 \text{ with probability } 0{,}2 \\ -10^4 \text{ with probability } 0{,}25. \end{cases}$$

The investor has a square utility function

$$U(x) = x - \frac{1}{2 \cdot 10^6} x^2, x < 10^6.$$

It was assumed that the decision maker faces two alternatives. In the first case, the probability $\frac{1}{2}$ receives a payout of 10, or a payout of 0 with the probability $\frac{1}{2}$.In the second case, the player receives the amount A.

Then

$$E[U(X)] = \frac{1}{20}\left(10^5 - \frac{1}{2 \cdot 10^6} 10^{10}\right) + \frac{1}{2}\left(10^4 \cdot 5 - \frac{1}{2 \cdot 10^5} 25 \cdot 10^9\right) + \frac{1}{4}\left(-10^4 - \frac{1}{2 \cdot 10^6} 10^8\right).$$

$$E[U(X)] \approx 26612;5$$

Then c was calculated such that $c - \frac{1}{2 \cdot 10^6} c^2 = 26612{,}5$.

The quadratic equation was solved, obtaining $c = 26;976{:}36$.

So if a competitor compensates the investor with 26,976.36 PLN, the investor will be willing to surrender the project to a competitor.

Table 2 contains inverse functions and equivalence equivalents for selected utility functions.

Table 2. Inverse functions and certainty equivalents for selected utility functions

Utility function $U(x)$	**Parameter conditions and domain $U(x)$**	**Inverse function $U^{-1}(x)$**	**Certainty equivalent c**
$U(x) = lnx$	$x \in (0,\infty)$	$U^{-1}(x) = e^x$ $x \in (-\infty,\infty)$	$c = e^{E[lnX]}$
$U(x) = -\frac{1}{\gamma} e^{-\gamma x}$	$x \in (-\infty,\infty)$ $\gamma \epsilon (0,\infty)$	$U^{-1}(x) = -\frac{1}{\gamma}\ln(-\gamma x)$ $x \in (-\infty,0)$	$c = -\frac{1}{\gamma} lnE[e^{-\gamma X}]$
$U(x) = \gamma x^{\gamma}$	$x \in [0,\infty)$ $\gamma \epsilon (0,1)$ lub $x \in (0,\infty)$ $\gamma < 0$	$U^{-1}(x) = \left(\frac{x}{\gamma}\right)^{\frac{1}{\gamma}}$ $x \in [0,\infty)$	$c = (E[X]^{\gamma})^{\frac{1}{\gamma}}$
$U(x) = x - \gamma x^2$	$x \in \left(0, \frac{1}{2\gamma}\right)$ $\gamma \epsilon (0,\infty)$	$U^{-1}(x) = \frac{1 - \sqrt{1 - 4x\gamma}}{2\gamma}$ $x \in \left(-\infty, \frac{1}{4\gamma}\right)$	$c = \frac{1 - \sqrt{1 + 4\gamma EX - 4\gamma^2 EX}}{2b}$ EX is expected value of the investment

Source: own study based on [5; 31]

6. Methods for selecting utility functions

The choice of utility functions for the investor interested is a significant problem. One of the ways is to assign the investor the form of service functions and perform parameter estimation based on the conducted experiments among the examined group of people. The second use is to search for service functions. Since both characters and utility function parameters affect the value of the assessment, proper assessment is important in the [13] decision-making process. A set of standard procedures assigned to services functions for investors, decision makers or the entire company. Below are some ways to use it in practice.

1. Certainty Equivalent Method

One way to determine the utility of a decision maker is to assign a certainty equivalent of various risky alternatives. An elegant method is the organization of a lottery in which the decision maker knows the payday is A with a probability of p, or B with a probability of $1-p$. For different values of p the investor determines the price *c* (certainty equivalent) za for departing from the lottery. The expected value of such a lottery is $h = Ap + B(1-p)$. So if the decision maker is risk sensitive then the certainty equivalent *c* must be less than *h*.

2. Parameter selection method

Another method for determining the utility of a decision maker is to assign a given utility function from the appropriate class, followed by estimating a parameter. This method was proposed by Tversky and Kahneman [24]. It assumes that the utility function is exponential $U(x) = -\frac{1}{\gamma}e^{-\gamma x}$, because as research confirms, [8, 43] best characterizes the preferences of decision-makers. The $\gamma > 0$parameter can be set as a result of a simple lottery. The decision maker determines the equivalent of certainty c, which is the value he is able to accept for giving up participation in a certain lottery. The following lottery was proposed. The investor wins 2 with a probability of $\frac{2}{3}$ or loses 1 with a probability of $\frac{1}{3}$. If $c = 1{,}5$ for this decision maker then

$$-e^{-1{,}5\gamma} = -\frac{2}{3}e^{-2\gamma} - \frac{1}{3}e^{-\gamma}$$

The solution of the equation is $\gamma = 1{,}38629$.

3. Questionnaire

The basis of research on economic behavior is business psychology. It focuses on consumer behavior, studies financial behavior, deals with risk-taking and decision psychology [14, 40, 42]. Decision theory assumes individual decision-making preferences in relation to risk. However, there are many situations where it is desirable to determine the individual's risk / risk attitude. For example, banks would like to adjust the risk level of proposed investments by offering various investment instruments to the level of risk accepted by customers. Interesting to banks may also have an attitude to the risk of employees granting loans [41] (this is the so-called operational risk that may arise as a result of human error). The attitude to the entity's risk depends on the individual's perception of risk, his current financial position,

future financial gains prospects, obligations and the person's age. One of the methods of estimating the appropriate risk factor and the entity's utility function is to conduct an appropriate survey. It gives a good qualitative assessment and the results can be used to determine the utility function. In the questionnaire, one question focuses on both the investor's financial position and the investor's approach to investing. The next questions characterize the market and relate to the value of the managed fund. This survey shows that risk tolerance is determined by the individual's perception of risk and by the investor's financial environment. The purpose of conducting such a survey is to determine a person's propensity to take investment risk. Such surveys are prepared in cooperation with psychologists. Investment firms use this type of questionnaire to research the client's investment profile because their propensity to risk affects which of the products offered to them is willing to accept. When a company knows the client's investment profile, it is able to offer products that best meet their needs.

CONCLUSION

The concept of expected utility enables formal analysis of economic behavior. A particular example of its application is the issue of choosing the optimal portfolio of shares. But since the theory of the value of expected utility has been formulated, there are discussions on its compliance with practice, with the observed behavior of individuals in a situation when a choice should be made. A number of experiments have been conducted which show that this approach is inefficient in many situations. Research by Kahneman and Tversky [24] showed that decision-makers evaluate the alternatives available to them on the basis of their own position, on their wealth, on their own experience. For positive forecasts, their utility function is concave, for negative forecasts convex (this is also confirmed by other researchers of human behavior [18, 21]). Very rare events are treated as impossible events, and the events with high probability of occurrence were treated as certain events. There are studies confirming that most people are risk averse when they focus on future profits and choose risk when they are facing losses. This phenomenon is known in the literature as theory of perspective [26, 35]. A person will choose a certain profit of 500 rather than a payout of 1000 with a probability of $\frac{1}{2}$. The same person will choose the risk of losing 1000 with a probability of $\frac{1}{2}$ than some loss of 500: It can be concluded that in the case of capital increase, the decision maker it is characterized by risk aversion, and in the case of capital decrease, in other words, losses are risk-sensitive [24].

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BANKING ACTIVITIES ASSESSMENT BASED ON BUSINESS MODELS

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Abstract
Banks performance based on their business models is assessed. Under current conditions it is urgent for banks to identify resources it receives profits from and which ones require to be paid for. This model is called the generalized financial model of banking institution activity. Features of the banks' activity business models during 2018 are researched, using PryvatBank, Raiffeisen Bank Aval, Oschadbank as case studies. Results of the risk level in the financial sector are analyzed based on the impact of certain determinants in Ukraine during the May of 2019. It is found that one of the most significant negative impacts on the country's overall performance and performance of its financial sector is attributed to the risk of corruption and law enforcement and judicial activity which accounts for 57%. The general estimation of Ukraine's banking sphere functioning and rating of banks' viability in Ukraine for 2018 are presented. Leader among the presented list of banks under study, is Raiffeisen Bank Aval with a rating of 4.5 points and an instant liquidity score of 19.7%. Conditions and possibilities for holding their financial positions by the banks of the country are determined. Ways of improving the banking activities functioning for both individuals and legal entities are identified. A constant monitoring of the customers' "products" necessary to have is to be carried out for adaptation to changing environment to be successful.

Keywords: banking, lending, attracted financial resources, inflation, business model.

INTRODUCTION

Monetary and credit resources are of great importance for the development and implementation of adaptation opportunities not only for the production and economic activity of the enterprises, but also for the economy of the country as a whole. Attracting investments and other necessary financial resources to support and ensure normal and efficient functioning of enterprises both in production and service sectors is quite normal and "natural" phenomenon in the current conditions of activity and transformation of financial and economic processes both at the international and national levels.

However, one should remember that the funds involved have several important features, both for businesses and economy in general. Among them there are recurrence and promptness. Therefore, before attracting investment and other financial and credit resources, it is necessary to plan the possibilities of their return clearly.

Banks are one of the main objects of the sources crediting. However, there are some important points here. After all, in order to pay off the loan, one need to know the "rules" and conditions of its return rather well.

It is known that the credit activities of banks are significantly influenced by the risks. Among them there are the following: inflation processes in the country; changes in interest rates; changes in monetary policy; changes in credit policy; changes in currency policy; credit user's insolvency; credit user's unprofitability, etc. In addition, one should not forget about the existence of unpredictable risks (in

particular, political and legal, military and political, social and legal). These and many other risks have a great impact on the conditions of both crediting and financial resources.

RELATED RESEARCH ANALYSIS

Studies in the field of financial and credit relations, monetary policy, functioning of the banking system, monetary and currency activity, overcoming financial and economic crises, etc. were carried out by such scientists as: Vladymyr O.M. [1], Dzyublyuk O.V. [1], Drobyazko A. [2], Karpova K.V. [4], Kiryeyeva K.O. [3], Koval Ya.S. [4], Migus I.P. [4] and many others.

It is known that banking activities are focused mainly on the financial and credit aspect of the activity. After all, this is one of the main sources of formation of its profitability.

However, there is another side to this activity. If the credit sector becomes «burdensome» for entrepreneurs and it may adversely affect its functioning and also its overall financial condition.

Therefore, choosing the «right» conditions for attracting financial resources to entrepreneurs one need to analyze the activities of the selected bank on the basis of its business model functioning.

This article presents an assessment of banks' activity based on the functioning of their business models, which include the following elements of study:

– an overall assessment of the banking sector, functioning in Ukraine;

– analysis of conditions and possibilities to maintain own financial positions by the country's banks;

– study of business models of banking institutions during 2018, on the example of such banks as: PrivatBank, Raiffeisen Bank Aval, Oschadbank;

– presentation, on the basis of the statistical materials examined, of the banks' viability rating during 2018;

– possible ways of improving functioning of banking activities for both individuals and legal entities.

RESEARCH RESULTS AND DISCUSSION

Over the past few years banking sector in Ukraine, as well as other structural elements of the country's economy, has experienced significant upheavals. However, it still finds and uses opportunities for adaptations and exits from crises.

The author Drobyazko A. [2] outlined a number of topical aspects that most specifically reflect last year's state of affairs in the banking sector of Ukraine, in particular, such as:

1. Stabilization and stagnation processes occurred after significant political and economic changes during 2014-2015. So, we cannot certainly say that throughout 2018 the entire financial system became «ideal» and regained lost positions in terms of financial resources. However, there are several positive points that have occurred during 2018, namely: increase in the amount of short-term deposits amounted to 10.8 billion UAH; the amount of current accounts increased by 22.2 billion UAH; the

amount of current accounts in foreign currency increased by 260 million USD; the amount of term accounts reduced by 160 million USD.

In general, population of the country made savings in national currency during 2018 that is why the deposit portfolio of the banking institutions of the country, is mainly formed on this terms. Thus, during 2018, the deposit portfolio volume of the banks in the national currency increased by 10 %, that is, to 539.7 billion UAH. As for the amount of the national currency deposits of individuals placed in solvent banks, their volume in 2018 increased by 14.5 %, that is, up to 268.9 billion UAH, while a positive growth dynamics is also present in the foreign currency – an increase by 1.6 %, that is, up to 8.6 billion USD.

If to analyze the result of deposits from business during 2018, here is the following trend: the amount of deposits of business in national currency, which is placed in solvent banking institutions of the country increased by 5.9 %, that is, up to 270.1 billion UAH.

Limited ability of the banking system to perform normal and efficient crediting during 2019 due to lack of their own financial resources remains a negative factor.

2. Entrepreneurs and business entities do not consider it necessary to store their own funds in banking institutions. Then, as time and past experience show, banking institutions credibility is not too high or even sufficient. However, it should be noted that during 2018 the amount of funds in the bank current accounts tended to increase (increased by 14.5 billion UAH), the amount of funds in current accounts increased (by 0,9 billion UAH only) not significantly relatively to data of 2017. Decrease in the amount of foreign currency funds in comparison to the result of the previous period remains negative.

3. Crediting of individuals gains positive growth dynamics. Thus, during 2018, the result of crediting of individuals by banking institutions of the country increased by 25.7 billion UAH, in relation to the result of crediting during 2017. In turn, foreign currency crediting of individuals decreased by 430 million USD. It is worth mentioning that the provision of credits to individuals in foreign currency has been banned since 2009, however, this matter can be decided in the court.

4. Negative tendencies are seen in corporate loans. Due to the significant impact of past financial and economic crises and military-political conflict, as well as «inability» of many banking structures to adapt quickly to the constant negative factors in financial sphere of the country, banking system requires significant improvements in providing corporate loans.

At present, the credit portfolio of the banks in UAH does not show the necessary growth; in foreign currency – growth occurs mainly due to crediting of non-residents by the Ukrainian banking structures.

According to the National Bank of Ukraine, UAH crediting portfolio volume for the country's population in 2018 increased to 135.4 billion UAH or by 31.4 % compared to the 2017's result. This growth was driven by consumer crediting.

The total credit portfolio of the banking institutions in the national currency during 2018 increased to 616 billion UAH, that is, by 8.1 %, compared to 2017.

According to the head of the National Bank of Ukraine, Yakiv Smoliy, the main task for 2019 is to resume corporate loans. Efforts should be made to restore the banking system to normal conditions of cooperation with large corporate clients.

It is worth noting that the so-called credit register of the National Bank was created with more than eighty thousand creditors, including 53.2 thousand individuals and 27.2 thousand legal entities.

5. Failure of the Deposit Guarantee Fund to resolve independently the issue of assets received from the bank institutions recognized as bankrupt in the amount of half a trillion UAH.

6. Significant increase in the discount rate of the National Bank of Ukraine. In general, UAH rate increased during 2018 primarily due to the gradual increase of the discount rate of the National Bank of Ukraine since 2017. Having compared the data, it is determined that the result of the discount rate increased by 5.5 of gross national product to the current 18.0 % per annum.

Considering the increase in interest rates on UAH business deposits, during 2018 their result increased by 5.9 of gross national product, that is, up to 14.5 % per annum, partly due to the increased competition between banking institutions for retaining existing and attracting new corporate clients.

As for the profitableness of the population deposits, it makes 11.7 % per annum during 2018.

As of the end of 2018, foreign currency interest rates of population and businesses made 2.7 % per annum and 2.5 % per annum, respectively.

During 2018, there was a gradual increase in interest rates on UAH credits that can be explained by significant increase in demand on them both by enterprises and population. All this, in turn, led to increase in the total cost of business credits by 6.6 of gross national product, that is, up to 20.9 % per annum, instead, the value of credits for population increased by 3.9 % of gross national product, that is, up to 33.1 % per annum during 2018.

However, it should be noted that, according to the National Bank of Ukraine, in 2018 the volume of credit and deposit resources of population in the banking institutions of the country exceeded the pre-crisis level.

7. The existence of small banking structures remains in a much larger risk area. First of all due to the need to form its own authorized fund in the amount of 300 million UAH, and secondly, withdrawal from the banking sector in 2014-2015 of a significant proportion of banking institutions with national capital.

All of the above described trends in functioning of the banking sector of the country still contribute to further development of the banking system, however, as noted in the studied sources – in case of «black swans» absence.

In addition, concerning an improvement of the mechanism of bank insolvency, on March 25, 2019, the National Bank and the Deposit Guarantee Fund with the World Bank together agreed on Directive 2014/59/EC on Bank Recovery and Resolution (BRRD) which is Ukraine's obligation to the Association Agreement with the EU.

As mentioned above, the banking sector activity is significantly influenced by a large number of various factors. Therefore, according to the National Bank of

Ukraine «Financial Sector System Risk Survey» (May, 2019), the following information is presented by financial institutions (Figure 1), which reflects the results of risk level in the financial sector based on the impact of a specific set of factors.

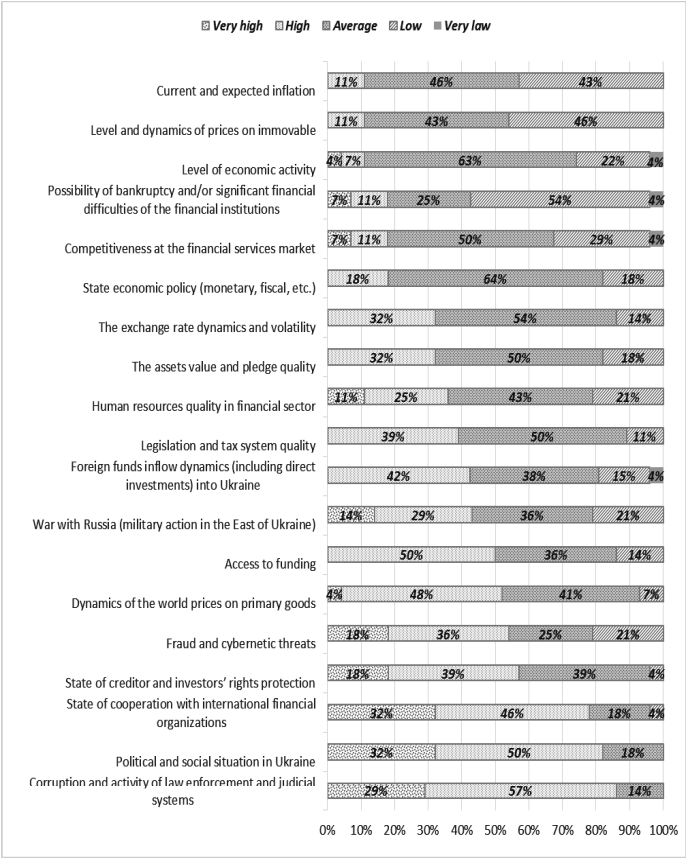

Figure 1. Results of the risk level in the financial sector, based on the impact of certain identified factors in Ukraine during May 2019, %

Source: [5]

Having examined the data presented in the figure, it was revealed that high, and therefore one of the most significant negative impacts on the overall activity and efficiency of the financial sector of the country as a whole have the following risks: factor of corruption and activity of law enforcement and judicial systems, the result of which is equal to 57 %; factor of political and social situation in Ukraine with the result at the level of 50 %; access to funding factor with the result at the level of 50 %; factor of dynamics of the world prices on primary goods, the result of which is equal to 48 %; factor of the state of cooperation with international financial organizations with the result of 46 %; factor of foreign funds inflow dynamics (including direct investments) into Ukraine, the result of which is equal to 42 %; factor of the state of creditor and investors' rights protection with a value of 39 %;

factor of legislation and tax system quality with the value of 39 %; factor of fraud and cybernetic threats with the result of 36 %; factor of the exchange rate dynamics and volatility with the value of 32 %; factor of the assets value and pledge quality of 32 %; factor of military action in the East of Ukraine with the result of 29 %.

In addition, it should be noted that there is reduction in the high level of the following risks impact on the financial sector of the country: factor of competitiveness at the financial services market and factor of current and expected inflation, which amounted to 11 %, respectively.

In order to be able to choose the best bank for the entrepreneur and not to make any mistake, it is necessary to carry out clear monitoring, which, unfortunately, sometimes also does not make any positive results. However, there is always a way out.

Thus, on the basis of the researched materials of the source [2], it was found that the best model for evaluating the activity of banking institution is a business model that reflects two main indicators of the bank's activity – what exactly it invests in and what exactly determines its basic earnings.

After all, at present, the assessment of financial model of the bank itself, that is the analysis of where it receives financial resources and where it invests, is irrelevant because it does not reflect the "complete picture" of its activity.

Under these circumstances, one need to focus on what kind of financial resources he/she earns, and for which one have to pay. This model is already more evident and stands for the so-called business model, or it is also called the generalized financial model of the banking institution.

To make a clear assessment of a bank's activity based on its business model, its cash flows are considered and on the results the balance there are determined: market of the legal entities; market of individuals; the MDB and IFI markets; the NBU market; the budget market; net commission income; result from trading operations; keeping the bank; operating profit.

The general view of the banks' activity business model in the competitive environment is shown in Figure 2.

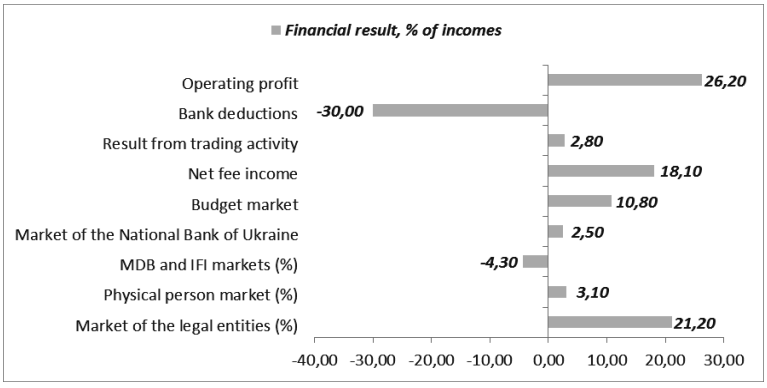

Figure 2. General view of the banks' business model for 2018

Source: [2]

As an example of the activity of individual banking institutions, this business model will look somehow different.

Thus, in the activity of PryvatBank (Figure 3) the generalized financial model looks as follows:

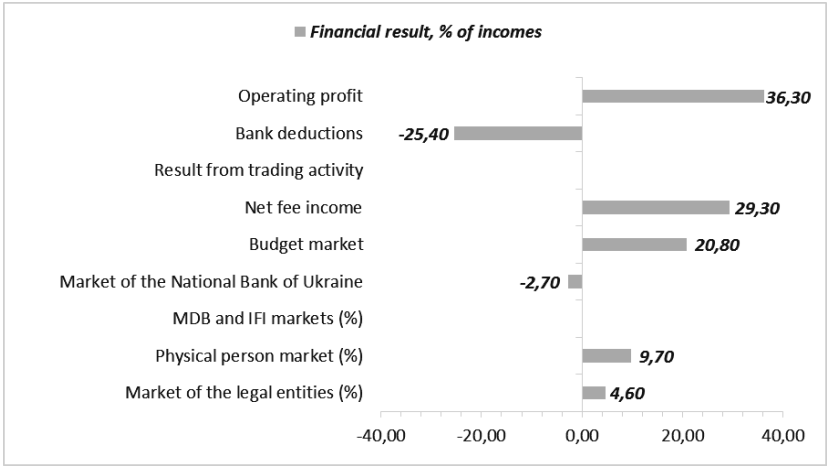

Figure 3. Business model of PrivatBank activity for 2018

Source: [2]

Business model of PrivatBank activity presented, taking into account the results of the data, indicates its positive results during 2018. This bank reflects the true latest innovative policy of its own activity, which primarily concerns the functioning of the corporate loans portfolio.

The following business model reflects the activities of Raiffeisen Bank Aval (Figure 4):

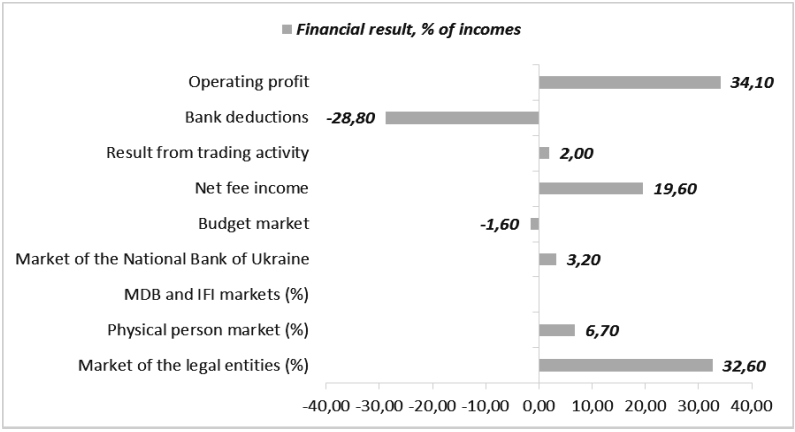

Figure 4. Business model of Raiffeisen Bank Aval activity for 2018

Source: [2]

In general, this bank is a leader among other banking institutions during 2018. After all, it has the best positions in terms of both of credit activity and possibilities of bank deductions at the expense of its own assets from trading operations.

Figure 5 shows the features of a business model that reflects the activities of the State Savings Bank (Oshchadbank):

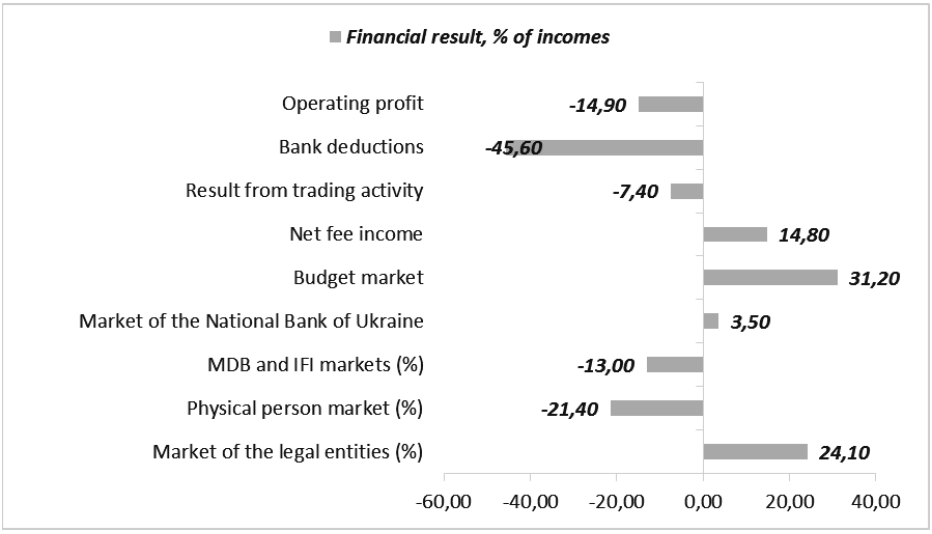

Figure 5. Business model of the State Savings Bank (Oshchadbank) activity for 2018

Source: [2]

From the presented data it is clear that the State Savings Bank (Oshchadbank) should «adjust» its credit portfolio, which is significantly overburdened by so-called default credit users as soon as possible. This issue is the most profound one for resolving and implementing an effective future policy for this bank. After all, this financial institution generates its profits on the basis of corporate loans.

Therefore, evaluating the business models of banking institutions, one can not only determine how one bank differs from another, but also choose the best for oneself.

An equally important stage of study is the viability rating of the banks in Ukraine during 2018, which is presented in Table 1 [2].

Raiffeisen Bank Aval was ranked the leader in 2018 among the banks surveyed, with a rating of 4.5 points and an instant liquidity score of 19.7 %.

10 banks ranked second, with a rating of 4 points. Among them there were one state-owned bank (PrivatBank) and nine foreign banks (Credit Agricole Bank and UkrSibBank – French; ING Bank Ukraine – Dutch; Citibank – American; Kredobank and Idea Bank – Polish; ProCredit Bank – German; Pravex Bank – Italian; OTP Bank – Hungarian).

The third place with 3,5 points was divided among the following banks: A-Bank; PUMB and Ukrgasbank.

The lowest rating (2.0 points) was received by Ukrainian – Megabank and Bank Credit Dnipro, as well as Russian Prominvestbank.

Table 1. Banking sustainability rating in Ukraine during 2018

Bank	Rating	Net assets, mln. UAH	Instant liquidity, %	Problem loans, %
Raiffeisen Bank Aval	4.5	79147.5	19.7	9.7
Credit Agricole Bank	4.0	32790.3	12.9	9.8
UkrSibBank	4.0	52681.3	16.7	13.0
ING Bank Ukraine	4.0	10950.5	4.4	10.9
Citibank	4.0	24638.9	12.5	0.3
PrivatBank	4.0	282037.4	11.5	83.4
OTP Bank	4.0	32862.2	14.2	27.3
ProCredit Bank	4.0	20996.7	5.3	3.7
Kredobank	4.0	16793.0	9.6	9.9
Idea Bank	4.0	4204.7	7.3	28.4
Pravex Bank	4.0	4500.6	42.4	10.5
A-Bank	3.5	4988.0	8.1	21.7
PUMB	3.5	49917.2	7.9	28.7
Ukrgasbank	3.5	82363.8	7.3	17.0
State Savings Bank (Oshchadbank)	3.0	218248.6	7.8	67.3
Alpha Bank	3.0	60200.2	5.6	19.4
Ukrsotsbank	3.0	16105.0	12.3	90.0
UkrEximBank	3.0	161731.6	4.7	59.3
Sberbank	3.0	30614.6	9.8	80.3
Universal Bank	3.0	8379.5	8.0	37.3
TasComBank	3.0	17722.6	9.0	12.6
Industrialbank	3.0	5053.1	13.8	20.1
Bank East	3.0	9398.1	17.5	3.8
International Investment Bank (IIB)	3.0	9360.8	4.8	37.8
MTB Bank	2.5	5000.2	11.6	15.0
Bank Pivdennyy	2.5	24937.8	10.7	10.4
Bank of Investments and Savings	2.5	4205.4	10.2	26.1
Megabank	2.0	9860.3	10.6	15.3
Bank Credit Dnipro	2.0	10052.4	3.3	66.5
Prominvestbank	2.0	13807.8	8.4	85.1

The presented rating shows the ability of banks to survive and the ability to adapt to changing financial and economic conditions.

The banking system, like any other financial and economic system, needs constant updating. In today's world, the smartest survive, and banks are therefore of no exception. For the best adaptation, one needs to monitor necessary "products" for customers and be able to implement them constantly.

CONCLUSION

During the recent years, the banking system has experienced considerable shocks. This is precisely the situation that reflects the ways of adapting to new opportunities in the modern world of business.

In the process of evaluating the activity of the banking system of Ukraine, it was found that its activities are influenced by huge number of various factors. Sometimes this impact is not only negative but also unpredictable. In addition, since banks are directly linked to financial resources, this is a risk activity on itself.

The only and unquestionable rule for banking institutions to ensure the maintenance of their own positions in the business environment is the constant "updating" of their own activities under the current conditions of both entrepreneurial and other activities that depend on financial resources.

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THE PROBLEM OF DIGITAL BANK BUSINESS MODEL IDENTIFICATION

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Abstract
The business model concept is becoming increasingly popular with development of digital economy. It is used within many fields of research, including both traditional strategy theory and in the emergent body of literature on e-business. This paper aims to clarify the concept of business models for banks. However, the concept of business models in banking activity is often used for bank business model identification that can be used in future for working out of regulatory measures for different types of banks. The existing researches on the bank business model identification have been analyzed. Dynamic development of information and telecommunication technologies and their applications in banking influence on banking business. Models of digital banking based on new information and telecommunication technologies are becoming the standard performance of banking and other financial institutions in today's market. We see models of electronic banking in particular the Internet and mobile banking taking primacy over traditional banking models that were dominant until the beginning of the twenty-first century. But there is a problem of identification of digital bank business models in countries as there are absent some features that can distinguish digital business model of bank from universal bank business model on the level of banking system research. So, the research of digital bank business model can be worked out only on the level of the bank. On the way of digital bank business model identification, we have to detect countries with formed base for digital banking development. Our research we will spend among 61 countries of Europe and North America. The core of the methodology is a statistical clustering algorithm that allows identifying the groups of countries (clusters) with similar trends of digital bank business model development. The cluster analyses were taken on the base of five chosen indicators: account ownership at a financial institution with a mobile-money-service provider, older adults (% of population ages 25+); automated teller machines (ATMs) (per 100,000 adults); Commercial bank branches (per 100,000 adults); domestic credit to private sector by banks (% of GDP). Recommendations concerning digital bank business model development are given.

Keywords: bank, business model, digital bank business model, banking system.

INTRODUCTION

In the scientific literature last time more attention in the researches was being removed to the term ‘business model’ that is often used to describe the key components of the business. The business model concept is becoming increasingly popular with development of digital economy. It is used within many fields of research, including both traditional strategy theory and in the emergent body of literature on e-business.

Banks are not the exception, as they follow a new philosophy of banking business that is oriented towards end users, adapting their business to valuable changes that are in the global market. So, banks, accounting new banking business philosophy with new business strategies, start to form new business models based on Internet technologies, distribution systems, mobile computing, that can provide the growth, and development to each bank.

RESEARCH RESULTS AND DISCUSSION

Banks according to their market strategy and balance sheet structure choose to be different from one another. In a competitive pursuit of growth opportunities, banks choose a business model to leverage the strengths of their organization. So, bank business models are not static and evolve over time and under the influence of financial market development. Traditional banking models that have dominated on the banking market more than a century where the bank has been talking central place in the market without taking into account the needs of its client, slowly but surely are losing the battle with new digital banking models. However, there are difficulties in identification of digital bank business models on practice, in the same time modern banks that have started to provide their activity on new business models that are based on electronic banking forget about riskiness of their activity in pursuit of profit. This paper aims to clarify the concept of business models for banks and find way of digital bank business model identification.

The term "business model" is quite new. It was first used by M. Jones in 1960 to reflect the interaction between universities and business, but more attention to business models was paid only after 1995 with the spread of the Internet all over the world in context of identifying the increase reserves of enterprises' profitability through the implementation of Internet technologies in their operating activity to create value for the consumer.

It is important to note that today there is no single accepted definition of the term "business model". Many studies have been conducted to determine the essence of this concept, but there is no single methodological approach to their formation and analysis. The study of the evolution of theoretical approaches to defining the term "business model" have showed that in the period 1998-2001 the term "business model" was associated with the description of the firm activity in order to implement in it the latest technologies that have appeared as a result of the development of the Internet. [9; 11; 2]. Further studies on the substance of this term have been resumed since 2005. There were conducted a number of studies [4; 8] to determine the essence of the term "business model".

We emphasize that these studies have become more in-depth and boil down to the fact that the business model is not a simple description of the firm's activity, but a complete reflection of its activity, which allows to see all opportunities for the development of the firm in order to create possible competitive advantages in a certain market.

The business model Canvas that has been worked out by Osterwalder in 2005 is the most widespread and used [4]. He has suggested to build a business model for any business based on nine blocks that give answer on simple key questions. The traditional bank business model is represented in Table 1.

However, the concept of business models in banking activity is often used for bank business model identification that can be used in future for working out of regulatory measures for different types of banks.

Table 1. The traditional business model of the bank (using Business Model Canvas)

<table>
<tr><td rowspan="2">8. Key partners
Investment partners
Technology vendors
Central Bank
Regulatory agencies
Credit agency
Rating agencies</td><td>7. Key Activities
Department operations
Branch operations
Bookkeeping
Call center operations
IT operations</td><td rowspan="2">2. Value Propositions
Deposit Products (lower interest rates)
Loan Products (higher interest rates)
Investment (higher interest rates)
Trust management (commission)</td><td rowspan="2">4. Relationships
Personal assistance
Automation (where possible)</td><td rowspan="2">1. Customer Segments
Depositors:
-retail customers
-corporate enterprises
-financial intermediaries
Borrowers:
-retail customers
-corporate enterprisers
-financial intermediaries
Issuers of securities</td></tr>
<tr><td>6. Key resources
Physical and IT Infrastructure
Loan Assets</td></tr>
<tr><td colspan="2">9. Cost Structure
Interest expences
Channel costs</td><td colspan="2">5. Revenue Streams
Interest income
Fee income</td></tr>
</table>

The existing researches on the bank business model identification have been analyzed (see Table 2).

Table 2. The researches on the bank business model identification

Author	Year	Indicators	Types of bank business model
R. Ferstl, D. Seres Ferst [5]	2012	net interest income; trading income; sncome from fees and commissions; operating income; customer deposits; total loans; total assets	five distinct business models
R. Ayadi W. de Groen [1]	2014	loans to banks (as % of assets); trading assets (as % of assets); bank liabilities (as % of assets); customer deposits (as % of assets); debt liabilities (as % of assets); derivative exposures (as % of assets)	Investment Wholesale Diversified retail Focused retail
R. Roengpitya, N. Tarashev, K. Tsatsaronis [7]	2014	total loans; securities; the size of the trading book; interbank lending; customer deposits; wholesale debt; stable funding; and interbank borrowing	Retail-funded Wholesale funded Trading
V. Rashkovan, D. Pokidin [6]	2016	Assets/Branches; average loan maturity; average loan size variable; equity and subordinated debt; retail loans ratio; retail deposits ratio; loans ratio	Households-to-Corporates, Retail, Universal, Corporate, Investment, Frozen

As we can see the bank business model identification is based on the formation of representation of the main directions of bank operative activity and the bank`s

main clients and can be easily worked out on the base of indicators that are in the bank`s balance sheet.

Dynamic development of information and telecommunication technologies and their applications in banking influence on banking business. Models of digital banking based on new information and telecommunication technologies are becoming the standard performance of banking and other financial institutions in today's market. We see models of electronic banking in particular the Internet and mobile banking taking primacy over traditional banking models that were dominant until the beginning of the twenty-first century.

But there is a problem of identification of digital bank business models in countries as there are absent some features that can distinguish digital business model of bank from universal bank business model on the level of banking system research. So, the research of digital bank business model can be worked out only on the level of the bank.

Recently, there have been distinguished four digital banking models depending on the level of digital technology using in the bank [3]:

– model A is a digital banking brand isolated from a parent classic bank. These digital brands may be marketed as a new bank, but they typically use their parent bank infrastructure when it is possible;

– model B is a bank with digital remote channels. Banks with model B deliver new mobile and online applications to their customers, but they resell the products of the real bank and have to redistribute the clients' funds to the insured accounts of the real bank;

– model C is a digital daughter of a classic bank. It is a synthesis of user experience and new business processes. The banks of this model are created from scratch as a new digital bank;

– model D is a 100 % digital bank. These are high-value banks that are building their core value proposition around digital technologies.

But on our mind such classification can be proved only by quality researches of the banks, but not by quantity analyses that can give real picture of existing digital bank business models.

So, the identification of digital bank business models is a long and complicated process. In our opinion the first step in the digital bank business model identification is the analyses of country preparedness level for digital transformation of banking sector.

On the way of digital bank business model identification, we have to detect countries with formed base for digital banking development. Our research we will spend among 61 countries of Europe and North America.

The core of the methodology is a statistical clustering algorithm that allows identifying the groups of countries (clusters) with similar trends of digital bank banking technology development. The idea is that countries with similar trends of digital banking technology development have similar condition for digital bank business model formation.

Cluster analysis is the task of grouping a set of objects in such a way that objects in the same group (called a cluster) are more similar (in some sense or another) to

each other than to those in other groups (clusters). Cluster analysis itself is not one specific algorithm, but the general task to be solved.

It can be achieved by various algorithms that differ significantly in their notion of what constitutes a cluster and how to efficiently find them. Popular notions of clusters include groups with small distances among the cluster members, dense areas of the data space, intervals or particular statistical distributions.

Among the methods of cluster analysis, the most distribution got the method of k-means clustering. In centroid-based clustering, clusters are represented by a central vector, which may not necessarily be a member of the data set.

When the number of clusters is fixed to k, k-means clustering gives a formal definition as an optimization problem: find the k-cluster centers and assign the objects to the nearest cluster center, such that the squared distances from the cluster are minimized.

Most k-means-type algorithms require the number of clusters - k - to be specified in advance, which is considered to be one of the biggest drawbacks of these algorithms.

The cluster analyses were taken on the base of five chosen indicators, which is formed and saved in the World Bank national accounts data [10]:

– account ownership at a financial institution with a mobile-money-service provider (% of population ages 25+) denotes the percentage of respondents who report having an account at a bank or another type of financial institution or report personally using a mobile money service in the past 12 months. This indicator in our opinion indicates the readiness of the population to use financial technologies (ACC);

– automated teller machines (per 100,000 adults) are computerized telecommunications devices that provide clients of a financial institution with access to financial transactions in a public place. If this indicator tends to decrease, this will indicate an increase in other channels with access to financial transactions (ATM);

– commercial bank branches (per 100,000 adults) are retail locations of resident commercial banks and other resident banks that function as commercial banks that provide financial services to customers and are physically separated from the main office but not organized as legally separated subsidiaries. In condition of information and telecommunication technology development bank branches have tendency to reducing (CBB);

– domestic credit to private sector by banks (% of GDP) refers to financial resources provided to the private sector by other depository corporations (deposit taking corporations except central banks), such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment; for some countries these claims include credit to public enterprises. This indicator characterizes the level of banking system development in the country (DC to PS).

The procedure of objects clustering on the base of k-means method is realized in a calculable application package “STATISTICA” in the module "Cluster analysis". Cluster analysis was carried out on the basis of selected indicators for 51 countries in Europe and North America for three dates: 2011, 2014, and 2017 – with purpose to see dynamics in changing of digital environment in countries.

It is important to highlight that cluster analysis is an inexact science. The assignment of countries to a specific cluster depends crucially on the choice of instruments and procedures, such as the proximity metric, procedures for forming clusters and the stopping rules used.

The clustering analysis identified three groups of countries as the most distinct form of clustering. Table 3 gives the descriptive statistics for the three groups of countries resulting from the cluster analysis based on the four selected indicators.

We have to underline that the fourth indicator (domestic credit to private sector by banks (% of GDP) have been used as an indicator that reflect the level of banking system development.

Table 3. Descriptive statistics for each cluster

Types of cluster		2011				2014				2017			
		ACC *	ATM	CBB	DC to PS	ACC	ATM	CBB	DC to PS	ACC	ATM	CBB	DC to PS
Cluster 1	Mean	85	108	81	158	97	83	33	116	91	41	21	128
	St.dev.	32	41	70	44	3	31	20	45	19	12	16	36
	Var	1040	1695	4950	1963	10,4	965	404	2070	376	147	271	1321
	Quantity	8				17				8			
Cluster 2	Mean	91	95	32	88	92	184	91	104	97	129	54	90
	St.dev.	14,1	36,4	19,0	23,0	13,1	34,9	87,5	32,4	5,8	40,2	46,4	21,6
	Var	199	1323	361	528	172	1221	7657	1047	33	1615	2152	467
	Quantity	20				5				15			
Cluster3	Mean	49	44	22	43	64	62	27	46	72	66	27	41
	St.dev.	26	20	13	18	26	24	20	16	19	23	24	15
	Var	658	379	178	328	656	556	392	268	371	506	554	214
	Quantity	23				29				28			

* ACC – account ownership at a financial institution with a mobile-money-service provider (% of population ages 25+); ATM - automated teller machines (per 100,000 adults); CBB - commercial bank branches (per 100,000 adults); DC to PS - domestic credit to private sector by banks (% of GDP).

As we can see from the table the distribution of countries between clusters are not equal:

– the first cluster includes in 2011 – 8 countries, in 2014 – 17; in 2017 – 8;
– the second cluster includes in 2011 – 20 countries, in 2014 – 5; in 2017 – 15;
– the third cluster includes in 2011 – 23 countries, in 2014 – 29; in 2017 – 28.

So, the third cluster has changed the least in 2011-2017, but between first and second groups there were constant migration of countries in analyzed period. The distribution of countries between clusters is given in table 4. Comparison of clusters and their description is given in table 5.

The analysis of separate indicator – the indicator domestic credit to private sector by banks (% of GDP) – shows:

– the first cluster includes countries with high level of banking system development, in average it varies from 158% in 2011 to 128% in 2017, thus it

indicates a decline in private sector lending, but countries in this cluster are the readiest to implementation of digital technologies in banks;

Table 4. Distribution of countries between clusters

	2011	2014	2017
Cluster 1	Cyprus, Denmark, **Iceland**, **Portugal**, **San Marino**, **Spain**, **Switzerland**, **United Kingdom**	***Austria***, ***Croatia***, Cyprus, Denmark, **Finland**, ***France***, ***Germany***, **Greece**, **Iceland**, ***Ireland***, ***Italy***, ***Luxembourg***, **Netherlands**, **Norway**, **Spain**, **Sweden**, **Switzerland**	Cyprus, Denmark, Finland, **Greece**, **Netherlands**, **Norway**, **Sweden**, **Uzbekistan**
Cluster 2	***Austria***, ***Belgium***, **Bulgaria**, ***Croatia***, **Estonia**, **Finland**, ***France***, ***Germany***, **Greece**, ***Ireland***, ***Italy***, **Latvia**, ***Luxembourg***, **Netherlands**, **Norway**, Russian Federation, **Slovenia**, **Sweden**, Canada, **United States**	Canada, **United Kingdom**, **San Marino**, Russian Federation, **Portugal**	***Austria***, ***Belgium***, ***Croatia***, ***France***, ***Germany***, **Iceland**, ***Italy***, ***Luxembourg***, **Portugal**, Russian Federation, **San Marino**, **Spain**, **Switzerland**, **United Kingdom**, Canada
Cluster 3	Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Czech Republic, Georgia, Hungary, Kazakhstan, Kosovo, Kyrgyz Republic, Lithuania, Moldova, Montenegro, North Macedonia, Poland, Romania, Serbia, Slovak Republic, Tajikistan, Turkey, Ukraine, **Uzbekistan**	Albania, Armenia, Azerbaijan, Belarus, ***Belgium***, Bosnia and Herzegovina, **Bulgaria**, Czech Republic, **Estonia**, Georgia, Hungary, Kazakhstan, Kosovo, Kyrgyz Republic, **Latvia**, Lithuania, Moldova, Montenegro, North Macedonia, Poland, Romania, Serbia, Slovak Republic, **Slovenia**, Tajikistan, Turkey, Ukraine, **Uzbekistan**, **United States**	Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Czech Republic, **Estonia**, Georgia, Hungary, ***Ireland***, Kazakhstan, Kosovo, Kyrgyz Republic, **Latvia**, Lithuania, Moldova, Montenegro, North Macedonia, Poland, Romania, Serbia, Slovak Republic, **Slovenia**, Tajikistan, Turkey, Ukraine, **United States**

*** Iceland –** country change cluster one time; ***Austria* –** country change cluster two times; ***Ireland*** – country change cluster three times

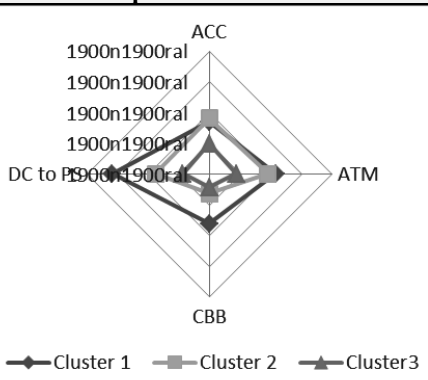
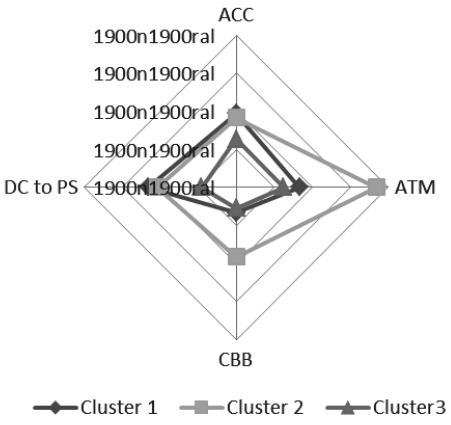
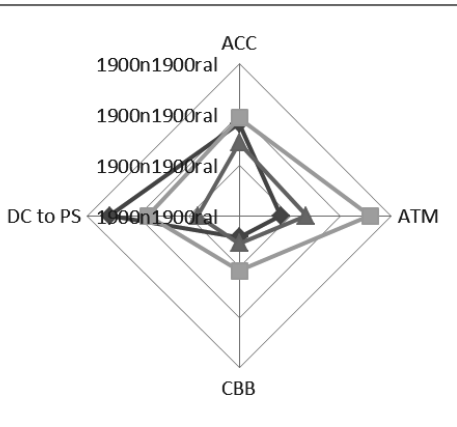
– the second cluster includes countries with average level of banking system development, it varies from 88% in 2011 to 90% in 2017, this trend is positive and indicates strengthening the role of banks in the financial market;

– the third cluster includes countries with low level of banking system development, but there can be two reasons: firstly, it is countries with developed stock market, secondly, it is developing countries, banking systems of which are only start their existing and are younger than 30 years.

Conducted analysis shows groups of countries where financial technologies are used by banks. In our opinion it is first step on the digital bank business model identification for their further regulation.

Therefore, the digital bank business model identification needs to work out the criteria inside the country, the necessary condition is availability of these indicators in the open access.

Table 5. Comparison of clusters and their description

Year	Characteristic of period	Comparison of clusters
2011	The difference between clusters is obvious. The more country developed, the higher are the indicators: there are more commercial bank branches, more automated teller machines and more mobile accounts. In most countries, banking systems are just starting to develop; therefore the analyzed indicators are relatively low.	
2014	The situation is changing: -countries in the first cluster start to reduce bank branches and ATMs, but mobile account are on the same level and even increase. This is evidence of financial technology implementation in banking activity. -countries in the second cluster continue to develop their banking systems by increasing the number of bank branches and ATMs. It gives some results as mobile accounts increase.	
2017	We can see that countries both of the first and the second cluster have approximately equal quantity of mobile accounts, but usage of the digital technologies gives advantages to the first one as the level of banking system development is higher. At the same time the countries of the third cluster start to increase mobile accounts without increasing the quantity of bank branches and ATMs and start to provide financial technologies in the banking sector.	

CONCLUSION

As a conclusion we have to underline that the evolution of information technologies during the last decade has significantly altered the business landscape on a worldwide scale. The integration of information technologies in the business processes resulted in numerous examples of enhanced organizational performance both in developed and developing countries. It is fact that the growth in access to ICTs is boosting economic productivity and banks that use information technologies grow faster, invest more, and are more productive and profitable than those that do not. The positive effects of Information technology integration brought up the issue of business model change for banks that wanted to stay ahead of the competition. But we have to underline the transition to a new business model can only be achieved, if there is a sound understanding of the current business model. However, creating and implementation of new business model is a high-risk strategy, as the probability of getting it right is acknowledged to be low. As technology evolves and new solutions emerge in the business practices, the necessity of business model change becomes greater and banks are faced with the dilemma of change versus their traditional business architecture.

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FUNCTIONAL IMPERATIVES AND DOMINANT IDEAS OF DIGITAL ACCOUNTING SYSTEM DEVELOPMENT

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Abstract
The article examines the theoretical and practical aspects of the conception "digitization of accounting" as the necessary element in the improving process of the technique, technology and organization of accounting process. The system of the enterprises' digitization is based on regular and information collection in time, its analysis, planning and forecasting on this basis of its activity. This system includes all spheres of the enterprise's life and as a result it has the aim to integrate them. It can be used in manufacturing, logistics and marketing, financial and investment-innovation activities. The studying system coincides with accounting tasks largely: formation, accumulation, transformation and transmission of information with purpose of making the effective management decisions. These enterprise's functions can be combined with others in the middle of each department unit without necessity to form a separate structure. The important role in development of digitization system is played by the human factor: the constant improvement and development of staff needs special attention; professional development of digitization workers. The main idea in using digital tools lies in simplifying the accounting process and to performing its inherent functions with maximum efficiency (digitization is inextricably linked with information). Development of accounting system requires a comprehensive using of dissemination and coverage of IT technologies not only by enterprises but also their counterparties, using the latest means of informatization and transformation of existing ones. Because as current technologies, which have been tested and proven their effectiveness, can be used in the enterprises' activity. In the process of organizing the accounting system it must be reformatted an accounting policy of the enterprise, to review a large number of transactions, to review the necessity of using in practice some of them. In addition, in the process of using the principles of digitalization, it is necessary to determine the content and meaning of concepts related to this sphere, the possibility of their usage in the process of accounting system improvement. The main and necessary are the next instruments: maximum usage of digital documents circulation in accounting system – a "must have" for any enterprise; increasing the efficiency of accounting process directly depends on information amount transformed with the help of used digital tools; transformation of existing technology and expansion in the process of usage "cloud services" and systems of interaction between accounting objects; developing the principles of chatbot usage as one of accounting technology tools, through automation of repetitive processes and interactive communication with users (suppliers, contractors, employees, etc.); spreading the system for users by deploying accounting services on a single platform, which will determine its cost effectiveness.

Keywords: information, accounting system, digitization, digital transformation, electronic communication.

INTRODUCTION

The development of information technologies significantly changes the structure of the economy of the state, region, enterprise. The widespread expansion of virtual enterprises that operate solely in the electronic sphere is no longer a novelty;

significant changes also occur within traditional enterprises. The fact that modern IT technologies alter the main factors of the reproduction at the enterprise is becoming an axiom, which, accordingly, changes the tasks of business management and the economy of the enterprise.

At present, a major socio-economic effect depends on the processes of digital transformation of all spheres of life – the digital economy. A significant amount of information is located on millions of websites, replacing television, newspapers and magazines on a large scale. The use of blogs, e-mail, social networks to share important information and conduct business communication is becoming a social norm. All these processes can be characterized by a small but cumbersome statement: "The basic transformation of the present is the transition from offline to on-line mode or digitalization".

RESEARCH RESULTS AND DISCUSSION

The issues mentioned above are the subject of discussion led both by scholars and practitioners around the world. The 20th World Congress of Accountants, held in November 2018 in Sydney, Australia, can be characterized as a historic one. The uniqueness of this event was uniting 6000 accountants from over 130 countries. The theme of this event was related to the changes that are taking place in the world under the influence of dynamic technology development and the way this process influences the development of accounting [1].

During the World Congress of Accountants (WCOA 2018, Sydney) a report was delivered by Dr. Ayesha Khanna (the co-founder and the CEO of ADDO AI, a consultancy firm and artificial intelligence (AI) incubator) on the topic: "The digital factor: artificial intelligence, automation and opportunity – a leap into the 21st century". The author suggested that the audience present should join her in seeking the answer to the question: does the development of technologies in this field really pose a threat to the profession of an accountant?

According to Dr. Ayesha Khanna, we need to understand and accept a well-established fact that a lot of our present reality and virtually everything that will relate to our future, in one way or another, is (or will be) under the influence of artificial intelligence [2]. According to the speaker, the obvious benefits related to the use of IT are clearly illustrated by the fact that almost every month recently more and more countries have announced it as a part of their national strategy for successful development.

And here, according to A. Hannah, the situation seems paradoxical, when within the network of accountants extremely concerned with the development of artificial intelligence its actual use is in the "most embryonic state" at present. However, there are rather impressive opportunities for its use at the existing level of the corresponding technology development in the field of accounting, corporate finance and jurisprudence [2].

Trends in the development of the domestic economy in general, and accounting, in particular, involve the reactive development of digitalization processes. The use of opportunities that information technologies offer in accounting practices is often seen as a threat to the profession. It is argued that an accountant is a profession of the past,

since starting from the moment of transformation of the document management processes of the enterprise from traditional media into cloud resources and other IT tools, people will become obsolete. However, these assertions are questionable, since accounting is a creative profession that often requires sound decisions, the ability to choose the best option from the totality under certain circumstances.

In view of this, it is impossible to disagree with the opinion of Pozov A., a chairman of "All-Ukrainian Accounting Club" NGO and a member of the Methodological Board on Accounting at the Ministry of Finance of Ukraine, who emphasizes the following: "Personally, I imagine an accountant not as a book-keeper or a checker, but as an operating director or business conservation and development consultant applying financial and non-financial information. The accountant is obliged to sit at the main table where management decisions are made" [3].

Conceptual foundations of the modern accounting system management are presented in the article by professor Plaksiienko, V.Ya. and Nazarenko, I.M.. According to the authors, the reaction to the socio-economic relations informatization which contribute to the business processes optimization should be the substantiation of conceptual foundations of paperless accounting management, which should be based on the current active conceptual maintenance of accounting development and take into account the requirements of cognitive-informational economy [4].

Digital economy is a combination of all types of activities based on digital technologies as well as the appropriate infrastructure to support the functioning of digital technologies (processes: creation, collection, processing, storage and transmission of information based on digital systems). Enterprises existing in the digital economy can be broken down into three types, each of them having its own specific features (Table 1).

Table 1. Applicability of digital technologies at enterprises

	Operating principles	**Implementation elements**
"Traditional" industrial enterprises	conducting business and using assets in "offline" mode, but actively applying modern technology as their infrastructure (hardware, communication system, software, ERP and CRM systems)	- exchange of information with tax authorities; - use of electronic document circulation systems, digital signatures; - call-center or loyalty department which operates using big-data.
Online-enterprises	conducting business exclusively through virtual channels, maintaining contact with consumers through virtual showcase exclusively (may have physical assets, but these are only a stock of finished goods, warehouses and outlets)	- integrated into the digital economy to some extent; - Internet is their main sale channel, the place where the revenue is generated; - product promotion devices and advertising channels are also virtual, digital.
Virtual enterprises	conducting business is not tied to a physical asset	- development and expansion through innovative startups.

Digitalization process at enterprises is not just IT business, but the extension of its capabilities in other related fields: managerial, servicing, banking, as well as industrial ones. The latter needs maximum transformation which is a difficult task the solution for which lies in two planes: the objective and the subjective. The objective reason is the banal lack of funds, and the subjective plane is the use of modern technologies in traditional industrial systems, which is a mental problem for business executives because it requires the introduction of something yet unknown and, to some extent, risky.

Modern requests for digitalization at Ukrainian enterprises are changing from production to logistics, accounting, document management, HR department operation.

The digitalization tools can be the following:

1. A smart addressee database – the use of address verification system which increases the productivity of the operator's work. Previously, when working with on-line stores the process involved requesting the address database in a strictly defined format or structuring it manually. Now the recipients' addresses can be transmitted in any form, including the Latin characters, and the system created on the basis of semantic analysis automatically checks the suitability, correctness and transforms it into the required work format.

Based on IT solutions, there has been created a module that makes a delivery within a two-hour time rage accessible to online shoppers.

2. Transparent management reporting: errors are reduced to zero. Sufficiency of information for comprehension of business indicators, its directions in "here and now" time mode, allocation of "bottlenecks" for each of them for making effective management decisions by business executives. That is, to implement "Management accounting" information project in interactive mode, to identify key points for each business direction and to allocate the necessary amount of analytical research; to provide online synchronization with 1C databases and technical implementation through the tools which are technologically essential. It is necessary to conduct training for executives of different levels on the basis of the developed information product (the feedback will provide means for correcting technical, technological, organizational and methodological errors and inaccuracies). These measures will positively affect the functioning of the internal decision-making system at the enterprise, in particular allowing: to reduce the costs of accounting and financial apparatus; to minimize technical errors; to reduce time for managerial decision making; to increase the financial literacy of the staff involved in this process.

3. The use of chatbots in operational activities. This provides for the development of a portal where accounting records for labour cost accounting of the employees of the enterprise would be allocated (creation of a chat-bot which, upon request, sends the necessary personal information which is technically regulated in advance to the employee's personal cabinet where information is stored not only concerning the current period but the preceding periods as well). According to the legislation, personal data is confidential information, so in practice, the accounting service sends the generated accounting records to the email addresses of each

employee, or via personal delivery, which is generally unacceptable taking into consideration the current conditions of technological development.

This is just one example of possible improvement in the operating processes which are numerous at enterprises.

4. Creation of internal service portals – on-line service for real-time interaction among staff and internal structural units (ordering required certificates, using document templates, legal advice, etc.). Such services can be included in corporate wage supplement packages for employees. As a result, with a small amount of resources spent on creating and maintaining the system, we get internal services activities organized in a more efficient way, releasing their employees from routine affairs, and providing the company staff with additional service products for daily use.

5. Digital recruitment service – the use of cloud technologies that would integrate information from recruitment agencies, employment services, and enterprise requests for the required employees. This system allows, at low cost of resources, to provide enterprises with the necessary human resources, especially those that are seasonal or have unequal peak loads (the recruitment of a sufficient number of employees with appropriate qualifications within a minimum period of time, online operation in 24/7 mode, automatic control etc are guaranteed).

There should be mentioned some issues which exist along with the benefits of digitalization. The use of up-to-date information systems and technical tools can cause a shortage of skilled workers and will also require the population which is employed already to have profound changes in thinking and approaches to fulfilling the production tasks towards utilizing the digital economy opportunities.

It is already clear today that new knowledge-oriented segments will emerge in the structure of the economy that will stimulate the demand for digitalization experts. However, the process of total implementation of digitalization mechanisms should be treated with care, and it should be taken into account how this system will change the employment of the population and what new opportunities and horizons it will provide instead. Obvious that today the competency-building process requires more attention to STEM in the long term, but at the same time, the education system must also focus on developing creative skills and critical thinking.

Another important issue that needs to be addressed is the modern model of training and retraining of accounting and tax professionals. This process must meet the adequate requirements of market economy and regional needs which requires improving both the content and the organization of the training process. Today, graduates of institutions majoring in accounting do not have sufficient knowledge of legal issues, taxation, management, contractual relations, the ability to work in situational management mode, and most importantly, to use the digitalization advantages and opportunities.

The higher educational system majoring in accounting should provide diverse and in-depth training for professionals who would possess strategic thinking, the ability to predict events, strive for continuous improvement and knowledge accumulation. Professional training and retraining of accountants is inextricably connected with the use of quality literature, which generally lacks clear scientific

concepts; regulatory documents content duplication takes place; the study content is taught through the application of traditional methodology. Therefore, today there is a need for in-depth presentation of contemporary study content which would be constantly updated.

Continuous improvement of teaching methods of accounting disciplines, widespread use of interactive teaching methods, retraining of teachers is of great importance in training the accountants at the university.

A key skill that a future accounting and taxation professional must possess is to evaluate the possible impact of the tools used in the synthesis of reporting indicators in the stakeholders' opinion and their response in the form of decisions made. The formation of this fundamental skill requires knowledge not only in the fields of accounting and taxation, but also in microeconomics, firm theory, financial management, information technologies, legal studies, psychology, etc. This proves that accounting is creative work that requires a comprehensive understanding of economic activity, as well as its individual elements in detail. It is impossible to master such skills without a quality education in the field of economics. In this context, the axiom is the assertion that human development in the surrounding reality in the world of global technology requires quality education.

At present, the development of the economy requires the professionals to acquire skills and competencies in the field of accounting and taxation using IT technologies, principles of digitalization, etc. That is, the transfer of routine areas of work in its various directions to the means of electronic information processing. The changes that are taking place raise new demands towards accounting staff but, at the same time, open up new prospects for improvement. For example, understanding the methodology of accounting in accordance with international standards opens up both domestic and other markets to professionals, gives an opportunity to speak about the professional competence, and is in demand among business entities.

Modern transformation processes in the economy are taking place at a very fast pace, so the response to changes becomes a key indicator of a professional's success at the labor market.

On the pages of "Everything You Need to Know about Accounting" newspaper, the authors of the article "Improving the quality of accounting and taxation specialists training" Ohiichuk, N. and Vasylyshyn, S. argue that curriculums should be aimed at achieving ten skills and competencies that an employer may be interested in for engaging an accountant into his/her team, in particular: reducing tax pressure on the enterprise; professional experience; the ability to make key commitments; experience in management accounting organization and managerial decision making; communication skills and ability to work in a team; use of IT technologies; the ability to adapt quickly to external changes; experience in using international accounting standards; experience in application of international accounting standards; application of global principles of management accounting; synthesis of theory and practice [5].

The authors of the article "What an Ideal Accountant Should Be Like" published in "Business" magazine emphasize that finding a professional accountant today is not an easy matter and dwell on the social image of a Ukrainian super-accountant. Having analyzed more than three hundred vacancies, experts say that the image of a

modern accountant can be characterized by one key phrase: “Perfection in everything”. The authors note that the requirements for a professional in accounting depend on the scale of the enterprise, but the main tendencies of the labor market are obtaining a higher field-specific education, mastering a foreign language (at a level not lower than intermediate), the ability to work with accounting programs (demand for English software products) and work experience available (not less than 3-5 years) [6].

It should be noted that the skeptics of the profession claim that the necessary knowledge can be acquired through accounting courses, but employers invariably prefer specialists with higher education in this field, since the latter have acquired greater competencies, having knowledge not only in the profession, but also in the disciplines provided that gave the opportunity for the formation of professional logical thinking. Moreover, without mastering a foreign language and the latest information technologies career growth becomes impossible.

In the field of education, the concept of “digital economy” is interpreted into the concept of “digital educational service” – the main current task of this field of knowledge upon which the future progressive development of education and science in the state depends.

The development of professional staff and scientists should be significantly enhanced as it is the category of people who enter active economic life today and is the medium of innovation. The creation of new scientific ideas and their commercialization is an indispensable component in enterprise management, a basic condition of their development. Today, this is a bottleneck in the activities of domestic enterprises. Occasional efforts to improve the educational and scientific processes in educational institutions need to be accelerated if we want professionals who are already living in a new technological setting to meet the demands of the present period. Curriculums need to be modified radically, not trying to defend and accumulate only individual, mostly narrow teaching methods.

The decision-making process is becoming more complicated, thus the requirements applied to the human resources involved in it are also becoming more complex. Despite the current demand for accountants, the requirements applied to involving the human resources are increasing, and it is common practice for many companies to require future candidates to speak foreign languages according to international accounting standards.

Improving the quality of education majoring in “Accounting and taxation” is possible today. The first steps may involve reviewing the curriculums to ensure compliance with the requirements of the most reputable international accounting associations: the American Institute of Certified Public Accountants (AISRA) and CIMA – the Chartered Institute of Management Accountants (the UK). In addition, the experience of European countries proves the long-term benefits of dual education (a combination of theoretical training in classrooms and practical training within the actual enterprise). At the same time, the ability to apply modern information resources and technologies in practice is of particular importance in the training process.

Thus, digitalization provides means both for creating new opportunities in the labor market and causing labor risks the main of which is the risk of shortage of the human resources possessing the correspondent qualification. That is, innovative transformation of the economy provokes transformation of challenges into opportunities in our profession.

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PECULIARITIES OF FORMATION AND EFFECTIVE USE OF FINANCIAL RESOURCES OF THE ENTERPRISE UNDER MODERN CONDITIONS OF MANAGEMENT

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Abstract
The article defines peculiarities of formation and effective use of financial resources of the enterprise under modern conditions of management. In particular, the concept, nature and types of financial resources of the enterprise are revealed, the specifics and conditions of their formation and effective use are characterized. There are identified main types of financial resources used by enterprises for the formation of their assets, financial and economic activities for the purpose of income and profit receiving. It is proved that under market conditions, financial resources are the only type of enterprise resources that can be transformed into any other type of resources in the minimum time interval. It is substantiated that the financial resources satisfy all needs of the enterprise for current activity and development. The article reflects the expediency of applying under such conditions modern mechanisms, principles, effective methods, tools in managing the financial resources of the enterprise to optimize costs and ensure the desired level of income. It is stated that the evaluation of the use of financial resources is efficiency, the latter being provided by the influence of many internal and external factors: economic, legal, social and others. It is shown that despite the existence of a large number of financial strategies and various approaches to determine the efficiency of financial resources of a business entity, it is necessary to implement such a system of criteria that would help most accurately to evaluate the effectiveness of the use of available financial resources in the enterprise and which would be clear, reasoned and took into account the type of economic activity of a business entity. It is proved that in the modern conditions for effective economic and financial activity of the enterprise, every business entity must form its own strategy of financial resources management.

Keywords: finance, financial resources of the enterprise, income, profit.

INTRODUCTION

Under modern conditions of economic development, an important factor in the effective functioning of the enterprise is the sufficient amount of financial resources and their rational use, which is one of the most important indicators of its competitiveness. Financial resources management is one of the most important aspects that determine the effectiveness of business entities in market environment, their financial stability and potential of development. Financial resources management at the level of an individual enterprise provides optimal formation of them, correct choice of directions of financial flows and use for the purpose. This leads to the creation of such a system of financial resources management at the enterprise, which would provide an efficient process of production and sale of products, as well as opportunities for further development and entry into new markets. Therefore, the urgency of the issue is due to the exceptional role of financial resources in the life of the enterprise, as well as the complexity of managing the process of their formation and subsequent use.

RELATED RESEARCH ANLYSIS

Issues of research of theoretical and methodological bases of formation and use of financial resources of business entities have been studied by such leading economists as I. Balabanov, O. Bandurka, V. Bielolypetskyi, I. Blank, O. Vasylyk, V. Hrebelnyi, V. Hrynova, A. Zahorodnii, H. Kireitsev, M. Korobov, V. Rodionova, A. Filimonenkov and others. I. Silina, N. Pohozha, S. Ksondz, P. Havrylo, I. Brodska and others devoted their researches to practical issues related to the formation and use of financial resources of enterprises. Significant contribution to the development of the theory and practice of financial resources management has been made by well-known foreign and domestic scientists-economists: M. Miller, S. Myers, N. Mailuf, Y. Brigham, L. Gapenski, R. Braly, G. Markowitz, U. Sharp, J. Tobin, S. Ross, I. Blagun, O. Zaruba, O. Kulynych, K. Pavliuk, V. Palii, A. Poddierohin, O. Redkin, V. Terokhin, O. Orlov, S. Yurii, etc. In particular, scientists have investigated the mechanisms of formation of financial resources of business entities; they have generalized features of valuation of financial resources of economic entities; evaluated the impact of an industry factor on the structure of financial resources of business entities; proposed measures to clarify the forecasting of financial status and performance of enterprises; considered methods of planning and forecasting the volume of financial resources of the enterprise, determined expediency of the study of the issue of estimation of the financial state of the enterprise under the current conditions of economic development of Ukraine, etc.

In spite of the large number of scientific works, a single definition of the nature of financial resources and their composition has not yet been formulated. This leads to differences in views on the issue of optimization and management of financial resources of business entities, which leads to the introduction of irrational methods of formation of financial resources of enterprises and their use. These problems require further research concerning the improvement of the processes of formation of financial resources of enterprises, planning of the need in capital, minimization of the cost of its involvement, finding the optimal structure of sources of financing of business entities, etc.

The purpose of the article is to substantiate the peculiarities of formation and efficient use of financial resources of the enterprise under modern conditions of management.

RESEARCH RESULTS AND DISCUSSION

Financial resources of business entities are one of the fundamental concepts in the structure of enterprise finance. They are always in monetary form, accumulating in nature, and reflect the formation and use of various funds of the enterprise, income, profit and various forms of enterprise liabilities. The size, condition and structure of financial resources depend on the financing of business entities of the process of extended reproduction, fulfillment of financial obligations to the budget, banks, insurance organizations, socio-economic and technological development of the enterprise as a whole. A sufficient number of financial resources, their effective use determine the financial well-being, solvency, liquidity, financial stability of business entities, which determines a thorough study of processes of formation and use of

financial resources – the basis of financial support for economic activity of enterprises.

Let's analyse the basic definitions of the concept of "financial resources". Thus, the financial encyclopaedia defines financial resources as a set of funds of cash, which are formed during the distribution and redistribution of aggregate social product and national income and are in the possession of the state, local governments, enterprises, organizations of different forms of ownership; financial resources of enterprises are at the disposal of enterprises, including cash funds, currency values, securities, as well as part of funds used in non-security form [24, p. 436].

In the specialized economic literature, financial resources are most commonly understood as the funds available to the entity. P. Havrylko emphasizes that this set of funds is formed in order to finance the development of the enterprise in the future [5, p. 132]. A. Filimonenkov treats financial resources of the enterprise as monetary capital invested for income and profit [25, p. 43]. Yu. Lukina under financial resources means all funds available to the enterprise; these include cash funds and a portion of cash funds in non-security form [14, p. 114]. I. Kozachok under financial resources means the sum of all monetary resources that came to the enterprise for a certain period in the process of sale of products, goods, works, services (operating activities), fixed and current assets (investment activity) and issuance of property and debt (financial activity) [11, p. 278].

V. Oparin considers financial resources as the sum of funds directed to fixed and circulating assets of the enterprise [15, p. 10]. In general, it can be summarized that financial resources – funds available to an enterprise to carry out its financial, economic, investment activities and fulfill certain obligations.

It is important that financial resources are a material embodiment of financial relations at the level of business entities, they include all monetary funds and that part of cash funds used by the enterprise in non-security form (Figure 1). The ability to perform the function of payment instrument and the level of liquidity of assets are the decisive signs of their belonging to financial resources.

It is clear that the volume of production, technical, labour, material security of business entities, their socio-economic development depend on the size, composition and structure of financial resources of the enterprise. They are intended for carrying out current financial and economic activity, economic stimulation, for expenses for extended reproduction, fulfilment of financial obligations to the state budget, state trust funds, legal entities and natural persons. In general, financial resources of business entities are used to purchase fixed assets, intangible assets, inventories for production of goods or services, payment of wages, taxes, lease, insurance payments, etc.

The analysis of various classification features of financial resources of business entities in economic literature makes it possible to divide funds, available to the enterprise, according to two signs: by type and composition, and by sources of their origin (formation). The financial resources of enterprises have the following properties: they have a stage of formation; reflect property; have formative sources and purposes of uses; the structure of financial resources of the enterprise depends on the sources of formation and directions of use [11, p. 278–279].

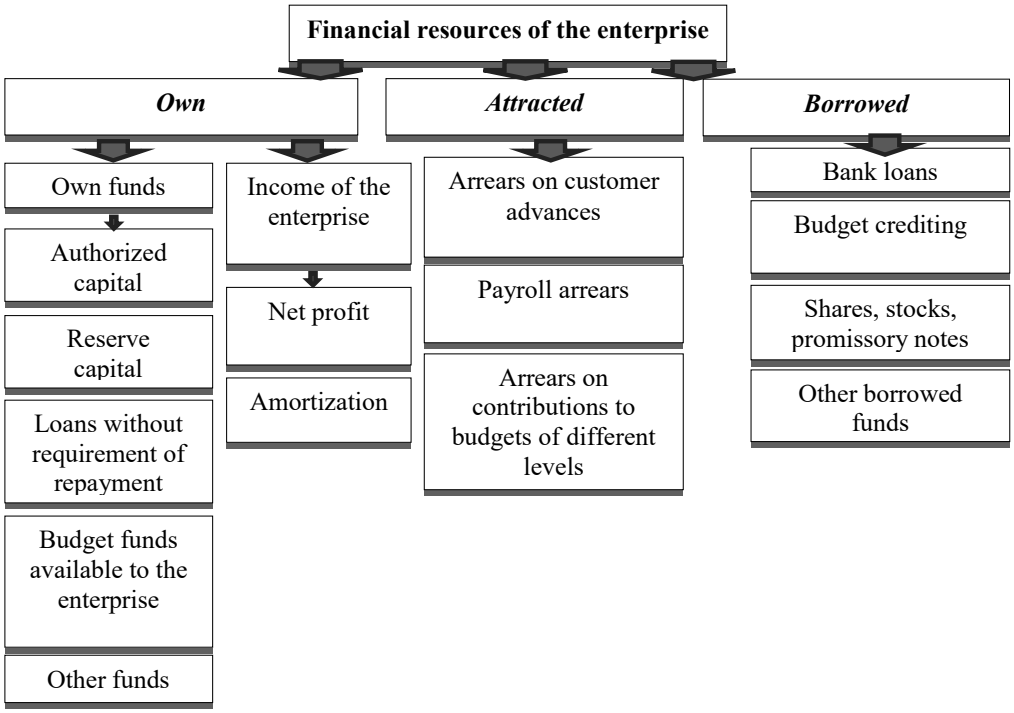

Figure 1. Composition of financial resources of the enterprise

Source: developed by the author according to the data [18]

In addition, financial resources of the enterprise are characterized by certain features that express monetary relations, depend on the primary distribution of the value of gross domestic product, the formation and use of monetary income and decentralized funds; all qualitative characteristics of financial resources are grouped into three groups: general economic; financial; individual [10, p. 102-103].

General economic characteristics (features) of financial resources of business entities include the accumulated value (it is considered by the assets that provide value movement and compliance with social development).

Financial characteristics of financial resources of business entities include:

– object of financial management (financial resources are the central element and the object of influence of financial management);

– source of income (act separately from other factors of production, their use is provided by the formation of cash flows of the enterprise in financial and investment links of activity, and accumulated financial resources are used to finance investments for the purpose of long-term income receipt);

– source of risk (the higher the level of income, the higher the level of risk);

– source of repayment of financial liabilities (accounts payable and receivables may arise before the state, owners, creditors and investors and they should be repaid for what they use financial resources).

Individual characteristics of financial resources of business entities include:

– assets with high transformative capacity (for participation of financial resources in the production process, they must be transformed into other assets);

– main component of financial potential (liquidity of assets and ability to regulate net cash flows are the basic elements for evaluating financial stability, solvency, creditworthiness and investment attractiveness) [10, p. 103].

The formation and use of financial resources of business entities are influenced by various factors – internal (directly related to the activity of an individual enterprise) and external (directly not related to the activity of enterprise, but affect it) (Table 1).

Table 1. Main factors of formation of financial resources of the enterprise

Internal factors	External factors
- level of perfection of financial structure of the enterprise; - linking the marketing strategy to the production strategy; - quality of organization of financial resources management; - selection of market segments according to production capabilities; - quality of financial, management and business accounting; - implementation of pricing policy, based on the cost of production, finding ways to reduce them; - establishment of work with intermediary organizations;	- inflation; - rising prices for resources; - change of political course of government bodies; - financial and tax legislation; - level of financial market development; - welfare of the country and state of economy as a whole.

Source: [17]

Business entities' own financial resources are characterized by the ease of attracting and the absence of additional costs (interest payment), which contributes to the financial stability and the solvency of the enterprise. At the same time, equity of economic entities has certain disadvantages: limited volume of attraction and opportunities for significant expansion of financial, operating and investment activities in the conditions of favorable market conditions; inability to increase the return on equity at the expense of borrowed funds. Therefore, the enterprise that uses only its own financial resources has the highest financial sustainability, but does not use the financial opportunities to increase the return on invested capital through additional borrowing and restricts the pace of its own development.

The sources of borrowed financial resources of business entities are bank and commercial loans, financial leasing, bonded loans and payables. Borrowed financial resources of the enterprise have quite wide possibilities of attraction, especially in case of high credit rating, availability of collateral or guarantee of the guarantor; provide for the growth of financial potential in terms the assets are expanded and the pace of growth of economic activity is increased; ability to contribute to the growth of financial profitability [20]. At the same time, the use of borrowed financial resources by the enterprise has disadvantages: their use is associated with a high dependence of the cost of borrowed financial resources on fluctuations of financial market conditions; risk of financial stability and loss of solvency; complexity of the procedure of raising funds (especially in large amounts) [22]. An enterprise that uses borrowed financial resources has a higher financial potential for development, but it

generates financial and bankruptcy risk, which grows in the process of increasing the proportion of borrowed funds.

In modern conditions, the structure of financial resources of business entities should ensure a combination of own and borrowed sources of financing, conducive to increased return on equity, solvency, financial stability, reduction of financial risks and weighted average cost of financial resources of the enterprise. Growth of the share of own financial resources and self-financing – the best way for an entity to achieve these goals. However, analysis of dynamics of the structure of financial resources of Ukrainian enterprises in 2014–2018 shows the opposite (Figure 2).

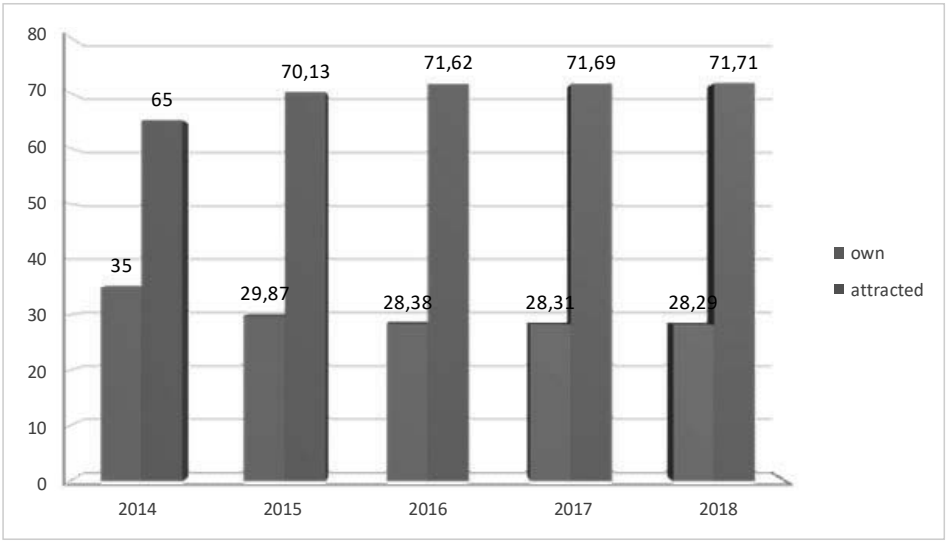

Figure 2. Dynamics of the structure of financial resources of Ukrainian enterprises in 2014–2018, %

Source: developed by the author according to the data [16]

The data shown in the picture indicates a constant decrease in the share of own financial resources and increase in the dependence of business entities on external sources of financing, which signals a general deterioration of the financial condition of Ukrainian enterprises. In the last 5 years, the share of own financial resources of business entities decreased by 7.46%, and the share of attracted financial resources increased by 7.22%. Financing from attracted funds indicates the inability of business entities to ensure effective development at the expense of their own sources, to avoid unjustified accounts payable and to settle liabilities in a timely manner. Also, excess of borrowed funds over their own indicates an insufficient level of financial stability of enterprises.

To study the financial condition of business entities, it is not enough to have information on the structure of financial resources, it is also necessary to analyse the financial results of enterprises and compare them with the structure of financial resources (Figure 3).

We see that the dynamics of financial results of Ukrainian enterprises in 2014-2016 in absolute terms was negative, and the growth of profits of enterprises has occurred only since 2017. There is a continuing downward trend in corporate profits and losses in 2014-2016 period, and a small growth period indicates the inability or lack of use of own funds for economic growth. Such conditions adversely affect the introduction of innovation and investment in enterprises. Also, given the instability of socio-economic development of the state, many business entities find it difficult to raise funds to form their own resources and maintain stable production.

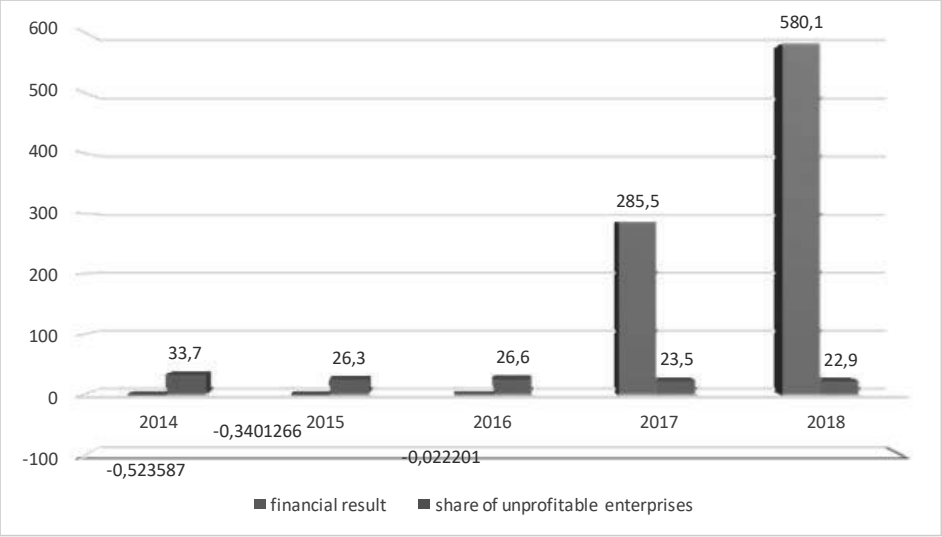

Figure 3. Financial results of Ukrainian enterprises and share of unprofitable enterprises for 2014-2018, bln. UAH.

Source: developed by the author according to the data [16]

It should be noted that enterprises invest in working capital a minimum of their own financial resources, in particular in amounts sufficient to create only minimal inventories of tangible assets and production costs. Other needs for working capital are met by business entities at the expense of borrowed resources, mainly – bank loans on maturity basis and refundability. However, when attracting external financial resources in a number of enterprises, there are problems associated with the risk of reducing financial stability and solvency, appreciation of credit resources and complexity of attracting them, high dependence of the cost of borrowed capital on fluctuations in the financial market. The conditions for granting entities of credit resources for current activities by Ukrainian banks are shown in Table 2.

As it is seen, the terms of crediting of enterprises depend largely on the specific borrower. On average, the corporate credit rate for legal entities in hryvnia amounts to 16.1% [6], which is a rather high figure, for example, compared to foreign practice. It is also a prerequisite for the lender to provide the borrower with pledge – usually

immovable property and vehicles. However, many small businesses in Ukraine use rented property that cannot be pledged.

Table 2. Terms of crediting of current activity of enterprises in 2017

Main terms of credit	The biggest banks in Ukraine				
	Savings Bank	***Ukreximbank***	***Privatbank***	***Ukrsibbank***	***Raiffeisen Bank Aval***
1	2	3	4	5	6
Credit purpose	Replenishment of working capital, financing of the client's current business activities	Replenishment of working capital, financing of the client's current business activities	Replenishment of working capital, financing of the current business activities	Replenishment of working capital, financing of the client's current business activities	Replenishment of working capital, financing of the client's current business activities
Credit amount	amount of credit limit shall correspond the current type of activity	from 50 000 up to 100 000 000 UAH	from 500 000 up to 2 000 000 UAH	from 100 000 000 UAH	up to 16 600 000 UAH
1	2	3	4	5	6
Credit term	Up to 3 years	Up to 12 months	Up to 12 months	Up to 3 years	Up to 18 months
Credit currency	UAH, USD, EUR	UAH, USD, EUR	UAH	UAH, USD, EUR	UAH
Interest rate	From 19% in UAH, from 12% in USD, from 12% in EUR	From 17,5% in UAH, from 8,4% in USD, from 7% in EUR	90 days – 19%, 180 days – 20%	From 13,9% in UAH, from 3,9% in USD, from 3,9% in EUR	16–18%
Credit repayment	Monthly / quarterly / equal parts	According to the schedule under credit agreement	zeroing every 90/180 days	According to the schedule under credit agreement	According to the schedule under credit agreement
Provision of credit	Immovable and movable property, property rights, surety	Immovable property, vehicles, machinery and equipment, property rights to deposit	collateralized liquid assets: commodity in circulation (coverage ratio at market value – 2.5)	Liquid property, possibly in combination with property rights, surety	Immovable property, vehicles, machinery and equipment, property rights to deposit

Source: [6]

In modern conditions of enterprise activity, it is impossible to give preference to any single source of financial resources due to negative consequences. Thus, when using only own funds, there is a threat to limit the growth of financial potential of enterprises, and the use of borrowed and attracted funds in large volumes, on the other hand, does not only provide the opportunity for survival and development in conditions of instability, but also significantly increases the degree of risk in financial activity of enterprises. To ensure continuous production and economic activity, each enterprise should have sufficient financial resources, and their structure should contribute to the achievement of the optimum level of profitability, strengthening of financial stability, ensuring a sufficient level of solvency and increase of market value in general [7].

A significant cause of the crisis situation of many domestic enterprises in an unstable economy is the improper performance of financial services assigned to them,

in particular – the lack of financial planning (budgeting) and analysis, risk management, work to optimize the structure of assets and liabilities [12, p. 32]. Often this is due to the fact that the responsibility for financial work in the enterprise rests with the accounting department, and the financial services are either absent or their tasks are uncertain. The unsatisfactory performance of financial services is also reflected in the fact that most domestic enterprises are insolvent because the available current assets are not enough to meet current liabilities [3, p. 185]. Activity of financial services of the enterprise should be concentrated on search of possible internal and external sources of financing of investment projects, operational activities and ways of their most "favorable" involvement [5, p. 132]. In some cases, financial resources should be formed by raising equity, in others, by raising additional loans. For some enterprises, it is more profitable to use internal sources of financing, for others – external. Therefore, the financial services of enterprises should determine the most suitable financing possibilities for the specific conditions.

In modern conditions, the factors of the state of economy of Ukraine, which exist independently from the activity of the enterprise, have a great negative impact on the efficiency of use of financial resources. However, business entities have internal reserves to improve the efficiency of financial resources: long-term business relationships; improvement of calculation system; rational sales organization; systematic control over the turnover of funds. However, the short term strategic objective should be to improve the financial support system of business entities by improving its structure, in which the own sources of formation of financial resources should be dominant [8, p. 59].

Following A. Bielous [23], we consider that the process of formation of financial resources of business entities, which is an integral part of comprehensive system for managing its efficiency, should be based on the following basic principles:

– consistency (allows to manage financial resources taking into account factors of external and internal environment of functioning);

– integrity (management of financial resources in combination with other resources – material, labour and information);

– complexity (ensures the development and adoption of such management decisions that affect the efficiency of the enterprise);

– synergy (ensures coordination of all operations and promotes greater economic effect);

– adaptability (creates conditions for managing financial resources within a flexible system of adaptation to changing market environment);

– dynamism (ensures establishment of sufficient speed of movement of financial resources between all subsystems of the enterprise);

– scientific nature (defines the need to apply scientific analysis and implementation of new approaches to managing financial resources of business entities).

Effective system of use of financial resources is required in order to rationally solve social and economic tasks. The main task for financial managers should be to choose the optimal strategy for the formation and use of financial resources of enterprises, which would provide profitability, solvency, reduce the risk of financial

risks and increase financial capacity. The financial manager of the enterprise should thus choose the optimal balance of external and internal financial resources, answering the following questions: what share of the profit to send to the accumulation fund, and what – to the consumption fund; how best to use the funds (start a new production or buy shares of another company); where to invest more efficiently (for example, to buy materials as they are needed or with a stock for the future); how to increase the value of funds (through the issue of own shares or credit) [22].

Investigating the tendencies of the structure of formation of financial resources, their use and connection with the financial result of Ukrainian business entities, we will distinguish the following ways of their improvement:

1) creation of sufficient information base on the financial and economic activity of the enterprise;

2) optimization of the structure of financial resources and selection of effective sources of attraction of financial resources;

3) provision of the necessary amount of financial resources for carrying out the activities of the enterprise and covering its obligations;

4) constant monitoring of financial resources by criteria (solvency, sustainability, business liquidity).

It is important that the system of managing the formation and use of financial resources of business entities should become part of financial mechanism of the enterprise based on the use of effective methods of formation of financial resources: provision and regulation [25]. Provision methods include financial market mobilization, self-financing, government and mutual financing. Regulation methods include regulation, planning, forecasting, control. The interest rate, securities rates, tax rates, norms and procedures for depreciation, pledge, currency rates, public procurement volumes, allowance and subsidies size, conditions for access to the credit market may be the levers of the mechanism of formation of financial resources of business entities. Investments, securities, income, taxes, leasing, government purchases, credit, factoring, currency values, allowance, depreciation, subsidies and subventions belong to formation tools of financial resources of business entities.

An important element of the mechanism of formation of financial resources of business entities is regulatory support (laws and regulations of the state and specific ministries and departments). Information support is also important. The internal information of business entities includes the conclusions of internal audit, data of internal financial statements and accounting, indicators of the financial condition of the enterprise. The external information of business entities includes the state of development of industry, state regulation, indicators of financial market development, political situation in the country, situation of the world financial market, main indicators of the monetary market. The last element of the financial resource formation mechanism is financial policy of business entity, which includes dividend, investment, amortization and management policy of the enterprise in general. The mechanism of formation of financial resources should be developed taking into account the specific conditions of operation of the enterprise, characteristics of the environment and strategic goal of activity.

CONCLUSION

So, financial resources of the enterprise can be defined as funds available to the enterprise for the purpose of extended reproduction and achievement of financial results. Financial resources of the enterprise are formed during the foundation of enterprises, are created at the expense of own and equivalent funds, come from the sale of products, provision of services in the form of income, are attracted through bank loans, mobilized in the financial market. Financial resources, which are formed at the enterprise level, provide the opportunity to produce products, invest, generate working capital, create economic incentive funds, fulfill commitments to the budget, financial and credit system, suppliers and employees. In the process of functioning of the enterprise, financial resources have the ability to be transformed into material, labour resources, which are integral parts of the production process. The analysis of the activity of domestic enterprises indicates that the vast majority of Ukrainian enterprises face the problem of efficient formation of financial resources and the choice of their rational structure. The dynamics of financial results of Ukrainian enterprises shows a decrease in profitability, which significantly limits the sources of formation of financial resources, as well as the possibility of repayment of attracted financial resources. The main sources of formation of financial resources are own and borrowed funds, which predominate in the structure of financial resources of the enterprise, finance assets, and are obligations to counterparties (state, natural persons, legal entities). To achieve the maximum possible results of financial and economic activity of the enterprise it is necessary to choose the optimal structure of financial resources, which is one of the main tasks of the modern financial manager. It is also necessary to constantly monitor the use of financial resources, to react quickly to changes, to find rational answers to the question: how many funds are required, for what purpose funds are required, what is the best way to spend funds.

Perspectives of the study are the directions of solving the issues of providing enterprises with financial resources. Therefore, further searches should be aimed at increasing the efficiency of domestic enterprises in order to increase the share of their own financial resources and expand the possibilities of using the attracted capital with minimal credit risks, in particular to determine the rational structure of own and borrowed financial resources; analysis of expediency and efficiency of the use of available financial resources of the enterprise in order to achieve a sufficient level of solvency, strengthen the financial stability and increase the market value of the enterprise as a whole.

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LOGIT AND PROBIT MODEL FOR PREDICTION THE FINANCIAL HEALTH OF INSURANCE COMPANY

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Abstract
A model for prediction the financial health of insurance company has been developed. The existing leading world and Ukrainian experience of prediction the financial health of financial intermediaries − banks and insurance companies − has been investigated. It was shown that for this need one of the most commonly used methods is the different types of regression equations − linear, logit and probit. As a result of the financial crisis 2015 in Ukraine, some insurance companies have ceased their activities and were deprived of their licenses. Therefore, the financial statements of these companies have been investigated in order to develop a model for prediction their financial health. This analysis was determined 31 indicators of their activities for the groups of liquidity, solvency and financial stability, profitability, business activity, as well as for the group of specific indicators of early warning tests. The selection of normally operated insurance companies and those that were withdrawn in Ukraine was made based on open sources, since an open register of insurance companies were not created by the financial regulator. For the screening of predictors to be included in the model for prediction the financial health of insurance companies, a two-choice F −test for variance, the Farrar-Glauber algorithm and the pair correlation method were applied. Three factors were included in the linear, logit and probit regression equations − gross return on equity, asset turnover, and indicator of changes in equity. The quality of the linear regression equation was checked using the coefficient of determination, F −criterion and p −statistics, logit and probit regression equations − level of significance (maximum likelihood estimator), bankruptcy cases, the residual sum of squares (RSS). Based on the financial statements of Ukrainian insurance companies, linear, logit and probit regression equations have been obtained, which can be used to assess the contributions of various factors to the future financial position of insurance companies, determine the probability of bankruptcy and prospective financial health.

Keywords: insurance company, prediction the financial health, logit and probit model, regression.

INTRODUCTION

Amidst instability in the economic and financial system, the management of financial intermediaries should constantly monitor financial health and assess its propensity for bankruptcy. Financial supervisory authorities are also interested in this, since an operational analysis of the financial position of financial intermediaries and the prevention of their crisis states forms the basis for improving the effectiveness of supervisory activities and achieving its primary objective − to ensure stability in the financial sector, which is not possible without the stability of individual financial intermediaries. This task can be accomplished within the framework of off-site financial supervision, based on the use of models for prediction the financial health and early diagnosis of bankruptcy probability. On the one hand, financial intermediary management cannot neglect the ability to improve financial performance, on the other, their managers are required to identify problems, risks,

threats and crisis phenomena in an institution's activities in a timely manner.

PREVIOUS RELATED RESEARCH

Nowadays, there is a wide range of methodological tools for determining the bank financial health and stability, such as statistical method, stress testing, rating system, macroprudential, expert, coefficient, factor, integral, structural and functional discriminant analysis [4, p. 117-118]. The same methods can be applied to non-bank financial intermediaries. For timely determination of the financial heath and a thorough understanding of the financial situation, these methods should be combined, since the results obtained and the estimates regarding the financial situation with the financial intermediary make it possible to draw a comprehensive picture.

Daniel Martin developed a group of equations for early warning of bank failure in 1969-1974. For each of these years, he determined the number of bankrupt banks and banks that continued operations [5]. Based on these calculations, he hypothesized that each bank has the same propensity for bankruptcy, which is equal to the ratio between bankrupt and non-bankrupt banks in the respective year. In his research, he examined the impact of 25 factors on banks activities. These factors were grouped as follows: asset risk, liquidity, capital adequacy, income. Building upon the progress already made, Martin constructed logit regression equations for different forecast horizons.

The study conducted by Hanweck is based on a sample of 177 banks, whose activities were estimated for the period 1973–1975. He identified the following factors for probit regression: net operating income / total assets; own equity / total assets; percentage change in net operating income / total assets; percentage change in total assets; loans / total capital; the size of the bank by volume of assets [4].

In 1996, R.S. Barr and T.S. Siems offered to include in an investigation the factors that not only explains direct banking activities (own equity / loans, inactive loans / assets, net profit / total assets, large deposits / total assets), but also such indicators that describe management quality and economic conditions [2]. The models were built for one- and two-year forecast horizons, with estimates being 92.4% and 94.8%, respectively.

In the same vein, by studying the activities of about 1,500 US banks, J. Tatom developed a logit and probit model based on CAMEL estimates and other indicators for one-year, two-year and one-quarter forecast horizons [10].

There are also some developments in determining the future financial health of insurance companies and in predicting their likelihood of bankruptcy. C. Anghelache and D. Armeanu classified the insurance companies operating in the Romanian insurance market in 2006. According to the results of the study, the following indicators were selected: gross premiums, net mathematical reserves, gross payments, net reserves, net income, authorized capital, reinsurance operations [1]. A broader perspective has been adopted by Z.D. Martinez, J.F. Menendez and J.S. Vargas who used non-parametric methods in order to predict the financial health of insurance companies along with discriminant analysis [6]. These methodological approaches have been used for Non-life insurance companies in Spain.

RESEARCH METHODOLOGY

The large number of bankrupt financial intermediaries in 2014-2016, and in particular of banking institutions and insurance companies, determines the need to improve the methods of express diagnostics of financial health, which will improve the practice of financial supervision. One of the most common approaches to prediction the financial health and forecasting the likelihood of bankruptcy of financial intermediaries involves the model construction based on economic and mathematical methods as a combination of various factors that affect the activities of the institution. According to this method, when constructing the function, it is a need to determine the weight that characterizes the power of influence of a factor on the financial health of the intermediary as a whole. We use a toolkit of binary choice models, including logit and probit functions, which can take values from 0 to 1. We also use a linear regression for better understanding the impact of factors on bankruptcy probability and the prospective financial position of an intermediary. The analysis can be based on bankruptcy data of insurance companies that have occurred in recent years in Ukraine.

A study sample consists of 12 insurance companies, of which 6 ceased their activities and 6 that functioned normally. An open register of insurance companies operating in the market and their financial and management reporting have not been established in Ukraine. Using open-source information, it is impossible to obtain accurate information about the characteristics of insurance companies and to create a large sample of financial intermediaries.

The scale for a binary variable is determined on the basis of an empirical study of the financial intermediaries activities: $p = 1$, if a financial intermediary bankrupt, $p = 0$, if the intermediary works in the financial market without problems. Independent variables are predictors that reflect the financial position of intermediaries: x_1, x_2, …, x_k. In doing so, the following types of regression equations should be constructed:

– linear:

$$p = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k, \quad (1)$$

– logit:

$$p = \frac{1}{1+e^{-Z}}, \quad (2)$$

where

$$Z = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k; \quad (3)$$

– probit:

$$p = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{x} e^{\frac{-z^2}{2}} dz, \quad (4)$$

where

$$Z = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k. \quad (5)$$

The construction of the linear equation in our study is only due to the fact that we can judge the specific impact of predictors on the probability of bankruptcy of insurance companies or banks. However, given the linearity of the relationship, bankruptcy probabilities p can go beyond this equation $[0; 1]$, making it difficult to predict using a linear model. Therefore, logit and probit models are better suited for this purpose.

The difference between logit regression and probit regression is that the first value of the function p is in the range from 0 to 1, and in the second − as close as possible or equal to 0 or 1. The logit-regression toolkit was developed in the 1950's and 1960's, while the probit-regression toolkit was developed somewhat earlier in the 1930's. Logistic regression is used to construct logit-regression and normal when constructing probit-regression.

The parameters of the regression equations is determined using the statistical analysis software package STATISTICA 10.

RESEARCH RESULTS AND DISCUSSION

For this study, the selection of liquidated and properly functioning insurance companies was made on the basis of data of the National Commission, which carries out state regulation in the sphere of financial services markets.

Based on the financial statements of insurance companies for 2015 [9], the study sample was formed based on array of metrics that are reflected in the statement of financial position and income and expenses of insurance companies. To consider whether to include insurance companies in the financial forecasting model, 31 indicators were identified:

x_1 – working capital / (short-term liabilities + insurance reserves);

x_2 – (cash + short-term financial investments) / short-term liabilities;

x_3 – (working capital − long-term accounts receivable) / (short-term accounts payable + insurance reserves);

x_4 – (cash + short-term financial investments + short-term receivables) / (short-term accounts payable + insurance reserves);

x_5 – cash / short-term liabilities;

x_6 – value of balance sheet profit / volume of capital;

x_7 – net profit / own equity;

x_8 – income from investment of insurance reserves / (short-term financial investments + long-term financial investments + securities);

x_9 – most liquid assets / short-term liabilities;

x_{10} – (working capital − deferred costs) / short-term liabilities;

x_{11} – income of the insurance company / assets;

x_{12} – total income / own equity;

x_{13} – total income / current assets;

x_{14} – own equity / total capital;
x_{15} – total capital / own equity;
x_{16} – (current assets − current liabilities) / own equity;
x_{17} – own equity / borrowed capital;
x_{18} – borrowed capital / total capital;
x_{19} – net income / assets;
x_{20} – net income / own equity;
x_{21} – accounts receivable / total capital;
x_{22} – highly liquid assets / liabilities;
x_{23} – net premiums / total capital;
x_{24} – liabilities / total capital;
x_{25} – net profit / total capital;
x_{26} – payouts and expenses / net earned premiums;
x_{27} – total capital at the end of the period / total capital at the beginning of the period;
x_{28} – the amount of net premiums at the end of the period / the amount of net premiums at the beginning of the period;
x_{29} – net premiums / gross premiums;
x_{30} – net insurance reserves / total capital;
x_{31} – profit from financial activities / financial investments.

The indicators selected in this research belong to different groups - liquidity, solvency and financial stability, profitability, business activity, as well as to a group of specific indicators of early warning tests of insurance company instability. The choice of predictors to be included in the model is followed by the use of a two-choice F –test for variance, the Farrar-Globe algorithm, and the pair correlation method.

To test the adequacy of the obtained models, special indicators should be calculated: for linear regression – R^2, F – criterion, p – statistics, for logit and probit equations: χ^2, level of significance (maximum likelihood estimator), bankruptcy cases, the residual sum of squares (RSS). Equation testing should also be based on determining theoretical values of a function and comparing them with empirical values.

In order to select the predictors of the insurance companies activity for inclusion in the model, we tested their significance using a two-choice F –test for variances (Table 1). Given the levels of freedom with a probability of 0.95, the tabular value of the F –criterion is 0.198.

Comparing the calculated values with the critical ones, a number of indicators from the totality of the insurance companies indicators were removed due to their statistical insignificance: x_1, x_2, x_3, x_4, x_5, x_9, x_{10}, x_{12}, x_{13}, x_{14}, x_{15}, x_{16}, x_{17}, x_{18}, x_{21}, x_{22}, x_{24}, x_{26}, x_{28}, x_{29}, x_{30} and x_{31}.

Using the Farrar-Glouber algorithm, the variables were standardized and a correlation matrix was made. Then, having defined the criterion χ^2, the multicollinearity in the data set were defined. This conclusion was made by comparison defined the criterion χ^2 (134.66) and its table value (23.27). If $\chi^2 > \chi_{tabl}$

there is multicollinearity in the data set. By constructing a matrix of pair correlation coefficients (Table 2), the tight relationship with factors such like x_6 and x_7; x_6 and x_{25}; x_7 and x_{25}; x_8 and x_{20}; x_{11}, x_{19}, x_{20}, and x_{23}; x_{19}, x_{20} and x_{23}; x_{20} and x_{23} was found. To get rid of multicollinearity, the factors x_7, x_8, x_{19}, x_{20}, x_{23} and x_{25} were removed.

Table 1. F –criterion values for indicators of insurance companies performance

Indicator	x_1	x_2	x_3	x_4	x_5	x_6	x_7
F –criterion	0.000	0.012	0.000	0,000	0,037	9,218	39,901
Indicator	x_8	x_9	x_{10}	x_{11}	x_{12}	x_{13}	x_{14}
F –criterion	54.423	0.012	0.000	0,434	0,022	0,120	0,054
Indicator	x_{15}	x_{16}	x_{17}	x_{18}	x_{19}	x_{20}	x_{21}
F –criterion	0.007	0.059	0.026	0,063	0,730	10,953	0,001
Indicator	x_{22}	x_{23}	x_{24}	x_{25}	x_{26}	x_{27}	x_{28}
F –criterion	0.000	6.659	0.007	34,022	0,000	1,945	0,001
Indicator	x_{29}		x_{30}		x_{31}		
F –criterion	0.000		0.094		0.000		

Source: calculated on the basis of the Agency for Stock Market Infrastructure Development of Ukraine [9], annual reports and financial statements of insurance companies

Table 2. Matrix of pair correlation coefficients

	x_6	x_7	x_8	x_{11}	x_{19}	x_{20}	x_{23}	x_{25}	x_{27}
x_6	1.000								
x_7	0.995	1.000							
x_8	0.241	0.283	1.000						
x_{11}	-0.243	-0.193	0.405	1.000					
x_{19}	-0.086	-0.034	0.504	0.828	1.000				
x_{20}	-0.030	0.025	0.675	0.782	0.951	1.000			
x_{23}	-0.287	-0.228	0.560	0.749	0.930	0.941	1.000		
x_{25}	0.804	0.750	-0.013	-0.329	-0.268	-0.256	-0.481	1.000	
x_{27}	0.466	0.493	0.419	0.287	0.425	0.542	0.283	0.230	1.000

Source: calculated on the basis of the Agency for Stock Market Infrastructure Development of Ukraine [9], annual reports and financial statements of insurance companies

Taking into account previously removed factors, the final list of predictors of insurance companies' activity for constructing regression functions (gross return on

capital (x_6), turnover of assets (x_{11}) and indicator of changes in capital (x_{27})) were obtained. The obtained parameters of the equations for the regression equations for prediction the financial health of Ukrainian insurance companies are given in Table 3. To evaluate the adequacy of the linear equation, the standard error and t –statistics for all regression equation coefficients were calculated. The multiple regression coefficient is 0.85; the determination coefficient is 0.72. The value of F –criterion is 6.72 with a theoretical value of 4.07, which indicates the adequacy of the obtained regression equation. The p –statistic values for the parameters β_6 and β_{27} correspond to a significance level of 0.05.

Table 3. Parameters of regression equations for prediction the financial health of insurance companies in Ukraine

Parameters	Regression		
	linear	logit	probit
β_0	1.300	49.932	10.455
β_6	0.966	12.200	4.504
β_{11}	-0.674	-65.464	-13.293
β_{27}	-0.305	-7.521	-2.295

Source: calculated on the basis of Forinsurer data [3] and National Commission for Regulation of Financial Services Markets in Ukraine [7]

An analysis of the impact of the predictors according to the values of linear regression coefficients on the performance trait showed that an increase in net return on equity and a decrease in asset turnover and insurance risk reduced the likelihood of bankruptcy of insurance companies.

The obtained logit-regression equation for f prediction the financial health of insurance companies in Ukraine has a value of χ^2 statistics equal to 16.63. This is indeed a vindication of the fact that selected predictors affect the probability of bankruptcy of Ukrainian insurance companies. The percentage of cases of foreseen insurance companies bankruptcies as well as those that continued their functioning is 100%. The sum of squares of residuals is also insignificant – 0.000805313, which indicates the normal quality of the obtained probit-regression.

The obtained probit-regression equation for forecasting the financial position of Ukrainian insurance companies has a value of χ^2 statistics equal to 16.55, which confirms the hypothesis about the impact of selected predictors on the financial health of Ukrainian insurance companies. The percentage of cases of foreseen insurance companies bankruptcies as well as those that continued their operations is 100%. The sum of the residual squares is also insignificant (0.043650596) and is a testament to the quality of the obtained probit-regression equation.

Based on the obtained parameters of equations for prediction the financial health of insurance companies in Ukraine, the regression equations are as follows:

linear regression

$$p = 1.300 + 0.966x_6 - 0.674x_{11} - 0.305x_{27}, \quad (6)$$

logit-regression

$$p = \frac{1}{1+e^{-(49.932+12.200x_6-65.464x_{11}-7.521x_{27})}}, \quad (7)$$

And also probit-regression

$$p = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{x} e^{-\frac{(10.455+4.504x_6-13.293x_{11}-2.295x_{27})^2}{2}} dz \quad (8)$$

Also, the theoretical values of the p function were calculated. The results of this assessment presented in the Table 4.

Table 4. Empirical and theoretical values of the functions of regression equations for prediction the financial health of insurance companies in Ukraine

Name of insurance company	Empirical value	Theoretical values		
		linear	logit	probit
PJSC NASK “ORANTA”	0.000000	0.380410	0.000661	0.018899
PJSC IC “Providna”	0.000000	-0.522770	0.000000	0.000000
PJSC SG “TAS”	0.000000	0.175730	0.000000	0.000000
PJSC “UPSK”	0.000000	0.428840	0.000003	0.001319
PJSC USC “Knyazha”	0.000000	0.167690	0.000000	0.000000
PJSC IC “UNIQA”	0.000000	0.220740	0.000000	0.000000
PJSC IC “Vector Invest”	1.000000	0.857960	1.000000	0.999750
PJSC IC “Vector Invest Life”	1.000000	0.913990	1.000000	1.000000
PJSC SC “Standard Re”	1.000000	0.843110	0.999860	0.977322
PJSC IC“Zlagoda”	1.000000	0.947820	1.000000	1.000000
PJSC SC “Atlanta”	1.000000	0.776828	1.000000	0.999942
PJSC USC "Garant-Life"	1.000000	0.807170	1.000000	0.999996

Source: calculated on the basis of Forinsurer data [3] and National Commission for Regulation of Financial Services Markets in Ukraine [7]

Thus, for linear regression, p values for some insurance companies go beyond the range $[0; 1]$, while for logit and probit regressions, theoretical p values are completely consistent with empirical values. Therefore, logit and probit regressions can be used for prediction the financial health of insurance companies.

CONCLUSION

Developing models for prediction the financial health of insurance companies could be viewed as one of the ways to improve the financial management of insurance companies and manage their risks. Other institutions and individuals, such as financial supervisory authorities, potential customers, business partners and other stakeholders interested in understanding the level of stability and reliability of an insurance company, could also use these models.

The first stage of models for prediction the financial health of insurance company's development involves the selection of insurance companies that operate stably and ceased their operations for a certain period of time. Usually, such selection is made in the years corresponding to the financial crisis − when some of the insurance companies operating in the market go bankrupt, lose their licenses and cease their business, while others − overcomes the crisis and adapts its business model to the new conditions of functioning. A primary goal of the next stage is to calculate as many indicators as possible to show the financial position of the insurance companies and form a short list of indicators that will be included in the model, based on the use of such tools as a two-choice F −test for variance, Farrar-Glouber algorithm, pair correlation. The third stage is to determine and analyze the parameters of the linear, logit and probit regression equations. The last, but not least stage is to check the quality of the obtained equations: linear − R^2, F –criterion, p –statistics; logit and probit − χ^2, level of significance (maximum likelihood estimator), bankruptcy cases, the residual sum of squares (RSS).

Based on the financial statements of Ukrainian insurance companies, linear, logit and probit regression equations have been obtained, which can be used to assess the impact of factors on the future financial position and determine the probability of bankruptcy of insurance companies and prospective financial health.

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STATUS, TRENDS AND DEVELOPMENT OF THE LIFE INSURANCE MARKET IN UKRAINE AND IN THE WORLD IN CONDITIONS OF FINANCIAL GLOBALIZATION

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Abstract
The essence and role of life insurance as a method of risk management to ensure personal financial security in the economy has been investigated. There has been characterized the content of financial globalization in modern conditions. The system of indicators for assessing the level of development of the insurance market and their economic interpretation has been investigated. Status and trends of the global life insurance market and regional markets are analyzed. The main macroeconomic indicators of the life insurance market in Ukraine in conditions of intensification of integration and globalization processes has been investigated. Based on the analysis and generalization of the sound system of indicators by the cluster analysis method, it was made the classification of the countries of the world according to the level of development of the life insurance market. The main forms of manifestation of financial globalization in the domestic life insurance market are investigated: absorption, merger of insurance companies and peculiarities of functioning of foreign insurance and reinsurance companies. Reasons for the low level of development of the life insurance market in Ukraine were determined. There has been generalized positive and negative consequences of globalization processes in the life insurance market in Ukraine and their implications for the domestic economy through the method of strategic analysis of PEST. It is made the conclusion about the high potential of the life insurance market in Ukraine. The main measures aimed at activating the life insurance market in Ukraine and the role of foreign insurers in these processes are offered.

Keywords: life insurance market, indicators, cluster method, financial globalization.

INTRODUCTION

Development and formation of mankind are influenced by a set of factors, the impact of which can have both positive and negative consequences. This operation is continuous as human activity leads to new risks, in the process of applying tools and implementing mechanisms to capture existing ones which are manifested in economic and social losses. Thus, human community faces the need to find reliable and effective mechanisms that will enhance the impact of positive factors (achieving sustainable economic growth, increasing life expectancy and quality, increasing people's education, etc.) and avoid or minimize the negative ones (wars, global warming, poverty, overcoming social inequality, disease etc.). One of such effective tools to overcome the economic impact of environmental uncertainty and permanence which was invented by humanity in ancient times and still is used, is insurance.

In today's context, the nature of insurance has been sufficiently researched in the scientific community and there is no discussion about its content, but it is indisputable that the category «insurance» is multifaceted and regarded as a type of civil legal relations [1], as a type of economic activity [2; 3], as a risk management method [4], etc.

RESEARCH RESULTS AND DISCUSSION

Today, the problem of finding ways to ensure personal financial security is increasingly relevant since market-type economic systems reduces the economic contribution of the state, offsetting this by creating effective mechanisms for its implementation within the legal field and providing free choice to the individual, including a specific financial institution.

Having considered many years of experience of functioning of life insurance institution, generalized research in this area, we can distinguish the role of life insurance:

– at the micro-level (individual) it provides protection of property personal interests, related to human life, health and performance; a significant psychological effect of financial security awareness is achieved in case of occurrence of the unforeseen event (certain insurance risk) and the subconscious inclusion of preventive measures by the insured person aimed at minimizing them; is financial service for saving and accumulating cash for citizens by the insurance company;

– at the macro level (country, region, world) – is an important financial intermediary, a powerful institutional investor that accumulates a free long-term financial resources and effective division between economic sectors, taxpayers and an integral part of the financial market of the country, etc.

The emergence and further development of life insurance markets is under the influence of financial globalization as an objective process for development of the world economy, caused by the over-openness of the world economies and their desire for sustainable economic growth, domination and competition for financial resources and control over their distribution.

Today, insurance is one of the most globalized forms of the financial market. Globalization of the insurance relations is leveled in the elimination of economic and legal obstacles between national insurance markets in order to form the global insurance space**.**

Financial globalization is affecting the insurance market because of the emergence and functioning of the global financial market, implementation of global financial strategies of MNCs (multinational companies), free and efficient movement of capital between countries and regions of the world, formation of a system of supranational regulation of international finances, creation of global networks. Creating the global insurance market, the essence of which is determined by the close intertwining of the totality of financial relationships by which national markets influence each other and the world market as a whole, are taking place at the present stage of formation of the global economy. Globalization of the insurance market is a controversial process. On the one hand, it modernizes the mechanism of the insurance activity by applying fundamentally new technologies, allows to diversify risks and reduce the cost of services. On the other hand, participation in globalization processes is not always effective and safe for national insurance operators, as there are risks of absorption related to the low level of their own development and the prospects of expanding the field of activity for transnational insurers [5].

The system of indicators that allows you to make comparison and collation, identify disparities and uneven distribution of life insurance in the world, is formed to

determine the status and level of development of the insurance market in the country. It should be noted that life insurance is not an essential service and its acquisition depends on many factors: financial position of the person, awareness of its need (determined by the level of financial literacy), demographic situation, macroeconomic indicators of the economy of the country (inflation rate, currency, GDP). In general, the insurance market indicators are a kind of indicators of economic development as a whole.

Life insurance market is one of the components of the insurance market of the country; the latter includes the general (risk) insurance market and the reinsurance market (horizontal structure). The insurance market of the country is a component of regional insurance market and the aggregate of regional markets is the world insurance market (vertical structure) (Figure1).

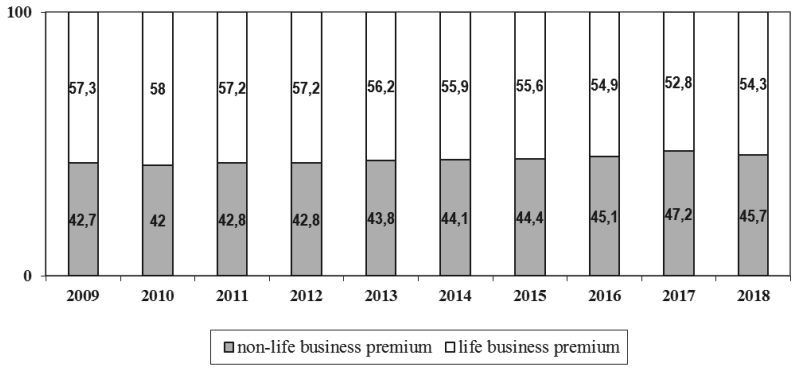

Figure 1. The dynamics of the structure of the world insurance market by the amount of collected premiums, %

Source: Sigma (2010-2019)

Distribution of the world insurance market in the structure on non-life business and life business in 2009-2018 certifies that progressive reduction of the share of life business in the world is happening. If the unit weight of life business in 2009 was 57,3% in the total amount of insurance premiums in the world market, then in 2018 it is by 3 percentage point less, namely, 54,3%. It is noted that the predominance of life business over non-life business underscores the importance of life insurance market for the global economy. It should be noticed that the horizontal structure of the world insurance market and its dynamics does not fully reflect the processes occurring in regional markets and the disparities in the growth rates of individual markets, changes in leaders, etc.

Visual assessment of the trend of life insurance premiums in regions based on estimated growth rates certifies that the structure of the world life insurance market is characterized by disproportions in development which are leveled by powerful regional centers (Figure 2).

In particular, the European Union life insurance market shows a slow decline, and Emerging markets – a pronounced upward trend, namely, the volume of collected premiums doubled in 2008 – 2018. The dynamics of the domestic life insurance

market is characterized by cyclicality, the rapid growth of which in 2013 was changed to the phase of decline due to the global financial crisis, and the reinsurance index was restored only in 2016. Therefore, Emerging markets are characterized by higher growth rates of life insurance market as opposed to Advanced markets.

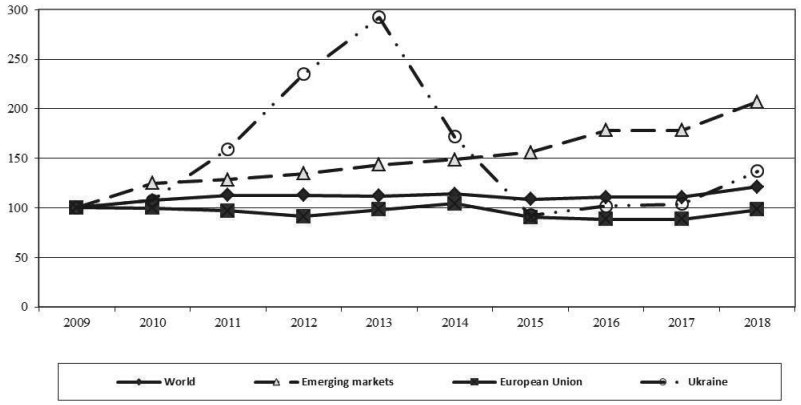

Figure 2. Growth rates of life insurance payments in regions, % (till 2009)

Source: authors' calculations based on Sigma (2010-2019)

Emerging markets capacity building has led to regional structural shifts in the global life insurance market (Figure 3).

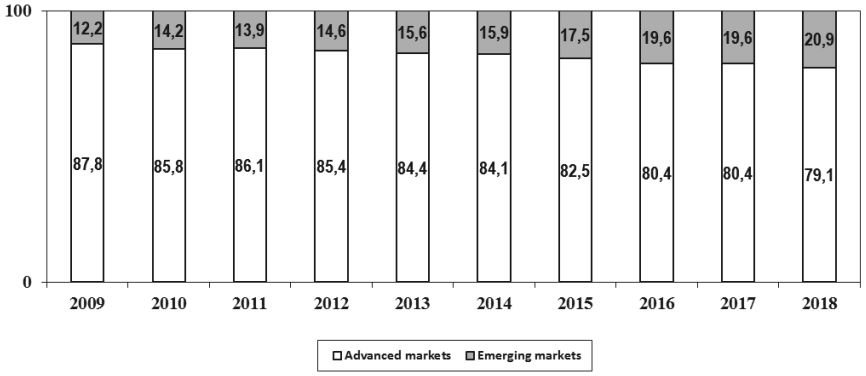

Figure 3. The structure of the world life insurance market by size of insurance premiums, %

Source: Sigma (2010-2019)

Realizing the potential of life insurance market in Emerging markets and slowing the growth of Advanced markets allowed to increase the share of the first ones for 2009 – 2018 by 8,7 % that happened at the expense of the Chinese market.

The demographic factor and the growing economies of developing countries have had a significant impact on this situation.

Modern insurance theory and practice use the system of indicators to evaluate the state and development of the insurance market; among them (for comparative analysis) we use:

– share of total business, %;

– premiums per capita, USD;

– insurance penetration, %.

The domestic life insurance market at the present stage of development of the insurance market is in the formation stage and, compared to the risk the insurance market is characterized by a lower level of attractiveness for potential insurers, as evidenced by the indicator of share of total business, %. This indicator reflects the degree of maturity of life insurance market. It is believed that the higher its value, the more developed is life insurance market and insurance market as a whole.

This indicator is inherently a stimulant indicator. The world experience shows that with high level of development, the share of life insurance market in the insurance market of the country is over 50%.

We want to note a positive trend of growth of the domestic life insurance market in terms of share of total business, % (Figure 4).

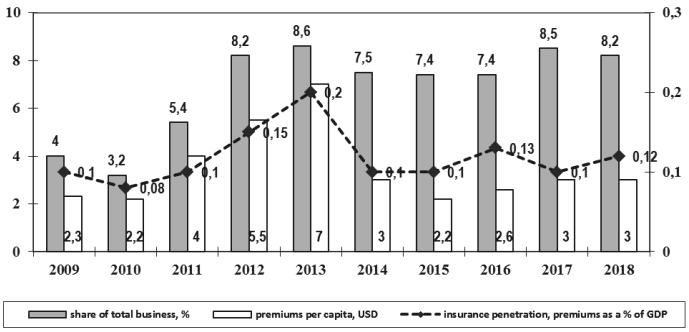

Figure 4. The dynamics of life insurance market development indicators in Ukraine in 2009-2018

Source: Sigma (2010-2019)

In 2018, the share of total business was 8,2%, up 4.2 percentage points or 2,05 times more than in 2009. However, the level of the indicator is quite low compared to its value in the world which was to 54,3% (Figure 5) and the maximum value of 92,6% in Hong Kong. In 2018, life insurance market in Ukraine bypassed only Venezuela (2,5%), Saudi Arabia (3,2%) but gave way to the markets of such countries as Algeria (8,8%), Kazakhstan (25,5%), Nigeria (45%).

The determining factor for development of life insurance market in the country is the level of income of the population, the level of insurance culture, as an awareness of the need for insurance. The quantitative expression of the influence of

these factors is reflected in the indicator of «premiums per capita». This indicator is one of the macroeconomic indicators of development of life insurance in the country and characterizes the density of insurance.

The level and dynamics of premiums per capita in life insurance market in Ukraine are unsatisfactory. For the last decade, the maximum was fixed in 2013 – 7 USD. The financial crisis of 2014-2015 that have led to the depreciation of the national currency, to inflation at 48% offset positive trends in the market. In 2018, premiums per capita in the world life insurance market was 370 USD, while in the domestic market 123.3 times less – 3 USD. Life-business premiums per capita of 3 USD was reached by Ukraine, Algeria, Nigeria and this is the lowest indicator in 2018.

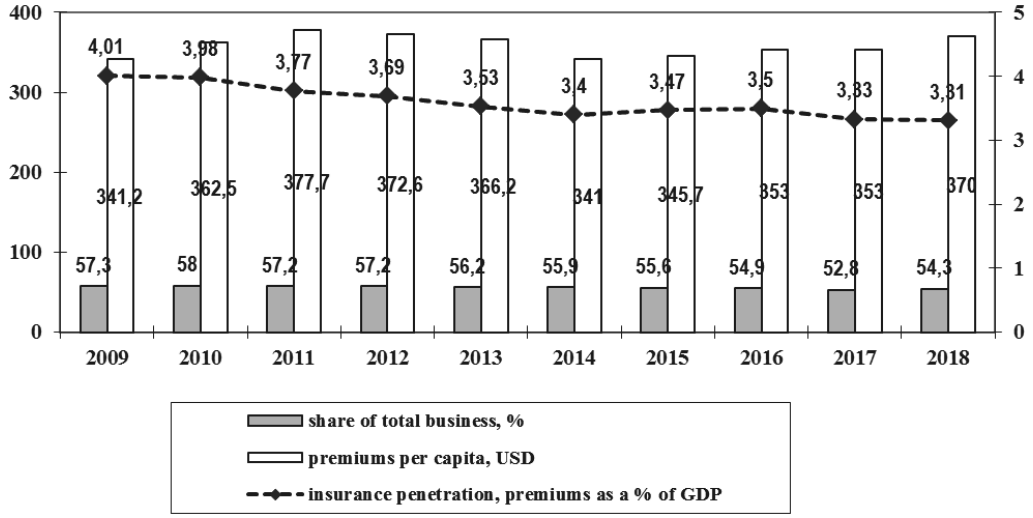

Figure 5. The dynamics of indicators of development of the world life insurance market in Ukraine in 2009-2018

Source: Sigma (2010-2019)

Insurance penetration indicates the level of development of insurance sector in a country. Penetration rate is measured as the ratio of premium underwritten in a particular year to the GDP. This indicator characterizes not only the level of penetration of insurance in the economy of the country, but also the attractiveness for other countries.

The average value of Insurance penetration in the world life-business in 2018 was 3.31% and the leader is the Advanced Asia-Pacific region (Taiwan, Hong Kong, South Korea) – 6,81%. The lowest level of Insurance penetration is found in Emerging Europe, Middle East, and Africa (EMEA) countries. According to this indicator, the domestic market occupies low positions in the rating with value 0,12%, bypassing Algeria (0,06%), Saudi Arabia (0,04%), Venezuela (0,03%).

Thus, the results of the investigation confirm the fact that life insurance market in Ukraine has been in its infancy since the transition to the market economy, is

backward compared to most countries in the world, and by some indicators, it is inferior to the poorer economies of the world. Among the reasons for underdevelopment of the domestic life insurance market, taking into account the results of sociological research [6,7], we can highlight: law income of the population, poor financial literacy of the population, distrust of financial institutions, underdevelopment of the financial market, low competitiveness of the domestic life insurance companies compared to commercial banks and highly capitalized insurers with foreign capital.

Comparative analysis of life insurance markets of the countries in the dynamics was performed with the help of Cluster analysis and their classification was conducted to identify groups of similar (homogeneous) life insurance markets (cluster) in 2009 and 2018 for 83 countries of the world (according to statistics of Sigma). Since the selected indicators are hierarchically interconnected to eliminate multicollinearity, Pearson correlation coefficient is determined (Table 1).

Table 1. Pearson correlation coefficient matrices

2009	**Premiums per capita**	**Insurance penetration**	**Share of total business**
Premiums per capita	1		
Insurance penetration	0,77444	1	
Share of total business	0,619653	0,721924	1
2018	**Premiums per capita**	**Insurance penetration**	**Share of total business**
Premiums per capita	1		
Insurance penetration	0,849456	1	
Share of total business	0,580568	0,662685	1

From the obtained Pearson correlation coefficient matrix, premiums per capita and share of total business indicators were selected, since the found relationship is the lowest in 2009 and 2018. Accordingly, a scatter diagram was constructed between the selected indicators in order to justify cluster analysis method and the number of clusters (Figure 6).

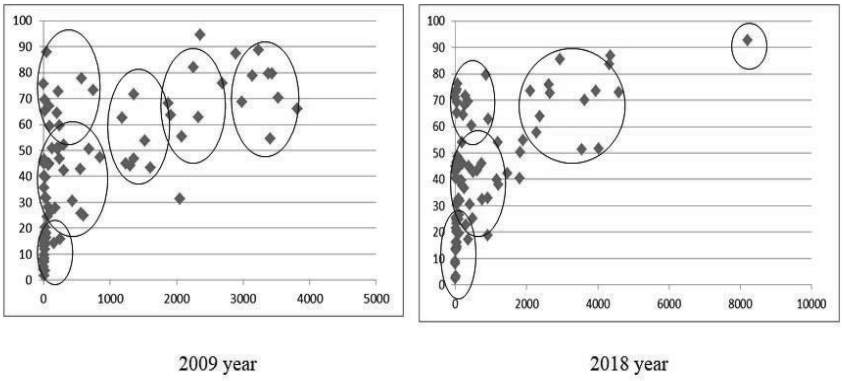

Figure 6. Scatterplots of correlation coefficients for 83 countries of the world

Source: authors' calculations based on Sigma (2010-2019)

Visual evaluation of the scatterplot of the correlation coefficients allowed to hypothesize the presence of clusters, and the application of the method of hierarchical cluster analysis (Hierarchical clustering) – to justify the number of clusters based on the agglomeration schedule.

The implementation of Cluster analysis procedure used Ward's method and obtained 4 variants of clustering solutions which were tested for cluster stability and selected the formation of 5 clusters in 2009 and 2018. Distribution of countries by clusters and their shifts are presented in Figure 7.

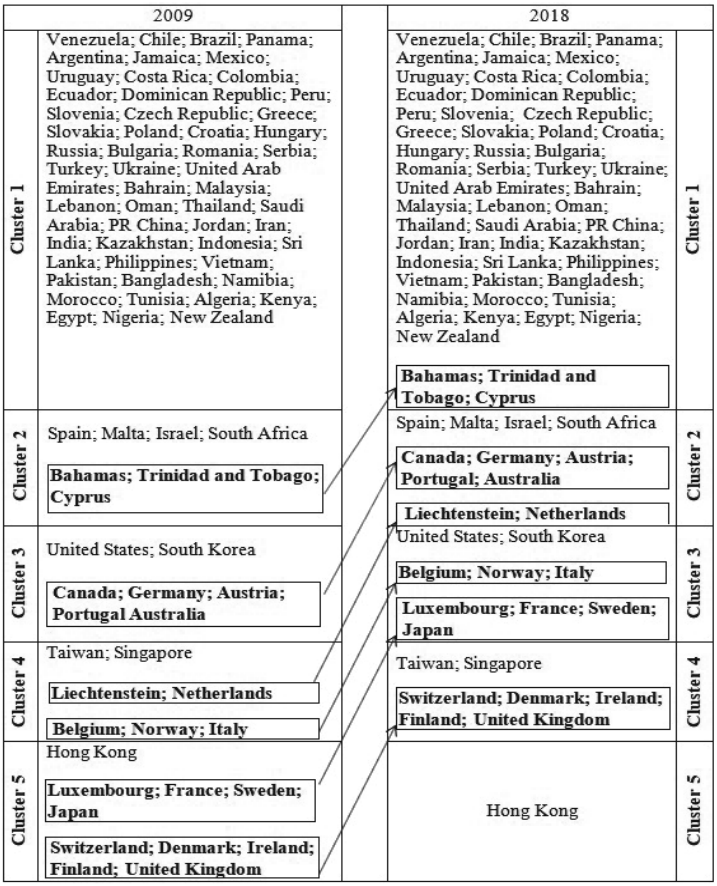

Figure 7. Clusters of countries of the world by level of development of life insurance market in 2009 and 2018

Source: authors' calculations based on Sigma (2010-2019)

The formed Clusters 2,3,4,5 are homogeneous, since the coefficient of variation does not exceed 0,3 (Table 2). The exception is Cluster 1, which includes 52 and 55 countries respectively in 2009 and 2018. Despite the fact that Cluster 1 is characterized by heterogeneity, it includes countries belonging to Emerging markets, in particular, China's life insurance market is expected to grow further in 2018,

accounting for 11,11% share of the world market compared to 4,01% in 2009. In future research, it will be advisable to treat the countries in Cluster 1 as a separate sample in the future.

The growth of the global life insurance market is indicated by the increase of average values of indicators in all clusters, and the differences in the level of development intensity are their absolute size and dynamics. Indicator Premiums per capita in the world market was 341.2 USD and 370 USD respectively in 2009 and 2018, which essentially separates clusters 1 and 2,3,4,5 despite the higher growth rate of the average value of clusters. In general, the average level of indicators of countries in clusters 2,3,4,5 exceeds the corresponding average values in the world life insurance market. Therefore, we can consider that the level of development of life insurance market of countries in cluster 1 is low, and clusters 2,3,4,5 are above average, sufficient, high and very high.

Table 2. Cluster average by level of development of life insurance market in 2009, 2018

Cluster	2009					2018				
	Number of countries in cluster	The average value in cluster			The coefficient of variation	Number of countries in cluster	The average value in cluster			The coefficient of variation
		Premiums per capita, USD	Insurance penetration, %	Share of total business, %			Premiums per capita, USD	Insurance penetration, %	Share of total business, %	
Cluster 1	52	79,4	0,95	33,0	1,28	55	122,5	1,04	36,5	1,15
Cluster 2	7	653,5	3,94	48,9	0,17	11	976,5	3,06	44,5	0,26
Cluster 3	7	1365,9	4,14	52,4	0,11	9	2278,2	4,82	63,9	0,18
Cluster 4	7	2120,2	5,43	65,9	0,01	7	4059,4	8,23	69,9	0,29
Cluster 5	10	3249,1	7,06	74,9	0,10	1	8204,0	18,81	92,6	–

A feature of clusters in 2018 was the formation of the separate cluster with one country – Hong Kong and the change in the composition of clusters themselves. The value of the investigated life insurance market indicators in Hong Kong reached a historic high in 2018 which secured the leadership of the country in life insurance market and confirmed its status as the global financial center of the world.

Life insurance market of Ukraine belongs to Emerging markets that testifies to its potential if crisis phenomenon is overcome on it. The processes of financial globalization have had a significant impact on the formation and development of the insurance market of independent Ukraine (since 1991) which was caused by the transition of the economic system of the market economy, including the emergence of multinational financial corporations that immediately occupied a dominant position in the market they are still holding.

Transnational corporations had many years of experience in the competitive insurance market, used effective business models, guaranteed the safeguarding of investments with the available large size of the authorized capital and impeccable international reputation in comparison with the domestic insurers.

The main manifestations of financial globalization in the domestic life insurance market are mergers or acquisitions of domestic companies, which have led to high level of market monopolization. In 2018, the Herfindahl-Hirschman Index (HHI) was 1441,37 (in 2017 – 1 417,52), and the top 3 accounted for 54,3% of life insurance market by collected premiums. Market leader is MetLife, Inc. (the largest global providers of insurance, annuities, and employee benefit programs, with 90 million customers in over 60 countries). Overall, in 2018, foreign-owned insurance companies accounted for 66, 64% of the market. Information on the country of origin of the capital of the insurance companies in the domestic life insurance market is presented in Table 3.

Table 3. Foreign capital in life insurance market in Ukraine in 2018

The name of insurance company	Specific weight on life insurance market of Ukraine, %	Country of origin of capital	Market entry year
PJSC «MetLife»	24,36	USA	2002
PJSC «Insurance Company «UNIQA Life»	17,11	Austria	1994
PJSC Insurance Company «PZU Ukraine Life Insurance»	10,57	Poland	2003
PJSC «GRAWE Ukraine Life Insurance»	8,71	Austria	1998
PJSC «AXA Life insurance»	2,39	France	1994
PJSC Insurance Company «Kniazha Life Vienna Insurance Group»	1,76	Austria	1999
PJSC «KD Life»	0,95	Slovenia	2007
PJSC «INGO Ukraine Life»	0,78	Cyprus	2004
TOTAL	66,64	-	-

Financial globalization of the insurance market is objective and inevitable phenomenon of today, it cannot be stopped or "canceled" because it is the imperative requirement of modern society. Due to the processes of interstate integration, internationalization and globalization of the economy, there is a gradual erosion of the identification boundaries between different national models of state regulation of life insurance [8].

Being aware of the inevitability of globalization processes, their consequences for the Ukrainian economy are determined:

1. Political factors: political dependence, the need for harmonization of legislation.
2. Economic factors: concentration of capital of multinational companies, reducing the competitiveness of insurance companies with Ukrainian capital, reducing the costs of maintaining companies, implementation of successful business models, GDP growth, excessive market monopolization.

3. Technological factors: introduction of successful experience in the digitalization of the insurance market and new insurance products, improvement of preventative measures and risk modeling.

4. Social factors: the change in standard of living and financial security of the person, raising awareness of risk protection, improving financial literacy.

CONCLUSION

Thus, according to the results of the investigation, we believe that life insurance market in Ukraine is characterized by high potential, for implementation of which it is necessary to introduce effective mechanisms to stimulate its development. Significant pressure on the domestic life insurance market by multinational companies, occupying leadership positions, requires a review of government regulation in order to limit their high concentration which is possible by creating a powerful state insurance company. Realization of the potential of the domestic life insurance market is impossible without continuation of state policy and public organizations, aimed at raising the level of financial literacy of citizens.

Further investigation on development of life insurance markets in China and Hong Kong and possibility of its application in domestic conditions are promising.

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ECONOMIC ANALYSIS OF ACTIVITIES OF COMPANIES OF UKRAINE AND POLAND AND CLUSTERIZATION OF THE INSURANCE MARKET OF THE NATIONAL ECONOMY

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Abstract
The article examines the financial and economic analysis of the activities of insurance companies of Ukraine and Poland in the context of integration and cooperation and exchange of experience in the insurance industry of the economy. The market for insurance services and its dynamic development is particularly relevant for the national economy, as insurance companies also act as providers of insurance services and which is extremely relevant for both Ukraine and Poland to investment entities that can invest specific investment projects, and cooperation with several easier than with banking institutions. Accumulation of money capital by insurance companies will allow to stabilize the financial and money market of both the national economy and the economy of Poland. Scientific developments in the field through the use of clustering tools of economic objects are relevant and can be used in practical implementation.

Keywords: insurance companies, insurance payments, cluster analysis, matrix of normalized values, construction of dendrogram, distance matrix.

INTRODUCTION

Each country's economy will be financially dynamic if there is sufficient circulation of financial capital in economic and economic activity, as an additional source of investment in the national economy and the economies of European countries, including we consider investments from insurance companies, and support the dynamic development of the insurance market of the national economy. Ukraine's insurance market has been developing at a good pace in recent years, but it is necessary to restore clients' trust in insurance companies and change the legislation of Ukraine in order to better protect the rights of clients of insurance companies, to receive full insurance payments, and in our opinion we should raise public awareness of insurance companies, which will allow the application of European standards for the provision of insurance services in the national economy

Both domestic and foreign scientists were engaged in studying the scientific aspects of the financial and economic activity of Ukrainian insurance companies. From the domestic it: L. Kotrsrach [3], Yu. Romanovskaya, I. Malinkov [2] and others. Problems of clustering of economic objects were addressed by such national scientists as: O. Zhabinets [1], V. Ilchenko, I. Homenko, B. Mrozowska-Bartkiewicz [7], A. Ostroscka-Dancevisz [8] and others.

Dynamic functioning of the insurance market of the national economy, and reasonable control by the central structures in our opinion, should be created by the Ministry of Finance or the National Bank of Ukraine will allow through synergetic influences on the relevant markets of services and production to significantly improve

the development of industries such as tourism, medical, hotel business, car and machinery market and many other areas.
In addition, stimulating the development of insurance business in Ukraine and other European or world economies will significantly improve the financial and credit portfolio, both regionally and in terms of the economy as a whole.

Incentives to exercise in addition to the primary function of insurance companies and reinsurance of services licensed by financial and investment activities can significantly improve the financial and investment climate of a particular region, where insurance companies and macroeconomic indicators of the country's economy as a whole operate. That is, in some of their functions, insurance companies are investors and a source of additional funds for the promotion of innovative business projects.

PREVIOUS RELATED RESEARCH

Domestic scientist L. Kostach researched the tendencies of development of insurance companies in Ukraine, and noted the positive dynamics of both the creation of the most insurance companies in Ukraine and the increase of insurance payments to clients of companies. Also, Ukrainian scientists in their midst: V. lchenko and I. Homenko emphasized the urgency of creating cluster structures in shaping the potential of enterprises in the real sector of the economy. Also interesting are the studies of Polish and European scientists on the analysis and legal activity of the insurance market of the economy. Polish scientist B. Mrozowska-Bartkiewicz [7] examines the legal field of activity of the Polish insurance market and states: "In accordance with the Law of 14 December 2017 amending the Law on Insurance and Reinsurance and certain other acts (the "Amendment"), new provisions were adopted to create the possibility of creating their own insurance and reinsurance companies. The provisions of Article 13 (2) and (5) of the Solvency Directive II4, which constitute a glossary, which defines internal insurance and internal reinsurance undertakings. supplemented by the provisions of article 3, paragraph 1, paragraphs 53 a and 53 b". The Polish scientist also explains the new type of co-insurance as: "The glossary has been supplemented with the definition of a leading co-insurer. According to the new definition, the leading co-insurance provider should be understood as an "insurance company selected from among participants in the co-insurance agreement to carry out activities specified in this contract on behalf of itself and other insurance companies co-insurance". The amendment to the Act provides for the use of leading co-insurance institutions in the case of co-insurance contracts for large risks, as well as for co-insurance agreements of risks other than large risks. The new regulations provide for the conclusion by domestic insurance companies of large-risk co-insurance agreements located in the territories of other European Union countries and the conclusion of foreign-type co-insurance contracts by foreign insurance companies located on the territory of Poland". A. Ostrovska Dankiewicz [8] states, describes trends observable on the Polish life insurance market.

RESEARCH RESULTS AND DISCUSSION

The market structure analysis leads to the presentation of tendencies and directions of growth, with particular emphasis placed on the demand for investment-type life insurance products, which have superseded traditional insurance policies and have given rise to numerous risks continued market development. The article identifies the causes of clients' negative attitude our opinion, it is expedient for Ukrainian managers of insurance companies on blacksmiths, who are researching the problems of activity of the insurance market of Ukraine, to learn from Polish and European colleagues the experience in this field. Overall, the Ukrainian insurance market has completed 2018 on the rise. According to the National Commission for Regulation of Financial Services Markets, total gross premiums written for 2018 amounted to UAH 49.4 billion, which is 13.7% more than in 2017.

If last year's rating update was a key opinion of "unprofitable" most insurance companies, then in 2018, many market leaders have learned to make money. Problems remain with OSCE, where the share of underwriting (policy value and / or brokerage) can be as high as 40%, and LCA, which by itself remains a loss-making product for most companies.

At the same time, premiums were growing for virtually all key types of insurance. In motor insurance (CASCO*- car insurance policy; OSCPV**-compulsory insurance of civil property of car owners in the territory of Ukraine; Green Card contracts), insurers collected 18.9% more net premiums in 2018, 25% more property insurance, 21.5% fire and natural hazards insurance % more than in 2017.

For health insurance, net premiums grew by 21.3%, medical expenses by 31.9%, and accident insurance by 32.5%.

Cargo and baggage insurance premiums, financial risk insurance and third party liability insurance decreased.

Cargo and baggage insurance premiums, financial risk insurance and third party liability insurance decreased.

The volume of payments to insurers is also increasing. Gross compensation in 2018 compared to 2017 increased by 22.1%, net payments – by 21.2%. The largest increase in net payments was recorded in cargo and luggage insurance (+ 86.7%), fire and natural hazards (+ 51.2%), health insurance (+ 25.3%), auto insurance (+ 17.1%) and especially property insurance (four times).

In the past year, insurers have also significantly increased their assets and reserves by 10.7% and 18%, respectively. Interestingly, in 2018, the volume of reinsurance premiums decreased by 2.1%, although in 2017 the volume of outgoing reinsurance, on the contrary, increased by almost 45%.

The Ukrainian insurance market is still heterogeneous. The top 10 largest insurance companies in 2018 generated more than 39% of insurance premiums, the top 20 insurers – 62% of insurance premiums and the top 50 insurers collected more than 88% of premiums. The total number of risk insurance companies in Ukraine by the beginning of 2019 exceeded 280.

"Business consolidation remains a global trend in the insurance market in Ukraine. Already, the Pareto principle is in line with the first 20 players accumulating

most of the insurance market," – said Alexey Alexashin, director of direct sales at Arsenal Insurance.

The portfolio of insurers' portfolios also has "biases" toward some types of insurance. According to the National Financial Services Commission, the market is dominated by CASCO, OSCPV and Green Card, medical insurance and property insurance.

"Motor" species continue to move the market. They occupy a significant place in the portfolios of virtually all leading companies, as OSCPV is bought by clients because of its obligation, and CASCO is sold to them by "trailer". Medical insurance is also growing. But medical insurance is difficult to make profitable, and earn a little on it", said Svyatoslav Yaroshevych, CEO of insurance company Colonnade Ukraine.

Experts and insurers predict that in 2019 the insurance market will be kept "positive". The Hull segment is promised to grow up to 15-20%, OSCPV – up to 30-40%, and VMS, according to various estimates, can grow one and a half times. "In the first quarter of 2019 alone, the market for voluntary health insurance grew by 54%", said Irina Hevel, chairman of the board of Alfa Insurance IC.

Participants forget to add that the main reason for such growth rates is still a low base: in the previous five years, insurance has decreased to a minimum.

The big challenge for insurers in the next year or two will be the fight for customer loyalty. And it is not only price competition, but also improving the quality of service, simplifying and speeding up procedures for loss settlement, as well as personalizing insurance products. In other words, insurers will be ready to cover the ever-narrowing needs of customers by offering programs to their liking.

Another trend is digitization. Insurance services and services will increasingly migrate to the Internet. It is a convenience for the client, for the insurance company it is an opportunity to reduce costs and cover a wider range of insurers. First of all, who prefers to shop online. As an example of "digitization" – OSCPV. "Almost a year after the launch of the e-policy, about 10% of the autolayer policies are issued electronically", said Andriy Peretyazhko, chairman of Akha Strakhuvannya.

But the global "clearing" of the insurance market in the near future is unlikely to happen. Although the National Financial Services Commission is taking steps in this direction. "A new commission regulation has come into force, which has strengthened solvency requirements, capital adequacy standards, asset quality and insurers' liquidity. This is a really important change, but now it is extremely necessary for it to work and for the regulator to actively withdraw from the market those insurance companies that do not meet these requirements", Andrey Peretyazhko thinks.

However, a major market reboot also requires serious legislative changes. First, the adoption of a new version of the Law "On Insurance", which has been elaborated and discussed for over 10 years. Second, the adoption of the law on "split", which will give the National Bank the powers to regulate the insurance market from Natcomfin Services.

One of the requirements in the memorandum with the IMF was the adoption of the split law by the end of March 2019.

Analyzing the dynamic development of the Ukrainian insurance market, we will carry out a cluster analysis of major companies in the national economy insurance market.

Using the Statistica software environment, a cluster analysis of insurance companies' activities in the Ukrainian market was conducted.

The input database is characterized by the following values:

VAR1 – Casco insurance payments, million UAH;

VAR2 – insurance payments of OSCPV, million UAH;

VAR3 – insurance payments for health insurance, million UAH;

VAR4 – the level of payments,%.

Table 1. Cluster analysis input database

No.	Insurance company (IC)	Casco insurance payments, mln UAH	Insurance payments of OSCPV, mln UAH	Health insurance payments, mln UAH	The level of payments, %
1	UNIQA	740,6	181,3	387,2	83,84
2	PZU Ukraine	338,4	203,8	131,5	37,09
3	Group TAC	255	481,2	85,3	39,30
4	Providna	93,9	185,1	400,1	65,70
5	USI	2,7	240,3	0,16	11,10
6	Oranta	35,9	477,7	9,9	34,40
7	Akha Strakhuvannya	1131	140,4	224,7	46,90
8	KNIAZA	132,9	207,4	44,9	44,25
9	Hlobus (Vienna Isurance Group)	11,3	51,8	0,22	18,80
10	VUSO	183,6	159,4	45,7	27,30

Each company is assigned an ordinal number according to the placement in Table 1. The result of entering data into the Statistica software environment is shown in Figure 1.

	1 Var1	2 Var2	3 Var3	4 Var4
1	740,6	181,3	387,2	83,84
2	338,4	203,8	131,5	37,09
3	255	481,2	85,3	39,3
4	93,9	185,1	400,1	65,7
5	2,7	240,3	0,16	11,1
6	35,9	477,7	9,9	34,4
7	1131	140,4	224,7	46,9
8	132,9	207,4	44,9	44,25
9	11,3	51,8	0,22	18,8
10	183,6	159,4	45,7	27,3

Figure 1. Entering data into Statistica environment

Since the data is presented in different formats, their normalization was performed using the built-in standardization function (Figure 2).

	1 Var1	2 Var2	3 Var3	4 Var4
1	1,22046518	-0,3697871	1,65467577	2,00677383
2	0,12494195	-0,208355	-0,0095545	-0,176431
3	-0,1022252	1,78192301	-0,3102485	-0,0732249
4	-0,5410338	-0,342523	1,73863576	1,15964367
5	-0,7894468	0,0535237	-0,8643844	-1,3901527
6	-0,6990157	1,75681135	-0,8009914	-0,3020528
7	2,28384725	-0,6632347	0,59704017	0,28169179
8	-0,4348045	-0,1825259	-0,5731929	0,15793794
9	-0,7660219	-1,2989183	-0,8639939	-1,0305661
10	-0,2967065	-0,5269143	-0,5679861	-0,6336197

Figure 2. Array of normalized values

Joining (tree clastering) method was used for cluster analysis. The result of the calculation is to obtain a distance matrix and a dendrogram.

	Euclidean distances (Spreadsheet45)									
Case No.	C_1	C_2	C_3	C_4	C_5	C_6	C_7	C_8	C_9	C_10
C_1	0,00	2,96	3,82	1,96	4,70	4,42	2,30	3,34	4,51	3,77
C_2	2,96	0,00	2,03	2,30	1,76	2,28	2,33	0,86	1,86	0,89
C_3	3,82	2,03	0,00	3,23	2,35	0,81	3,55	2,02	3,34	2,40
C_4	1,96	2,30	3,23	0,00	3,67	3,61	3,19	2,53	3,54	2,94
C_5	4,70	1,76	2,35	3,67	0,00	2,02	3,86	1,63	1,40	1,11
C_6	4,42	2,28	0,81	3,61	2,02	0,00	4,13	2,02	3,14	2,35
C_7	2,30	2,33	3,55	3,19	3,86	4,13	0,00	3,00	3,68	2,98
C_8	3,34	0,86	2,02	2,53	1,63	2,02	3,00	0,00	1,69	0,87
C_9	4,51	1,86	3,34	3,54	1,40	3,14	3,68	1,69	0,00	1,03
C_10	3,77	0,89	2,40	2,94	1,11	2,35	2,98	0,87	1,03	0,00

Figure 3. Matrix of distances in the clustering of insurance companies of the national economy

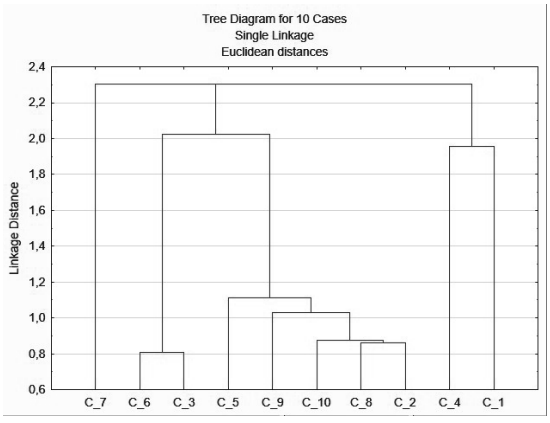

Figure 4. Dendrogram of formation of clusters of insurance companies of Ukraine implemented in the Statictica program

Analyzing the obtained dendrogram, we concluded that there are 3 clusters among the studied insurance companies.

Cluster 1 includes:

1. IC “Providna”.
2. IC “Uniqa”.
3. IC “Akha Stranuvannya”.
4. Insurance Group “TAC”.

Cluster 3 includes:

1. PZU Ukaine.
2. IC “USI”.
3. IC “Hlobus (Vienna Isurance Group)”.
4. IC “VUSO” .

To test the hypothesis of dividing objects into 3 clusters, we use the K-means method, during the calculation of which we specify the number of clusters we need. The results of the calculations are shown in Figure 5.

Members of Cluster Number 1 (Spreadsheet45) and Distances from Respective Cluster Center
Cluster contains 3 cases

Case No.	Distance
C_1	0,475001
C_4	0,793356
C_7	0,867759

Members of Cluster Number 2 (Spreadsheet45) and Distances from Respective Cluster Center
Cluster contains 2 cases

Case No.	Distance
C_3	0,201553
C_6	0,201553

Members of Cluster Number 3 (Spreadsheet45) and Distances from Respective Cluster Center
Cluster contains 5 cases

Case No.	Distance
C_2	0,467323
C_5	0,512014
C_8	0,405996
C_9	0,528640
C_10	0,083258

Figure 5. Members of each cluster and distance

As a result, we will analyze each of the clusters.

Table 2. Cluster 1

No.	Insurance company	Casco insurance payments, mln UAH	Insurance payments of OSCPV, mln UAH	Health insurance payments, mln UAH	The level of payments, %
1	UNIQA	740,6	181,3	387,2	83,84
4	Providna	93,9	185,1	400,1	65,70
7	Akha Stranuvannya	1131	140,4	224,7	46,90

Cluster 1 companies have the highest payout rates among all companies and are the leaders in health insurance payments.

Table 3. Cluster 2

№	Insurance companies	Casco insurance payments, mln UAH	Insurance payments of OSCPV, mln UAH	Health insurance payments, mln UAH	The level of payments, %
3	Group TAC	255	481,2	85,3	39,30
6	Nask Oranta	35,9	477,7	9,9	34,40

Cluster 2 companies are the leaders in terms of insurance payments for OSCPV.

Table 4. Cluster 3

No.	Insurance company	Casco insurance payments, mln UAH	Insurance payments of OSCPV, mln UAH	Health insurance payments, mln UAH	The level of payments, %
2	PZU Ukraine	338,4	203,8	131,5	37,09
5	USI	2,7	240,3	0,16	11,10
8	KNIAZA	132,9	207,4	44,9	44,25
9	Hlobus (Vienna Isurance Group)	11,3	51,8	0,22	18,80
10	VUSO	183,6	159,4	45,7	27,30

Cluster 3 companies are mid-cap companies, they are not industry leaders, so they can be combined into a so-called “general” cluster of companies.

Carrying out a cluster analysis of companies actually operating in the insurance market of the national economy will allow to clearly identify the companies with the highest financial indices for payments to customers and other factors that characterize the activity of insurance companies. For the insurance companies themselves, this is an opportunity to compare financial indicators and negotiate with one another, on cooperation on customer experience, the possibility of increased netization and thereby reducing the cost of their services to clients and the convenience of clients to make insurance poles and services electronically.

CONCLUSION

The activities of insurance companies of both the national economy and the economies of European countries, including Poland, are the subject of scientific research in the context of the entry of Ukrainian companies into cooperation in the European and world zones with mandatory insurance conditions for almost all types of services, with Ukrainian clients only starting to consider all aspects of the provision of services or the purchase of goods with a particular type of insurance purchase. In another aspect, insurance companies for the economies of any European and world state are an additional source of accumulation and provision of investment funds, which in turn improves the financial and investment portfolio of activity both in the regional aspect of the country and in general macroeconomic indicators of the country.

Applying the tools of economic and mathematical apparatus for clustering of insurance companies on the example of the Ukrainian insurance market is a roadmap for further analysis and decision-making by both the relevant authorities on the regulation of the insurance market, in our opinion it should be the National Bank and investors planning to make investments. into the insurance company, in the course of the cluster analysis, we have divided all the insurance companies of the national economy into three main clusters in the main areas of ment insurance, insurance, medical services and avtograzhdanki. Also in our article we emphasized on the relevance of the digitization of the insurance market of both the national economy and the economy of the European state, which will significantly reduce the price of insurance services and significantly expand the client base of insurance companies.

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INSTITUTIONAL PRINCIPLES OF THE FUNDED PENSION SYSTEM IMPLEMENTATION

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Abstract
The main task at the present stage of the socio-economic development of our country is the implementation of a European model of the pension system that would meet the requirements of a market economy. That is why the pension system in Ukraine is completely changes. The main strategic vector in the system of further pension system reforms in Ukraine is the introduction of a funded pension system. The functioning of funded pension systems in developed countries is accompanied by a number of macroeconomic, investment, management and other risks. This forces the development and implementation of specific models of pension institutions work and the creation of special systems of state supervision over the pension institutions. Under the institutional components of the mandatory cumulative level of the pension system, we mean the creation of a proper system of regulation and supervision that can reliably protect the rights of its participants (beneficiaries). In order to create such system we should implement the legislation that would consolidate supervisory functions in the field of funded pensions and establish the necessary powers, independence and institutional capacity of the supervisor authority. It is much more difficult to reach a consensus on the model and baseline parameters of the mandatory cumulative pension system because of the large number of bills under consideration in the Verkhovna Rada. For constructing the second level of the pension system, it should be used the combined model that will ensure the centralization of the expenditures part of the system. Next, the development of the system should be based on the existing software complex of the Pension Fund of Ukraine, which will allow avoiding the significant expenses onthe development of new software and the maintenance costs will be transferred from beneficiaries to the budget of the Pension Fund of Ukraine. Among the set of basic parameters of the mandatory cumulative level of the pension system, particular attention is drawn to those that determine the range of pension contributions payers and the size of such contributions. The most effective approach is to maximize the involvement of the economically active population in funded pension funds, emphasizing their personal responsibility for own well-being at retirement age, taking into account the social risks of different income groups. World experience shows that the basic building principles of a second level pension system in Ukraine should be: minimizing the administrative costs of system participants by achieving the “economies of scale” effect; minimization of government spending on supervision; ensuringstate control on payment of contributions; ensuring transparency and clarity of the system for participants; reducing the risks of pension assets loss; ensuring competition in the field of asset management.

Keywords: funded pension system, funded pension fund, non-state pension funds, institutions, state regulation.

INTRODUCTION

The development of Ukraine as a highly developed social state should become a strong foundation for comprehensive innovative development of the country, integration into the European Union, the basis for the development of a state with a competitive socially oriented market economy, capable of ensuring human development, decent living standards and quality of life. One of the strategic directions of the movement towards a socially oriented economy is the

implementation of the pension reform, which envisages the creation of a multi-level pension system that can meet both demographic and financial challenges.

The present stage of economic development in Ukraine is characterized by institutional transformation, which consists in the emergence, development and strengthening of market rules of economic behavior and market institutions (organizations) and their replacement by the old institutions – rules and organizations inherent in the administrative-command system. In the majority of post-Soviet countries, there is a widespread belief that the norm and the optimal form of institutional system capable of providing a high level of economy and quality of life is the institutional environment created today in the leading Western countries.

In the economical literature the institutional environment is seen as the compilation of the basic political, social, lawful and economical rules. That defines the frames of the human behavior and creates the basis for the production, exchange and distribution. V. Savchenko states that the institutional environment is a clear, streamlined set of institutions that determine the framework conditions for the functioning and development of economic entities [1].

RESEARCH RESULTS AND DISCUSSION

The formation of effective and modern pension institutions is only at an early stage. This is due to the inconsistency of pension reform, which has evolved from a full-fledged structural adjustment to repeated attempts at permanent change; lack of political will in the ruling elites to take responsibility for the negative consequences of reform (if they arise); difficult economic situation; high level of shadowing of the economy; chronic deficit of the Pension Fund budget and as a result of large expenditures of the State Budget of Ukraine to cover it; a significant number of legislation on the accrual and payment of pensions to different categories of population; the accumulation of surcharges, allowances and benefits in the pension system that undermine its financial status. At the beginning of its independence, Ukraine failed to accept the nation-wide doctrine of forming effective retirement institutions, primarily non-state institutions, as the most important component of additional retirement income directly related to the wage system, demographic and labor market policies. All this results in the absence of well-defined goals and action programs in the field.

Some publications on the development of institutions suggest that the spontaneous process of formation of market environment institutions and the mismatch of interaction between them became the main reason for the unsatisfactory results at the beginning of the state formation and caused difficulties during the crisis period of Ukraine's development [2]. Therefore, the key task at the present stage of socio-economic development of our country is a clear construction of a balanced European model of a multi-level pension system, which is based on a funded pension system as a new pension institution. For its effective implementation and functioning, it is necessary first of all to form its main financial institutions, regulate their activities, determine the powers and peculiarities of financial relationships between them regarding the storage and use of second-tier pension assets.

Despite the fact that the functioning of the compulsory system of compulsory state pension insurance was declared by the Law of Ukraine "On Compulsory Pension Insurance" No. 1058-VI of July 9, 2003, it has not been implemented since then. The funded component of retirement insurance, which aims to achieve the global long-term goals of social and economic development of the country, is based on the principles of accumulation of funds of insured persons in the Cumulative Fund and the financing of the costs of life insurance contracts and lump sums. A characteristic feature of the system is its dualistic character. On the one hand it acts as a social institute and on the other as a source of long-term investment. Given this, it is possible to distinguish the advantages and disadvantages of the system (Table 1).

Table 1. Advantages and Disadvantages of Compulsory State Pension Insurance

ADVANTAGES	DISADVANTAGES (potential threats)
- reduction of social tension in society; - strengthening of insurance principles; - increasing the independence of the pension system from demographic factors; - increasing the amount of pension payments; - increase of financial literacy of the population; - increasing the motivation of the population to participate in the non-state pension system; - reducing the fiscal burden on employers; - accumulation of significant amounts of financial resources – creation of a source of long-term investments in the national economy.	- high dependence of the system from the economic and financial state of the country; - financial resources distraction from the solidary system (at the beginning stage); - increased sizes of the administration system; - availability of the changes risks in the price of the assets to the side of decreasing; - dependence of the inflation processes; - lack of the gender aspects inclusion; - availability of the risks of unskillful management of pension accumulation; - political risks of costs usage for the purpose of the budget deficit financing; - high spending associated with the implementation of accumulative system.

Source: created by the author on [3, 4]

The successful implementation of the pension reform defines the search and systematization of institutional factors, that influence the system of the accumulative pension insurance and its institutional environment, also the possibilities and paths of its transformation, oriented on the increasing the level of population's social foundation. The institutional factors of the formation of the accumulative system of the pension insurance system (Figure 1) include the political, lawful and economic rules of the game, and also the socio-cultural factors [5].

The institutional components of the mandatory retirement savings system include:

– adoption of basic legislation;

– type of functional model;

– outline of the basic parameters of the system (time of entry, subjects, circle of payers of pension contributions and the size of such contributions, rights and obligations of the subjects of the system, mechanism of protection of pension assets, directions of their investment, etc.).

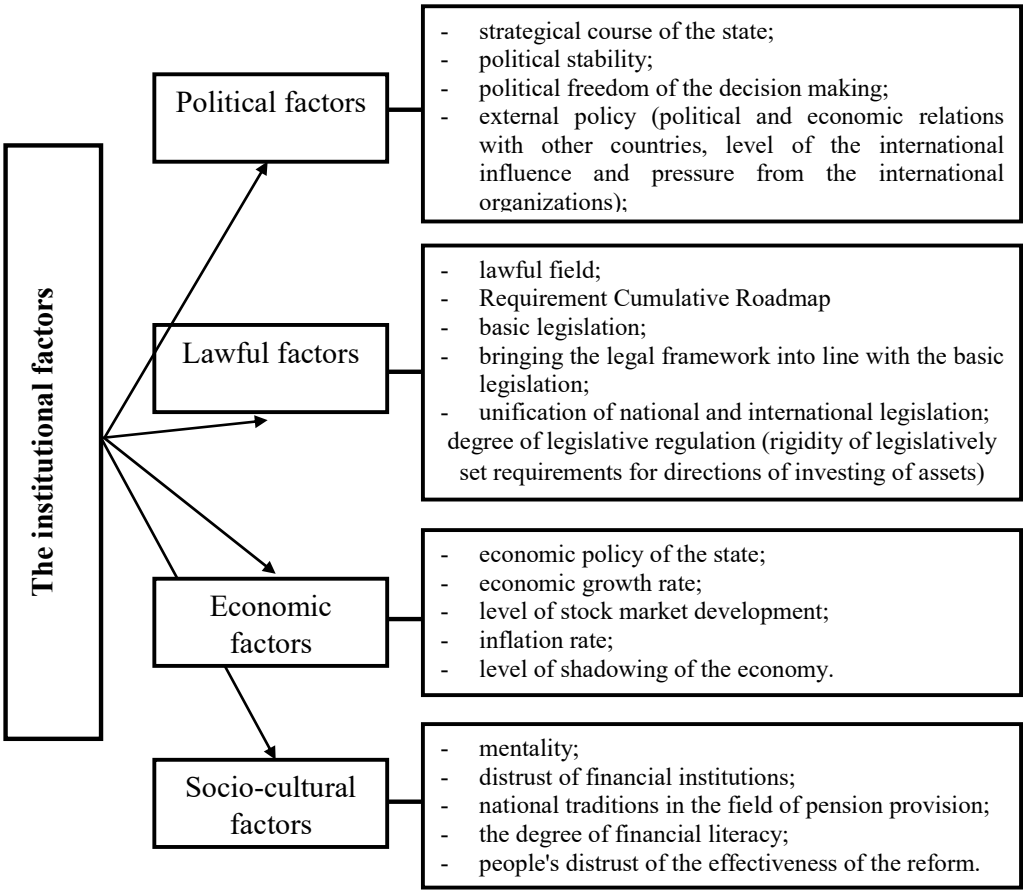

Figure 1. The institutional factors of the formation of the accumulative system of the compulsory state pension in surance system

Source: created by the author on the basis of [3-5; 13; 16]

One of the main conditions for the start of operation of the second level is the adoption of a separate law on the introduction of the compulsory system of compulsory state pension insurance. Currently, there are several bills in the Verkhovna Rada with almost similar names regulating the mechanism of implementation of the second level – No. 2854 of December 29, 2006, submitted by the Cabinet of Ministers of Ukraine; No. 4608-1 of May 19, 2016, submitted by the Group of Deputies and taken as a basis (Bills 4608-2, and 4608-3 tabled as alternatives), No. 6677, submitted by MPs Solovey Y.I., Veselova N.V., Rizanenko P.O., and No. 600 dated August 31, 2018, developed by the NCSFM. In fact, the bills summarize the results of more than a decade of discussing second-level implementation issues, most of the provisions of these projects contain the same approaches to the mechanism of introducing a cumulative component, regulating relations in this area, while at the same time differing in several conceptual bases, each of which may affect functioning.

We analyze the bills by certain criteria (table 2).

Table 2. Comparative analysis of bills on the introduction of the compulsory system of compulsory state pension insurance

Criterion	Bill №2854	Bill №4608-1	Bill №6677
Type of organizational model	Mixed: centralized initially – Cumulative Pension Fund. After 11 years, switching to a mixed model – Accumulation Pension Fund (AF) or Non-State Pension Funds (NPF) at the participant's choice	Centralized creation of a Cumulative Pensi on Fund	Decentralized through the system of non-state pension funds
Date of introduction	01.01.2009 meeting the requirements for economic growth of the country over the last two years by 2% compared to the previous one and the balance of the PFU budget	01.07.2017 (4608, 4608-1) January 1 of the year following the year in which the PF budget deficit is reached (4608-3)	01.01.2018
Participants	persons under 40 years old, participation is required	persons who have not reached retirement age (persons under 35 who are entitled to a retirement pension on preferential terms - compulsory participation in relevant occupational retirement benefit schemes)	persons under 35 years, participation is required
Voluntary participation	provided	provided	provided
The size of the deduction rates	min – 2% max – 7% a wage increase is required to compensate employees for losses	min – 2% max – 5%	min – 2% max – 7%
Administration	Pension Fund of Ukraine	Pension Fund of Ukraine	Pension Fund of Ukraine + NPF Administrators
State guarantees for saving money	Missing	provided for the amount of insurance premiums paid, taking into account inflation	provided through participation of NPF in deposit guarantee system (Deposit Guarantee Fund)
Benefits	availability of competitive principles; the right to choose the insured person between public and private financial institutions; ability to diversify strategies	simplicity of state control; the maximum financial resource that facilitates the financing of large-scale state projects	ensuring competition in the market for funded pension insurance services; the distribution of potential risks among dozens of non-state pension funds; ability to diversify strategies
Disadvantages	dispersion of monetary resources; complications of state control; financing of the state structure at the expense of the budget	lack of choice for the insured person; lack of market competition	dispersion of monetary resources; complications of state control; the difficulty of choosing for the participant due to the low level of financial literacy
Need for additional financial resources	4 billion of UAH	missing	missing

Source: developed by the authors on the basis of [6-12]

According to the analysis, the main conceptual differences of the submitted bills are the type of organizational model of the system, its administration, the existence of state guarantees for the preservation of funds and the need for additional financial resources.

One of the differences is the rejection of a centralized model of the accumulation system for the accumulation of second-tier premiums through the creation of a Cumulative Pension Fund and the transition to a decentralized model through non-state pension funds that meet the criteria of the Law of Ukraine "On Non-State Pension Insurance" [13]. That is, compulsory (second tier) retirement savings are formed in non-state pension funds (tier 3) selected by citizens, together with voluntary retirement savings. This model assumes that only certain administrative functions, such as collecting insurance premiums, maintaining personal records, etc. provided by the Pension Fund, will remain centralized. However, due to the low level of financial literacy of the population, the crisis of distrust in financial institutions, taking into account the performance of non-state pension funds for more than ten years, the lack of reliable instruments for investing pension savings in the stock market, to implement a decentralized model at once is quite risky. Therefore, in our opinion, the best option is the mixed model proposed by Bill No. 2854. The mechanism of introduction of the system is reduced to its phased implementation with a gradual shift of emphasis from state supervision and regulation to the personal responsibility of citizens for their own pension well-being. That is, the first stage is the introduction of a centralized system, concentrating pension assets in the Cumulative Pension Fund under state control and management (full responsibility of the state), and in the second (after 11 years) - decentralization of the system and giving citizens the right to choose a non-state pension fund (NPF).

The obligation to participate in the system implies a gradual coverage of a large contingent of cumulative pension insurance. This requires such requirements as: the simplicity and accessibility of the regulatory framework to be understood and understood by all actors in the process; the mechanism of the administrative system for rapid recording of the whole range of insured persons is established; the capacity of the institutional infrastructure to process and systematize a large amount of information; ensuring control over the receipt of insurance premiums. Effective solution of these problems is possible only with a high degree of centralization of information and cash flows, accounting procedures, control functions, which is possible only if they are consolidated at the PFU level as a single administrative center [14].

In foreign countries, various models of functioning of mandatory funded pension systems are used: from rigidly centralized, in which only investment activity (ie, management of pension assets) is transferred to private hands, to fully decentralized ones, in which state participation is reduced exclusively to regulation of pensions, provision, supervision of the entities providing services to members of such systems and consolidation of key data flows. The main advantage of the centralized model is the low level of administrative costs, which is achieved through economies of scale. Instead, it is considered that a decentralized model, which has a mechanism of market self-regulation, thanks to competition (this almighty "market power"), is

better able to meet the diverse needs of different participants in the mandatory funded level of the pension system, giving them the freedom to choose pension-based pension services acceptable value for money. However, in recent times, a number of countries, including those with advanced financial markets and pension systems, have resorted to the creation of centralized models or models in which national and private pension funds would function equally.

The prerequisite for the introduction of a mandatory cumulative level of the pension system is, first and foremost, the creation of a proper system of regulation and supervision that can reliably protect the rights of its participants (beneficiaries). To this end, legislation should be enacted that would consolidate supervisory functions in the field of funded retirement provision and establish the necessary powers, independence and institutional capacity of the supervisory authority. Relevant Bills – "On Amendments to Certain Legislative Acts of Ukraine on Consolidation of Functions in State Regulation of Financial Services Markets" (No. 2413a, or the so-called "split") [15] and "On Amendments to Certain Legislative Acts of Ukraine on Protection of Investors from Market Abuses capital "(No. 6303-e) [16] were submitted to the Verkhovna Rada for consideration in 2016.

Among the set of basic parameters of the mandatory cumulative level of the pension system, particular attention is drawn to those that determine the range of payers of pension contributions and the size of such contributions. The provisions of the Law on Compulsory State Pension Insurance and the two bills (the MPs and the NCSFM) are similar in these respects: only the members of the system (working population) are payers of pension contributions, and the pension contributions are paid at the rate of 7% (current legislation and deputies' legislation) or 15% (in the published version of the NCSFM bill) of the total income of the system members.

This approach should aim to maximize the involvement of the economically active population in participating in retirement benefits, emphasizing their personal responsibility for their own well-being at retirement age. However, when determining the conditions of retirement, not only age-related risks, but also other anthropogenic risks (loss of work, illness, disability, etc.) that are particularly vulnerable to the poor, should be considered. For our country, this problem is particularly acute because much of the working-age population, to some extent even those employed in the formal economic sector, remains poor.

The existence of a mechanism for the protection of retirement savings and state guarantees is one of the key points in the introduction of a funded system of compulsory state pension insurance. Given that the system is mandatory for participation, initiated by the state, the mechanism and conditions of introduction are fixed by law, the state, represented by the government, is responsible for macroeconomic indicators of development, the state itself should be the ultimate guarantor of saving the pension funds of citizens. There is no prospect of implementing any pension reforms in the country unless its citizens are convinced that their pension savings will be maintained. Rather, on the contrary, in the event of mistrust of the pension system, any deductions will be seen as a waste of money at best, and at worst, as the desire of the state to enrich itself at the expense of its citizens [19]. Real protection provides for the organization of reliable physical

storage and investment of funds to at least offset their inflationary depreciation, storage costs, management, etc. at the expense of investment income.

Equally debatable is the effectiveness of the cumulative system given the high level of inflation in the country (and thus the possible depreciation of retirement savings), the risks associated with the under-qualification of companies that will invest retirement assets, the transparency of competitions among such companies, abuse and corruption factors, lack of awareness of the public about the fundamentals of the pension system, and lack of trust in government bodies.

CONCLUSION

Therefore, the basic principles of building a second-tier pension insurance system in Ukraine should be:

– minimizing the administrative costs of system participants by achieving the ”economies of scale” effect;

– minimizing government spending on supervision;

– ensuring control by the state on payment of contributions;

– ensuring transparency and clarity of the system for participants;

– reduction of risks of loss of pension assets;

– ensuring competition in the field of asset management.

It should be remembered that in developing and building a system of institutions, the mechanical copying of the positive experiences of other countries has almost never been successful. This is due to the fact that specific successful institutions are copied, which are effective in one situation and have completely unforeseen consequences under other conditions. It is necessary to design new institutes that fulfill the same functions but are compatible with the peculiarities of national social and cultural capital, the carriers of which are informal institutions. Therefore, the main task of reforming the pension system is a thorough development and consistent systematic implementation of a long-term program, which would be based on the concept of adapting the desired institutional innovations in the field of pension provision to real-life official, and, above all, unofficial, non-public institutions that were formed social, economic and socio-cultural life of the country The social significance of the accumulation system determines diligence in the development of conc ptualnyh concepts of its implementation and further holds the Government of responsibility for the consequences of such steps.

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MINIMUM WAGE AND WORKING UNDER THE TABLE: ISSUES AND SOLUTIONS – ACCOUNTING ASPECT

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Abstract
This article analyses problem the minimum wage and getting money under the table in Ukraine. The minimum wage is one of the most contentious issues in economics. Too many Ukrainians working legally, officially get just minimum wage but in the reality make money much more than minimum. In common practice a lot of small business owners in Ukraine used to pay their employees in cash since it's harder to trace and most of them are trying to evade taxes or cheat the government. The employee is missing out on benefits, such as the ability to earn Social Security benefits in old age or financial assistance in case of disability. The government doesn't receive individual income tax and cannot fully provide funding to the social sector. This article also compare labor law and employment, concept, methodology, explain basic principles and difference between wages, minimum wages and salary, payment taxation in USA, UK, Germany. The research suggests transform accounting system of income taxes and social security taxes in Ukraine. The article improve necessary to apply progressive payroll taxes scale, limit cash payments to minimum and compulsory automate an accounting process for all types of business.

Keywords: minimum wage, salary, wage, money under the table, accounting of payment taxation.

INTRODUCTION

In past decades, mainstream economic thinking held that the main objective of macroeconomic policy was to ensure macroeconomic stability (often narrowly defined as inflation control) since better employment opportunities and poverty reduction would then follow suit. Employment-centered macroeconomic and structural policies are vital to generate productive employment and improve living standards. Minimum wage determination is a major instrument of economic and social policy because it can be manipulated in order to achieve diverse objectives, from income distribution to economic competitiveness. Wage and salary management is essentially the application of a systematic approach to the problem of ensuring that employees are paid in full size and in an equitable and fair manner. Wage and salary for most of the employees is certainly one of the main forms of their income and constitutes powerful spring of motivations in our society.

RESEARCH RESULTS AND DISCUSSION

The term "wage" may be defined as the remuneration paid by the employer for the services of hourly, daily, weekly and fortnightly employees.

Salary is defined as the remuneration paid to the clerical and managerial personnel employed on monthly or annual basis. This distinction between wage and salary does not seem to be valid in these days of human resources approach where all employees are treated as human resources and are viewed at par. Hence these two terms are used interchangeably. As such the term wage or salary can be defined as the

direct remuneration paid to an employee compensating in services to an organization. Salary is also known as basic pay [3].

In Ukraine labor rights of citizens are traditionally defended by the norms of civil, labor and administrative legislation. According to the labor law of Ukraine there are two possible ways of employment:

– a labor agreement or labor contract;

– a civil contract on performing certain services.

Ukrainian labor market nowadays a lot of processes are irregular and uncontrollable as a result informal employment without signing an employment contract, using civil contract instead employment agreements and to pay illegal wages.

There are two types of contracts in Ukrainian legislation – labor and civil – show the difference between them.

The first and most significant difference is that the employment contract is within the scope of Labor Law, which has provisions in the Labor Code, whereas in civil contracts they are covered by the Civil Code and can`t benefit from the right to leave, benefits, protection and others.

Another important difference is that labor contracts are concluded between a worker and an employer for the provision and implementation of a work force, and in the case of a civil contract, it is in the performance of a specific task and an exact deadline for implementation to see the results achieved.

In the labor contracts, there are precisely defined working conditions mentioned and stipulated in the labor contract between the parties, as the location / seat of the work process /, the duration of the working process / in days and hours /, the amount of the basic and the additional annual leave other clauses. While these civil rights and obligations between a worker and an employer are lacking in the civil contract. Only the person determines the duration of the work process and its place of execution.

The approaches to payment under the independent-work contract and the labor contract differ significantly. In the case of the civil law contract, it's better to define the price in the form of payment for certain measurements or sizes. According to Article 843 of the Civil Code of Ukraine, parties are allowed to determine the price of works in various ways in the contract itself. The price includes recovery of costs and actually the payment for the work.

The labor contract doesn't belong to this method of recovery of costs - the amount of salaries must be specified. Article 6 of the Law "On Remuneration for Work" provides for specific methods of calculating salaries (tariff scales, post salaries).

Another feature which is inherent to civil law contracts is that the work performed under the independent-work contract is delivered by acts. The labor law doesn't contain provisions on the signing of acts of acceptance-transfer, and the parties don't sign such a document.

Signed after completion of work or provision of services acts of acceptance-transfer can be the basis for their payment. It will also be a ponderable argument for concluding a civil law contract and not a labor contract.

Another difference of the contracts is that the work or services under the independent-work contract are performed at their own risk (Part 1 of Article 837 of the Civil Code of Ukraine), and according to the employment agreement, the employee performs the functions which are outlined by his position and gets guaranteed salary (Part 1 of Article 21 of Labor Code of Ukraine). Performing works at your own risk means that if the contractor provides his services poorly, he will independently correct the gaps and won't be entitled to payment. Under a labor contract, non-payment of salaries is impossible - it's a criminal offense.

One of the main components of the costs of any firm is the payment of workers. Their accounting is an essential aspect of accounting. It would be appropriate to identify the similarities and differences in the characteristics of accounting for employee benefits in accordance with national accounting standards and international standards (IFRS and Accounting Standards).

In Ukraine, employee benefits are governed by the National Accounting Standards 26 "Payments to employees" [17], and in Europe, the International Accounting Standard (IAS) 19 "Payments to employees" [18].

The structure of employee benefits in Europe, according to IAS 19:

1. Short-term employee benefits, such as wages, salaries and social security contributions, paid annual leave and paid sick leave, profit-sharing and bonuses (if payable within twelve months of the end of the period) and non-monetary benefits (such as medical care, housing, cars and free or subsidized goods or services) for current employees.

2. Post-employment benefits such as pensions, other retirement benefits, post-employment life insurance and post-employment medical care.

3. Other long-term employee benefits, including long-service leave or sabbatical leave, jubilee or other long-service benefits, long-term disability benefits and, if they are payable twelve months or more after the end of the period, profit-sharing, bonuses and deferred compensation.

4. Termination benefits are employee benefits payable as a result of either: an entity's decision to terminate an employee's employment before the normal retirement date; or an employee's decision to accept voluntary redundancy in exchange for those benefits.

According to Accounting Standards 26 "Payments to employees" include:

1. Current payments for employees;
2. Payments after the end of employment;
3. Other employee benefits;
4. Payments in case of dismissal;
5. Payment of enterprise's equity instruments.

IFRS 19 "Payments to employees" has a more open and informative structure, as opposed to Accounting Standards 26. Not for nothing, the international standards of financial reporting are advisory and for keeping records in Ukraine. However, each enterprise has the right to make decisions on the adoption of a particular standard on its own. The taxation of wages in Ukraine and Germany is also significantly different.

Many Ukrainian employers started using civil law contracts with individual contractors instead of employment agreements. A contract with an individual

contractor is a wonderful civil law tool. Employment agreements require employers to pay taxes for their employees. Under civil law contracts, individual contractors who provide services or perform works are responsible for paying their self-employment tax. That is, if you pay an individual contractor a bit more, you will cover your contractor's tax obligations, but you will still spend much less than you'd spend with an employment agreement.

The taxation of wages in Ukraine, Europe and USA are also significantly different. Each employer as a tax agent is obligated to pay taxes on behalf of the employee before paying salary: military tax - 1.5% and personal income tax- 18% - payable from the salary base (paid as a cost of employee), Social Security Tax - 22% payable on the top of salary base (paid at the cost of employer). Personal Income Tax (PIT) is a national tax levied on income of individuals resident and non-residents who receive income from sources of their origin in Ukraine. Military collection (MC) is a local tax levied on income of individuals resident and non-residents who receive income from sources of their origin in Ukraine.

Trade union contribution – voluntary (optional) monthly membership fees, which are set in different sizes, namely: – for working union members 1%; – for students 0.5% of the minimum scholarship; – for non-working pensioners, 0.1% of the minimum age pension. Membership union fees are not paid from the amount of payment, a disability card, material assistance, one-time bonus. The procedure for payment of membership fees is determined by the primary trade union organization.

Income tax in Germany is calculated by applying a progressive tax rate schedule to taxable income. Employer will automatically deduct the income tax from gross wage/salary in the form of wage tax and transfer it to the tax office on behalf. An employer also transfers the "solidarity surcharge" and – if employee is a member of a religious community which levies it – the "church tax" as well. Pension, health, nursing and unemployment insurance are also deducted from wages and paid by employer.

In Germany, everyone's earnings are subject to a basic tax allowance. Up to this amount, taxable income is not subject to tax. In 2019, this basic tax allowance is 9,168 euros for unmarried and not in a civil partnership. For couples who are married or in a civil partnership is 18,336. If taxable income is higher than these amounts, employee will pay income tax on it. The taxation rates vary from 14 percent to 42 percent. The rule is: the higher taxable income, the higher the rate of taxation. However, the top tax rate of 42 percent is only payable on incomes of more than 250,731 euros a year if you are unmarried and not in a civil partnership. For couples who are married or in a civil partnership, the maximum tax rate is applicable for incomes of over 501,462 euros (Table 1).

In addition to the income tax rates indicated above, the following taxes and surcharges are additionally levied on all types of income:

- solidarity surcharge: 5.5 percent of the income tax;
- church tax: 8.0 or 9.0 percent of the income tax – church tax is only levied if the taxpayer is a member of a church that is recognized for church tax purposes [4].

Depending on the personal situation of the employee in Germany, he is assigned a tax class. There are six such classes.

Table 1. Income tax scheme in Germany

Taxable income bracket	Taxable income bracket	Tax rate on income in bracket
From EUR	To EUR	Percent
0	9,168	0
0	18,336	0*
9,169	55,960	14-42
18,337	111,920	14-42*
55,961	265,326	42
111,921	530,652	42*
265,327	No limit	45
530,653	No limit	45*

*married couple filing a joint return

Tax class 1 applies to persons who are unmarried or divorced, and also to married persons whose spouse lives abroad, and to couples registered in a civil partnership. Married couples, who are permanently separated, as well as widowed persons, are also covered by tax class 1.

Tax class 2 takes into consideration an allowance for alone parents. This refers to persons who are unmarried and whose household includes at least one child (the child must be registered with the person in question in the primary or secondary residence, and the person must also have a children's allowance or receive child benefit payments). Another requirement for classification according to tax class II is that the lone parent does not live in a cohabitation union or in a registered civil partnership.

The 3rd class is assigned to married/unmarried persons who do not live separately and if the 4th class is not selected. In this case, another member of the marriage is assigned the 5th class. The 3rd class is usually chosen by a man who has considerably more monthly earnings than the other.

Married dual earners can apply for the tax class 4. This is recommended if both partners have relatively similar net wages. Tax class 4 applies to both spouses in that case. The requirement here is again that both earners reside in Germany and do not permanently live apart.

Tax class 5 with factoring refers to the same group of persons as tax class IV, except that in the factoring alternative the benefits of tax class splitting is already considered during the year.

Should not each spouse be classified as belonging to tax class 4, one shall be assigned to tax class 5, and the other to tax class 3.

Tax class 6 applies to persons with more than one employment position. The employer paying the lowest wages should deduct the income tax according to tax class 6.

The U.S. income tax system is supposed to pay income tax on both the federal and state level. Federal taxes include social security and FICA. Each state also has its own form of income tax that employers also withhold from your paycheck. If employee earn over a certain amount, $6,750, he must file both federal and state taxes before April 15th of each year [2].

The overall system of taxation in the United States is progressive. By a progressive tax system the percentage of income an individual (or household) pays in taxes tends to increase with increasing income. Not only do those with higher incomes pay more in total taxes, they pay a higher rate of taxes. This is the essence of a progressive tax system (Table 2).

Table 2. Marginal income tax rates for 2019 in USA

Marginal Tax Rate	Single Taxable Income	Married Filing Jointly or Qualified Widow(er) Taxable Income	Married Filing Separately Taxable Income	Head of Household Taxable Income
10%	$0 – $9,700	$0 – $19,400	$0 – $9,700	$0 – $13,850
12%	$9,701 – $39,475	$19,401 – $78,950	$9,701 – $39,475	$13,851 – $52,850
22%	$39,475 – $ 84,200	$ 78,951 – $ 168,400	$ 39,476 – $ 84,200	$ 52,851 – $ 84,200
24%	$ 84,201 – $ 160,725	$ 168,401 – $321,450	$ 84,201 – $ 160,725	$ 84,201 – $ 160,700
32%	$160,726 – $ 204,100	$321,451 – $ 408,200	$160,726 – $ 204,100	$160,701 – $ 204,100
35%	$ 204,101 – $510,300	$ 408,201 – $612,350	$ 204,101 – $306,175	$204,101 – $510,300
37%	$510,301+	$ 612,351+	$ 306,176 +	$ 510,301+

For example, a single taxpayer John making $32,000 in a year. That person would be in the 12 percent tax bracket but wouldn't actually pay 12 percent of the full $32,000. Instead, they pay would 10 percent on the first $9,700 and 12 percent on the rest

– amount in the first income bracket = $9,700; taxation of the amount in the first income bracket = $9,700 × 10% = $970.00;

– amount in the second income bracket = $32,000 – $9,700 = $22,300; taxation of the amount in the second income bracket = $22,300 × 12% = $2,676;

– total federal income tax is $970+ $2,676 = $3,646.

While John paid a maximum tax rate of 12%, we can see that his effective tax rate is much lower. An effective tax rate can be calculated based on total income, AGI, or taxable income. Suppose we wish to calculate John's effective tax rate based on his total income of $32,000. Given that his federal income tax is $3,646, her effective tax rate is only 11.4%, (($3,646/$32,000) ×100).

In addition to income tax, a wage earner would also have to pay Federal Insurance Contributions Act tax (FICA). FICA tax is a combination of a 6.2% Social Security tax and a 1.45% Medicare tax the IRS imposes on employee earnings. For 2019, only the first $132,900 of earnings is subject to the Social Security part of the tax. A 0.9% additional Medicare tax may also apply if earnings exceed $200,000 if you're a single filer or $250,000 if you're filing jointly [1]. Typically, employers deduct FICA tax from employee paychecks and remit the money to the IRS on behalf of the employee. FICA stands for Federal Insurance Contributions Act.

- $32,000 × 6.2% = $1,984 (Social Security portion)
- $32,000 × 1.45% = $464 (Medicare portion)

The UK income tax rates and brackets for 2019-20 is shown in Table 3.

This means that taxation begin from the minimum income (£12,500) which person have to earn in a year. Similarly, the basic tax rate of 20 percent, which currently applies if employee earn up to £46,350 a year, has been extended.

For example, accountant Bill, his total income after deducting allowable expenses is £54,000 a year. Let's show how much tax he'd pay under the current income tax rules and how much he'll pay in 2019-2020 [5].

Table 3. The UK income tax rates for 2019-2020

Tax Rate (Band)	Taxable Income	Tax Rate
Personal allowance	Up to £12,500	0%
Basic rate	£12,501 to £50,000	20%
Higher rate	£50,001 to £150,000	40%
Additional rate	Over £150,000	45%

Under the current thresholds:

- £12,500 is tax-free.
- This leaves Bill with a taxable income of £12,450 (£50,000-£12,500), which falls within the basic rate threshold.
- The remaining £4,000 falls within the higher rate and is taxed at 40 percent, that is £1,600.
- So, his total tax liability would be 20 percent of £12,450 plus 40 percent of £4,000 that is £2,490 + £1,600 = £ 4,090.

National Insurance has to be paid by both employed and self-employed workers. National Insurance contributions depend on employment status and how much a person earns. For 2019-20, the Class 1 National Insurance threshold is be £8,632 a year. If an employees earn less than this amount he'll pay no National Insurance contributions. If a person earns more, she'll pay 12% of earnings between £8,632 and £50,000. She'll pay 2% on any earnings above £50,000.

When Ukrainian employers hire new employees under employment agreements, there are at least two ways how they can pay them:

1) an employer indicates his employee's real wage in an employment agreement and instructs an accountant to assess all payroll taxes. If the basic wage is, let us say, 15 000 UAH (+/-600 USD), then this employer is required to pay 22%, which is 3300 UAH (+/-135 USD), of unified social tax, withhold 1,5%, which is 225 UAH (+/-9.2 USD)of war tax (war tax is due since the beginning of the anti-terrorist operation in the eastern Ukraine), and 18%, which is 2700 UAH (+/-110 USD) of income tax. In the end, the employee gets 12 075 UAH (a little less than 500 USD) of take-home pay;

2) an employer indicates a minimum wage rate (currently, it is 4173 UAH(+/-170 USD) in Ukraine) in an employment agreement, but in reality wage is 15 000 UAH (+/-600 USD). This employer has to pay 22%, which is 918,06 UAH (+/-37,5 USD) of unified social tax, withhold 1, 5%, which is 62,60 UAH (+/- 2,55 USD), of war tax, and 18%, which is 751,14 UAH (+/- 30,65USD) of income tax. The rest is 15000 - 62,60 - 751,4 = 14 186 (+/- 579 USD) - a backdoor salary or money under

the table, also employer is on 3300-918,06 = 2381,94 UAH (+/- 97,55 USD) less than in first option. The second way was called “grey”.

According to some estimates, in Ukraine, a “hidden” salary, at tax-free is about 16.6% of the country's gross domestic product. In addition, a survey conducted among representatives of domestic small and medium-sized businesses showed that each legally paid hryvnia accounts for approximately $ 1.5 in earnings issued “in grey”.

In common practice a lot of small business owners in Ukraine used to pay their employees in cash since it’s harder to trace and most of them are trying to evade taxes or cheat the government. The employee is missing out on benefits, such as the ability to earn Social Security benefits in old age or financial assistance in case of disability. The government doesn’t receive individual income tax and cannot fully provide funding to the social sector.

In our opinion, the Ukrainian taxation system needs to be reformed on progressive with increasing marginal tax rates at the institutional level. Progressive tax embodies the concept that those with high incomes should pay more of their income in taxes because of their greater ability to pay (Table 3).

Table 3. Reformed income tax scheme in Ukraine

Taxable income bracket	**Taxable income bracket**	**Tax rate on personal income in bracket For employer**	**Tax rate on Social Security in bracket For employee**
From UAH	To UAH	Percent	Percent
0	Minimal wage	0	5
Minimal wage+1	10,000	12	10
10,001	15,000	15	15
15,001	20,000	18	18
20,001	25,000	22	18
25,001	30,000	26	18
30,001	40,000	30	18
40,001	50,000	35	22
50,001	No limit	40	22

Let’s show how it’s deal on example. Accountant Maria earns 11,000 UAH (+/- 445 USD).

1) When an employer indicates Maria real wage (11,000 UAH) in an employment agreement in suggested tax rate 12 and 15 %. 4,173 UAH is tax-free.

Maria’s first taxable income is UAH taxed in 12%, which is 699,24 UAH (+/- 28 USD);

– amount in the first income bracket = 10,000- 4,173 = 5,827 UAH; taxation of the amount in the first income bracket = 5,827 × 12% = 699.24 UAH;

– amount in the second income bracket = 11,000 –10,000 = 1,000 UAH; taxation of the amount in the second income bracket = 1,000 × 15% = 150 UAH (+/- 6 USD).

Total income tax is 699.24+ 150 = 849.24 UAH (+/- 35 USD)

Maria's an effective tax rate can be calculated based on total income and it's only 7.7% (849.24/11,000)*100).

This employer is required to pay 5%, 10% and 15%, which is 3300 UAH (+/- 135 USD), of unified social tax:

– amount in the first social security bracket 4173 UAH; taxation of the amount in the first social security bracket = 4,173 × 5% = 208.65 UAH (+/- 8 USD);

– amount in the second social security bracket = 10,000- 4,173 = 5,827 UAH; taxation of the amount in the social security bracket = 5,827 × 10% = 582.7 UAH (+/- 23 USD);

– amount in the third social security bracket = 11,000- 10,000 = 1,000 UAH; taxation of the amount in the social security bracket = 1,000 × 15% = 150 UAH (+/- 6 USD);

Total social security is 208.65+582.7+ 150 = 941.35 UAH (+/- 37 USD).

2) When an employer indicates Maria real wage (11,000 UAH) in an employment agreement in current tax rate 18%. She will pay 1,980 UAH (+/- 80 USD) (11,000 *0.18) of income tax. The employer has to pay 22%, which is 2,420 UAH (+/-98 USD) of unified social tax.

3) When an employer indicates a minimum wage rate (currently, it is 4173 UAH (+/- 170 USD) in Ukraine) in an employment agreement, but in reality wage is 11 000 UAH (+/-445 USD). She will pay 751 UAH (+/- 125 USD) (4,173 *0.18) of income tax. The employer has to pay 22%, which is 918,06 UAH (+/-37,5 USD) of unified social tax

As we see the most favorable variant is the first for each side:

1) employee has to pay little bit more amount of income tax (98.24 UAH or 0.40 USD) as from minimum wage and can earn Social Security benefits in old age;

2) in the same time employer has to ability indicated all official wage which is almost 3 times higher than minimum wage rate without any risk and backdoor salary and pay almost the same unified social tax.

CONCLUSION

In our opinion, proposed mechanism of reforming the income and social security taxation system is the way to economic transparency and stability on Ukrainian labor market. In support these activities Ukrainian government should set also a limit for cash payments, lead on it to minimum and compulsory automate an accounting process for all types of business.

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SKILLS – ONE OF THE MOST IMPORTANT ASSET IN THE FUTURE GLOBAL BUSINESS

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Abstract
The article is about how quickly humankind must change the way to learn and teach new skills. As technologic conditions change, people need to be able to cope and adapt by acquiring new skills to the demands made by the labor market, economy and society. Companies will find out that one of the most important assets, more important than tangible or intangible assets will be the human resource. The Higher Education can play a key role in the progress of a good opportunity and the best exchange rate for so called new currency regarding skills and this reality is not far from us! It do must reshape our way to think about the perpetuation of welfare or poverty, if we speak about people and the position on the global stage if we speak about companies.

Keywords: new currency, skills, asset, E-labor platforms, adapted model, Measurement Map, Triangle academia-business-society.

Companies will find that one of the most important assets, more important than the tangible or intangible assets will be the human resource having flexible, customizable, adaptable and high performance skills

INTRODUCTION – Not job titles but skills

The workforce all over the world is undergoing a paradigm shift (3).

We are all witnesses at the obsolescence of a lot of the jobs which people acquired over thousands of years (1) and we must now accept that it is possible our occupation will reshape during our working lives. The notion of a skill for the whole life, has become just a story.

As technologic conditions change, we need to be able to adapt to what the market demands.

Companies will find out that one of the most important assets, more important than tangible or intangible assets will be the human resource.

The notion is about how quickly humankind adapt. The start point will depend on education and training and on the ability of the education system to respond to market request, so any company who wants to be on stage should focus on high skilled employers and anybody who wants to remain employable must be ready to get new skills and keep on learning throughout whole life.

As approaches, some are presented below:

1. Learning to take place in a range of settings "rather than just the traditional educational institutions, schools and colleges."

2. Robust links between education and industry materialized ine-platforms and innovative spin off research center, but not only.

3. Links between the formal education sector and informal sectors (i.e. e-labor platforms).

4. Providing more flexible curriculum forms of education, action supported by forward thinking education policies makers.

Keep on learning throughout whole active existence is not just about economic ranking. However, it is also about social cohesion and humankind welfare. Education can play a key role in the progress of a good opportunity and the best exchange rate for so called new currency regarding skills and this reality is not far from us! It do must reshape our way to think about the perpetuation of welfare or poverty, if we speak about people and the position on the global stage if we speak about companies.

Q/A are about how institutional and organizational conditions for the production of knowledge relate to each other and what kind of characteristics this knowledge has (Figure 1) Different institutional arrangements produce different forms of knowledge and this can lead to differences in the capacities of knowledge products. An analysis should aims at assessing the forms of interaction between spin-offs, and their parent institutions.

”While useful internally, many job titles are very general, and don’t necessarily say much about a candidate’s experience or qualifications. Industry or company size can have major impacts on employees’ titles, and can be misleading to a prospective employer. Creative Job Titles Can Energize Workers…” (2)

So, this is a paradox that companies are able to fix it.

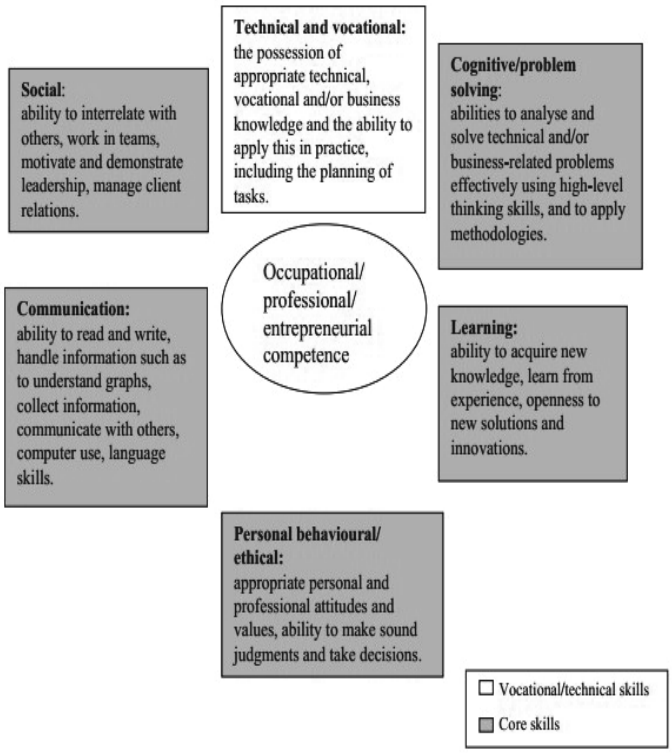

Figure 1. Core skills and technical skills, defining professional competences

Source: ILO 207i

The focus should instead be on finding similarity between occupations based on the knowledge, skills and abilities they require. ”Economic Modeling Specialists Intl. (EMSI) recently ran a study using their compatibility index to illustrate this. For example, a company that needs to fill an open business intelligence analyst position is looking for someone comfortable producing financial and market intelligence, generating reports, and researching in data repositories. This is typically a vital position and ideally will not remain open long. By excluding candidates without business intelligence analyst listed as a past title, they rule out many individuals who have the relevant skills and experience required of the job” (2).

Skills should be a new currency in global business

The studies point out that ”Countries with highly-skilled and educated workforces will possess the same comparative strategic advantages this century as those with highly-developed infrastructure, oil reserves and mineral deposits did in the past. This economic imperative will have the most profound consequences for the education system.

Educational institutions will have to accompany students throughout their working lives rather than merely preparing them for their working lives” (1).

Figure 2. Position along value chain

Source: Zeca D.E., INTED2015 Proceedings(browse), Pages: 3448-3457

A reality, we are witnessing, imposed by the velocity of development of the technologies and economic approaches of the companies, is this, according to which ”technology is replaced and upgraded in the workplace so frequently that employees and job candidates alike are struggling to keep up with the most in-demand skills. The most dynamic companies will build cultures of continuing education, where training is always occurring and workers are constantly upgrading their skills. Furthermore, internships, boot camps and similar training programs will become more common. Simply put, managers can no longer rely on new hires to have all the skills required to handle every project that will arise on the job and old methods of hiring and training are unlikely to work well in the future” (3).

E-labour platforms fluidizes the process the *Right skills for the right job*

On E- labour platforms enterprises, companies, organizations and employees can tailor their interactions to their needs. On the other hand, "E-labor platforms- key new technologies" is both about tools for a battle to find a good job and tools to retain the empowered worker. It is about performers, when they understand their own value. But it is not enough to find the right people for the right job. Companies in innovative industries need mechanisms that support ongoing, self-directed, and virtual learning. Training platforms enable employees to create online learning programs Beyond the hiring process, entrepreneurs, but not only, use e-tools to develop a base of employees with great variety skills.

Table 1. E-labour platforms

Linkedin	http://www.linkedin.com/uas/login
Careerbuilder	http://www.careerbuilder.com/?sc_cmp2
Monster.com	http://www.monster.com/geo/siteselection https://www.youtube.com/watch?v=b3QZppcxTAE&nohtml5=False
Freelancer.com	https://www.freelancer.com/?utm_expid https://www.youtube.com/watch?v=l-6pnPOG9is&nohtml5=False
Toptal	https://www.toptal.com/?adnetwork https://www.youtube.com/watch?v=t4R-WCfJI8E&nohtml5=False
Upwork	https://www.upwork.com/? https://www.youtube.com/watch?v=Pk_96LDtwmA&nohtml5=False
Glassdoo	https://www.glassdoor.com/index.htm https://www.youtube.com/watch?v=OCPqhAAV5gc&nohtml5=False

LinkedIn is a business-oriented social networking service.

CareerBuilder provides „labor market intelligence, talent management software, and other recruitment solutions, including online career search services."

Monster.com is one of the largest job search engines in the world. Monster is used to help all those seeking work to find job openings, for lower to mid-level employment, that match their skills and location.

Freelancer is a „global crowd sourcing marketplace, which allows potential employers to post jobs that freelancers can then bid to complete."

Toptal employs a screening process to evaluate freelancers from all over the world and „has an acceptance rate of around 3% of applicants."

Upwork is a global freelancing platform where entrepreneurs and professionals connect remotely. Upwork allows everyone to interview, hire and work with through the company's platform. E- platform includes a real-time chat platform.

One more tool to connect learning program and business goals – Measurement Map

The *Measurement Map* is a way to illustrate hypothesize about the causal chain of evidence between a learning program and business goals.

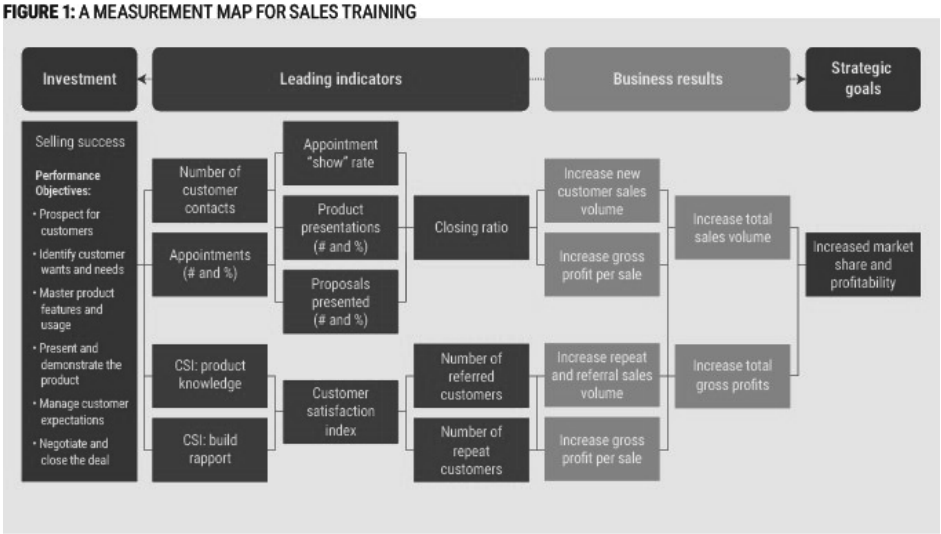

Figure 3. Measurement Map

Source: https://www.chieflearningofficer.com/2019/09/23/so-you-want-to-measure-impact-now-what/

In the ranks below I bring forward the exercise done by *Bonnie Beresford* and the people from *chieflearningofficer* (4). They take over L&D and business stakeholders collaboratively ”engage in a measurement-mapping process and create a map about how a learning program affects the business.

The format of a Measurement Map is intentionally straightforward. Its goal is to clearly communicate alignment, typically on one sheet of paper. It consists of four logically connected sections. Investment: This is the training program. A Measurement Map defines what success would look like.

Leading indicators: These are nonfinancial measures that provide insight into whether the investment is on track. Leading indicators often include evidence of behaviors and outputs. The logical argument posits that if these indicators are moving in the right direction, then the investment is on track to realize desired business results.

Business results: These measures carry a financial value, expressed either in dollars or easily translated into financial terms by the business. Common examples include employee turnover rates, sales volume, production run-rates and workers’ compensation costs.

Strategic goals: These represent the organizational imperative that the initiative is trying to impact, such as profitability, market share or customer loyalty. The map uses the terms “leading indicators” and “business results” to provide a common

lexicon for thinking about alignment and measuring impact. The straightforward example shown in Figure 1 depicts the causal chain of evidence between sales training and improved financial performance" (4).

CONCLUSION

The notion here is that we can shape Educational, Academic direction and evolution over time and accelerate learning within the system, so that the system becomes more and more effective in terms of addressing the challenges and opportunities. Arguably it is our accountability to dare upheaval enthroned tenets. So, adjustable variables is Large Open Online Collaboration (LOOC), including a set of protocols that determines who can participate, what roles they might play, how they might interact, and how disputes get resolved; set of protocols or standards is typically designed to facilitate connection, coordination, and collaboration between task of experts, scholars, students.

On E-labor platforms enterprises, companies, organizations and employees can tailor their interactions to their needs. On the other hand, "E-labor platforms- key new technologies" is both about tools for a battle to find a good job and tools to retain the empowered worker.

Because all come to the value, to the people, to the skills, the last seen more and more seriously as a new currency and because skills should be the most important asset in future global business.

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INTELLECTUAL PROVISION OF ENTREPRENEURSHIP INNOVATIVE DEVELOPMENT IN THE KNOWLEDGE-BASED ECONOMY CONDITIONS

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Abstract
Knowledge-based economy radically changes the traditional principles and competitive business model. Knowledge-based economy development pattern – entrepreneurship intellectualization, which was reflected with the increasing significance of intangible resources, especially intellectual have been revealed; the transition from producing tangible product to create intellectual values – knowledge, information, etc; changing the type of entrepreneurship – from employment to business smart. It is proved that successful transition to a knowledge-based economy involves creating certain conditions through long-term investment into science, education, development of innovative systems, constant modernization of information infrastructure and creation of a favorable environment for market innovation. The regularities of modern innovative development, the role of education and science in its provision are highlighted. A critical analysis of the results of the development of innovative entrepreneurship is carried out, the key negative factors and tendencies that impede the deployment of innovative activity of domestic business structures are identified. The intellectualization of entrepreneurship and its manifestations, structural and qualitative transformations of the entrepreneurial environment are revealed. It has been proven that in modern environment, entrepreneurship requires a holistic approach based on organizational synapses created by experience or learning opportunities. The problems of Ukraine intellectual resources use are researched, the conclusion is made due to the high potential and inefficient use of intellectual resources, which negatively affects the entrepreneurship innovative development. The results of the conceptual modeling are presented, within which the concept of "entrepreneurship innovative activity intellectual support" is offered, which allowed to formulate an algorithm of innovative activity intellectual support system functioning in order to ensure efficient transfer of knowledge from the education system to the enterprise. The structural aspects of entrepreneurship innovative activity intellectual support system are defined. The conceptual model of entrepreneurship innovative activity intellectual support is formed in two plans: at the macro- and micro-levels, that reveals the subjective composition of its participants and the mechanisms of their interaction. The expediency of intellectual support infrastructure formation due to new forms of innovative entrepreneurship organization – networks and training and production clusters, contributing to the innovation of the economy is substantiated. Methodological principles have been developed to ensure the effective functioning and regulation (purposeful self-organization) of entrepreneurship intellectual innovative activity support system from the standpoint of a synergistic management concept. The proposed conceptual approaches, models and mechanisms of entrepreneurship innovative activity intellectual support systems development reveal new standards of entrepreneurship and universities interaction in the regions of the country, as well as the development of intellectual resources and capital.

Keywords: knowledge-based economy; entrepreneurship innovative activity intellectual support; entrepreneurship intellectualization; innovative development; synergistic management.

INTRODUCTION

In the age of the knowledge-based economy, traditional principles, approaches and development models of competitive entrepreneurship change dramatically. Because of this, modern enterprises are focused on innovative models of development, which, accordingly, require the intellectual products creation processes establishment, and their commercialization is able to provide the value, which scientists and practitioners consider as the foundation to strengthen the competitive position. As L. Edwinsson rightly points out, "the knowledge-based economy obliges organizations to recreate themselves, but in the posture of intellectual enterprises already" [2, p. 135].

RESEARCH RESULTS AND DISCUSSION

In the context of global trends in socio-economic development, it becomes apparent that the formation of economic relations based on the dominants of mental and intellectual work, the knowledge and information factor role in economic and social processes natural growth, the transformation of institutions such as science and education in the context of their market orientation, the intellectual property developed market formation, the intellectualization of the economy in the field of high-tech services the emergence of a new vector and the emergence of knowledge-based economy phenomenon – intellectual entrepreneurship. These are the processes of intellectual and entrepreneurial activity synthesis, which means the formation and development of such "rules of the game", according to which the interaction of intellectual resources of economy, and society and subjects of entrepreneurship subjects continuous reproduction takes place [8, p. 83].

However, these processes transformations in such conditions, is hindered with the mind inertia an, the idea of entrepreneurship in general formed during the period of industrial development. In this paradigm, domestic business continues to be and most often uses the logic of managing enterprise performance, and industrial entrepreneurship (according to Bartlett and Ghoshal) exists at the level of operational management, at which competition is the main engine. Hence, the main problem of modern entrepreneurship is the lack of new innovative and creative mind, new concepts, theories, methods, mechanisms in the context of enterprise knowledge capitalization, the potential entrepreneurship institutional system modernization, etc. In this context, it is interesting and very relevant in theoretical and practical terms to state that, in an era of knowledge-based economy development, only those entities will succeed, that will truly be able to transform from industrial enterprises into enterprises capable of becoming collective entrepreneurs-intellectuals. This is due not only to the presence of innovative components (materials, energy and resource-saving technologies, management), the competitiveness of manufactured products (goods, technologies and services), but also the formation of harmonious society special structure based on the theory of "value created by knowledge" principles.

At the same time let's recognize that according to the World Bank knowledge-based economy index assessment, Ukraine occupies the 56th position in the world due to inefficient institutional regime and economic incentives promote the development of the "knowledge" economy, low level of innovation and information

and communication technologies [1]. Thus the highest rating was received by the system of education of Ukraine (8,15 compared to 9.78 mm for the first ten countries), that allows to consider this area as the most stable element of national economy, which ensures the reproduction of the intellectual resources even in conditions of unfavourable environment and creates economic and political influence of the country in the international arena. At the same time a kind of a brake for restraining the progress of the country in the international knowledge-based economy development index, remain low in the indexes of the institutional environment. It is primarily the low efficiency of public administration innovation development, a lack of venture entrepreneurship development, high administrative barriers for innovative companies. In this context, we note that for the effective use of existing capacity in conditions of the new economy formation requires the development of institutional frameworks and rapid knowledge-based economy material-technical base growth [10, p. 115].

The positions of Ukraine in the global rankings for 2018 are presented in Table 1.

Table 1. Ukraine's position in international rankings

Rating name	Organization or source	Position***
Human Development Index, HDI	United Nations Development Program	88 (189)
Social Development Index, SDI	The imperative of social progress	64 (146)
The Global Innovation Index, GII	World Intellectual Property Organization	43 (127)
Global Competitiveness Index, GCI	World Economic Forum	81 (137)
Networked Readiness Index	World Economic Forum	71 (143)
Technological Readiness Index, TRI	World Economic Forum	81 (137)
The International Property Right Index, IPRI	International Property Rights Alliance	110 (125)
*** The parentheses show the total number of countries represented in the rating.		

Source: [11]

According to the Table 1 the most significant is the Global Innovation Index (GII), which in 2018 covered 127 economies of the world. To calculate it, the indicators were combined into 7 blocks: institutes; human capital and research; infrastructure; development of the internal market; development of technology and knowledge-based economy; results of creative activity; business development. The above data show that Ukraine is not among the leaders in innovation development. One of the major reasons is the change in the innovation system model, in which the intellectual and personnel component of innovation activity is dominant, where Ukraine loses its positions, which were quite high in previous periods [4, p. 89].

In this context, it should be noted that at the present stage there is a general tendency to move to higher advanced countries innovative development models, which will inevitably involve countries with economies in transition and developing

countries. This tendency is related to the significant strengthening of education and science role in the state's innovation system further development in the context of the transition to post-industrial society.

It should be noted that the strategic priorities of Ukraine at the present stage are the formation of an innovative model of development, the integration of the economy into the European economic space. At the same time, quality of human resources and intellectual support of the innovation process play an important role in ensuring dynamic innovation development. As in the first half of the twentieth century innovations could be created at the basis of experience, so further improvement of available technologies, study of human needs, then in the conditions of technological processes high level achievement require high level of education and significant scientific development. However, the considerable technological backwardness of the economy, the low level of innovation activity of domestic business indicates that in Ukraine there is no effective innovation system formation. There are many obstacles to its formation, among which the problem of the development of science, education and the production of intellectual resources for an innovative economy is quite acute.

At the same time, let us acknowledge the disappointing trends in the development of Ukrainian science: the chronic under-funding of R&D (research and development) over the last 20 years; a significant reduction in the researchers number; degradation of the applied sector of science, largely destroyed in the 90's of the twentieth century, reducing the performance of state scientific centers; extremely low (with a few exceptions) scientific activity of domestic universities; is still quite powerful, although the capacity of science in state academies is weakened and

In the final report on the results of independent monitoring of the modern world main trends coverage, leading experts from the US National research Council (National Intelligence Council), “Global Trends 2025 – a Changed World” (“Global Trends 2025 – a Transformed World”) focus on education, noting that "...with increasing cross-border nature of today's business and labour market, education became “the leading determinant of economic potential of the world community” [3]. When developing the priority directions of improving the quality of education, consider the following: its objectives determined by needs of enterprises in highly educated professionals; the quality of education is determined by its suitability to the needs of individuals, society and the economy. As the research shows, the productivity dependence on education, with a ten percent increase in the level of education – the productivity increases by 8.6 %. At the same increase in the stock company capital productivity increases by 3-4 % [9, p. 385].

According to the authors, in order to develop the intellectual component in Ukraine, it is first of all necessary to elaborate clear priorities of the long-term state economic and industrial policy based on a thorough foresight of the STP (Scientific and technological progress) and a strategy for the development of the education and science system in accordance with state policy. In doing so, the education system should become a key integrator of economic entities intellectual and innovative provision.

Many studies have now identified a strong link between the performance of the country's intellectual sphere and the development of innovative entrepreneurship.

Therefore, for a real transition to an innovative path of development in Ukraine, conditions must be created, which include the development of institutional environment, innovation and knowledge infrastructure, channels of intellectual support of entrepreneurship, while effectively operating new forms of innovative entrepreneurship organization – networks and clusters that contribute to the innovation of the economy [5, p. 306-308].

Noting the overall backwardness of Ukraine in the global economic arena, it should be noted the importance of effective models finding, mechanisms and tools for innovative entrepreneurship development intellectual support. In the conditions of economy development and knowledge becoming as the main economic resource, intellectual support of innovative entrepreneurship development becomes the most important factor of the country competitiveness and its population well-being increase.

This necessitates the intellectualization of entrepreneurship, which is the following: the main economic product of entrepreneurial activity is increasingly the intellectual product (know-how, software, methodology, technology, etc.) and high-tech product (the share of R&D expenditure in the product is more than 3.5 %) [6]. Intellectual product is a kind of innovative and has such specific features as: the inalienability of knowledge in the sales process, the increasing return on the product, the dominance in the product of R&D costs, the presence of network effect, the ability to bring intellectual rent in the form of payments (license payments).

It is known that ideas for creating innovations (product and others) usually arise either as a result of market needs ("market impetus") or within R&D units ("technological impetus"). The ideas about which of the two paths are most effective are often the opposite. The practice of countries with developed market economies shows that 25 – 35 % of all innovations underlying ideas are originated within R&D units. Whatever their exact relationship, it is clear that both R&D and marketing serve as the main sources of ideas whose development is fraught with weak communication and lack of understanding [7, p. 140].

The intellectualization of entrepreneurship creates conditions for the education role growth as a basis for the formation and development of intellectual resources, the creation and transfer of new knowledge to the economy. The education system inevitably becomes closer to entrepreneurship, integrates with it, that contributes to a more efficient exchange of knowledge, the introduction of more advanced scientific methods of entrepreneurship, the growth of education and spirituality of entrepreneurship, which forces it to serve the interests of society, not only for personal gain. One of the ways of integrating the education and science system with the entrepreneurship system is the enterprises organization at universities, which are increasingly considered within the framework of intellectual entrepreneurship [8, p. 86].

An important feature of a knowledge-based economy is the transition of competition, on the one hand, to the super-system (at the global level) and, on the other, to the subsystem – at the level of the individual (nano-level). Competition becomes multilevel, also penetrating into the internal environment of the enterprise, with the enterprise must be competitive at every level of both internal and external

environments (natural-ecological, information-educational, socio-cultural, socio-economic). In the external environment, the role of the subject's interaction with its partners within the networks that become the most important economic agents of the new economy (as opposed to corporations in the industrial economy) is increasing. In the internal environment, an increasingly important influence upon the competitiveness of the enterprise its employees have, as well as mechanisms for the implementation of knowledge sharing between them and making collective decisions. In this way, innovative entrepreneurship promotes the convergence of education, science and business, creating trust and an effective channel of knowledge transfer between them. The above determines the importance of exploring the nature and role of intellectual support for innovative development of entrepreneurship in the current socio-economic conditions of the country (at the macro level), as well as the development at the micro-levels of practice oriented models and mechanisms of this provision in the regions of the country.

Intellectual support for entrepreneurship innovative development of (ISEID) means the process of of economy, society and subjects of intellectual entrepreneurship intellectual resources continuous reproduction for the development of business structures knowledge competitiveness. Intellectual support for the entrepreneurship innovative development involves the organization and self-organization of continuous counter-information and knowledge flows in the system "education – science – business – state", which contributes to the development of all participants competencies innovative development process at all interaction.levels.

System of innovative entrepreneurship development intellectual support is formed on the basis of such key components as intellectual resources, a data base of knowledge and information, knowledge environment (in particular, innovation culture, protection of copyright and intellectual property, economic incentives for creation and innovation) and knowledge infrastructure. In this context, an important role is played with knowledge infrastructure, which is understood as the set of auxiliary facilities, buildings, systems and services for the generation, accumulation and exchange of knowledge, building of capacity for prompt and continuous access to them, ensuring reproduction, development and effective use of intellectual resources of economic actors.

Aspects and plans of the innovative entrepreneurship development intellectual support model are presented in Table 2. Structural aspects of the conceptual model reveal the content of theoretical and methodological support, the institutional and structural composition of the subjects and their functions in the system, as well as technological mechanisms and tools for the implementation of the IEDIS.

The proposed model is the need for the state to create conditions for effective interaction of the education and science system with the entrepreneurship system to activate knowledge-informational flows through: effective regulation of the subjects self-organization interaction system processes; contributing intensification of intellectual entrepreneurship development processes (development of legislative and legal framework); development of knowledge infrastructure.

The model is organized according to the network principle implies the development of horizontal links between subjects, contribute to the coordination of

their activities through the implementation of joint projects on the development of intellectual resources various kind and level, sharing knowledge and their implementation in the activity of all the IEDIS subjects.

Table 2. Aspects and plans of the innovative entrepreneurship development intellectual support model

The model aspects	**Content analysis and synthesis plans**		
	Macro (meso)	**Micro**	**Nano**
Conceptual	Development of theory and methodology of IEDIS in knowledge-based economy: - identification of knowledge-based economy and business development patterns; - entrepreneurship research; - analysis of intellectual entrepreneurship role in the IEDIS system; - review and analysis of the IEDIS models and mechanisms at the macro level; - development of network and cluster approaches to the organization of the IEDIS; - development of a synergistic approach to the organization and regulation of the IEDIS system.	Development of the intellectual support theory and methodology for the entrepreneurship structures development: - identifying patterns of development of "knowledge" competitiveness of enterprises and their intellectual capital role; - analysis of intellectual support models at the micro level; - adaptation of enterprise interaction information and communication models in the context of knowledge transfer; - the network and cluster approaches to the organization of the IEDIS systems at the micro level (microcluster) methodology development.	Theory and methodology development of personal/employee interaction intellectual support; - development of the entrepreneur-intellectual development models; - adaptation of theoretical and conceptual projecting to the intellectual self-development of the creative personality (for the purposes of study and self-study).)
Institutional and structural	Determination of the system subjects composition and role/functions: - analysis of the VAT (Value added tax) state and information development in the region/country as a whole; - identification of the intellectual/innovative activity subjects and the level of their relationships.	Determination of the company/university IEDIS subjects composition and the role/functions: - analysis of specific models of the IEDIS implemented by enterprises / universities; - substantiation of the role and functions in the construction of the IEDIS systems by enterprises / universities; - synthesis of the focal type microcluster model based on the university.	Determination of the subjects composition and role/functions for the personality/entrepreneur intellectual development; - determining the role and functions of universities in the development of a particular personality intelligence; - determining the role of self-development; - determining the role of the interaction environment in the development of personality / entrepreneur.
Technological	Projecting of mechanisms for the IEDIS implementation: - definition and analysis of the IEDIS models implementation conditions; - development of organizational and economic mechanisms for the IEDIS implementation.	Projecting of the IEDIS implementation at the level of university/enterprise mechanisms: - the mechanism of the microcluster and the university management interaction; - the mechanism of the microcluster subject interaction; - the mechanism of personnel development, etc.	Projecting of the intellectual support implementation for the specific person/employee development mechanisms: - training/self-study; - project training; - mentoring; - the spiritual component of the student/employee, etc.

The mechanism of model implementation involves the creation of various partnerships, non-profit organizations with representation of the IEDIS system stakeholders aimed at development of intellectual resources, knowledge infrastructure and knowledgeable environment, effective knowledge transfer that will contribute to the growth and scope of innovative entrepreneurship, forming of innovative culture on all levels of the system.

In order to effectively operate and regulate the IEDIS system, it is advisable to use a number of methodological principles, namely: purposeful self-organization, resonant influence, use of a network mechanism for coordinating the activities of subjects, the transition from traditional strategic planning of system development to the development of strategic vision of the state of the system in future, proactive and responsive management.

Successful functioning of the IEDIS system provides socio-economic effects, among them, economic: reduction of production material consumption, growth of business, growth of investment attractiveness, reduction of development and introduction of innovations terms, increase of added value and economic added value (on one employee); social: increase of social responsibility of business, development of intellectual resources and capital of enterprises.

CONCLUSION

In view of the above, we can conclude in the context that in the last decade in Ukraine the intellectual support of the scientific and technological sphere has significantly deteriorated. This has a negative impact on the opportunities for innovative development of entrepreneurship. While developed countries in the world are building highly innovative systems, Ukraine is losing its position in technological and economic development, which is only increasing over time. In order to increase the level of the IEDIS in Ukraine, we offer a number of coordinated activities, namely:

– restructuring of the existing innovation infrastructure (scientific sector, education, industrial complexes) and enhancing its integration and efficiency within the national innovation network;

– reorganization of the institutional and legal environment, development of institutions for the use and protection of intellectual property rights, establishing a system of state support for the commercialization of intellectual property results and training for the management of innovative activities;

– ensuring the growth of research and development funding to the EU indicators at the expense of both budgetary and enterprise resources;

– ensuring technology transfer to the real economy sector through close cooperation of scientific institutions, higher education institutions, industry representatives;

– creation of modern state key laboratories system with a high level of technical equipment, which are integrated into world systems, and providing subjects of scientific and business activity with open access to them;

– formation of a new Ukrainian society outlook, development of innovative culture at all levels of government, promotion of tolerance as the new society basis.

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INTELLECTUAL CAPITAL AS A BASIS FOR COMPETITIVENESS AND STABLE FUNCTIONING OF ENTERPRISES OF DOMESTIC MACHINE-BUILDING ENTERPRISES: ORGANIZATIONAL AND ECONOMIC MECHANISM OF ITS CREATION AND APPLICATION

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Abstract
The importance of intellectual capital as a basis for ensuring the competitiveness and stable functioning of domestic machine-building enterprises is explained, and the organizational and economic mechanism of its creation and application are outlined. The purpose of this research is to determine the essence of intellectual capital and its importance as a basis for ensuring competitiveness and stable functioning of domestic machine-building enterprises at the present stage of development under transformational conditions of Ukrainian post-industrial society. Intellectual capital and the ability of its application determine the successful development of the enterprise, its stable competitive position both at the domestic and foreign markets on the basis of ensuring long-term competitiveness and stable functioning. In this case, intellectual capital means not only tangible or intangible resources which are used in the manufacturing process of a machine-building enterprise. First of all, intellectual capital should be attributed to enterprise personnel special abilities and its competences, based on knowledge, skills and experience, as well as providing valuable information for the enterprise, which is the basis of significant competitive advantages at internal and external markets in post-industrial conditions. The analyzis of foreign and domestic scientists researches on the interpretation of "intellectual capital" and "intellectual capital of the enterprise" concept is conducted. Modern ideas about the structure of intellectual capital and interrelation of its elements are analyzed. The problems of the intellectual capital components' determination are investigated. Own interpretation of the intellectual capital of the enterprise is formulated. Basic approaches to the allocation of intellectual capital elements of the enterprises of domestic machine-building are offered. The necessity to consider all components of the intellectual capital of the enterprise involved in the processes of its creation and use is substantiated. Functions of domestic machine-building enterprises' intellectual capital are formulated. Features and characteristics of enterprise intellectual resources are defined. Approaches to formation of organizational and economic mechanism of creation and use of intellectual capital that influence changes in the structure of enterprise management are revealed. The key tendencies of organizational and economic development of intellectual capital as an opportunity to ensure the competitiveness and stable functioning of domestic machine-building enterprises are outlined.

Keywords: intellectual capital, enterprise intellectual capital, competitiveness, innovation process, stable functioning.

INTRODUCTION

Today, industry plays a leading role in supporting the growth of the country's economy. Industrial production of Ukraine is the basis for creation of scientific, technical, economic and social progress. Domestic machine-building is one of the leading industries in Ukraine and basis of its economic development. The state of Ukraine social and economic development highly depends on the efficiency level of machine-building enterprises activities. Therefore, the study of state and tendencies

of of machine-building complex development in Ukraine is relevant nowadays [6, p. 444].

Mechanical engineering is one of the types of economic activity that determines the competitiveness of Ukraine's economy and its place in the world. Today, the state of the machine-building industry of Ukraine does not meet the features of sustainable development. It is characterized by physical and morally worn fixed assets, low share of innovatively active enterprises, low implementation of low-waste and resource-saving processes, low level of investments, difficult political and economic situation in the country, high cost of energy resources, poor interaction between production and R&D sphere [7, p. 88].

The machine-building complex of Ukraine covers more than 20 specialized industries, that is, practically all branches of mechanical engineering. Depending on which market the products manufactured by machine-building enterprises are oriented, they can be grouped into five groups (Table 1).

Table 1. Grouping of Ukraine machine-building complex branches

No.	Group name	Brief description of the group
1	Investment (heavy) machine-building	A group of industries whose development is determined primarily by the investment activity of metallurgical, construction, energy and transport complexes
2	Tractor and agricultural machine-building	A group of industries whose development depends on the solvency of agricultural producers and processors of agricultural products, as well as partly on the population demand
3	Railway machine-building	Designed to meet the demand of country's railways
4	Automotive machine-building	The production of products is focused on the demand of end consumers (production of cars), as well as needs of enterprises, firms and executive bodies (production of trucks and buses)
5	Electrical engineering, instrumentation, machine-tooling	A group of high-tech industries, so-called industries which produce components parts for others, which means following the needs of all other industries, including the engineering itself

Source: [2, p. 76]

The main location centers of machine-building branches are given in Table 2.

The most powerful machine-building enterprises of Ukraine are situated: Azovmash (Mariupol); State Enterprise "Electrotyazhmash Plant" (Kharkiv); Kremenchug Automobile Plant (Kremenchuk); Lvivsilmash (Lviv); "Lviv Bus Factory" (Lviv); Nikopol Crane Building Plant (Nikopol); Southern Machine Building Plant (Dnipro); "Poltava Turbomechanical Plant" (Poltava); Sumy Machine-Building Research and Production Association (Sumy); Turboatom (Kharkov); "Kharkov Tractor Engine Plant" (Kharkiv); Kharkiv Tractor Plant (Kharkiv); Kherson Machine-Building Plant (Kherson) [5].

Table 2. The main location centers of machine-building branches

Industry	Territirial location
Heavy machine-building	Kharkiv, Dnipro, Kryvyi Ri, Mariupol, Kiev, Lviv, Drohobych
Electrical Industry	Zaporizhzhia, Kharkiv, Odessa, Kiev, Khmelnitsky, Berdyansk, Poltava, Kamianets-Podilskyi
Transport machine-building branches	Kharkiv, Dnipro, Kremenchug, Mariupol, Nikolaev, Kherson, Kiev, Zaporizhia, Lviv, Odessa, Lutsk, Melitopol
Machine tools	Kharkiv, Kiev, Berdychiv, Odessa, Cherkasy, Dnipro
Instrumentation	Kiev, Kharkiv, Ivano-Frankivsk, Lviv, Sumy, Cherkasy, Zhytomyr, Lutsk
Agricultural Engineering	Kharkiv, Dnipro, Ternopil, Kherson, Odessa, Kiev, Berdyansk, Uman, Novograd-Volynsky, Nizhyn, Kolomyia

Source: [1, p. 94]

Main problems of modern engineering development in Ukraine are as following:

– obsolescence of enterprises fixed assets, which negatively affects the competitiveness, quality and cost of engineering products;

– insufficient level of producers solvency, which adversely affects the financial and economic conditions of machine-building enterprises;

– limited domestic demand for domestic products;

– low level of innovation activity of domestic enterprises;

– significant dependence of domestic enterprises on the supply of components from other countries;

– inefficient policy of the state on the activity of monopolists and intermediaries, which leads to an increase in the cost of materials and energy resources [3, p. 24].

The competitiveness of an enterprise is a complex characteristic that is determined by factors and components. Such components were first considered by M. Porter and called “competitive advantages”. According to M. Porter's definition, “competitiveness is the feature of a commodity, service or enterprise to perform on the market on equal basis with similar goods, services or enterprises present there” [9]. Competitive advantage is an economic category, which means that enterprise has unique characteristics that distinguish a given enterprise from other similar ones at the market. Enterprise’s position within the industry is determined by its competitive advantages, which are broadly divided into two main types:

– lower prices for manufactured products;

– creation of quality goods.

The first researches of the essence of enterprise’s and country’s competitiveness were made by M. Porter, A. Marshall, L. Walras, E. Chamberlain, J. Robinson, and J. Schumpeter.

Advantages in the field of intellectual component of enterprise activity are its basis – technology, business processes, knowledge, competence of employees, ability of the enterprise to learn and quickly respond to market demand changes.

For further researches of the competitiveness assessment, it was determined the essence of competitiveness at different levels of study (Table 3) [9, p. 46].

Table 3. The hierarchy of market players' competitiveness concepts

Level of hierarchy	The concept of competitiveness
Country Competitiveness	Country's ability: - to produce products and services that meet the requirements of world markets; - to create conditions for increasing state resources
Ensure sustainable GDP growth and quality of life at world level	Regional competitiveness: - to produce goods and services that meet the requirements of domestic and world markets; - to create conditions for increasing regional resources to ensure the growth of potential competitiveness of economic entities; - to ensure steady GDP growth and quality of life of the region's population at world level
Industry competitiveness	Industry ability: - to produce products and services that meet the requirements of world and domestic markets; - to create conditions for increasing the competitiveness of enterprises in the industry on the basis of basic macro technologies
Competitiveness of the enterprise (according to M. Porter)	"Competitiveness is the feature of a commodity, service or enterprise to perform on the market on equal basis with similar goods, services or enterprises present there" [9]

Source: [9, p. 46]

To our mind, it is most accurate to determine those definitions of competitiveness essence, which are based on the description of internal and external activities of the enterprise because these definitions emphasize the ability of the company to act in a competitive environment and have several advantages over other market representatives.

The economic development of the last two decades has shown that the intellectual capital of the enterprise is the basis of its competitiveness at different levels, both at external and internal markets [8, p. 76].

The category "capital" is one of the most used in economic science and at the same time has no generally accepted definition due to the variety of forms of capital and its manifestations. According to traditional economic definition, capital is understood as a dynamically accumulated economic resource, which is reproduced through the conversion of its forms (production, commodity, monetary) and acts as an age-old value. Capital key feature in such a definition is liquidity, which means the ability to convert directly or indirectly, regardless of its forms, into monetary form. The diversity of capital theories is grounded by the process of roductive forces development. At various stages of economic development, the leading role belonged to material, financial and, finally, intellectual capital. The general essence of capital, as reflected in all theories, is that capital must be invested in economic work which, in the process of continuous movement, generates income. This essence is preserved regardless of the forms of capital.

In the innovation economy, the capital intangible forms come to the forefront. Finding a specific medium and/or legal status, intangible forms of capital are

converted into intellectual capital, which enables them to be attracted to business and transformed into various forms of tangible and financial capital for profit aim. Such process is called cognitive capitalization. According to Polls B., cognitive capitalism should be understood as kind of capitalism in which knowledge is the main source of value, and hence its opposition to industrial capitalism.

Beginning of the XXI century in domestic economic science is characterized by an increase of attention to the problem of intellectual capital, identification of its structure and processes of its management. However, today it can be stated that the vast majority of domestic researchers rather actualize the results mentioned in the researches of E. Brooking, T. Stewart, L. Edinson, M. Castels and other foreign scientists. Meanwhile, in the context of the emergence of an information economy as a support for the global socio-economic system, such situation cannot in any way be considered satisfactory. The necessity of developing an original scientific approach to intellectual capital is determined by at least one of the following reasons. First, intellectual capital is increasingly determining the level of national security and competitiveness. Secondly, the existing approaches in Western scientific thought are more likely to capture the presence of a leading role for intellectual capital within the existing economy than to give it a deep economic and theoretical substantiation.

A coherent system of interdependent categories should be organized in the following order: information and knowledge, information resource, capital in general, human and intellectual capital.

The problem of understanding information as an economic category, especially in the context of its correlation with knowledge, has recently been given great weight in a number of works (J. Hodgson, M. Castels, R. Crawford, J. Sapir, etc.), in which three basic points of view were identified:

– knowledge as a product of information use;

– information as an external form of knowledge;

– knowledge and information are closely related to the positions of economic science, these are identical phenomena.

Having analyzed these approaches, it is defined that it is not easy to give a clear definition of what “knowledge” is. The fact is that, firstly, this concept is one of the most common, and such terms are always difficult to be determined. Secondly, there are many different types of knowledge, and it is difficult to combine them into one synonym. Although it was given an attempt to find out the specific essence of this phenomenon. Knowledge is a way of consciousness existence. Knowledge can also be defined as a form of existence and systematization of the results of human cognitive activity. This most general formulation allows to combine into several synonyms several terms that express the specific types of knowledge that are found in social practice. Knowledge is information learned in a person's mind. This information is absorbed (recorded) in a spiritual form. Information that accumulates in the mind, along with its spiritual understanding, is recorded materially, primarily in natural, spoken language. But knowledge can be fixed with the help of other material signs: with the help of written formulas, mathematical graphs and tables, diagrams, drawings. All these forms of knowledge fixation are called written language (sometimes called symbol language, artificial language).

Being materially fixed, knowledge can be passed on to other people. As a result, it acquires social characteristics and social significance. That is, the essence of knowledge cannot be understood without revealing the socio-historical conditionality of human activity. Knowledge crystallizes, accumulates and objects the social experience of people. A person in the context of real social relations begins to accumulate historically developed conceptual and categorical apparatus. All knowledge that is present in the socio-economic system can be divided by the criterion of their acquisition at home, obtained from direct experience and based on common sense, and scientific obtained through the use of special procedures. In the researches of V.I. Vernadsky, N. Bohr, and K. Marx it is shown that science, as the most advanced instrument of acquiring new knowledge in every particular historical moment, is the sole mean of evolution of human society intellectual sphere.

Based on researches of M. Polanyi, I. Nonak, and X. Takeuchi, it can be distinguished another, equally important classification of knowledge by owner's nature. It allows to distinguish individual and collective knowledge. This allows also to assert that if information is a certain amount of symbols, data, in a certain way organized and transmitted, then knowledge is some intangible object that acts as the dialectical unity of the source and result of the transmission of information. Principle in the generation of knowledge is the participation of individual, as well as his evolutionary character. In this regard, knowledge is always determined by social and technological development of the system. In the context of the information economy, the role of knowledge both – as an economic resource and as a commodity is constantly increasing. Today this process is as follows:

– knowledge becomes more quantitatively and qualitatively more important economic resource in comparison with material resources and physical capital;

– the diversity of knowledge forms as an economic good and growth of sectors related to the market nature of its reproduction (research and development sector, various types of consulting, programming, etc.) are increasing;

– incorporation of codified knowledge into the structure of the production function;

– formation of the telecommunication-information sector of the socio-economic system that transforms the processes and conditions of knowledge transfer between its elements.

Under modern conditions, when the formation of information economy is on the agenda of economic development, the dependence of socio-economic relations on the process of transformation of knowledge into a special kind of capital - intellectual, is more evident. Despite the relatively short history of this concept, it is now clear that intellectual capital is a complex and multi-level phenomenon. At the same time, it is also the greatest success modern science has achieved in the study of intellectual capital at enterprise level.

In a number of works, intellectual capital is regarded as the intellectual activity of a person in the socio-economic system. In this approach, there is virtually no distinction between revenue-generating and cost-effective intellectual activity and other types and forms of intellectual activity. In our deep conviction, the fundamental heuristic value of the concept of intellectual capital lies precisely in the allocation of

a particular element of socio-economic relations, that is, the analysis of intelligence as a factor of economic development. In this sense, the distinction between intellectual capital as income-generating knowledge and other types of knowledge of, for example, purely scientific, technical or cultural-historical significance must be understood. In this sense, intellectual capital is a form of knowledge that is used in the production process and generates additional revenue. Hence the fundamental difference between intelligence and intellectual capital is that intelligence is a collection of human intelligence and accumulated knowledge, and intellectual capital is that part of the intellect that is able to generate income. Thus, intellectual capital is a special part of intelligence.

One can fully agree with a vision of intellectual capital as a multi-level phenomenon that is capable of providing competitive advantages to individuals, firms and nations. Indeed, intellectual capital is manifested at three levels – individual, corporate and social. Moreover, each of these levels corresponds to its special form: on the individual – it is the intellectual capital of the individual; at the firm level – the intellectual capital of the enterprise; at the level of national economy – public intellectual capital.

The prevailing intensive type of economic development characteristic of the information economy is information, knowledge and intelligence that act simultaneously as sources of economic growth and as limiting factors. At the same time, their reproduction and storage are directly related to the person, his level of qualification and cognitive abilities. Under these circumstances it is determined the increase of role of skilled, scientifically trained personnel in ensuring economic development.

The above mentioned allows to define the intellectual capital of an individual as a set of cognitive and spiritual capabilities that provide an increase in the level of income in terms of labor costs. Its structure includes knowledge, experience, skills and abilities of an individual economic agent, as well as the results of his creative activity, which are realized in economic activity.

Objective basis for the increase of intellectual capital is the following characteristics of a person: natural qualities (health, psychophysiological stability, etc.); appropriate upbringing, as well as a high cultural level. The main methods of increasing the intellectual capital of the individual are to increase the level of education and training, which is combined with the continuous work on its increase and the search for new solutions. In parallel with the acquisition of knowledge and the expansion of horizons, a person changes the purpose to which he or she strives, together with the methods of their achievement. Today, the use of high technology requires renewal of knowledge for most specialists once every 5-7 years. All these methods collectively create a certain mentality, which is an integral driving force of human intellectual capital.

There are defined the following features of intellectual capital:

– within the information economy it acts as a limiting factor for economic growth;

– it has the property of storage and accumulation;

– it is combined with a high level of costs for its reproduction;

– it has cultural, historical and institutional conditioning;

– investments in intellectual capital have the effect of multiplier and accelerator of socio-economic development.

From mentioned above it follows that individual intellectual capital largely acts inalienable from the individual. However, it should not be forgotten that in practice it is realized only when it becomes part of the total intellectual capital of the enterprise. It becomes an element of socio-economic relations and in one way or another objective.

The intellectual capital of the enterprise, in turn, is a collection of individual intellectual capital, the integrating factor of which is the level of entrepreneurial capabilities of the enterprise, which allows it to be combined both within it and with other factors of reproduction. This allows to agree with T. Stewart's position, which defines it as the sum of knowledge of all company employees, which ensures its competitiveness. It is safe to say that it is the intellectual capital of the enterprise that determines the shift of the curve of its production capabilities and ensures the dynamics of technological development. Moreover, provision of technological and organizational competitive advantages is the main function of this type of the capital.

T. Stuart and other scholars consider the intellectual capital of an enterprise as an integrated learning and propose to distinguish it into three components - human capital, structural capital (intellectual property and information resources) and consumer or client capital. Accordingly, the structure of an enterprise's intellectual capital can be represented as follows.

All three components of intellectual capital are in constant interaction with each other. Therefore, investing in each of them requires a systematic approach to the development of the intellectual capital of the enterprise, which would provide mutual encouragement. Thus, one of the classic concepts of intellectual capital is L. Edwinson’s which suggests to calculate intellectual capital as an effect of multiplying human capital on structural capital.

At the same time, each element differs in quality characteristics from the another one and is determined by different factors. Thus, an important indicator of the human capital of the enterprise, its ability to innovate is the proportion of new products in the total volume of sales. For example, it should be emphasized that in the effective management of an enterprise, maximum amount of return on investment in human capital can be several times higher than the return on investment in machinery.

In turn, public intellectual capital is an aggregate indicator, which includes two previous levels, which function is to ensure the sovereignty of the state, the innovative trajectory of its development, as well as a steady pace of economic development [4].

Based on this we conclude that as the level increases, the category of intellectual capital gains its importance. So, if for an individual economic agent intellectual capital appears as a reproduction factor, which acts alongside and in combination with other factors, then for the national economy it is already the potential for economic development, a reserve for improving the quality of life. In this sense, the concept of intellectual capital and intellectual resources goes beyond

the economic sphere inherent in society.

There are different perspectives on understanding of intellectual and human capital and their relationship with each other. In our view, despite the undeniable closeness, these concepts should not be identified as same. And if at the enterprise level human capital is seen as one of the constituent parts of the intellectual, then at the society level their relation is different.

In the domestic literature, intellectual capital refers to a set of intellectual assets (experience, knowledge, skills of people, enterprise personnel, other results of their creative intellectual activity, used in economic practice and capable of generating income in business), which may include:

- human assets, as the most important intangible capital (joint collective knowledge of employees of the enterprise, the totality of their creative abilities, ability to solve business and management problems, etc.);

– market assets (intangible assets related to market operations);

– intellectual property as legal knowledge that can generate additional income (patents, copyrights, licenses, trademarks of goods and services, know-how, trade secrets, etc.);

– infrastructure assets (processes, technologies, methods that allow the efficient operation of the enterprise);

– a system of stable business relationships between manufacturers, suppliers and customers, reducing transaction costs for their interaction with each other and with the end consumer;

– brands that reduce engagement costs at the expense of customer confidence as a purchased product. A brand owner can earn extra revenue by reducing customer service and maintenance costs or by high prices.

If the term “human capital” is to be understood only as the knowledge and creative abilities of workers, then this term is the same as the term “intellectual capital”. The fundamental feature of human capital is that it includes not only the spiritual but also the physical abilities (properties) of a person. However, it should be emphasized that the greatest interest in economic research is caused not by the physical properties of the individual, population or nation, but by the spiritual qualities of human capital.

It seems appropriate to consider 2 major groups of intellectual resources in the structure of intellectual capital: personnel resources and non-tangible assets. To our opinion it is inappropriate to include market (client) capital in intellectual capital. This conclusion can be drawn from the analysis of the scheme interaction of intellectual capital elements of the enterprise presented in Figure 1.

As can be seen in Figure 1, it is the resources of the staff as the basic element of the enterprise intellectual capital, which forms and organizes information flows in the group of business process resources and creates the results of intellectual activity, which, in turn, form the basis of innovation - competitive product. All these elements create a certain reputation among enterprise clients and partners, which form the so-called market capital, which determine the place of the enterprise in the market. Although based on the definition of intellectual capital, the reputation of the enterprise is the result of the activity of intellectual capital, and therefore cannot be

part of it.

It is recommended to split the entire set of resources that make up intellectual capital into two large groups of intellectual resources: personnel resources and non-tangible resources consisting of the results of intellectual activity (RID) and the potential of business processes. The cornerstone of the enterprise's intellectual resources structure are the resources of company's personnel such as: ideas of executives, specialists, including R&D divisions, that boost new strategies to appear, projects, developments, inventions and patents, which make it possible to improve enterprise reputation to attract customers; ideas of functional managers which help to build optimization systems of enterprise processes (quality management systems), human resources management, inventory management, corporate databases etc.).

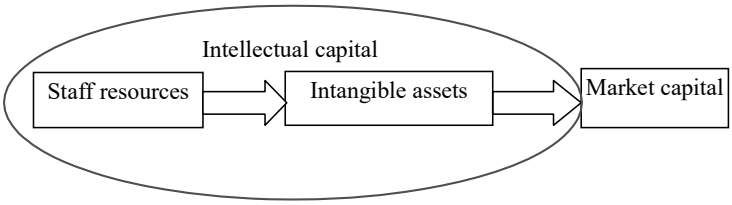

Figure 1. Relationship between intellectual capital elements

Without knowledge, experience and ideas of entrepreneurs and specialists, it is impossible to transform intellectual resources into enterprise capital.

However, it should be noted that not all staff resources are part of intellectual capital. In our opinion, personnel resources are primarily formed by those employees who are directly involved in the development of the enterprise, in other words, planning, creating or improving the company's products, technologies and business processes.

This category includes:

– staff engaged in research and development activities, in management projects of all types;

– managers who determine enterprise strategy and policy;

– personnel management department, which develops and implements a policy of selection, development and motivation of the personnel;

– marketing department, which studies the market conditions and develops options for market strategies and technologies;

– units engaged in organizational development, organizational design, risk management;

– staff involved in creating and maintaining information networks and databases, etc.

According to the author, staff resources include some of their intellectual resources:

– knowledge, competences, experience, set of knowledge, skills, abilities, business contacts of employees who directly design new products and technologies that introduce innovations, organize and carry out business processes in the

enterprise;

– staff attitude to work, motivation – this resource is characterized by staff motivation to effectively carry out, improve their activities, involvement and loyalty to the enterprise. Demotivation significantly reduces the productivity and in some cases can lead to the dismissal of key employees who depend on the development and efficiency of the enterprise.

CONCLUSION

The results of intellectual (creative) activity are intangible in nature – they can only be understood, intellectually or emotionally perceived, but not tangible. However, they also receive real embodiment in different material forms – in the form of product, drawings, device, model, prototype, documents, files, reports, programs, local regulations of the enterprise, etc.

First group:

1. Industrial property is the result of intellectual activity and the means of individualization of legal entities, goods, works, services and enterprises to which legal protection is afforded. In essence, it is the institutionalized knowledge that can be used in production, which gives unique consumer properties to a product, and without which it is impossible to manufacture certain goods.

2. Unregistered results of intellectual activity or know-how. This group includes technologies, inventions, utility models, blend recipes, technologies and business process management techniques whose patenting is impossible or impractical because of the high risk of disclosing their substance in the absence of a real opportunity to control their misuse.

The second group of non-tangible intellectual resources includes potential of business processes. This group includes the capabilities of structural units to manage innovation at the enterprise. This group includes the following intellectual resources.

1. The potential of R&D units represented by the ability to carry out research and development work at the enterprise, the availability of advanced technologies or the possibility of their acquisition, organizational and technical level of production.

2. Enterprise information systems – a set of hardware and software that allow you to automate procedures and processes in the daily activities of the enterprise, improve employee productivity and enable managers to quickly make adequate decisions on the management and planning of the enterprise. Modern information systems are an integral part of the enterprise management infrastructure and contain various tools for providing and managing business processes.

3. Innovative activity of the staff. This refers to the design, research and scientific activities of staff not included in their job responsibilities (as a manifestation of employees' excess activity). For example, work in projects, innovation activities, invention, publication of articles, work in scientific and technical communities. This resource is one of the most important intellectual resources in the potential of business processes, because it allows to change the enterprise from the bottom up and improve those processes and products that are not often taken into account by enterprise management and specialists of functional units.

By analogy with the structure of intellectual capital at the enterprise level there

are identified two main groups of intellectual resources:

1. Human resources – they represent the population that, by their skills knowledge form regional GDP. The formation of human resources of the region are based on two main institutes: the labor market – this institute allows to rationally involve, distribute, regulate and use work in the territory of the region, also by ensuring a normal level of income and well-being of people, allows to achieve a stable level of reproduction of workers' abilities to work; system of higher and secondary education - this institute allows to provide training of highly skilled personnel in all major professions, directions of activity and maintenance of their competence at the modern level, thus significantly improving the quality and efficiency of human resources of the region.

2. Innovative activity of the region – a complex of scientific, organizational, technological, financial and commercial activities at the regional level, aimed at commercialization of the accumulated and generated knowledge in the region. This group includes the following 3 types of intellectual resources:

– the intellectual property market. This institute is responsible for the state of registration, renewal and sale of intellectual property results of the subjects of the region. The condition of this institute is characterized by a close connection between the entities engaged in innovation activity and the state authorities, which provide mutually beneficial cooperation in the legal field;

– innovative infrastructure of the region include scientific, technical, informational and financial resources of the enterprise, which ensure the implementation of regional enterprises innovative activity. This resource group may include both state-owned innovation infrastructure facilities and commercial organizations providing access to innovation infrastructure (technoparks, business incubators, technopolis, venture funds, etc.), as well as non-profit organizations.

– innovative activity of the enterprise which includes the results of innovative activity of organizations located in the region with the aim of development and implementation of new technologies. This resource is one of the most important in this group because its activity determines both the state of the intellectual property market and the necessity for innovative infrastructure.

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ORGANIC AGRICULTURAL PRODUCTS MARKET IN UKRAINE: CURRENT SITUATION AND FUTURE DEVELOPMENT

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Abstract
Modern global science that is based on successful experience of organic operation is certain that this is the way to create conditions to ensure integrated sustainability in line with the concept of balanced development. This model is a combination of best practices in terms of environmental preservation, soils restoration, rural areas development and promoting harmony between human and nature. Ukraine has certain competitive advantages for production of organic produce such as geographic location, rich soils, human capital, proximity to potential international buyers – all these factors show importance of development of the strategy for the development of the national agro-production market.
The goal of this research is to emphasize the peculiarities of the current status of the domestic organic produce market as well as perspectives for its improvement. Problematic aspects, including major destructive elements that slow down customer demand for healthy produce have been determined. Major focus of the research is to review main approaches to how the government can support, motivate and regulate market stakeholders to ensure development of this lucrative niche of the Ukraine economy. The research analysis has shown the importance for the cooperation algorithm between state and private organization as well as community groups working in organic sector, in line with international standards, to ensure food security. As a result of transformation of the traditional farming into organic practices such area can become a real driver, create momentum for other related industries. Besides, it can provide consumers with quality and healthy food products, increase competitiveness for agricultural produce and improve image of the country on international stage.

Keywords: organic agricultural production; government regulation; motivation.

INTRODUCTION

Economic efficiency, ecological safety and social justice have been recognized as the criteria of the newest civilization concept implementation. Namely the model of organic products manufacture coordinates its three components: the economic component (increasing the competitiveness of products, reducing manufacturing expenditures because of the chemicals use refusal), ecological (improving soil structure, reducing pollution of water sources and atmospheric air) and social aspect (creating an eco-image of the enterprise, increasing the viability of rural communities, the level and quality of life of the population). Scientists of O. O. Bogomolets National Medical University have certified that the health of a child in Ukraine is 50% dependent on nutrition, 10% - on treatment, and 20% - on genetics and living conditions [1]. Organic products manufacture opens a new niche for Ukrainian farmers, which is of particular topicality. Market of agro organics is a functional unit that provides food safety of the country. Therefore, there is a need to characterize current trends and achievements, identify the problematic aspects of the organic market. This substantiates the topicality of this study.

What explains the great attention and the increased interest in consuming organic products? In our opinion, the dynamic process is caused by:

– first of all, the availability of a resource base. In European countries, 23% of all

– organic world agricultural lands is centered. Ukraine is ranked 20th in the world and 11th in Europe in the total area of lands certified as organic; 7th place in the world among the countries-manufacturers of organic cereals, 5th – for oilseeds, 7th – for legumes and fruits [2];

– secondly, the need to harmonize the processes of providing the population with safe and qualitative products while preserving the environment;

– thirdly, in economically developed countries, the concept of a healthy diet is being promoted, and there is an increasing concern of governments that is aimed at improving the health of the nation and extending life expectancy. Financially viable consumers are becoming more demanding to ensure the guarantees of their products cleanliness. As a result, such nutrition has taken the form of a peculiar "philosophy of life";

– fourthly, the manufacturers are provided with a diversified state financial support. Organic agriculture programs, and therefore some support of ecology, are not subject to budgetary financing constraints in accordance with WTO principles.

RESEARCH RESULTS AND DISCUSSION

Let us outline the obtained results of the studied area. The agrarian sector is a traditional branch of Ukraine's specialization and has always been regarded as one of the locomotives of the national economy development. Therefore, the transition to organic standards is positioned as one of the future vectors for improving the state's competitiveness. The main competitive advantages of the domestic manufacturers of agricultural products are: fertile soils, proximity to international markets, transport network, labour potential, high level of land resources provision.

The first certified farms in Ukraine were created on the initiative of foreign companies, which incurred such expenditures and exported the grown products abroad in the form of raw materials. Back in 1997, the first agreement between the governments of Ukraine and Switzerland on technical and financial cooperation in the development of organic projects was signed. The first organic products of Ukrainian manufacture appeared on the supermarket shelves only in 2007; and in 2009 they were for the first time presented at the International Exhibition in Nuremberg (Germany). Only since 2015 the organic market has been integrated into a Single Integrated Strategy of the agriculture and rural territories development for 2015-2020. The Law «On manufacture and turnover of organic agricultural products and raw materials» was subsequently adopted. The positive point of such legislative documents is that the formation of a regulatory framework in this area has begun. There are joint projects with Switzerland, Germany, Austria, Canada, and Poland. There is a system of organic products certification, which is carried out by a specialized body «Organic Standard». It was created within the framework of the Ukrainian-Swiss project according to the international standards. Some state support to farms as interest-free loans up to 500 thousand UAH for 5 years is envisaged. As a result of decentralization, some regions have begun to lay money in local budgets to partially offset the cost of organic certification.

In August 2019 the Law of Ukraine «On basic principles and requirements for organic manufacture, circulation and labeling of organic products» entered into force. Our country has become the 93rd country in the world, where such a law is applied. It envisages the introduction of a single state logo, which consists of a graphic representation of two intersecting circles, forming a figure in the form of a leaf of a plant with the inscription «organic product». This means a content of at least 95% of organic ingredients; the manufacturers will be added to the new State Register of Operators. The use of this term will only apply to certified manufacture activities at all stages of the technological process (collection, processing and operations related to changes in products status). The prerogative of organic products is the refusal of pesticides, preservatives, artificial colours, genetically modified organisms (GMOs) use. That is, the law sets out the basic requirements for organic agriculture, the responsibility for the deception of the consumer by the manufacturers and the guarantee of his/her rights protection. The products with such markers as: «eco», «bio», «natural» will be withdrawn from sale.

An important step in the expansion of new initiative ideas is the creation of a sufficiently extensive system of public organizations engaged in the promotion of safe products. Among them: the Federation of Organic Movement of Ukraine, the Association "BioLan Ukraine", the «Naturproduct» Union of Organic Farmers, the «Ukrainian Organic Cluster» Public Association. The «Organic Basket» project, which started in late 2015, opens new opportunities for expanding consumption of safe products, where Ternopil region is represented by such companies as Lysonia Bio (dairy) and Living Land Potutory (herbal teas, spicy herbs and spices). Organic apiaries, truffle harvesting, cultivation of watermelons, sea buckthorn, manufacture of suluguni and brynza can serve as modern achievements.

According to the «Organic Standard» data, as of March 2019, there are 617 organic operators in Ukraine, most of which are certified in the crop sector. Beekeeping is the leader in livestock section, with 167 operators in the export direction [3], which is driven by the growing demand for organic traders. In total, more than 400 organic products are manufactured in Ukraine. The oldest one is the Ukrainian-Swiss company «EthnoProduct», which was founded in 2008. It is engaged in a complete processing cycle and supplies a finished certified product, such as cheese and milk, sour cream, kefir, yogurt, butter, honey, meat, sausages, vegetables, as well as cereals and legumes. Also on the domestic market is another Ukrainian-Swiss project – the «GALEX-AGRO» company, which has a vertical structure (from agriculture to dairy and meat products manufacture). It owns a dairy plant with a capacity of 30 tons per day, and also cultivates 8.5 ha of green lands. TM «Ekorod» is an enterprise, which for several years has been one of the top eco-manufacturers with high achievements not only in Ukraine but also in Poland. Confirmation of this fact was the recognition of cold pressed sunflower oil as the best organic product of Eastern Europe in 2013. Let us present in Table 1 the largest manufacturers of organic products.

Table 1. Ten Ukrainian organic manufacturers

No	Trade mark	Specialization
1.	World Bio («Lybid-K»)	Eggs, goat's milk, vegetables
2.	«Golden Parmen»	Direct squeeze juices
3.	«Kasper»	Sunflower, flaxseed, rapeseed cold pressed oil
4.	«Ecorod»	Flour, oatmeal, buckwheat, millet, semolina, beans, watermelons, oil
5.	«LiQberry»	Organic berry paste
6.	«Organic Milk», «Organic Meat»	Milk, honey, meat
7.	«Liluck»	Birch sap
8.	«Ethnoproduct»	Meat and milk
9.	«Skvyrianka»	Buckwheat, oatmeal, corn grits, flour and flakes
10.	«Molfar»	Herbal teas

Source: [4]

Despite the current progress in the development of such a segment of the agrarian sector, there is a number of factors that hinder the realization of Ukraine's large-scale potential, namely:

– incompleteness of the land reform and lack of a transparent civilized agricultural land market;

– excessive concentration of the leased lands in agro-holdings that favour intensive technologies and have a powerful lobby in the executive power;

– low level of infrastructure development, including storage of organic products, certified sites of raw materials processing, transportation and sale;

– lack of effective control of the executive power;

– lack of an effective cross-sectoral link between crop and animal husbandry, primarily from the position of an organic fertilizer supplier;

– low technological culture of agricultural manufacture.

The specificity of the formation of the organic agri-food market of Ukraine is the dominance of export orientation (more than 90% of the manufactured products). The demand for such products is emerging in countries that have reached a certain level of economic development. In addition, there is a stratum of population that not only believes in the value of such a diet for the human body, but can afford to pay a higher price for ecological cleanliness. In Ukraine consumption of organic products per capita is only 0.5 euro; for example, in Switzerland – 274 euros, and in EU countries - 40 euros. Consumer priorities of Ukrainian citizens lie in the low standard of living, so internal consumption remains at a rather low level. Potential domestic consumers of organic products are about 5% of the population of large and about 1-2% of the average cities of Ukraine. The largest share is in the city of Kyiv (about 25%), about 10% - in the regional centers [5], the rural population focuses on their land plots.

So, it is concluded that the insignificant volumes of healthy products purchase is explained by the fact that:

– the domestic information space, on the contrary, actively advertises and persuades the population to consume useless and "unhealthy" products such as chips, crunches, burgers, sweets, sausages, sweet sparkling water;

– since organic products imply an increase in the price premium by 40-60%, therefore, only if the level of remuneration is increased, a motivational mechanism of internal demand is formed;

– the development of the organic sector requires a considerable financial support from investors and public institutions.

According to foreign experience, there is a close correlation between the level of organic manufacture development and the amount of state support. Such business requires high initial investments that is primarily a limiting factor in Ukraine (according to «Organic Business School» calculations, a greenhouse of 10 ares can yield a profitability of 50% and pay off in 1.5-2 years, although the cost of its construction reaches about 1 million US dollars per 1 hectare) [6]. One of the prerequisites for establishing the conformity of products manufacture with the requirements of the organic manufacture legislation is the certification procedure, the cost of which is quite high. In Ukraine in 2018, it amounted from 30 to 120 thousand UAH. In this regard, it is necessary for the state to assume the role of a moderator in giving preferences to economic entities. The key measures to be implemented at a state level in Ukraine can be considered: budget subsidies (including for conversion and certification), reduction of interest rates on investment loans, tax benefits, grant financing for young entrepreneurs for innovative projects. Organic manufacture is not only much more expensive, but also more technologically complex than a traditional manufacture. Therefore, it requires a strong consulting support. Other available instruments and levers of state influence should also be used, such as: to use a mechanism of land monitoring, to standardize the norms of assessment of the natural resources quality, to ensure effective control over compliance with phytosanitary standards. In addition, it is important to systematically and promptly monitor the emergence of problems of such agricultural sector formation.

One of the leading roles in the strategy of the organic agro-food market development is given to the internal infrastructure, which currently remains a weak spot, so it would be advisable to create specialized shops, proper logistic channels, dealer companies and service centers. That is, the state should create conditions for the manufacturer to have an incentive and desire to feed the population with qualitative, tasty and safe products. It is necessary to stimulate internal consumer demand by:

– conducting an educational promotional campaign aimed at forming consumer awareness and public knowledgeability of the benefits of organic products (advertising events and promotions, exhibitions, festivals, tasting fairs, round tables) with simultaneous monitoring of the realization conditions;

– promotion of such trademarks as the «Family Welfare» (organic vegetables, greens and salads), «BIOFARM ORGANIC» (organic honey based pastes, nuts and honey bars, protein supplements of hemp kernels), «Rud» (organic ice cream);

– introduction of state orders of organic products for the purpose of solving social issues (supply of eco-products to school canteens, kindergartens and establishments: medical, resort, catering).

CONCLUSION

Summing up, it can be stated that the organic manufacture method can be considered as a set of smart and innovative farming technologies, efficient food chains, which are based on the principles that support small farms and regional territories. The studied direction of economic management can be a real driver, give impetus to the development of other related industries, and Ukraine has to take positions of an important player in the world agricultural market.

However, the formation of a proper full-fledged segment of the domestic food market needs to be resolved. It is that the economy can produce the necessary amount of high quality products, but consumers are unable to meet the demand for such products. It can be eliminated only through the introduction of state compensation instruments with a simultaneous increase in the level of remuneration. Only in such conditions the vector in the direction of both demand and supply will increase. That is, the key position of the motivational process is to establish the entire communication chain – from the manufacturer to the buyer.

Ecologization of agricultural manufacture provides an integral, fair and far-sighted approach, and is a factor of integration of social, economic and ecological goals. Efficiency of organic industry broadening will trigger multiplicative effect in providing consumers with quality and eco-safe certified food products without harming environment that will finally increase level of food safety.

We share the opinion of L. Hryniv, that the greatest effective output in the long term period the agroecosystem can provide only under the conditions of organic farming, since then it functions in a closed cycle, and therefore, there is an increase in the energy budget of the Earth nature [7, p.11].

The identified problems depend on factors of different levels and directions of action. Adaptation of leading foreign experience may be appropriate in building a personal multifunctional model of state regulation aimed at motivating business entities. This will create a favorable environment for economic growth, improving the quality of the population's life while enhancing the environment at the same time.

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SENSITIVITY OF SMALL BUSINESS OF UKRAINE TO DYNAMIC CHANGES OF THE GLOBAL ENVIRONMENT

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Abstract
The article deals with the problems of development of small business of Ukraine and substantiates the basic prerequisites for its existence in a dynamic external environment. The estimation of the current state and tendencies of development of the food industry of Ukraine as a strategically important branch for the domestic market is conducted. The analysis of the main economic indicators of the industry. The competitiveness of Ukrainian products in the international market is analyzed. The sectoral composition of the food industry, its problems and contradictions of development are considered. A detailed analysis of the sub-sectors of the food industry for the production of bread, bakery and flour products was carried out. The problem of ensuring the effective functioning and development of small businesses in the food industry in Ternopil region is considered.

Keywords: enterprise, small business, food industry, change.

INTRODUCTION

In the context of present transformations in the state economy business sector performs an important role and, at the same time, acts guarantor of stability of the economy and increase welfare of the population. Small business enterprises are the an integral element of market economy. Occurrence of such enterprises is considered by western economists as the main source of increasing the number of jobs, welfare of the population, potential stimulus of innovation activity in the country, development of healthy competition and reduction of monopolism on the market of management and a kind of impetus to regional development.

According to the results of 2017, in the structure of domestic entrepreneurship the number of small business entities in Ukraine amounted to 322920 units, the share of which was 95.5% to the total number of enterprises, when the large ones – 0.1% and average – 4.4%. The priority spheres of the activities of small business entities in the same year were wholesale and retail, repair of vehicles and motorcycles (86572 units), agriculture, forestry and fisheries (47714 units), real estate transactions (33673 units), processing industry (31239 units), professional, scientific and technical activities (26884 units), construction (26673 units) and other fields of activity [1].

The peculiarity of the functioning of small businesses in the market is the focus of their activities on the specific production of any one product. At the same time, small volumes of production allow to use material and technical supply more effectively due to limiting the number of suppliers, applying flexible pricing policies, rather adapt to changes in external environment, orientation is carried out purely on local markets and a small circle of consumers. In recent years, due to the unstable business environment in the country, sometimes unclear actions of the authorities, restless the situation with neighboring countries, the number of small businesses and the number of employees in such enterprises was considerably reduced. In almost all types of economic activity, apart from enterprises engaged in the supply of

electricity, gas, steam and air conditioned, there were tendencies to reduce the number of small enterprises – whether it is wholesale and retail trade, or financial and insurance activities, or professional, scientific and technical activities.

One of the leading types of economic activity of small business enterprises in Ukraine is invariably food industry. It refers to the processing industry, which comprises 31239 small business enterprises, i.e. 88.8% of the total number of enterprises [1].

Food industry – this is the main link agroindustrial complex of Ukraine. It has favourable conditions for its effective development and is also one of the leading structure of forming units of the whole economy and industrial complex, whose effective functioning is the fundamental factor of economic and social growth, the main condition for increasing living standards of the population. This industry has always been considered priority and strategically important for Ukraine. It provides the population of the state food products, determines the development of agriculture and is a powerful export potential of our country.

The composition of food industry includes almost 22 industry and over 40 productions. The main ones are sugar, flour milling, meat, dairy, bakery, oil milk, confectionery, alcohol, macaroni, brewing, fish, wine, cereals, canning, tobacco.

The importance of the food industry for the country's economy in general is due to its specific weight in total production and sales of products, the amount of taxes it pays to the state fund, as well as export potential. According to the State Statistics Service of Ukraine volume of sales, namely the production of food products, drinks and tobacco products has been gradually increasing in recent years (Table 1).

Table 1. Volume of sales of products of the food industry of Ukraine for the period of 2011–2017

No	Indicators	Years						
		2011	2012	2013	2014	2015	2016	2017
1	The volume of sales of industrial products, total, mln UAH (actual prices)	1331886	1400680	1354130	1428839	1776604	2158030	2608027
2	Processing industry, mln UAH	868392,4	889496,6	836571,7	903735,3	1139213	1312729	1619495
3	Production of food products, beverages and tobacco products	222387,8	254459,9	261783,7	302391,9	398023	462419	546654

Source: compiled by the author using data from [1]

The largest development of food products, beverages and tobacco products was observed in 2017. During the analyzed period (2011–2017), the production of food products, beverages and tobacco products increased almost in 2.5 times, which, in turn, provoked growth of industrial production in total in the state – by 2 times.

Domestic food industry counts enough food and beverage producers that are able to compete well in the market. According to the State Statistics Service of Ukraine in 2017, the number of industrial enterprises engaged in the production of food products, beverages and tobacco products was 5498 units, when the highest value of the indicator was in 2011 6559 units (of these, 5206 units are small business enterprises), which employed about 427.2 thousand people (including 47.1 thousand people – at small business enterprises). More detailed analysis of the industry is presented in table 2.

Table 2. Number of companies, employment and hired workers in the food industry (2010–2017)

	Years	Number Enterprises, units		Number of employed workers, thousand people		Of these number of hired employees, thousand people	
		In all	Small Enterprises	In all	Small Enterprises	In all	Small Enterprises
Production of food products, drinks and tobacco products	2010	6551	5193	419,2	49,5	417,9	48,3
	2011	6559	5206	427,2	47,1	425,7	45,7
	2012	5768	4490	417,0	43,8	415,2	42,2
	2013	6407	5192	404,1	45,3	402,4	43,8
	2014	5528	4477	350,8	37,5	349,4	36,2
	2015	5502	4486	321,0	36,6	319,5	35,2
	2016	5104	4114	313,7	38,6	312,5	37,6
	2017	5498	4465	323,6	37,8	322,3	36,7

– the highest value of the indicator for 2011–2017

Source: compiled by the author using data from [1]

The food industry is extremely important for small business, with the need for the development of which noted in the European strategy "Europe 2020" [2]. Food production is not a capital-intensive activity, to ensure effective activity in it, the scale effect does not play a special role, therefore, it is dominated by small businesses, whose share was in 2017, 81.2% in the total number of food processing companies respectively [1].

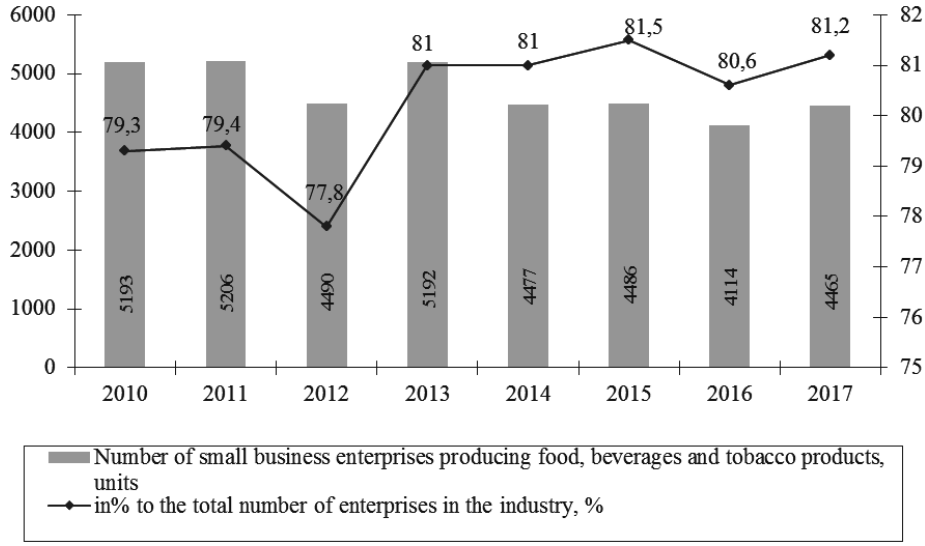

Figure 1. Dynamics of the number of small businesses and their share in the structure of the industry (2010–2017)

Source: compiled by the author using data from [1]

The volumes and structure of food consumption significantly affect the purchasing power of the population and its solvent demand. At the same time, they depend on the level and structure of Ukrainian incomes, the subsistence minimum, the sexual structure, the place of residence of people and other factors. The study examines the market of food industry products from a position of analysis of baking industry in Ukraine and Ternopil region in particular. After all, this industry plays a significant social and strategic role in the life of society and the result of its production – bread and bakery products, is the main product of every person's nutrition every day.

Specificity of the market of bread is that it is almost entirely represented by products of domestic production. In this respect, the national bakery industry operates in the mode of subsistence farming: what did, and then consumed. However, the volume of such consumption over the past 20 years has decreased three times. Such a negative trend influenced by the following factors:

– reduction of population, in particular high mortality rate, low fertility, emigration;

– increase in prices for products;

– insufficient solvency population;

– development of home baking and mini-bakeries whose products are not recorded and statistics are not taken into account;

– change of consumption structure, that is, reorientation of consumer demand for the more expensive types of food – dairy, meat and fish products.

According to the data of the State Statistics Service of Ukraine, in 2018 the actual consumption of bread and bakery products did not exceed the rational norm (101 kg per person per year) (Figure 2).

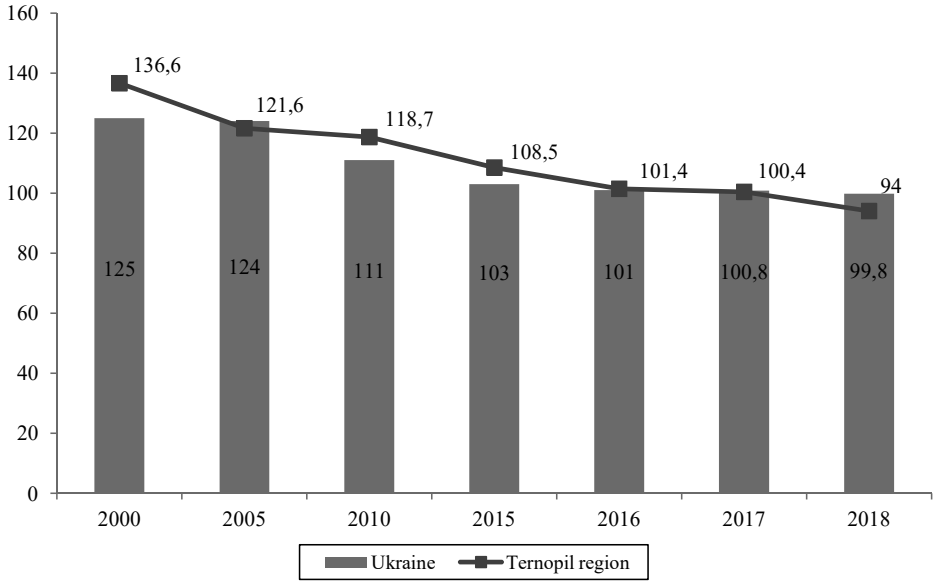

Figure 2. Dynamics of bread and bread products consumption in Ukraine and Ternopil region per capita per year, kg

Source: compiled by the author using data from [1]

In the total volume of products of the whole food industry of Ukraine bakery industry occupies one of the leading places, and the share of consumer food expenditures on bread and grain products of Ukraine in 2018 amounted to 14% (about 576 UAH), confirming their status as the main food product [1].

The main problem of the baking industry of the present time is the pricing process: the growth of components of the cost of grain products ahead of opportunities to increase prices for bread. The price situation on the market in Ukraine is constantly under the control of both authorities and the public. Average prices for the main types of bread in Ukraine and in the Ternopil region are shown in table 3.

If we consider the issue of competitive food products of our country, it is worth noting that Ukraine in the Global Food Security Index (GFSI) occupies a total of 63 place, and in some categories: quality and safety – 46 place (65.2 points), affordability – 66 place (54.1 points), natural resources&resilience – 76 place (57.5 points) and availability – 73 place (53.8 points) [3]. This index is calculated from

2012, and is published by The Economist Intelligence Unit. The Global Food Security Index is a dynamic quantitative and qualitative model of comparative analysis based on 28 unique indicators, which measures the level of food security in developing and developed countries. Overall food security index is calculated for 113 countries.

Table 3. Price dynamics for the main types of bread on the consumer market

No	Region	Bread wheat from the first grade flour			Rye-bread, rye-wheat		
		average prices		Growth rate (decrease) %	average prices		Growth rate (decrease) %
		as of 29.12.2016	as of 28.12.2017		as of 29.12.2016	as of 28.12.2017	
1	Ukraine	10,87	13,30	122,4	10,60	13,01	122,7
2	Ternopil region	11,38	13,57	119,2	10,67	11,68	109,5

Source: compiled by the author using data from [1]

Creating appropriate conditions for the development of food production will promote the development of small businesses, agriculture, better use of agricultural products grown in households, increase the level of employment of population and others.

Leadership of the state at the present stage of the economy should direct policy on the expansion and interest of investment capital in small business of any kind of economic activity. The primary objectives are to provide a highly skilled working force, an effective system of stimulation and motivation of personnel for the maintenance of those specialists, stable normative-legal legislation, implementation of quality control systems of products that meet the world standards, establish a system of planning the development of enterprise potential, foreign economic relations in the conditions of implementation of the principles of free trade within the European economic area, expanding the domestic market of products through the growth of real citizens' incomes, improving raw materials by increasing productivity and efficiency of agricultural production, increasing technical and technological level of production, etc. Implementation of the goals allows to ensure the optimum pace and proportions of development of industry enterprises, food safety, effective management of the enterprise in the direction of maintaining its sustainable competitiveness in the context of globalization.

The state needs the main efforts to implement an effective state regulation of food industry in Ukraine concentrate on the development of production of medium and high-tech innovative products with high added value. This is what will provide a general increase in the competitiveness of food products and increase the level of industrial and technological processing. To overcome the crisis phenomena and stabilize economic development, the state should create the necessary prerequisites

for the direction of public, private and foreign investment in the food industry, for which the future of the national economy.

In conditions of market instability food industry is a sphere that provides sustainability of the economy and living standards, satisfies the population in food and workplace, makes a significant contribution to gross domestic product, forming State budget and food security.

The food industry of Ukraine makes a significant contribution to solving the global food problem. Ukraine is one of the leading countries in the world that provides its own needs in many types of food and exports almost 30% of the volume of products produced in the agro-industrial complex. Solving the problems of this area will help increase its role in the implementation of sustainable development goals not only in Ukraine but also in other countries.

CONCLUSION

Summing up the foregoing, it should be emphasized that the food industry throughout the period of independence played and continues to play a vital role in the economy of Ukraine. In crisis periods, she served as a stabilisation role in the development of economic complex and support of welfare of the population. At the same time, the absence of processes of reforming the industry and its sustainable functioning in the transitional period led to the closure of many enterprises and the collapse of production. Despite many problems, food industry remains the leading sector of national industrial production.

The development of the small business sector in the food sector of both the State and the regions, awareness of their significance, competitive advantages and problems should become the basis of our country's regional policy in the future.

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MODEL OF DECISION MAKING IN THE FORMATION OF AN INDIVIDUAL TOUR

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Abstract
Development of tourism, to a large extent, depends on the condition of infrastructure, which forms the basis of the tourism industry. Nowadays its functioning is practically impossible without use of computer technologies. However, due to the development of Internet technologies, a large amount of available information often makes it difficult to take decisions during self-planning of individual and group tours, which is largely inherent in youth tourism. Choosing and agreeing on one or another route is rather complicated task. The paper proposes an algorithm which, in combination with the corresponding software, based on the priorities of a potential tourist and available information on the modes of operation of tourism infrastructure objects, creates the rational structure of the tour with its detailed program. When using such kind of interactive site, a potential traveller is offered possible tour options and tours, based on the criteria of quality and restrictions introduced.

Keywords: weighted graph, matrix, membership function, tourist rout.

INTRODUCTION
Recently, the tourism industry shows accelerated development due to increased demand for travel services. Travel and tours, due to economic, administrative, social, cognitive needs, gradually evolved into the motive power of self-development of the individual, which in turn intensified complex growth of cultural-historical and socioeconomic activity.

Today, tourism has acquired characteristics of a mass phenomenon, which requires quick processing of large arrays of concomitant information flows. Means of modern Internet technologies and information systems are an indispensable tool during planning, study and organization of practically any trip. In its turn, the complex improvement of tourism business information products is not possible without the use of economic and mathematical modelling.

Among the well-known Web sites that contain the most detailed information about different travel destinations, the following can be mentioned: Expedia.com, Travelocity.com, LonelyPlanet.com, Asiatravel.com, itncorp.com, eBookIt.com, thetrip.com, priceline.com. Online travel services are provided by airlines, well-known travel agencies, car rental agencies, hotels, tour companies. Travel guides publishers provide large amounts of relevant information on their Web sites. However, the growing availability of information often makes it difficult to make motivated decisions when choosing a tourprogram, especially when arranging a self-planned tour. The process of making up complex routes requires special knowledge and practical organization skills. The experience of professional tour operators can minimize the risks of their clients during the organization of excursion tours. However, during individual planning of individual or group tours, which is mainly inherent in youth tourism itself, the choice and coordination of one or another route is

not an easy task. Therefore, the development of algorithms and related software is important for the development of interactive tourist sites, which, based on the priorities of a potential tourist and accessible information about tourist infrastructure, choose a rational program of an individual tourist route. When developing such algorithms, it is important to have the fullest possible coverage and unified mapping of tourist infrastructure objects and services in the simulation model and its ability to meet different consumer demands.

PREVIOUS RELATED RESEARCH

Problems of creating methodologies, mathematical models and information systems in tourism business were developed in the works of domestic scientists Melnychenko S.V., Pasichnyk V.V., Artemenko O.I., Lytvyn V.V., Savchuk V.V. and a number of others [1–4].

One of the main tasks of integrating the interests of both potential tourists and tour operators is the choice of optimal time and economic based tourist route. In this context, the approaches are associated with the use of ant algorithms are of particular interest [5] as well as modelling of a tourist route plan based on of bee colony behaviour [6].

However, despite a significant amount of theoretical and practical developments in methodological approaches to informed tourist routes choice using a variety of mathematical approaches, there still remain the promising areas for further improvement.

Structural model of any system characterizes its internal structure and describes the stable relationships between its elements. An effective mathematical modelling and researching tool for various structures is the theory of graphs. Structural model on the graphs consists of two types of objects: those which are described by the vertices of the graph, ones which characterize the connections between the vertices of the graph. Links between vertices are modelled by branches or directed edges. Different types of structural models can be created by computer and their construction can be formalized on it [8].

In paper [9], diagrams of routes are presented in the form of graphs for different types of routes – linear, circular, radial and combined. The route scheme is chosen depending on the transport system: the configuration of the transport network, its density and technical condition, the level of development of certain types of transport, the level of development of transport infrastructure, which ensures the reliability and safety of transport. At the same time, most often, the criterion for choosing the route is to minimize the time for moving between the main points of the route when trying to provide the greatest possible informativeness of the trip, that is, to cover as many objects of the display as possible to satisfy the cognitive goal. However, such a technique is focused on generalized priorities and does not always meet the needs and expectations of participants in individual tours.

The aim of the paper is to develop an algorithm for making reasoned decisions when choosing sustainable tourist routes by the criterion of usefulness for a potential tourist.

RESEARCH RESULTS AND DISCUSSION

The basis of the model is a database of tourist objects: historical and architectural monuments, religious buildings, spiritual centres, cultural and art monuments, nature monuments, recreation facilities, hotels and motels, restaurants, etc., as well as information on ways, means and accessibility of transport links. The indicated in the model tourist objects comprise the vertices of a weighted graph, A_i, $i = 1,2,...,m$ tied to the map, and are endowed with appropriate normalized indicators of attractiveness x_{ik} which reflect the preferences of a potential tourist when choosing a tourist product [10]. Indicators k are set up on the basis of surveys and expert assessments ranging from 0 to 1 according to criteria of historical and cultural value, architectural or natural attractiveness, sacred value, recreational opportunities, etc. Other vertices of the graph are service facilities A'_i, $i = 1,...,m,...,n$, with standardized quality indicators x'_{ik}, namely hotels and motels, restaurants and cafes, petrol and/or service stations, sports and recreational facilities, etc. For example, by the criterion of value the maximum value $x'_{i1} = 1$ will be a service with a minimum cost, the minimum value $x'_{i1} = 0$ is a service with the maximum value. By the criterion of prestige and convenience $x'_{i2} = 1$ takes the most comfortable place, $x'_{i2} = 0$, takes the least comfortable place.

The vertices of the graphs of tourist objects A_i have a higher priority than the vertices of graphs A'_i of the service providers and are being processed first by the program.

The weighted graph [*i, j*], correspondingly, is equal to the p_i – weigh of the *i*-vertex if $i = j$, and for the adjacent vertices is the weight of branch (edge) g_{ij} from vertex *i* at vertex *j*. Formalized description of *i*-objects of infrastructure with *k*-properties is given by the matrix of properties $M[x,k]$. The weight p_i of each vertex is determined by the normalized sum of indicators of objects attractiveness of and the quality of services [10].

$$p_i = \sum_{k=1}^{r} \alpha_k x_{ik} + \sum_{k'=1}^{r'} \alpha'_{k'} x'_{ik'} \qquad (1)$$

where r and r', accordingly, are the number of indicators characterizing the object and services provider;

α_k and α'_k, accordingly, are normalized parameters, which specify the priority of customer choice of the object and service provider by the k (k')-characteristic; $\alpha_k = 1$ (and also $\alpha'_k = 1$), when the consumer has set his or her priority, that is, has set a criterion for evaluating a tourist object or service.

Evaluation parameters of the tourist objects x_{ik} and service providers' quality indicators x'_{ik} are set and modified by the site administrator, and the standardized

parameters of priority α_k and α'_k of the consumer choice are set by him in an interactive mode.

The vertices of weighted graph are joined by branches, which can correspond geographically to the ways of communication, while the weight of which $g_{ij} = l_{ij}$ is given by normalized indicator, determined by the dependence:

$$l_{ij} = \beta_{ij}(1 - L_{ij} / L_{\max}), \tag{2}$$

where β_{ij} – the coefficient taking into account the condition of the roadway and affecting transfer time and quality,

L_{ij} – the length of the way between the objects on the map,

$L_{\max}$ – conventional maximum allowed way length, set by model constraints,

$l_{ij} = 1$, when the objects are maximally available and l_{ij}= 0 in case of their inaccessibility, for example, for tourists traveling by public transport in the absence of transport links.

In the case when the distance between the objects is determined by the roads length matrix, this graph is supplemented by a graph of transport connections routes by the route of the tours with vertices that coincide with the objects A_i and A'_i, as well as with vertices A_i^0, that are territorially corresponding to the branching of the roads (crossroads) with indicators of the attractiveness of the facilities and the quality of the services provided, respectively, $x_{ik} = 0$ and $x'_{ik} = 0$.

The implementation of decision-making algorithms is consistent in time from the start of the tour to its end. The availability of tourist and other facilities, for a certain time period $t_0 \le t \le t_1$ (for example, working time) according to the fuzzy sets theory, is taken into account by the corresponding membership function.

In the case of the tourist or service provider object have a clear opening and closing time $t_0 \le t \le t_1$, the membership function possesses the value $\mu_i = 1$ when the object is opened and $\mu_i = 0$ when it is closed.

For objects with a specific work schedule, the membership function is analytically described by the following dependency:

$$\mu_i = 0{,}5 \cdot [1 - \operatorname{sgn}((t - t_0)(t - t_1))]. \tag{3}$$

If the object is closed for a lunch (maintenance, etc.) for a certain time $t_{01} \le t \le t_{11}$, then the membership function μ_i possesses the value

$$\mu_i = 0{,}5 \cdot [1 - \operatorname{sgn}((t - t_0)(t - t_{01})(t - t_{11})(t - t_1))]. \tag{4}$$

A similar membership function $\mu'_i(t)$ describes the given time interval for receiving a service (lunch, hotel rest, etc.).

The time of service users (tourists) is distributed in the same way. If the time $t_{r0j} \le t_{rj} \le t_{r1j}$ allocated for the tour on the j-th day is clearly normalized, then the membership function of the user will look similar to (3):

$$\nu_j = 0{,}5 \cdot [1 - \mathrm{sgn}((t - t_{r0j})(t - t_{r1j}))] \tag{5}$$

The user's membership function that prioritizes time for breakfast ν_{jb}, lunch ν_{jd}, dinner ν_{jd}, or other needs, such as car refueling, etc., is also described similarly.

If the time allocated by the consumer to tourist services or needs is not strictly stipulated, but has some priority of benefits distribution, then the membership function of the user's benefit is described by the dependency [10]:

$$\nu_j(t) = 0{,}5 \cdot \{1 - th[\lambda_j (t - t_{r0j})(t - t_{u1j})]\}, \tag{6}$$

where λ_j – coefficient that takes into account the curve of the consumer benefit distribution in a given time interval.

In the case of a uniform distribution of received utility over time, $\lambda_i \to \infty$ ($\lambda_i = \lambda_{\max}$) and dependence (6) in turn becomes a dependency (5).

If the certainty of the start and end time of consumption of a particular service is different with, respectively, different level of the coefficient λ_j, then dependence (6) possesses the value

$$\nu_j(t) = 0{,}5 \cdot \{1 + th[\lambda_{0j}(t - t_{r0j}))]\}\{1 - th[\lambda_{1j}(t - t_{r1j}))]\}, \tag{7}$$

where λ_{0j} and λ_{1j}– coefficients that take into account the curve of the consumer benefit distribution at the beginning and end of the period of receving the service (beginning and end of the day of the tour).

The start time of the tour day can be more accurately predicted and the end time – less accurately. Then $\lambda_{1j} > \lambda_{0j}$.

The values of the membership functions levels are considered as: absoulately inadmissible – $\nu_j = 0$, admissible – $\nu_j = 0{,}5$, most convenient and possible under given circumstances – $\nu_j = 1$.

To implement the algorithm, the user must specify the choice of transport (mode of transportation) and enter the location of the beginning and end of his/her tour, as well as the consumer's priority parameters α_k and α'_k.

According to the algorithm, the first step is to select a hotel (accommodation) if this is foreseen the tour program. In the case of a multi-day tour, the option of accommodation in one hotel, offered according to the priority of the consumer with the subsequent realization of the tour with the choice of a ring, radial or combined route, according to the machine search of the vertices of the graphs, is considered as

the basic one. In the case where the start and end points of the tour differ, the choice of a linear route is a priority.

The time to start visiting a tourist or service object is specified based on the distance to the property and the speed of the car. For example,

$$t_{101} = t_{01} + v \cdot l_{01}, \tag{8}$$

where t_{101} – is the start time of a higher priority object A_1 inspection,

t_{01} – is the start time of the tour,

v – car speed,

l_{01} – the distance from the starting point of the tour (hotel), that is, the vertices of the graph A_0 to A_1.

For each vertex, the membership function of the object μ_i selection corresponds with the membership function of the user's benefit ν_j according to the calculated time, assuming that the intersection of their sets must be an empty set, that is, the combined membership function ψ_j is calculated.

$$\psi_{ij} = \mu_i \cdot \nu_j \tag{9}$$

The specified membership functions are limitations to the inclusion of the *i*-th vertex of a (tourist) object with a weight p_i in the objective function.

Otherwise, a request for service with a lower priority is generated. After that, variants of passing graph vertices are formed. Taking into account the given restrictions, the choice of options for the tour with optimization according to the criterion of utility for a potential tourist, given by the target function [10] is made.

$$F_{sj} = \sum_{i=1}^{m} p_i \int_0^{t_{\max}} \psi_{ij}(t)dt \tag{10}$$

CONCLUSION

Thus, providing the use of the relevant interactive site, a potential tourist enters data about the tour duration, his/her preferences for each proposed option describing the tourist object and his requirements for receiving services, and also forms his own restrictions on the choice of the tour according to the list proposed. As a result of the algorithm implementation, the consumer is offered the possible variants of tours with a ranking on the criterion of its maximum usefulness and, if possible, the ways of improving the program by changing the time of the tour or time limits or consumer preferences.

The developers and administrators of the site are responsible for accurate information about the time of the objects' operation, the list of their services. In such case, the program will clarify the baseline average indicators of the tourist objects or

services providers attractiveness online, depending on the needs and rating of the user.

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PECULIARITIES OF MANAGEMENT OF STRATEGIC ALLIANCES IN THE FIELD OF TOURISM

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Abstract
The article defines the essence of strategic alliance as a form of partnership. Motives of strategic alliances formation are defined. Theoretical approaches to the definition of the essence of strategic alliances are studied. The article outlines competitive advantages characteristic of integrated tourism structures in the context of the following areas: managerial, financial, resource, marketing, and social.
The types of relations arising in the course of the strategic entities activity meant to ensure the effectiveness of the tourism industry are characterized, and the problems of participation of Ukrainian tourism enterprises in international strategic alliances at the present stage are described. It is determined that each of the identified problems makes a certain impact on the functioning conditions of the integrated tourism structures. According to the results of the evaluation, all the problems were divided into three groups: the most important problems that have a significant impact on the development of integration processes, the problems of medium impact and insignificant problems.
The article grounds the mechanism of complementary management in the management system of tourism enterprises – members of the strategic alliance. It is pointed out that in order to strengthen the management efforts of the participants to the corporate system of complementary management, its implementation should take place at the following levels: corporate level, business level and functional level of service.

Keywords: integration processes, strategic alliances, corporate system of complementary management.

INTRODUCTION

Modern realities of economic development affect the formation of new rules of conduct for business structures. The uncertainty of the business environment, the formation of a unitary global tourism market and increased competition encourage tourism enterprises to re-evaluate the prospects for their strategic development. Under such conditions, it is obvious that it becomes more difficult for the entities of the tourism market to carry out their activities on their own, without partners, so they are increasingly seeking stable areas of business partnership, that is, business integration. The formation of strategic alliances is a promising alternative for the activities of tourism businesses in the unstable environment.

PREVIOUS RELATED RESEARCH

The study of the motives for the creation of strategic alliances, development and prospects of cooperation in the tourism industry was carries out by such foreign scientists and national scientists as G. Lorenzoni [11], B. Garrett [6], P. Dussauge [6], M. Bosovska [3], I. Krupenna [1], A. Pylypenko [16], I. Pidgurska [15], I. Voronin [18]. But despite the significant number of publications on the outlined problems, the issues of formation of strategic alliances, with consideration to the industrial orientation, require further study.

The purpose of the study is to substantiate the possibilities of forming strategic alliances for the domestic tourism industry and to develop a mechanism for complementary management thereof.

RESEARCH RESULTS AND DISCUSSION

Under integration in the general sense we understand the establishment of such relations between enterprises (legal bodies), which provide long-term convergence of the general objectives of integrating enterprises and are aimed at creating synergies and sustainable competitive advantages.

Integration processes in the tourism industry are as follows:

✓ penetration into the sphere of tourist activities of businesses and organizations of transport, financing and insurance of tourism business. The main direction of interaction in this aspect is the agreement between air line companies concerning incentive programs for regular customers;

✓ purchase by tourist enterprises their own tourist complexes, hotels, accommodation facilities or leisure and recreation complexes.

Integration processes enhance the dynamism of the tourism market activities, because any enterprise in this field of tourism is a complex dynamic system of partnerships and complementary strategies meant to achieve target points.

Creation of strategic alliances can be considered one of the forms of partnership, because this form of association of tourism industry entities is less risky, does not require significant investment and is the most promising for the development of both the individual business and the entire tourism industry as a whole. The formation of a strategic alliance, which fully meets the requirements of the strategic development of interrelated participants, necessitates changes in their organizational structures, management systems and interaction strategies in order to ensure effective functioning on the principles of adaptation, streamlining and synchronization of all marketing activities.

Studies of the role and goals of strategic alliances made it possible to distinguish different points of view on this concept (Table 1).

Taking into account the existing definitions of “strategic alliance”, we note that this category should, in our opinion, reflect the following position, and namely: a strategic alliance is a formal or informal alliance with an industrial orientation in the context of mutually beneficial cooperation of independent enterprises with the purpose of implementing joint projects, exchanging experience, improving competitiveness and obtaining synergistic advantages.

It is noteworthy that there is a quite large classification of forms and types of strategic alliances; however, to ensure the effectiveness of the tourism industry in the future, it is advisable to identify four possible options for the development of strategic alliances:

1. Cooperation is episodic but changes the conditions of competition between partners.

2. Cooperation within the framework of target projects or programs (for joint transportation of tourists, struggle with competitors, creation of “clubs” for joint work

on the implementation of a specific tourist product in the markets of other countries, etc.).

Table 1. Approaches to the definition of the essence of the "strategic alliance" concept

The author of the definition	The substance of the definition
D. S. Lvov, B. Z. Milner [7,14]	Strategic alliances of enterprises are a kind of network organizations
V. A. Barinov [2]	Strategic alliances are network and virtual organizations
Y. V. Ivanov [8,9]	Strategic alliances are an analogue of syndicate in the financial (banking, investment) field
Y. L. Drachyova, A. M. Libman [5]	Strategic alliances are included in non-financial metacorporations, with a focus on the fact that the relations between enterprises are regulated not by shareholder control, but by special agreements
A. A. Pylypenko [16]	Strategic alliances are "a flexible form of quasi-internationalization, in which it is possible to neutralize the impact of the deadline timing of integration processes in favor of determining the contribution of each party to the future development of the situation within the alliance"
O. A. Tretyak [17]	Strategic alliance of enterprises is an opposition of mergers and "friendly" acquisitions by a «hostile» business, characteristics of cooperation between the business-the general customer and subcontractors, which ensures increase in output or unites activities of several businesses.
B. Garrett, P. Dussauge [6]	Strategic alliances are agreements without specific goals that are concluded between large enterprises on the basis of mutual trust and friendly relations between the chief officers of these companies
	A strategic alliance is an "association of several independent enterprises which intend to engage in a specific production or want to complete a project, using the knowledge, materials and other resources of each other, instead of: - starting production on their own, without sharing with anyone else the risks and trying to beat competitors; - creating conditions for the merger or acquisitions of companies"
A. O. Kasych [13]	Strategic alliances are various forms of long-term cooperation between companies, usually large transnational corporations from different countries
W. E. Butler [4]	Strategic alliances are the cooperation of several industrial enterprises aimed at achieving long-term results, stable and sustainable development of the participating corporations. And if at the initial stages the purpose of the alliances was limited to the implementation of joint trade operations, in today's conditions there has been a shift of the goals in the field of integrated scientific and technical cooperation
V. D. Markova, S. A. Kuznetsova 12]	Strategic alliances are a temporary group of independent enterprises linked by modern information technology that have combined their resources and efforts with the purpose of making effective use of the favourable market situation

3. Strategic alliances that pursue development beyond their original goals but do not seek vertical integration. Each partner benefits from working together but retains independence in making management decisions.

4. Structures established to carry out joint activities or cooperative programmes within alliances are gradually getting out of control and starting to operate as independent enterprises.

The formation of strategic alliances makes it possible for organizations of the tourism industry to get a number of competitive advantages distinguishing them from competitors. It is advisable to present competitive advantages characteristic of integrated tourism structures, in the context of five blocks: management, financial, resource, marketing, social (Figure 1).

The formation of strategic alliances in the tourism industry is aimed at creating a unified system of tourism product sales and risk distribution. A striking example of the activities of strategic alliances in the field of international tourism are global computer systems for booking a broad range of tourist goods and services – from air travel, railway travel and the purchase of package tours to auto rental, pre-booking a hotel room or tickets for a football match or a concert. The most famous among such systems is “Amadeus” and “Galileo”, which are present on the Ukrainian market of transport and tourist services as well. One of the important tasks of the Ukrainian tourism industry is active integration into the existing global reservation networks.

In international tourism, integration processes can also be observed through the example of the tourist accommodation sector, which has recently been actively developing hotel chains or chains, and namely: Wyndham Worldwide (USA and Canada), Choice Hotels and Marriott International (USA), InterContinental Hotels Group (UK), Hilton Worldwide (USA), AccorHotels (France), Best Western Hotels (UK), Jin Jiang International Home Inns (China), Carlson Rezidor Hotel Group (Belgium), Robinson Club GmbH (Germany), Grupo Sol Melia (Spain) [18,19].

The manifestations of globalization processes in tourism should also include the transportation field, which also creates global alliances, such as: “Star Alliance” (27 airlines), “SkyTeam” (13 airlines) and “Oneworld” (12 airlines), etc.

On the whole, at the present stage of the integration of the Ukrainian tourism industry into the world tourism market, there are three types of relationships in the format of a strategic alliance:

Franchise agreements when the parent company enters into an agreement with the organization to grant it exclusive rights for the sale of services under the brand name of the parent company i.e. a small and little-known tourism organization (company or hotel) gets included in the distribution network of the renowned tourist firms, increasing the opportunities of the latter to monitor the markets with minimal cost. According to the results of research in the field of franchising as far back as 2011 there were 16 tourist networks in Ukraine that worked under the franchise system; these being mainly Ukrainian companies [10]. The most famous franchisors in the tourism business that operate in the domestic market are: Travel Professional Group (TPG), TUI, Join Up!, Coral Travel, TEZ TOUR, Sonata “Haryachi tury” Agency Network”, “FEYERIYA mandriv”, “Poyikhaly z namy”.

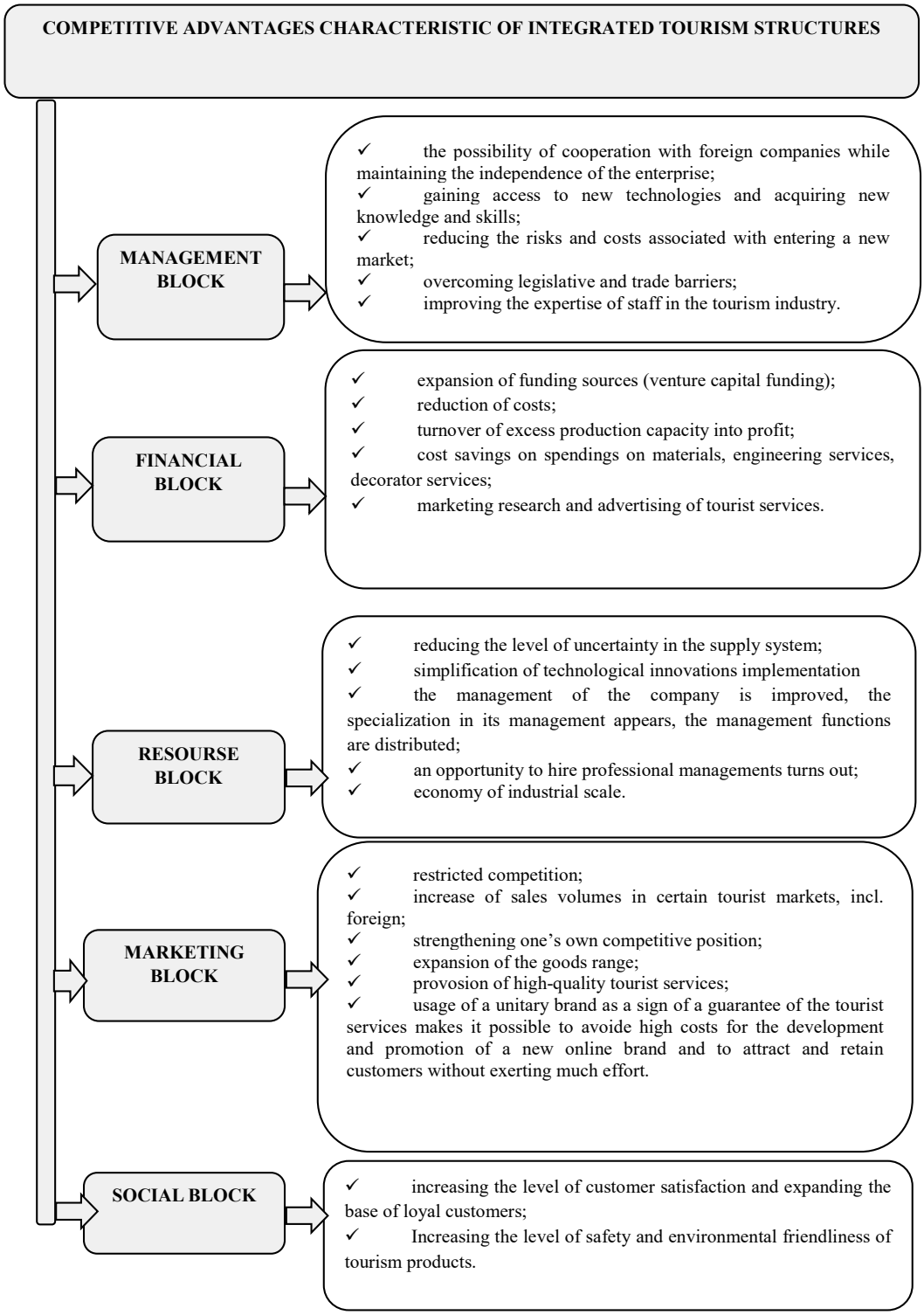

Figure 1. Competitive advantages characteristic of integrated tourism structures

Partnership with a travel franchise network can provide a travel agency with prestige, benefit, stability, protection in the conditions of globalization. Franchisees receive from franchisors as follows: the best prices and increased commission fee on the tourist product; joint PR and advertising campaigns with partners (BTL-activity (sponsorship), Digital marketing (SMS-mailing, e-mail mailing, and social networks), design support, etc.); personnel management techniques (workshops, seminars and training courses; personnel testing and certification; recruitment assistance; participation in information tours; individual bonus programs).

2. Partnership in the form of functional agreements on the basis of combining financial, scientific and technical, and human resources of various enterprises to achieve competitive advantages or to implement joint programs and projects through cooperation. Enterprises agree to cooperate in one or more activities where the agreements between them are in the form of projects (estimation and monitoring the market environment, marketing research, project financing, management of tourism services or personnel, etc.), in which the acquisition of new knowledge and experience is carried out to obtain competitive advantages and a positive synergistic effect. The emergence of synergistic effects in this format of business partnership is mainly due to the effective use of intangible assets such as brand, business reputation, consumer capital, etc.

3. Formation of a strategic alliance in the form of a vertically integrated structure. For example, TUI AG is a vertically integrated holding company that makes arrangements on the entire tour on its own and under its own control: from booking, flight, accommodation, service by its representatives at each resort and at each hotel. The TUI group includes tour operators, travel agency networks, more than 300 hotels, 6 airlines with a total fleet of 136 aircraft, 12 cruise ships and much more.

The establishment of hotel chains, international tour operators, airline associations, as well as the spread of e-Commerce and global distribution and booking systems have made the inevitable impact of integration processes on corporate relations and resulted into a need for complementary management of integrated tourism activities. The problem lies in the structuring of such activities of the tourism industry enterprises, that will ensure the highest efficiency of both the integrated structure as a whole and each business partner.

With the purpose of studying the functioning conditions of integration tourism structures, the results of a survey of specialists in the field of tourism (more than 70 respondents) were analyzed: representatives of travel agencies, tour operators, transport companies and representatives of infrastructure. According to the results of the survey, a number of problems that negatively affect the integration processes in their activities were identified. The results of the survey are demonstrated in Figure 2.

Each of these problems has a certain impact on the functioning of the integration tourism structures. According to the results of the evaluation, all the above-mentioned problems were divided into three groups: the most important problems that have a significant impact on the development of integration processes, the problems of medium impact and insignificant problems.

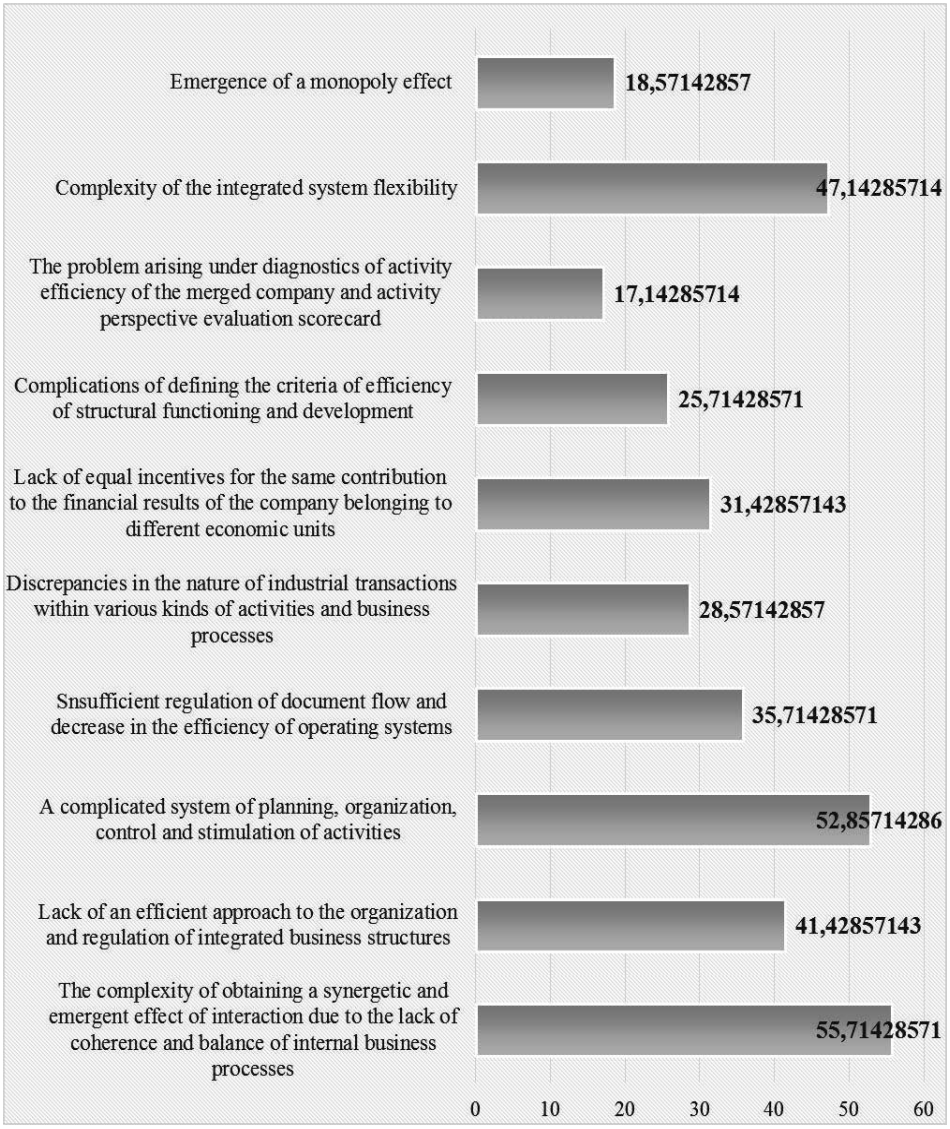

Figure 2. Diagram illustrating assessment of importance of the problems affecting the functioning of the integration tourism structures

The problems of group 1 include as follows: the complexity of obtaining a synergetic and emergent effect of interaction due to the lack of coherence and balance of internal business processes (55.7%), a complicated system of planning, organization, control and stimulation of activities (52.9%), complexity of the integrated system flexibility (47.1%).

The following problems received a moderate appraisal for significance: lack of an efficient approach to the organization and regulation of integrated business structures (41.4%), insufficient regulation of document flow and decrease in the

efficiency of operating systems (35.7%), lack of equal incentives for the same contribution to the financial results of the company of different economic units (31.4%).

The problems with the lowest degrees of influence include as follows: discrepancies in the nature of industrial transactions within various kinds of activities and business processes (28.6%), complications of defining the criteria of efficiency of structural functioning and development (25,7%), emergence of a monopoly effect (18,6%), the problem arising under diagnostics of activity efficiency of the merged company and activity perspective evaluation scorecard (17.1%).

In our opinion, in order to solve complex of common managerial tasks, it is advisable to create a corporate system of complementary management (CSC) of an integrated structure, which has a number of significant features that distinguish it from the management system at the level of an individual enterprise.

Firstly, all the activities concerning relations of tourism entities with the market are aimed primarily at the creation and development of certain key areas of expertise with the purpose of obtaining additional competitive advantages. Each participant of an integrated tourism structure should carry out a number of important activities on building up a key marketing competence. In this regard, the author focuses mainly on the integrative function of the corporate system of complementary management on formation a joint key marketing megacompetence on the basis of integration of key competences of member enterprises of the strategic alliance, which will make it possible to form the added consumer value as the basis for the formation of sustainable competitive advantages which are hard to pattern after.

Secondly, the criterion for the formation of an effective corporate system of complementary management is such kind of development of its member companies which is based on the appropriate consolidation of their tourism potential. Business partnership between strategic alliance members is increasingly organized on a cooperative basis, that is, through the combination of resources and their joint use. The integration of partners around the value creation process should be achieved through the formation of a single resource base, internal administrative mechanisms, as well as through strategic coordination of joint activities. Thus, it can be stated that one of the most important functions of CSC is the formation and implementation of a unitary tourist potential of its participants. It should be emphasized, however, that the mechanism for sharing capacity assets may differ significantly depending on the form of partnership, interests, degree of openness and degree of trust between the partners.

Third, business processes in integrated structures have a great functional diversity, covering the research, innovation, distribution and communication fields of each of the subjects belonging to the integrated structure, focusing them on the active joint formation of consumer value. At the same time, the functional component of the CSC should cover different levels of the management hierarchy in the context of strategic areas of activity. It makes it possible to comprehensively consider the entire range of management tasks at all levels of the corporate hierarchy.

CONCLUSION

Thus, at the corporate level, CSC is able to solve such problems as: expansion of target markets; obtaining a more balanced range of tourist services, integration of innovative and technological infrastructure.

At the business level, it is important to strengthen the competitive position of the enterprise, to create a coalition model for the formation of loyalty of tourist services consumers, strategic procurement sourcing, outsourcing of individual marketing functions.

Management efforts of CSC participants at the functional level are directed to the implementation of the co-branding policy, the deployment of the quality function, joint decision-making in the field of pricing, improvement of service quality standards, integration of marketing communication tools.

Implementation of managerial decision-making procedures in CSC requires special information and analytical, technical and organizational support. Formation and functioning of business CSC provides harmonization of all platforms of interaction concerning consensus of business partners interests and ensuring sustainable development of each of them and strategic alliance as a whole.

Thus, the following conclusions can be drawn: the formation of a unitary global tourism market, increased competition, increased pressure from the external environment and other factors have contributed to the spread of various forms of partnerships, including strategic alliances between domestic and foreign companies. The creation of strategic alliances makes it possible for organizations belonging to the tourism industry to improve the quality of the tourism product sold, invest in «environmentally friendly» tourism production, identify existing rooms of the tourist market, diversify the services offered within the selected market segment, increase the individualization of consumer services.

The study identified the main advantages of strategic alliances and a set of problems in their functioning. To improve the efficiency of the strategic alliance in the field of tourism and the solution thereof of a set of common tasks, it is advisable to create a corporate system of complementary management of the tourism integrated structure, which will ensure harmonization of the business partners interests and achievement of synergistic competitive advantages on this basis.

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INVESTMENT POTENTIAL OF RECREATION AREAS: ESSENCE, COMPONENTS, DEVELOPMENT STRATEGIES, METHODS OF EVALUATION

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Abstract
Tourism, as one of the dynamic areas, requires constant investment, so investment provision and investment activities play a very important role in this process. Since investments are a factor that provides not only the functioning but also the future development, for the tourism and recreational sphere they are an indicator of its development. The key to the effectiveness of investing in the recreational sphere is the transformation of investment resources into the investment potential of recreation areas. Investment potential of the recreation area- the sum of objective conditions and prerequisites for investment, which depend on both the recreational potential of the territory (the presence of consumer demand) and the variety of investment objects (the relevance of investment proposals and projects) and their economic development level (availability of necessary resources for realization of the planned / factors of production / technologies) and are essential for formation the investment activity in the territory. It is important to emphasize that the analysis of investment potential is able to provide the investor with valuable information about potential investment opportunities. The investment potential of the recreation area is characterized by a set of elements, each of which represents a separate potential. Each of these potentials can be evaluated both quantitatively and qualitatively, as well as ranked according to generally accepted techniques. The investment potential of the recreation area can be viewed from two points of view, based on its components: formation of investment potential; using this potential. Formation and development of the investment potential of the recreation area occurs within certain limits or taking into account the principles that determine its use: 1. Taking into account the strategic goals of development of the region in the formation and expansion of the investment potential of the recreation area. The size of the potential should be sufficient to ensure the development of the recreation area, in accordance with the chosen investment strategy. 2. Provision of flexibility of investment potential to influence of factors of internal and external environment, prompt reaction to changes of investment climate, emergence of new investment opportunities. 3. Ensuring diversified use of investment potential, facilitating the redistribution of unused resources between different investment projects. 4. Consideration of the life cycle stage of the recreation area when using the investment potential. In the conditions of globalization of economic processes against the background of market environment dynamism, the basis of stable recreation area development and its effective functioning becomes the choice of investment development strategy taking into account the life cycle phase of the recreation area. Based on the analysis of successful international experience, we can identify the following effective strategies for investing in the development of recreation area: 1) an innovative strategy focused on the development of the territory as a tourist destination; 2) a motivational strategy aimed at improving the quality of tourism products and recreational services; 3) a supportive strategy with priority investment in clusters; 4) an evolutionary strategy focused on the creation of infrastructure for the use of a priority type of recreational resource with connection to the tourist routes network; 5) explanatory strategy, investing in development of strategic and programmatic development documents.

Keywords: recreation area, investment potential, investment strategies, life cycle, principles.

INTRODUCTION

The design of the complex development of the recreation area is the basis for the substantiation of the model of sustainable functioning of both tourist sites and complex recreational and tourist products. The basis of any recreational project is a balance between the terms and the budget of the project creation, which meets the needs of both potential tourist (a person involved in recreation) and the local population and is aimed at the comprehensive development of recreation and tourism. Any changes to the operation and development of a recreational facility or tourist product are generally associated with the use of recreational and economic resources that have price and value. That is why the task of rational use of limited resources, including investment, arises. Tourism, as one of the dynamic areas, requires constant investment, so investment provision and investment activities play a very important role in this process. Since investments are a factor that provides not only the functioning but also the future development, for the tourism and recreational sphere they are an indicator of its development.

RESEARCH RESULTS AND DISCUSSION

Investing in the recreational sphere is a process (a set of sequential actions) of attracting (motivating) an investor (or their totality) to putting in investment resources in the creation / operation / development of recreational facilities in order to achieve the effective development of the recreation area based on the harmonization of participants' interests in this process, which have advantageous socio-economic effects and benefits, including expected profitability in the form of material profit. Investing takes place through an investment project, the realization of which is organized according to a legally defined mechanism of investment activities. The key to the effectiveness of investing in the recreational sphere is the transformation of investment resources into the investment potential of recreational territories.

Investment potential of the recreation area – the sum of objective conditions and prerequisites for investment, which depend on both the recreational potential of the territory (the presence of consumer demand) and the variety of investment objects (the relevance of investment proposals and projects) and their economic development level (availability of necessary resources for realization of the planned / factors of production / technologies) and are essential for formation the investment activity in the territory. It is important to emphasize that the analysis of investment potential is able to provide the investor with valuable information about potential investment opportunities.

The investment potential of the recreation area is characterized by a set of elements, each of which represents a separate potential. Each of these potentials can be evaluated both quantitatively and qualitatively, as well as ranked according to generally accepted techniques.

The main components of the investment potential of the recreation area include:

I) Natural potential – a set of natural and cultural and historical factors that reflect the geographical features of the territory and characterize the resources that contribute to the development of the recreational zone:

1.1) provision of the territory with natural conditions and resources that have recreational properties and have recreational attractiveness (forests, water bodies, landscapes (geomorphological resources), climate, beaches, biodiversity, natural-reserved fund)

1.2) provision of the territory with natural healing resources (mineral waters, peloids, salt water, seawater);

1.3) favorable environmental situation for the recreation development;

1.4) providing the territory with cultural, historical and spiritual heritage;

II) Production potential – the aggregate result of economic activities in the recreation area:

2.1) provision of the territory with objects of recreational, resort and tourist infrastructure;

2.2) provision of the territory with resources (objects) for the development of non-stationary recreation;

III) Labor potential

3.1) provision with labor resources for the recreation development;

3.2) provision with labor resources for the implementation of the investment process;

IV) Infrastructure potential of the recreation area development

4.1) the level of development of transport and municipal infrastructure;

4.2) the level of development of social infrastructure;

4.3) the availability of institutions that facilitate the functioning of the investment mechanism;

V) Financial and consumer potential

5.1) the totality of accumulated financial resources that can be used to provide investment in the development of the recreation area;

5.2) aggregate purchasing power of the population;

5.3) demand for recreational services and products (tourist flows);

5.4) availability of investment projects / proposals, both potential and specific.

It should be emphasized that the natural-geographical potential has a decisive influence on the assessment of the investment potential of the recreation area. After all, the most important characteristic of investment potential is its prospect.

The prospects for investing in the tourism and recreational sphere have been sufficiently substantiated with scientific papers [1; 3; 4; 5] and analytical documents. The growing demand for wellness tourism is an undeniable argument.

The investment potential of the recreation area can be viewed from two points of view, based on its components:

- formation of investment potential;
- using this potential.

The formulation of the task of developing a recreation area may look like this: it is necessary to choose a development option in which the available potential allowed at least one way to achieve the expected results.

Formation and development of the investment potential of the recreation area occurs within certain limits or taking into account the principles that determine its use:

1. Taking into account the strategic goals of development of the region in the formation and expansion of the investment potential of the recreation area. The size of the potential should be sufficient to ensure the development of the recreation area, in accordance with the chosen investment strategy;

2. Provision of flexibility of investment potential to influence of factors of internal and external environment, prompt reaction to changes of investment climate, emergence of new investment opportunities;

3. Ensuring diversified use of investment potential, facilitating the redistribution of unused resources between different investment projects;

4. Consideration of the life cycle stage of the recreation area when using the investment potential.

In the conditions of globalization of economic processes against the background of market environment dynamism, the basis of stable recreation area development and its effective functioning becomes the choice of investment development strategy taking into account the life cycle phase of the recreation area.

Based on the analysis of successful international experience, we can identify the following effective strategies for investing in the development of recreation area:

1) recreation area of active attraction with sustainable development of tourist and recreational infrastructure – an innovative strategy focused on the development of the territory as a tourist destination, the formation of a complex recreational and tourist product and the development of a marketing model for its effective promotion to the domestic and world markets;

2) recreation area with developed tourist and recreational infrastructure but with great potential of unused recreational resources - a motivational strategy aimed at improving the quality of tourism product and recreational services, forming a portfolio of investment projects for the development of new types of recreational product for the territory;

3) a recreation area with significant recreational potential, but with a pioneering level of tourism and recreational infrastructure development - a supportive strategy, a priority type of investment into clusters;

4) recreation area with a unique set of recreational resources, but with a low level of tourist attractiveness – an evolutionary strategy focused on the creation of infrastructure for the use of a priority type of recreational resource with connection to the tourist routes network;

5) recreation area of future-oriented development in the long term - an explanatory strategy, investing in the development of strategic and programmatic development documents.

In order to evaluate the investment potential of the recreation area, one should take into consideration such factors as:

– the ability to attract investors' attention;

– availability of up-to-date proposals for investing in the project.

It should also be borne in mind that the investment potential of one area has a very close relationship with the potential of another. Interconnected, they form the investment potential of the region.

The main methodological approaches to the assessment of the investment potential of the recreation area and its components are the value approach, expert evaluation, evaluation based on a generic indicator, a comprehensive approach [2].

1. Cost-based approach, according to which the investment potential is defined as the difference between the future and the present value of the recreational object, although the change in value occurred as a result of the implementation of investment projects. This method most fully reflects the economic nature of the investment potential.

2. Expert assessment – involves the determination of the investment potential level by a group of professionals with the appropriate qualifications on the basis of a certain list of indicators. In this case, investment potential can be assessed both in general and in individual components.

3. Evaluation on the basis of a generic indicator – an indicator of the rational amount of additional investment of funds, which ensures the highest level of return on investment.

4. Comprehensive approach – involves a comprehensive assessment of investment potential based on a set of indicators with possible experts' involvement. Its advantage is the ability to fully take into account all aspects of the investment potential, the ability to improve the method taking into account the features of the recreational sphere. This method is widely used by investment funds and does not exclude the partial application of the above approaches. At the same time, various methodological approaches to assessing the performance of economic actors (graphic, matrix, factor analysis, etc.) are reasonably combined. They organically complement each other when evaluating different components of investment potential.

It is important to emphasize that investment potential is a motive for which, besides the owner of the investment resources, the actors in need of investment should be involved. Therefore, this process requires targeted coordination.

In the process of evaluating the investment potential of the recreational territories of the Odessa oblast, a comprehensive approach was used, which provided for a comprehensive assessment of the investment potential based on a group of indicators. The assessment of investment potential was carried out using the balance method, which is the basis for a comparative analysis of the investment opportunities of the territory according to certain blocks of indicators, which are taken for equivalent categories.

Specific features that were taken into account in the process of evaluating the investment potential of recreational territories of Odessa oblast:

– the selection of indicators depended on information security: official statistics and open data on the sites of rayon state administrations (Table 1);

– taking into account different units of measure and different directions of optimization, normalization of estimates was carried out for each selected indicator;

– the score for each of the blocks of indicators was carried out by summing the scores, taking into account the coefficients of significance;

Table 1. System of indicators to evaluate the investment potential

Indicator	Data sources
Block 1: Production potential	
Production development	The volume of sold industrial production (goods, services), thousand UAH. per 1000 of the population
Development of agricultural production	Agricultural production indices,% to previous year
Entrepreneurship development	Profitability of operating activities of enterprises,%
The success of entrepreneurship	Proportion of loss-making enterprises (% of total enterprises)
Volume of retail turnover	Indices of physical volume of retail turnover of enterprises, (percent to the previous year)
Block 2: Social potential	
Population density	Population, 1000 people per 1000 hectares
Average monthly nominal wage	Average monthly nominal wage of full-time employees, UAH
The volume of housing construction	Indices of commissioning of the total area of residential buildings (percent to the previous year)
Provision of primary health care to the population	The share of the capacity of outpatient clinics establishments per 1000 population
Criminal situation	Number of detected crimes per 1000 population, cases
Unemployment rate	Load upon 1 vacancy, persons
Block 3: Financial potential	
Financial capacity of local budgets	The coefficient "financial capacity of local budgets"
The degree of influence of the state on the economy of the rayon	Subsidy dependence coefficient
Financial independence of local budgets	The coefficient of "financial autonomy of local budgets"
Local budget efficiency	Income stability coefficient
The level of budget performance	The amount of local budget revenues per capita
The level of financial support of the population with budget funds	The amount of local budget expenditures per inhabitant

– each block consists of indicators that are adjusted by the coefficients of significance when it is necessary to reduce or increase the weight of the impact of the indicator on the overall assessment of the respective block, reflecting the degree of direct impact on investment processes in the recreational sphere. Thus, all indicators were divided into the main ones – key factors, the weight of which should be increased; neutral – significantly affect investment processes but do not need to be increased in significance, and minor, the weight of which should be reduced. The choice of significance coefficients reflects their corrective nature and does not allow significantly overlap the estimates;

– the distribution of points for each block depended on the maximum and minimum values in the blocks; the integral block estimate is calculated on the geometric average, which allows to take into account the multiplicative effect of the impact of indicators on investment processes.

Integral assessment of the investment potential of the recreational territories of the Odessa oblast allowed zoning of the territory with the allocation of 5 zones with

priority investment strategies: 1) an innovative strategy focused on the development of the territory as a tourist destination; 2) a motivational strategy aimed at improving the quality of tourism products and recreational services; 3) a supportive strategy with priority investment in clusters; 4) an evolutionary strategy focused on the creation of infrastructure for the use of a priority type of recreational resource with connection to the tourist routes network; 5) explanatory strategy, investing in development of strategic and programmatic development documents.

The practical implementation of the investment model of the complex development of recreational territories of the Odessa oblast is connected, first, with the use of investment resources of the territories that have their price and value. Therefore, the main principle of the model implementation is the principle of rational use of limited investment resources.

CONCLUSION

The aggregate of all resources of the recreation territory, capable of ensuring the stable growth of the main socio-economic indicators, is its investment potential, the current level of which is a decisive factor in the selection of types of investments and investment objects. Therefore, taking into account the principle of rational use of investment resources, priority areas of investment are those that will ensure the effective implementation main recreational functions by the recreational zone. The introduction of the investment model will increase the investment potential of the recreation area, which will make it possible to implement projects focused on ensuring the fulfillment of the territory of its secondary functions, and, subsequently, the development of the territory as a tourist destination, the formation of a complex recreational and tourist product and its efficient promote to the domestic and world tourist market.

Based on the above principles, depending on: life cycle stage of the recreation area; the level of its investment potential; major and minor recreational functions; defined investment strategies; the availability of unused resources, the investment objects were divided into groups:

– *priority investment objects, recommended in the short term aspect*, which correspond with the strategy of development of the recreation area in terms of its basic recreational function, and for which both investment potential and recreational resources are available; as well as facilities providing additional functions - only in the case of territories with sufficient investment potential (group of investment objects of 1st queue);

– *medium-term prospective investment objects* that correspond with the recreation area development strategy in terms of performing secondary functions for which recreational resources are available, but investment potential is insufficient at present; relevant investment projects can be implemented under conditions of sustainable development of the recreation area and increase of its investment potential; for territories with sufficient investment potential, projects aimed at utilizing untapped resources are also possible (group of investment objects of 2nd queue);

– *long-term prospective investment objects* that correspond with the recreation area development strategy in terms of performing secondary functions, for which there are unused resources (or additional research is needed to determine and measure the recreational value of those resources), but insufficient investment potential (group of investment objects of 3rd queue).

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REASONS OF VULGARISM PROBLEMS IN MANAGEMENT AND BUSINESS-ETHICS AND WAYS OF THEIR SOLUTION

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Abstract
The reasons of vulgarism problems in management and national business-ethics are investigated on the basis of literary sources and existing experience analysis. The ways and means of their prevention are proposed. The expediency of state ideology and cult-educational component implementation into management sphere as the means of vulgarism prevention in industrial and everyday communication, media fake taking into account the indicated factors, ensuring the industrial level rise in the state is substantiated. Solution of vulgarism problems, gossip and rumor prevention are considered as one of the directions of national security development in hybrid war conditions.
The improvement of the above indicated measures is proposed on account of state-ideological-educational and innovation-management key-factors. It is substantiated that due to the above mentioned factors it is possible to ensure not only national culture rise, but also stable functioning of Ukraine national economy and to make it competitive in EU conditions.
The investigation was carried out in unstable, transformational, post-totalitarian society.

Keywords: vulgarisms, ideology, efficiency, business activity, enterprises, transformational society, European Union, Cult-educational component, fakes, gossips.

INTRODUCTION

The occurrence of vulgarism problems in management and national business-ethics in great extend is connected with the inertia of post-Soviet epoch. In fact Russian language constitutes the majority of Ukrainian slang vocabulary not only because it is the second one most widely used in Ukraine but also because all special terminology in Ukrainian economy was Russian. That is why many words from Russian slang went into Ukrainian language and are being successfully used in production management, business-ethics till now. Among these words we would like to mention those which were used in the last election campaign: cool, hot red (wonderful), supercool (excellent), freak out, fall guy- slang expression meaning a pigeon, potential criminal victim, bust nuts (annoy), brad (money), mate (men), be street-smart (to understand), buster (boy), flip over – and many others having sometimes not only polysemantic but also indecent and even vulgar and humiliating meaning.

Reference: Vulgarism (Lat. vulgaris – brutal, simple) – in the stylistics of artistic speech – is not accepted by the national literary language, incorrect, everyday or belonging to another language word or expression.

Vulgar words are often used by writers in order to give the composition a special, everyday coloring or characteristics of low cultural level of depicted characters. The use of vulgarisms was the characteristic feature of many heavy industries in totalitarian and post-totalitarian periods.

It is well known that the birth of state of post-totalitarian period occurs as a rule

by people will and is accompanied by variety of negative phenomena of informational character including gossips, fakes and rumors dissemination, etc., being an integral part of the hybrid war, unleashed at present by Russian chauvinists. Meanwhile the state development successes sufficiently depends on its leaders wisdom and on ideology it pursues , its population consciousness level, its professional qualities, patriotic convictions and honesty. ,

Though some states are not large but have authority, power and influence on international community. Others in view of the above-mentioned factors are large and full of contradictions and do not develop effectively.

It should be noted that at present taking into account the above-mentioned factors teaching and educational function of the state which could prevent the negative influence of vulgarism on both management and national business-ethics as well as society as a whole is ignored, neglected and not performed. The state ideology formation significantly influencing the formation of conscientious-patriotic indicators of the young society development is slowed down. The scientists confirm that in the states without ideological activity the number of suicides is 30% higher than in those where people hope for better future.

Actually, these and other circumstances define the importance and immediacy of the designated subject.

PREVIOUS RELATED RESEARCH

The investigation of the prime cause of vulgarism occurrence, organization of cult-education works in management sphere as the means of their prevention in the state shows that this sphere remains out of sight not only of Ukrainian scientist but responsible from the state persons and services as well. This negative phenomenon has the largest influence on youth.

It was and still remains very vulnerable to vulgarisms and new not quite clear words. We hear these words everywhere. Their occurrence resulted from several factors: 1) laziness – as native speakers seek to reduce commonly used words and phrases resulting in slang origin which is understood only by certain companies; 2) almost complete illiteracy resulting from item 1, as certain names and notions the native speakers replace by others, very often by vulgarisms. And as the result such expressions we hear on plants and factories, at higher educational establishments as well as from state and public tribunes.

Low communication culture and development of negative processes set scientists and all those who are not indifferent thinking.

Thus, there is a need to get rid of vulgarisms systematically especially of those which diminish human dignity and which are historically and systematically imposed on us (Ukrainian people) by supporters of boorish neoimperialism (here referred as Russian World and Russia as a whole). The researches prove that there were no vulgarisms in Ukrainian language till we were occupied by Soviet system.

In order to eliminate vulgarisms, it is necessary to apply systematic actions of Ministries of Culture, Education, state authorities and local self government, church, public, etc.

Many four letter words came into communication from the criminal world,

particularly from Yiddish for example the word “buster”. According to Wiki dictionary, – “buster” boy, is a child of male gender, but in reality “buster” comes from the word “putz”. This term in Yiddish means small (immature) men’s genital organ (Dictionary of modern lexis, jargon and slang).

Probably it is the mostly used the most offensive name for real guys. And most linguists lean towards it. Those who does not know, the word “putz”, is the most widely used oath in Jewish environment of the Eastern Europe.

This term seems to be spread in the USSR due by the representatives of Odessa criminal world. Since then this word is being used for the young, inexperienced thieves and homeless people..

The next famous slang expression of colloquial language is the word “dude”. Modern youth uses this term to denote male and “dudette” – female population. There are several versions of this word origin.

Reference: Dude (Engl. dude) is colloquial slang meaning “young man”, boy, teen-ager. Informal message to a person of male gender with positive tone popular among youth. Relative female form is “dudette” (англ. dudesse) (Dictionary of modern lexis, jargon and slang).

The first version. The researchers assume that that tis word originated in 1960s. This word comes from Gypsy “cavo” which means “right guy”. There is no doubt that Gypsy words and lingual phrases penetrated not only into Russian culture but cultures of many other countries as well. In English speaking countries the word “chav” is interpreted as “the guy from the street”. If we look into English-Russian dictionary we can see the translation of the term “chav” as “hoodlum”. As many Gypsies migrated to Spain it left a lot of marks. Foe example, the word “chaval” is translated as “a boy”.

The second version. It is believed that the notion “Dude” comes from the word “chew” which was borrowed from English and means “hippie”. Literally the term “chew” can be translated as “chewing”. This is a hint that “hippies” are great lovers of chewing the “chewing gum”. It was in 1960s that chewing gum became popular among young people.

The third version. It is also assumed that the term “Dudes” originated from the word Chuvashs, i.e., the native population of Chuvashia. Certainly, there are a lot of versions of the term “dude” origin which does not delete excessive use on this topic

It is revealed that there is another translation which is not mentioned. it is detected that “dude” translated from Ivrit is nothing else but knackered sheep! Knackered horse (Rus. gelt horse), bull – ox, boar – in Russian hog, and Ukrainian pig, rooster – gelt cock, and hen – spayed hen (Internet resource).

By the way what does the word “sharper” means more relevant to economics and management? Many words from German language came into Ukrainian slang to such an extend that a lot of Ukrainians do not understand their origin

For example, if you know German, you understand the meaning “schuler” pronounced like “shuler” whicc in Ukrainian means “school boy”. You will be surprised that such naïve word in Russia colloquial language has completely different meaning.

The matter is that the word “Schuler” in Russian does not concern with German

language. This term was borrowed from Polish colloquial language in 19th century. Polish people called “szuler” the card swindler. The researchers also express another version concerning the origin of the term “schuler”. In their view the term “ula” is borrowed from the Czech language meaning “swindler” in Russian

Therefore the problem of finding the ways of vulgarisms prevention negatively influencing the production effectiveness, rumors, gossips and fake information spread, financial and psychological stability of Ukrainian citizens, activities of industrial objects require scientists consideration. It should be noted that this problem is partially highlighted in Ukrainian and foreign scientists works.

Papers of Ukrainian scientists O. Baranovskiy, Yu. Barash, I. Binko, T. Vasyltsev, O. Vivchar, O. Vlasiyk, V. Hoiets, O. Hnennyi, L. Holovkova, A. Hrechko, A. Hrytsenko, V. Dykan, M. Yermoshenko, Ya. Zhalilko, V. Kompaniets, L. Maliuta, A. Momot, V. Muntian, s. Miamlina, I. Nazarenko, O. Sorokivska, A. Oliynyk, H. Pasternak-Taranushenko, O. Paskhaver, D. Preiger, P. Pryhunov, O. Phynko, I. Rekun, V. Sychov, Z. Stakhoviak, V. Tarasevych, A. Tkach, V. Franchuk, A Shastisko, V. Schlemko, V. Yakubenko and others are devoted to the investigation of economic theory security, institutional aspects of economic security.

Among foreign scientists special attention to this problem is paid in the papers by O. Wiliamson, O. Ivanova, M. Kastels, R. Kouns, D. Nort, Ye. Oleinikov, R. Sedehov, E. Toffler, F. Fukuiami, D. Hodjons and others [1-17].

Meanwhile the investigation of the causes of vulgarism problems occurrence in management and national business-ethics, development of the ways and means of their prevention are left beyond the field of scientists view..

The *objective* of the paper is to investigate the prime causes of vulgarisms, mass media fakes, occurrence, sociological investigation of cult-educational component in management sphere as means of their prevention, and growth of culture level in the state. The development of theoretical-methodological approaches and practical recommendations for prevention of vulgarisms, rumors, gossips, fake information spread due to state national security strengthening is suggested.

RESEARCH RESULTS AND DISCUSSION

Ukraine is in the state of hybrid war with Russia aggressor. Using the language, Russia tries to remove Ukrainian society to its side by spreading vulgarisms, destructive anti-state elements, hybrid methods, imitation, rumors and gossips, intended to arouse ethnic quarrels between Ukrainians and Hungarians in one of the regions.

On the other hand with the Poles, and between the Tatars (but they were cleverer than aggressor thought). They tried to arouse hatred to Jews in the Central Ukraine. In fact the latter are now very successful in the state governing. But when they were not in Ukraine? And where they have not been in the history of mankind.

Perhaps it is the result of the state ideology absence and passivity of Ukraine Humanitarian Ministries or defense and law enforcement agencies

Big money leave no space for morality and respectability. At present not fakes and gossips but objective visibility is “Babylon” appearance, our castles owners not only around Kiev but regional centers, many apartments and expensive automobiles.

At the same time real estate purchases are taking place almost all over the world on exotic islands.

Publicistic digression: ... .. and what should be done when it is unjustified in the whole nation view to pay bonuses and wages in millions of hryvnias…every month. Where to put money on? By no means export abroad or offshore? Because here, in Ukraine we can face changes and they can lose everything.

"Some thousands of gryvnias for common people for bread and water and everything will be "OK" is sarcasm. It is strange that this happens with conscious perception of the known truth you will not take anything with you to another world.

For all lives you will not provide all your descendants and

...By the sweat of your brow you will eat your bread until you return to the earth, because you are taken from it. As you are powder will and return to the powder. Genesis [3:19].

According to the intensity of circulation fakes and gossips are divided into productive and unproductive.

"Intensity of circulation (vulgarisms – auth.) of rumors, fakes, gossips is directly proportional to the audience interest in the topic and inversely proportional to the number of official messages at the moment and the degree of trust to the message source. This statement relates only to the conceptual conditions of rumors occurrence and spread. As far as functional motives is concerned, the rumors circulation makes interpersonal contacts easier giving them additional impulse" [9].

The probability of rumors and gossips occurrence is very high, particularly at the moment when they contain false information, and then the imitation possibility is rather high.

In accordance with social elements interaction P. Sorokin notice in his paper that there is another approach to gossips understanding, it is more free from ideological stereotypes.

On the other hand depending on their quality Olshanskiy [9] presented the following examples:

– men are more than women inclined to produce, spread and receive such kind of rumors as political news (formal and informal);

– women are associated with price growth, family life, rivalry, jealousy;

– young people are constantly exchanging information about popular sportsmen, actors, pop stars;

– old people – about pensions rate, new medicines, others fates, etc.

It is these similarities and differences that have the greatest impact on the nature of communication type.

At present the science has determined the fundamental conditions which coincidence makes it possible the rumors and gossips occurrence including:

– the availability of mass audience interest in certain problem, high importance of the problem and its connection with people's vital needs. Interesting information has many chances to be picked up and reproduced as gossip if it is interesting and contain certain needs that encourage people then it is demanded in society;

– dissatisfaction of relevant needs. Life itself should give rise to the need for information on certain topic. It must be very important, i.e. completely dissatisfied.

Under such condition almost any message will fill the information vacuum and, relatively, be successful reproduced in the form of gossip. People are dissatisfied and interested in two cases. Either it is diverse information lack on the given topic or it is such situation where the available information is not concerned by the audience as reliable one

It is determined that in the process of hybrid war or other aggressive actions vulgarisms, rumors, gossips and fakes while reproducing undergo various transformations including: *smoothing* – when certain details are omitted and as the result, this information can be overlooked by those who received it; *intensification* – new details that were not originally presented are produced, in this case this information is much more interesting for recipients; *assimilation* – approximation of the original information to the psychological, cultural, ethnic recipients characteristics [9].

Availability of the specified information makes it possible to determine the most important features of the development of transformation-destructive processes in the state, to form the concept of organizational mechanism of transformation-destructive (production) and degradation (conscious) occurrence, their manifestation and prevention of their negative consequences.

Characteristic features of transformation-destructive and degradation processes manifestation in the state, particularly: misrepresentation of the state basic functions, including administrative, educational, legal, social-safety defense, etc., carried out by certain mechanisms and means; leveling the leading functions of the state and recognizing it as the responsible body for educational function among the population; references in case of negative phenomena on more negative ones taking place abroad; provoking (following the example of the nearest neighbors) the meaningless processes.

Analyzing the situation we can identify several directions of vulgarisms, fakes, rumors and gossips use and their insidiously aggressive activities. They pollute the information space by fake penetration into Internet not only in the state but globally. They carry out sabotage in financial and banking-credit system. Fake produces carry out sabotage on the world markets in order to buy resources in certain countries at discounted prices, and sometimes for free and sell them at overestimated prices. Such actions incite further misunderstanding and even hatred to their actions. By no means fake producers always act in someone's interests.

CONCLUSION

Therefore the vulgarisms prevention, fakes and gossips liquidation, activation of society escape from the crisis situation should provide the improvement of the state management, the search of the state idea in behalf of which not only politicians, public employees, but also the majority of population was ready for patriotic support, develop national economy both currently and in future. Executive bodies should offer organizational-economic mechanisms of their implementation and provision. Such extensive aim should predict the formation of appropriate basis which is provided by the following tasks implementation:

– change of the electoral system to Verkhovna Rada in such a way that state

governing, legislative and executive bodies should involve patriotic, professional and highly qualified honest representatives of all strata and branches of society;

– development of state ideology and its propaganda;

– development and implementation of institutional frameworks for the formation of Ukraine Economic Constitution providing control and responsibility for conformity with the state economic development strategy;

– implementation of complete regional calculation of administrative and territorial state units allowing the local entrepreneurs to demonstrate creative initiative in local resources use [2].

The presence of the process negative features(factors accounting) resulting both in transformational-destructive and degradation processes makes it possible to determine the process dynamics and apply proper management measures to prevent negative consequences.

Thus, solving the problem of vulgarisms, gossips, rumor and fakes prevention as one of the directions of national security development in hybrid war conditions will contribute not only to economy stability but guarantee of peace in society as well.

The performance of state functions in this life activities sphere has constant, systematic nature and takes place throughout the whole time of its existence objectively and appropriately established tasks facing the state i.e. our independent Ukraine. The implementation of functions depends on a number of factors including determination of the state development direction executed by its governing body.

Thus, for thorough and comprehensive analysis of any state functions execution, especially business-ethics and educational ones the content context, forms and methods of implementation of the proper state activity direction should be taken into consideration.

In order to prevent vulgarism and implement the latest business-ethic principles through information uncertainty, improve the quality of information support it is reasonable to form the model of effective modern information technologies use. This model should contain advanced information management system and methods of actual and optimal financial-economic state estimation by means of the developed integrated estimates.

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THE MODELS OF DYNAMIC RISK MANAGEMENT OF ENTREPRENEURIAL ACTIVITY IN THE MANAGEMENT SYSTEM OF INDUSTRIAL ENTERPRISE

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Abstract
The research is aimed at substantiating the feasibility of using a systematic approach to risk management of entrepreneurial activity in the management system of industrial enterprise. The objectivity of the risky nature of entrepreneurial activity is a prerequisite for the development of risk protection mechanisms and provides basis to state that it is appropriate to classify the risks of entrepreneurial activity of an industrial enterprise on the following characteristics: industrial risks, commercial risks and financial risks. It is proved that there is a correlation between the used entrepreneurial activity risk classification features and the functional activities of an industrial enterprise. Generalized domestic and foreign experience in developing enterprise management systems by decomposing the overall business model of the enterprise (strategy model, organizational-functional model, functional-technological model, process-role model, financial model, restructuring model) using vertical description, horizontal description and quantitative description. The structural components of the general business model are: strategy model; organizational-functional model; functional-technological model; process-role model; financial model; model of restructuring.
Based on the philosophy of risk management, it is proved that integrated, unified risk management, aimed at maximizing the formalization of management objects - functional activities (processes, operations, procedures) of the enterprise, is effective. Risk identification of entrepreneurial activity within the functional types of activity of the enterprise (entrepreneurial activity in general, investment activity, financial activity, production and commercial activity) is carried out. It is proved that the concentration of risks of entrepreneurial activity in the context of functional activities leads to a threat to the financial security of the enterprise, in particular industrial enterprises. Special attention is paid to study machine-building enterprises, Limited Partnership Zaporizhzhia High Voltage Equipment Plant, whose activity was suspended in December 2018 due to the recognition of its bankruptcy. It is proved that concentration of risks of entrepreneurial activity, namely risks of financial, commercial and production activity for a long period of time and lack of an effective management system caused the enterprise to be stopped and eliminated. The impact of entrepreneurial risks is systematized and combined into two time periods, each characterized by its own set of systemic entrepreneurial risks. It is proved that the risks of entrepreneurial activity are generated as a result of influence of internal and external factors that destabilize the entrepreneurial activity, as well as the key risks of entrepreneurial activity of the machine-building enterprise. The use of system and process approaches to build a risk management model of entrepreneurial activity of industrial enterprise is justified and based on the interconnection of functional activities, business processes and operations that accompany the entrepreneurial activity. Processes occurring at the enterprise, grouped into homogeneous groups: getting an order, product development, provision of commodity-material assets, production, logistics of product delivery to the consumer, service provision, development and management of technological documentation, financial management, information infrastructure management, power supply and production safety management, administrative infrastructure management, personnel management, change management, product quality management, document management, transport infrastructure management.

Keywords: dynamic management, risks of entrepreneurial activity, risk identification, business processes.

INTRODUCTION

For a long period of time, namely since 2010, in Ukraine, in particular in industry, there has been an increase in the negative impact of risks of entrepreneurial activity on business efficiency: the possibilities of modernization and expansion of the volumes and types of activity of industrial enterprises are reduced, the enterprises are liquidated due to the bankruptcy, the enterprises lose human capital. As current practice shows, there are valid reasons for the emergence of risks in entrepreneurial activity, which are the inability to calculate the results and take into account the impact on them of different factors in the direction and strength of action, in particular, the factors themselves may change during the implementation of processes, projects. In order to minimize the negative impact of risks, identify possible consequences for an enterprise in a risky situation, neutralize the negative results of such impact on the activity of the enterprise, it is necessary to constantly update the arsenal of methods, models, approaches to managing entrepreneurial risks in industrial enterprises. The complexity of timely anticipation of changes in the environment of socio-economic relationships requires the immediate solution of the scientific problem of improving models of risk management of entrepreneurial activities, constant updating of the industrial enterprise management system that functions in the conditions of dynamic changes, ensuring economic, environmental and social security of industrial production.

The aim of the research – conceptualization of dynamic risk management of entrepreneurial activities in the management system of industrial enterprise, aimed at preventing capital losses.

PREVIOUS RELATED RESEARCH

Theoretical and practical aspects of risk management were explored by such well-known scientists as G. Markowitz, J. Neumann, W. Sharp, and J. Schumpeter, further scientific study of risk issues developed in the works of V. Apopiy, I. Balabanova, G. Bashnianin, I. Blank, G. Velikoivanenko, V. Vitlinskyj, O. Dubrova, L. Donets, A. Mazaraki, N. Mashyna, B. Mizyuk, S. Nakonechnyy, V. Tochilin, V. Chepurko, V. Cherkasov, O. Yastremska and others.

The works of these scientists investigate various aspects of risks of entrepreneurial activity [1; 2], but the problem of the presence of risks and the unmanageability of risky situations in industrial enterprises requires the improvement of a holistic theory of risk, which would be different in dynamism of mechanism, models, tools of risk management of entrepreneurial activities, which more and more characterized by signs of uncertainty, instability and variability. This is especially true of industrial machine-building enterprises and enterprises of metallurgical industry. Scientific researches in the area of risk management is relevant and needs further development, taking into account industry and internal and external environment of industrial enterprises, as well as global changes in the competitive environment.

The scientific novelty of the research. There was performed an identification of risks of entrepreneurial activity of industrial enterprises in the context of functional types and conceptualized models of dynamic risk management in the enterprise management system, which allow, through joint actions of all management components, to provide improvement of economic, organizational, technological, production, social, management market, environmental and other components of the entrepreneurial activity of an industrial enterprise, operating in a single management system and are constantly gaining ground. It is proved that concentration of entrepreneurial risks directly influences the functional activities, business processes and operations that accompany the entrepreneurial activity.

RESEARCH RESULTS AND DISCUSSION

Regardless of the area of activity (production, provision of services, execution of works), legal form, ownership, entrepreneurial activity is inextricably linked with risk. In order to protect the property interests of business entities that occur in the context of the potential likelihood of losses and the threat of other negative economic and social consequences, it is important to comply with laws, which are manifested mainly in the dynamics, that is, in the processes, by determining the uniqueness of cause and effect connections [3, pp. 30–35].

The essence and mechanism of action of these laws in relation to production systems (industrial enterprises) testify to such. The law of synergy is that the sum of the attributes of an organizational whole exceeds the "arithmetic" sum of the attributes of each of its elements separately, or, the sum of the attributes of the system does not equal the sum of the attributes of its components. The synergistic effect is achieved by enhancing the organizational role of management. The Law of Awareness - Order states that in an organized whole there can be no more order than information. Orderliness is a characteristic of a system that reflects the presence of relationships in some way. That is, the more quality information, the more stable the organization. It is believed that ordering will be achieved in full if it is defined: the constituent elements of the system (enterprise); indicators that characterize the elements of the system; the nature of the interaction of each element, as well as the system of their interaction. The law of unity of analysis and synthesis is that the processes of division, specialization, differentiation, etc., on the one hand, need to be complemented by opposite processes - integration, cooperation, integration, etc. Analysis is focused on structure, it shows how parts of the whole work, and synthesis focuses on functions, that is, the task of synthesis is to build such a structure of the system in which the system-defined functions are best implemented. The law of self-preservation is that any organizational system seeks to preserve itself as a whole education, that is, to spend its resources sparingly, while ensuring its equilibrium functioning. An important aspect of equilibrium is the sustainability of an industrial enterprise as a system. Resistance can be in relation to the structure of the system, or to the functions that determine its functioning.

The mechanism of action of the self-preservation law is as follows: self-preservation is the survival of the system by maintaining its integrity, state of rolling

equilibrium and stability, rational use of the system's potential; self-preservation is directly related to adaptation of the system; a necessary condition for self-preservation is the constant development of the organization [3, p. 35]. Thus, the expediency of using the laws of system analysis in constructing models of dynamic risk management of entrepreneurial activity is proved.

According to Art. 42 of the Economic Code of Ukraine entrepreneurship is an independent, initiative, systematic, at-risk economic activity carried out by economic entities (entrepreneurs) with the aim of achieving economic and social results and profit [4]. That is, risk is one of the main features of entrepreneurial activity. Joseph Schumpeter argued that there is a need to take into account the risky nature of entrepreneurship because these risks can cause both profits and losses, and therefore require economic considerations [5, p. 21]. That is, entrepreneurial (commercial) risk is associated with the possible adverse property consequences of the activity of an entrepreneurial structure (industrial enterprise). Such consequences may be due to changes in legislation, breach of obligations by counterparties, changes in business conditions, which in the aggregate leads to a negative synergistic effect of loss of reputation, capital, property, profits and business as a whole. Entrepreneurial risk directly influences the material, financial resources, production, economic processes of entrepreneurial activity.

Thus, the risky nature of entrepreneurial activities is an objective prerequisite for creating risk protection mechanisms. There are many scientific views on the classification of risks, however, in our opinion, to further develop the mechanism of risk management of entrepreneurial activity of an industrial enterprise the narrowed classification, proposed by Alexander Shapkin [6, p. 12], can be used:

– production risks (related to the failure of the enterprise to fulfill its plans and obligations to produce products, goods, services, and other types of production activities as a result of the influence of both the external environment and internal factors);

– commercial risks (risks of losses resulting from the decrease in sales volumes, unforeseen decrease in the volume of purchases, increase in the purchase price of the product, increase in the cost of circulation, loss of goods in the process of circulation);

– financial risks (arising from the inability of a firm to fulfill its financial obligations due to changes in the purchasing power of money, failure to make payments, changes in exchange rates) [6, p. 12].

Improving the mechanism of risk management of entrepreneurial activity for domestic enterprises of different industries is a technology to increase the efficiency of their activity, a mechanism for adapting to globalization changes in a competitive market environment.

Modern opportunities of information technologies, domestic and foreign experience in the development of management systems offers enterprises many modeling options [7–10], from which it is advisable to distinguish the following:

– a vertical description of the enterprise, including a list of goals, methods of achieving them, management and assurance functions required to achieve the

objectives in the chosen manner, as well as a description of the hierarchical structure of enterprise management capable of implementing these functions;

– horizontal description that reflects the technology of implementation of functions in the form of processes;

– quantitative description that reflects the resources needed to implement business processes.

The main purpose of building management models is to decompose the overall business model of the enterprise. Structural components of the general business model of an industrial enterprise, in our opinion, can be:

– a strategy model that aligns with the goals of the enterprise a set of strategies, ie ways to achieve the goals;

– organizational-functional model, which assigns responsibility for the presentation of products on the market and the implementation of the relevant management and assurance functions for individual structural units of the enterprise;

– functional-technological model that outlines business processes in the form of a temporary sequence of simple operations that accompany material and information flows;

– process-role model, which assigns a personal executor (process or project manager) to each business process operation;

– financial model - a model that represents the system of budgets of the enterprise;

– model of enterprise restructuring (reorganization, modernization, etc.).

The combination of these models gives a complete and interdependent description of the entrepreneurial activity of an individual industrial enterprise. The change of each model undoubtedly causes corresponding changes in the other models, but these changes should not violate the laws of synergy, awareness, unity of analysis and synthesis, the law of self-preservation.

The problem of risk management of entrepreneurial activity of any enterprise requires, first of all, continuous improvement of the enterprise management system, in particular, the mechanism of business process management, each of which is aimed at a certain level of efficiency.

Business process management involves the identification and analysis of the situation, corrective actions, determining and measuring their impact on the effectiveness of the business process. Ignoring and underestimating the impact of risks of entrepreneurial activity in developing a model of industrial enterprise management inevitably impedes the development of the whole society, scientific and technological progress, provides stagnation of the economic system as a whole. The latest methodological approaches to risk management are focused on the philosophy that every company employee views risk management as an integral part of their work, the risk management process is continuous, taking into account all types of risks and probabilities for their occurrence. Such integrated, joint risk management aims to maximize the formalization of management objects, which, in our view, should be the functional activities of an industrial enterprise (economic activity as a whole; production activity, which includes the stages of development, design,

production planning and the actual process of production); commercial activity; financial activity; investment, which embodies elements of other activities, is the most risky activity because long-term financial investments in an unstable external environment have the highest level of risk of capital loss.

From the managerial and economic point of view, every enterprise should have reasonable information about the risks of entrepreneurial activity, which require priority management, that is, the loss from which is estimated as a value that exceeds the level of risk acceptable for the enterprise. The priority criterion for risk management of entrepreneurial activity of an industrial enterprise is particularly relevant during the recession life cycle, because during this period the enterprise has no available financial resources, needs to update its cumulative potential and has little ability to generate net income in sufficient volumes to self-finance their investment needs.

An important step in managing entrepreneurial risks is also the identification of internal and external cause and effect relationships between risks, which will allow quantitative measurement of the potential consequences and the size of losses. In general, it should be noted that the model of risk management of entrepreneurial activity for each individual enterprise is unique and, in addition to the developed scientific and methodological approaches, embodies many years of experience of professionals in a particular area.

Based on the classification of risks of entrepreneurial activity [6, p. 12], it is expedient to carry out the identification of risks within the functional types of activity of the enterprise (Figure 1), which allows to formalize the risk situations, the management of which is within the competence of a specific function manager.

The concentration of risks of entrepreneurial activity in the context of functional types of activities threatens the financial security of the enterprise, especially in the case of industrial enterprises.

For a long period of time domestic industrial enterprises, in particular machine-building enterprises, are in a financial and entrepreneurial crisis. The lack of ability to upgrade the production capacity of the industry with the products of its own mechanical engineering has such devastating consequences for the domestic economy as the reduction of the value added and the reduction of the sector of the economy tuned for the production of high value added products; reducing the employment of the population and its solvent demand; reducing the level of profitability of industrial enterprises and reducing the opportunities for self-financing of their economic activity; reduction in the amount of tax revenues and, accordingly, the amount of direct financial support by the state to industrial enterprises and other consequences. As a consequence, the above negative trends not only increase the dependence of the Ukrainian industry on foreign markets of machinery and equipment, but also limit the possibilities of generating financial resources of enterprises within the national economy, thus creating a significant threat to the economic security of the state. Taking into account the almost destroyed production potential, the absence of long-term success factors, the gradual loss of equity due to loss-making activities, it should be noted that most machine-building enterprises of Ukraine are in a state of strategic

crisis and crisis of profitability, while balancing the reality on the verge of crisis solvency.

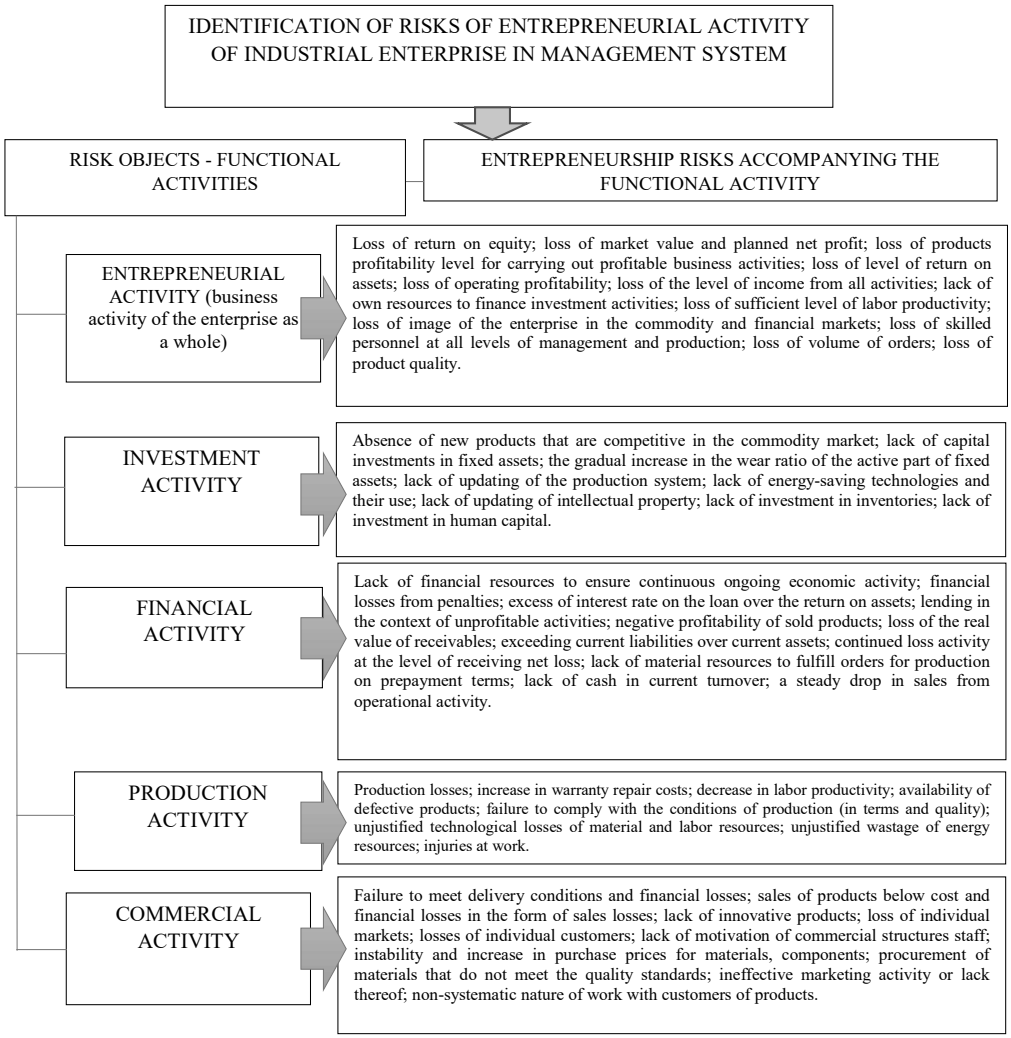

Figure 1. Identification of risks of entrepreneurial activity of industrial enterprise

Regarding the concentration of entrepreneurial risks, it is advisable to dwell on the example of an industrial enterprise in Zaporizhzhia region, which ceased to exist in December 2018 due to bankruptcy.

For more than 60 years the Open Joint-Stock Company Zaporizhzhia High Voltage Equipment Plant (today Limited Partnership "ZZVA" – hereinafter referred to as LP "ZZVA") has been a monopolist for the production of most of the current and voltage measuring transformers, and to this day in Ukraine it is a monopoly for the production of gas and gas measuring transformers of current of the TOG-765 type (large size). The electrotechnical equipment, which has been produced to date at LP

“ZZVA”, is presented at all energy objects of the National Energy Company (SE NEC “Ukrenergo”), at all facilities of the National Atomic Energy Company (SE NAEC “Energoatom”), at energy facilities of Ukrzaliznytsia, at facilities of energy generating companies, at coal-mining substations, as well as at some Oblenergo structural units.

The concentration of entrepreneurial risks at LP “ZZVA” occurred during the period 1997 – 2017, which should be divided into two stages: the first stage – 1997 – 2007, the second stage – 2008 – 2016. The first stage is characterized by the following features of entrepreneurial activity:

– exports of products more than 60% provided the opportunity to receive VAT refunds;

– exports to Central Asian countries allowed to form attractive prices for the enterprise;

– pricing policy in Ukraine also allowed to form competitive prices on the basis of stable economic situation;

– utilization of production capacity of the enterprise allowed to plan fixed and variable costs, which together did not exceed the break-even point;

– stable product portfolio allowed to plan purchases, which allowed to optimize purchase prices and material costs in the cost of production.

That is, the financial and commercial activities of this period are not characterized by significant entrepreneurial risks, but the risks of production activity occurred and were reflected in the nonconformity of certain components of products to the international quality standards, as evidenced by the auditors who audited annually the quality management system of the enterprise. Also, there were risks of entrepreneurial activity in the area of investment activity, namely: small enterprises appeared in energy market of Zaporizhzhia region, having the technical capacity to produce certain types of products of LP “ZZVA”; during 2000 – 2007 the activity of these enterprises resulted in the loss of 1/3 of the commodity market volume by the enterprise of LP “ZZVA“. The mobility of the production systems of these enterprises, the absence of burdens on large volumes of fixed assets made it possible to purchase the latest equipment and produce competitive products. The loss of time by “ZZVA“ managers and the concentration of entrepreneurial risks in the area of production and investment activities have led to losses, which since 2008 have been systematic in nature and have led to a forced halt to economic activity. The systemic entrepreneurial risks of the second stage include the following:

– the share of exports is not more than 37%, it is unstable in the time period, which does not allow planning and optimization of VAT (refunds);

– since 2009, a significant amount of own working capital has been diverted to paying VAT, which has reduced the mobility of the enterprise in the circulation of funds; this is due to the duration of manufacturing products and accessories, which do not match in time and does not allow to optimize VAT payments;

– in order to streamline payment to the State Budget of VAT to all counterparties in the market, the state tax policy was aimed at exercising a constant (monthly) control over the ratio of tax liabilities and tax credit between counterparties

that have relations with economic activity; if there is a doubtful counterparty in the relationship chain, then the company has additional financial obligations for VAT, reduced gross costs, criminal charges may occur;

– since 2009 the state-owned enterprises of NEC "Ukrenergo" and NAEC "Energoatom" have become the main buyers of the company's products; relations with state-owned enterprises are characterized by a tender procurement procedure, which makes it impossible to formulate a flexible pricing policy during periods of decline in commodity market;

– the duration of the period of execution of business agreements with state-owned enterprises is usually six months or more, ie, in the face of an unstable external economic situation, enterprises incur additional financial costs associated with the increase of energy tariffs, prices for materials, etc.

– a feature of this period's relations with state-owned enterprises is the low level of subscriptions (30%) or even their absence, which causes the enterprise to produce products for its own working capital or for credit; also, the terms of contracts with state-owned enterprises provide for a final settlement within 30 days after the production and shipment of products to the customer;

– the state policy of this period was not aimed at supporting the domestic producer, so the utilization of production capacities of such enterprises as LP "ZZVA" did not allow to cover permanent expenses (energy, land lease, other taxes and fees in local and state budgets), which led to increased losses; so, if in 1997 the enterprise produced 3584 units of production, in 2016 – 543 units of production;

– enterprises, similar to LP "ZZVA", are hostages of the system of sectoral agreements, which, irrespective of the efficiency of conducting business activity, defines an increase in the level of wages in accordance with budgetary indicators, which forcibly increases the level of cost; it is not possible to carry out the reduction of personnel more than 4% promptly; the procedure for agreeing a higher percentage of staff reductions is time consuming and does not solve the problem of cost optimization.

Systemic risks of entrepreneurship activity should also include the inability of internal management to respond in time to changes in the external competitive environment that signal the need for change; thus, the interaction of "purchase - sale - product development" areas under the conditions of effective management is able to respond to requests of the product market by changing the design, production technology, purchasing new progressive materials, changing suppliers, carrying out small wholesale purchases, researching market needs, developing new markets and new technologies for product promotion, use of electronic resources, team updates and more.

The instability of the financial market, tax policy, customs policy, the political situation in the country have negatively affected the export-import operations, in particular, in the composition of strategic materials for the production of LP "ZZVA" products there are such items that are not produced in the territory of Ukraine. Due to the fact that LP "ZZVA" has been an important component of the USSR machine building industry for more than 60 years, these positions have been procured on the territory of the Russian Federation. Political and economic changes have prompted

the company to look for alternative sources of supply in Europe and Asia, which has led to additional financial losses. Also, the logistics of supplying enterprise products to Central Asian countries, due to political sanctions, are long-term, risky and high-value.

The risks of commercial activity include the transportation of products by sea, repeated cargo reloads, risks of damaging cargo; the complexity of clearly planning the length of transportation. It should be noted that in the pre-crisis period, the main mode of transport was the railway, which took into account the dimensions of the product, minimized its vibration during transportation, travel time and so on.

High-value and significant risk of entrepreneurial activity in the financial area include the instability of the financial market of Ukraine, which, starting from 2009, led to the financial crisis and the inability of industrial enterprises to service credit resources. The NBU short-term lending rate increased from 11% in 2009 to 25.5% in 2016; at the same time the US dollar exchange rate increased from 7.7 UAH for 1 US dollar in 2009 to 25.5 UAH for 1 US dollar in 2016.

The concentration of entrepreneurial risks in the financial activities of LP "ZZVA" industrial enterprise led to their spread in commercial activities, which resulted in a negative synergistic effect of loss of capital and business as a whole.

Thus, the aggregate key risks of entrepreneurial activity of LP "ZZVA" include:

- utilization of production capacity less than 30%;
- outdated production system and slow updating of fixed assets;
- sale of products at prices below cost;
- political and economic crisis in Ukraine in the period 2013 – 2016;
- unacceptable conditions for subscription (less than 30%) for domestic producers - in case of execution of government orders;
- lending in conditions of scarcity of own financial resources for loan servicing;
- raising energy tariffs in conditions of low utilization of production capacity;
- high cost of credit resources;
- currency exchange rate volatility;
- poor quality of material resources.

The enterprise is a complex socio-economic system. An important role in modeling the behavior of such a system is played by the methodological approach that is used to evaluate the effectiveness of the system. The considerable number of scientific and methodological approaches [11–14] does not mean their originality and significant differences, however, each enterprise can, based on its specificity, use them in whole or in part. Systematic and process approaches are the most commonly used management approaches of any system. The systematic approach focuses primarily on the holistic perception of an industrial enterprise as a system, taking into account most of the possible mutual effects of all its components on the risks of entrepreneurial activity. The process approach is more dynamic, it is to identify the features of the process flow and the impact on these processes. A process or process – oriented approach leads to the simplification of multi-level hierarchical organizational structures. By reducing hierarchical levels of organizational structure, the process approach makes it easier to share information between different

departments. The transition to a process approach eliminates the isolation of divisions and officials, considers any functional activity not in statics, but in the dynamics, when activity in the system should be constantly improved on the basis of appropriate measurements and analysis, focus management's attention on the interaction of divisions and officials [15]. The process approach implies a clear formalization of the functions that make up certain processes, which is relevant in the context of risk management of entrepreneurial activities.

The study of the risks of entrepreneurial activity of LP "ZZVA" makes it possible to state that the management system is of decisive importance in risk management, and its constant improvement should be directed to the development of the mechanism of managing business processes and operations. The set of business processes of an industrial enterprise is a more detailed and formalized description of functional activities. Business process management involves management operations, therefore, in our opinion, it is advisable to base the model of dynamic risk management of entrepreneurial activity on the operational description of processes (business processes) occurring in each area of activity of an industrial enterprise (Figure 2).

The process-operational approach to managing the risks of entrepreneurial activity of industrial enterprise is to consider the entire activity of the enterprise as an organized network of processes and derivatives of them interrelated in time and space of operations to transform input resources into output; processes take place over a long period of time, are sustainable and aimed at achieving the purpose of existence of the enterprise. Production systems of industrial enterprise are relatively constant structures, and processes are being a constant component for more than five years, while operations may vary depending on changes in the internal and external factors of the enterprise.

The processes that take place in an industrial enterprise, according to expert judgment, are grouped into the following groups:

– getting an order (marketing and sales units);

– product development (design units grouped by type of product and having significant differences in the preparation of design documentation);

– provision of commodity-material assets (strategic procurement units, procurement of tools, materials and components, logistics and procurement support; warehousing);

– production (planning, attestation of production processes at all sites, preparation of processes and their logistical support, dispatching of production processes, preparation of reports and all stages of production; accounting of work in progress; implementation of repair works ensuring continuous production);

– logistics of product delivery to the consumer;

– service provision;

– development and management of technological documentation;

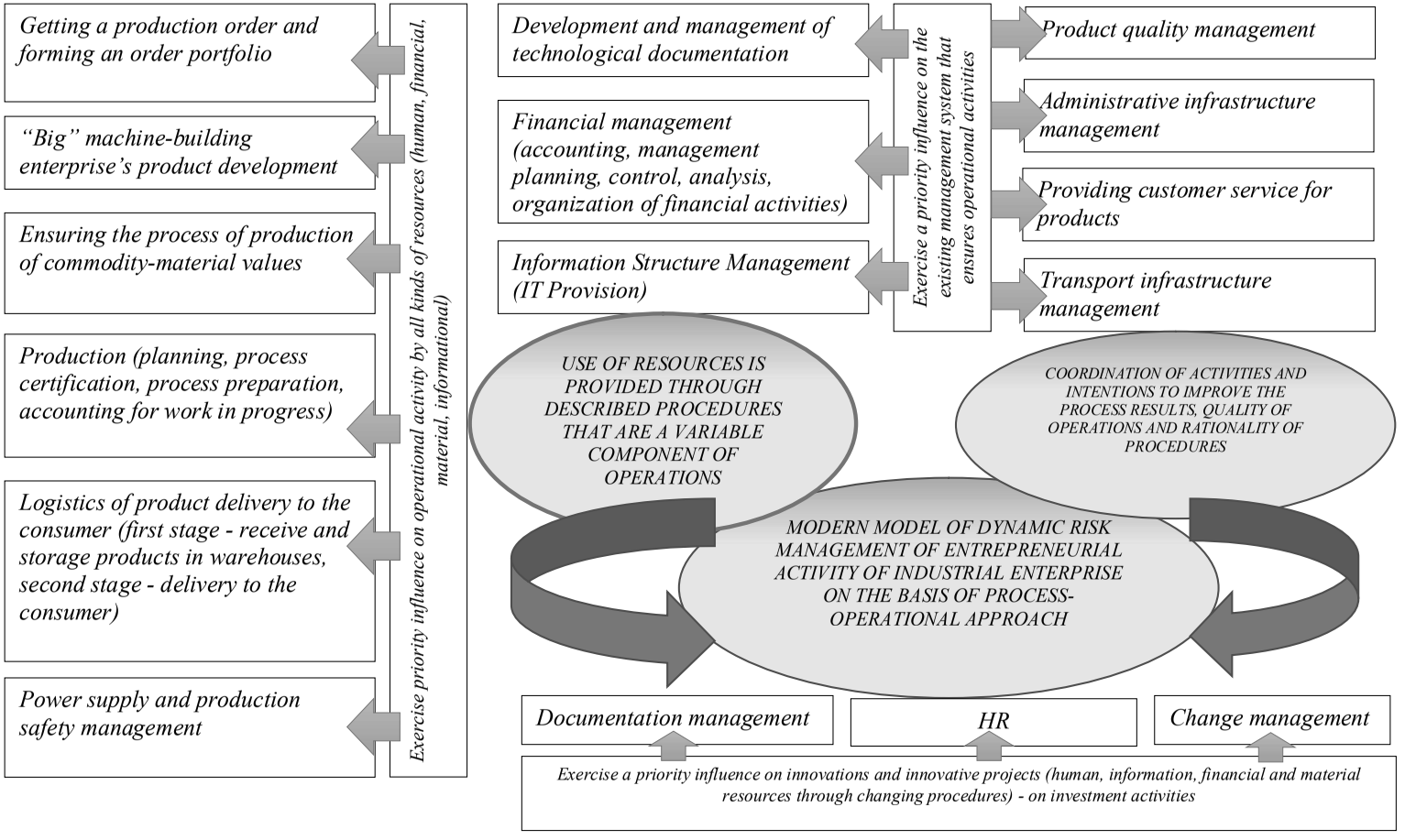

Figure 2. Model of dynamic risk management of entrepreneurial activity of industrial enterprise on the basis of process-operational approach

– financial management (accounting organization; management planning, accounting, control and analysis, including: formation and control of budget execution, accounting of commodity products and formation of static reporting, calculation of prices for products, conducting statistical observations, estimates, estimated cost, management reporting; organization of financial activities);

– information infrastructure management;

– power supply and production safety management;

– administrative infrastructure management;

– personnel management;

– change management (organization of project management processes - monitoring, measuring and analysis of processes; organization of processes of continuous improvement management - management systems, processes, project management; organization of corrective and preventive actions);

– product quality management;

– document management;

– transport infrastructure management.

CONCLUSION

The study of entrepreneurial risks of an industrial enterprise has allowed to establish patterns of risk situations that accompany functional types of entrepreneurial activity and to offer conceptual business models of the enterprise, to justify the feasibility of using a process approach to risk management of entrepreneurial activity, based on the fact that all business processes of the enterprise are based on the cumulative impact of processes and operations affects the riskiness of entrepreneurial activities. Expert assessment of system of risks of entrepreneurial activity of LP "ZZVA" allowed to substantiate the process-operational approach to risk management of entrepreneurial activity. The proposed process-operational approach to the risk management of entrepreneurial activity can be the basis for the development of local models of industrial enterprise risk management in any industry and with the purpose of identifying risks in business processes, operations and functional activities. Such horizontal detailing of risks reflects the technology of implementation of functions in the form of processes and formalizes functions and processes, which allows to carry out quantitative measurement of influence of factors on the level of risks of entrepreneurial activity; determine the level of losses from the influence of negative factors.

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RISK IDENTIFICATION, ESTIMATION AND MANAGEMENT AS A TOOL TO IMPROVE THE COMPETITIVENESS OF THE ENTERPRISE

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Abstract
The problems of uncertainty and risk as elements of objective reality that directly affect the competitiveness of businesses was considered in the paper. In a market economy, uncertainty and risk constantly accompany the activities of economic entities. The main criteria for determining entrepreneurial risk factors are the source of their occurrence (external and internal factors) and the degree of influence (factors of direct and indirect action), which can change the individual parameters of the enterprise, which will lead to deviation of actual results of performed operations from the projected ones. Particular attention should be given to the mechanism of risk estimation, as the correctness of risk evaluation directly affects the results of the enterprise, the dimension of possible losses or expected profits. Insomuch as the economic system of the enterprise consists of a set of subsystems and interconnections, we have proposed a mechanism for identifying the source and assessing estimation the negative impact. On the base of analyzing the impact of the set of risks an integrated economic risk indicator is formed, consisting of an adequate number of local risks of these subsystems. Analysis of the integrated risk indicator offers an effective risk management system that includes measures to adapt and counteract the negative impact. The main internal measures of the enterprise are: risk limitation, risk diversification, risk minimization and internal risk insurance. Forms of external risk insurance include: non-current assets insurance, cargo insurance during transportation, investment insurance, profit insurance and insurance by a hedging operation. Thus, ensuring the competitiveness of industrial enterprises involves the formation and implementation of an effective risk management system, which should ensure that the negative effects of entrepreneurial risk are minimized.

Keywords: risk, competitiveness, risk estimation, risk management system, limitation, hedging operation.

INTRODUCTION

The activities of enterprises in the market are accompanied by risks and uncertainty. It is impossible to eliminate risks in the activity of economic entities. Therefore, to reach purpose of increase the competitiveness of the company they need to identify and estimation them.

The main difference between risk and uncertainty is the possibility of measurement and evaluation: uncertainty cannot be measured, while the risk can be estimated. It follows that the risk, unlike uncertainty, can be manageable. Thus, uncertainty should be considered as the main condition for the occurrence and development of risk.

RESEARCH RESULTS AND DISCUSSION

In order to determine economic risk, study methods for its identification, evaluation and effective management it is necessary to determine the essence of this

category. In the scientific literature, there are many approaches to determining the nature of the risk category, which can be grouped into three main groups [8].

Works of the theory of optimal control, consider the risk as characteristics that inherent in any human activity, carried out in condition with limitations resources and choice of method to achieve the objectives [1]. No one ability or action can eliminate the risk. There are only ways to mitigate its effects. In the scientific literature of this area, the risks characterize the probability of events that lead to a change in equilibrium of socio-economic systems. Particular attention is paid to the study of risk properties such as systematicity, generality and dynamic probability. These risks are estimated using a system of qualitative indicators and quantitative indicators that characterize the situation for the better or worse.

The second area is represented by works, in which risk is meant as adding the regression potential. The research on these scientists is focused on such negative risk characteristics as:

– irreparable loss of material values, various properties and qualities that were useful in the past, but are disappearing in the present;

– appearance of new material values, qualities and properties of which is uncertain in the future;

– increasing environmental threats due to industrial development;

– decrease in security as a result of the creation and spread of new technologies.

A third group of authors investigates risks as a form of result uncertainty associated with a special type of business activity − entrepreneurship.

For the first time, the concept of risk as a functional characteristic of entrepreneurship was put forward in the XVII century by the French economist R. Cantillon, who viewed the entrepreneur as a decision-maker and satisfying his interests in the condition of uncertainty. The development of the concept of risk, above all, was associated with studies of the nature of income entrepreneur [5]. The followers of R. Cantillon held similar views, believing that entrepreneurial income or a portion of it was a risk pay and qualitatively different from profit on advanced capital.

The most significant contribution to the development of the economic aspect of risk theory was made by representatives of the classical, neoclassical and Keynesian School of Economics.

Today, much attention of risk research and its role in domestic practice is being considered. It is the works of recent years that have a complex and comprehensive approach of limitations of risks. Their study allows us to identify the components and properties of risk as a main phenomenon of economic activity that must be used to determine risk.

An analysis of the various economic literature of risk theory has allowed us to identify the following approaches to defining this category.

1. Risk as the probability of negative result.

2. Risk as uncertainty of future state, internal situation and external environment.

3. Risk as the probability of a mistake or the success of a particular choice in a multi-alternative situation.

4. Risk as a loss, possible losses.

The analysis of numerous definitions of the risk concept allows to determinate the main features that are characteristic of the risk situation: the presence of uncertainty, the availability of alternative solutions, the ability to determine the probability of finals and expected results, the probability of losses or additional profit [5].

Determining the essence of the risk and identifying it to improve the competitiveness of the enterprise can be facilitated by a detailed examination of risk classifications.

In the economic literature, there are many different approaches to the classification of business risks, but even nowadays the authors in this area don't have a single point of view of what the classification of the risk system should be.

Most Western economists identify operational, market, and credit risks. Often, these main types are added to liquidity, business and legal risks, and regulatory risks.

The specificity of the Western risk classification is that in these countries there is a stable banking system, as well as developed markets: currency and securities. Thus, most of the work on risk issues is linked to these institutions and their governing.

Risk is the probability of loss of assets as a result of a planned activity. Financial loss is a common ultimate costing manifestation of the negative effects of economic risk.

As the economic system of the enterprise consists of a set of subsystems, the integrated economic risk consists of an adequate amount of local risks of these subsystems. It is proposed to identify the following main types of economic risks (Figure 1).

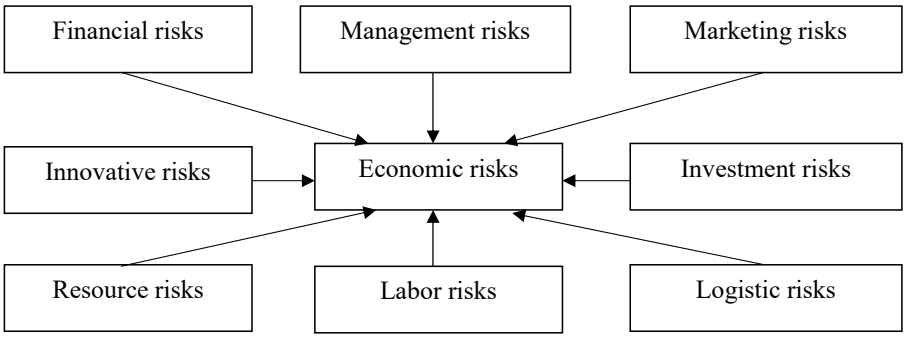

Figure 1. Classification of economic risks

The classification offered above is not complete, since the classification principle is determined by the specific task, the characteristic of the entity that make the task, and the specific situation in which the subject is located. For each case, the risk classification may have an independent decision, since the nature of the risk that accompanies a certain type of activity has its own specificity, which determines the possibility of the presence in the classification system of certain characteristics.

In the analysis of risks, the question of the nature of their manifestation is debatable: there are three basic points of view in the literature that recognize either the subjective, objective, or subjective-objective nature of risks.

The greatest contribution to the development of subjective theory was made by V.A. Oyzengit assuming that risk is always subjective because it acts as estimation of human's activity, as a conscious choice given the alternatives. Since, from the point of view of this concept, risk is always associated with the will and awareness of the person, then risk is first of all a choice of behaviors, taking into account the threat, regarding the possible adverse effects [9].

Proponents of the objective nature of the origin of risk are based on the fact that the concept of risk reflects real-world phenomena and processes, and the risk exists regardless of whether they are aware of its presence or absence, take it into account or ignore. The objectivity of risk is reflected in the fact that this economic category reflects the real uncertainty and conflict in economic activity.

The degree of risk also depends on the attitude of the subject of decision-making to uncertainty and conflict: predisposition, indifference. Therefore, all factors of uncertainty, conflict and risk are divided into subjective and objective. Risk arises when decisions are made in condition of uncertainty, conflict, and the decision-maker is interested in this process. All this makes the risk a dialectical unity of subjective and objective.

For a more complete concept of the nature of "risk", we will reveal its object and subject, the functions it performs and the factors of its occurrence.

The object of risk is the economic system itself, the efficiency and operating conditions of which are unknown. The subject of risk is an individual or a group of individuals who are interested in the results of managing the object of risk and have the right to make decisions about the object of risk [4; 5].

But in the question of the functions of risk, the views of scientists are diverse. L.N. Tepman and A.P. Slobidsky distinguish stimulating and protective functions of risk [6; 8], L.I. Donets adds innovative and analytical features to these functions [2]. But the most complete and detailed list of functions is allocated by S.M. Klimenko and O.S Dub [3].

1. The regulatory function has two aspects − constructive and destructive. A constructive aspect is that risk can play the role of catalyst in the conduct of business operations, as it facilitates the search for innovative ideas and encourages business. However, in the context of incomplete information and without proper consideration of the patterns of events, the risk can act destructively.

2. The protective function also has two aspects − historical-genetic and social-legal. The content of the first is that people are always spontaneously looking for forms and remedies for possible unwanted consequences. In practice, this can be manifested in business risk insurance or the creation of reserve funds. The essence of the other is the objective necessity of legislatively fixing the notion of "legitimacy of risk".

3. The innovative function stimulates the search for solutions to the problems facing the business entity. Risky decisions lead to more efficient production, which benefits both entrepreneurs, consumers, and society. The value of the innovative

function is also to provide additional impetus to the development of promising areas of research and business.

4. The analytical function is manifested in the fact that risk analysis necessitates the choice of the most profitable option with the least degree of risk in the analysis of alternatives.

Obviously, all the considered risk functions directly or indirectly contribute to improving the level of competitiveness of the enterprise.

The main criteria for determining entrepreneurial risk factors are the source of origin (external and internal factors) and the degree of influence (direct and indirect factors) [9]. Direct action factors directly affect business results and risk levels. Indirect factors don't directly affect these processes, but may cause them to change. The parameters that characterize the internal activity of the enterprise are internal; External factors are parameters that characterize the external environment of the business entity.

The external factors of direct influence include:

1. Legislative policy of the state on regulation of economic activity and unforeseen actions of state authorities and local self-government.

2. The tax system. Economic practice shows that withdrawing from the taxpayer up to 30% of its income is the point at which the process of reducing investment in the economy begins.

3. Relations with partners. In this case, the break of contractual obligations, on the one hand, by suppliers and, on the other, by buyers, may increase the risk level.

4. Competition. Exactly the risk involves the entrepreneur in the system of relations of natural selection through fierce competition. Competition belongs to the main factors affecting the level of business risk. Success in competition is only conducive to those who will identify new needs, release new products and introduce new technologies.

The external risk factors for indirect influence are the following [2, 3]:

1. The environment.
2. Scientific and technological progress.
3. Market conditions.
4. The economic situation in the country and the individual industry.
5. The political situation.

Internal risk factors include:

– availability of resources and efficiency of their use;
– costs of production;
– staff and motivation of their activity;
– quality and competitiveness of products;
– the level of organization of the production process;
– production capacity and volume of sales;
– development strategy, tactical and operational planning;
– the state of the technological base of production and the nature of innovative processes.

Therefore, risk is a financial category, so the extent and quantity of risk can be influenced through a financial mechanism.

Risk management is a system of risk assessment, risk management and economic relationships that emerged in the process of this management, and includes the strategy and tactics of management actions (Figure 2).

Such a management system consists of two subsystems: the controlled subsystem − the object of control and the control subsystem − the subject of control. The object of management is risky capital investment and economic relations between economic entities in the process of risk realization. These economic relations include relations between the insured and the insurer, lender and borrower, between businesses, competitors etc. Subject − a group of managers (financial manager, a specialist in insurance etc.), which means of various variants of its actions carries out purposeful functioning of the object of management. This process can be carried out only if the necessary information is exchanged between the subject and the object [7].

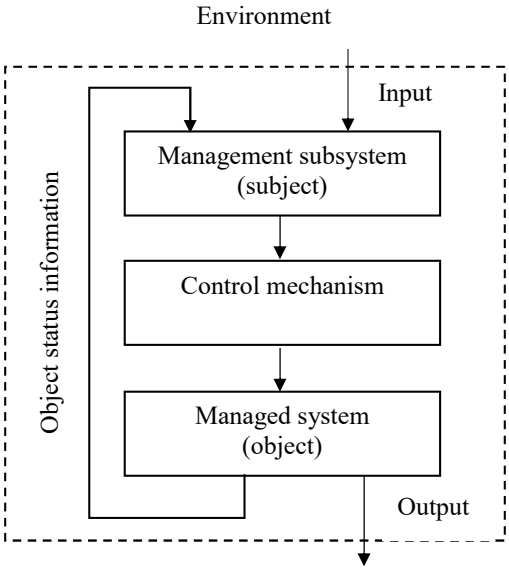

Figure 2. The risk management system

The essence of the mechanism in management is to neutralize the possibility of lack in the planned profit in the process of economic activity of industrial enterprises. It is advisable to distinguish three levels of such neutralization.

1. To avoid the possibility of risks − involves the refusal of actions that may be accompanied by risk and cause loss of profit.

2. Adaptation to the possibility of risk − of adaptation measures and eliminating the negative impact of risks on the activities of enterprises.

3. Reducing the level of negative impact of risks − identifying internal and external means of reducing the level of risk.

Internal risk limitation measures include: risk mitigation, risk diversification, risk minimization and internal risk insurance.

Forms of external risk insurance are: insurance of non-current assets, cargo insurance during transportation, investment insurance. profit insurance and hedge insurance.

Thus, a risk management strategy is the art of managing risk in an uncertain economic situation, based on the prediction of risk and the methods of reducing it.

Accounting for uncertainty done in three ways:

1) check the sustainability of the project;

2) adjustment of project parameters and economic standards;

3) by formalized description of the uncertainty.

One of the most important indicators of sustainability testing is the break-even point (sales volume at which the sales revenue coincides with production costs). Break-even point is determined by the formula:

$$P_b = C_f / (P - C_v),$$

where
C_f − fixed costs;
C_v − variable costs;
P − price.

To confirm the efficiency of the project needs to break-even point was less that nominal value output: as the farther from their break-even point that stability project is.

Indicators used to compare different projects (or project variants) and select the best one is indicators of the expected integral effect – E_e (economic − at the national economy level, commercial − at the level of the individual enterprise). These indicators are also used to justify the rational size and forms of reservation and insurance. If the probability of various conditions of the project are known precisely, the expected effect of the integral calculated as a mathematical expectation:

$$E_e = E_i * P_i, \qquad i = 1, n.$$

Currently, the most common methods of risk analysis are [4]:

– statistical;
– expert assessments;
– analytical;
– evaluation of financial stability and solvency;
– estimation of expediency of expenses;
– analysis of the consequences of risk accumulation;
– method of using analogs;
– combined method.

The statistical method studies the statistics of losses and profits that took place at a given or similar enterprise, in order to determine the probability of an event, to determine the quantity of risk.

Method of expert assessments. This method differs from the statistical one only by collecting information to construct a risk curve. This method involves the collection and study of estimates made by various specialists regarding the probability of different levels of loss.

Analytical method. The analytical way of constructing the risk curve is the most difficult, since it is based on elements of game theory. It consists of the following steps: selection of a key indicator against which sensitivity is assessed (internal rate of return, net present income, etc.); choice of factors (inflation rate, state of the economy, etc.); calculation of the values of the key indicator at different stages of the project implementation (purchase of raw materials, production, implementation, transportation, capital construction, etc.).

Certain types of factors are integral, and a clear awareness of their appearance to determine their possible impact on the projected production results is very important for timely and effective management of the enterprise, ensuring its competitiveness in the market.

CONCLUSION

A direct study of the specificity of the risk itself and the specificity of decision-making in risky situations can determine the ways of its transformation into an active lever to manage the economic development of the enterprise and increase its level of competitiveness.

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THE RISK-ORIENTED THINKING CONCEPT IN THE QUALITY MANAGEMENT SYSTEM OF THE EDUCATIONAL ORGANIZATION

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Abstract
The article presents the definition of risk-oriented thinking, in view of the applicable requirements of the current version of the national standard DSTU ISO 9001:2015 "Quality Management Systems. Requirements". The authors analyzed the changes that occurred in the sense of the term "risk" compared to the previous version of the standard, as well as the related requirements. The advantages of the educational organization from the introduction of risk-oriented thinking concept in the quality management system are presented. In order to prevent a purely formal application of this concept, the article presents the author's proposals aimed at formalizing methods and documenting the risk management process. Of paramount importance is the understanding by the staff of the educational organization of the regulatory and legislative requirements for risk assessment and management, the main list of which is presented in the paper. Using the graphical method, the relationship between the Schukhart-Deming PDCA improvement cycle and the components of risk management as principles, structure and process is outlined. The substantive essence of such interaction is the creation of an effective quality management system of an educational organization aimed at achieving the defined goals in the field of higher education. The study identifies elements of the risk assessment and management decision making process. A form has been developed and provided to provide documented identification, hazard analysis and risk assessment of the educational organization. To select the risk assessment method, the authors analyzed the methods outlined in the national standard DSTU IEC/ISO 31010:2013 "Risk Management. General Risk Assessment Methods" and identifies the methods most applicable to the educational organization's quality management system. Examples of scales and matrices of risk assessment in the quality management system of an educational organization are developed, which ensures the clarity and practical application of the methods chosen by the authors of the article. The features of risk-oriented thinking concept, identified and analyzed in the course of the presented study, provide an opportunity for structuring the risk management process and for determining the factors that may influence the achievement of higher education goals.

Keywords: DSTU ISO 9001:2015, opportunities, educational organization, risk, quality management system.

INTRODUCTION

The vast majority of educational organizations in Ukraine, where a quality management system has been implemented and certified according to the requirements of DSTU ISO 9001:2015, the risk-oriented thinking concept is mostly used as a formal act, first of all, due to the lack of complete information and practical examples for using assessment methods in the educational sphere. Therefore, there is a problem of comprehensive analysis of risk-oriented thinking and the identification of features associated with the use of this concept in the quality management systems of educational organizations.

PREVIOUS RELATED RESEARCH

Significant contribution to the study of the theory and nature of risk was made by such domestic scientists as Balabanova LV. [4], Vitlinsky V.V. [5], Granturov V.M. [6] and foreign scientists as Bedford T. [1], Cruy M. [2], Monahan G. [3] and many others. At the same time, the problem of introducing of the risk-oriented thinking concept has not been adequately reflected in the available scientific works in educational organizations, so it leads only to the declared goals in higher education and hinders the development of quality management systems in accordance with the regulatory requirements of the international community.

The problem definition. The purpose of this research is to analyze the essence of the risk-oriented thinking concept and determine the features of its application in the quality management systems of educational organizations.

RESEARCH RESULTS AND DISCUSSION

After the review of ISO 9001 standard "Quality management systems. Requirements" by the international organization ISO, and its edition in 2015, "process approach" and "risk-oriented thinking" are the key aspects on which quality management systems (hereinafter referred to as QMS) of enterprises and organizations should be based on[10].

Risk-oriented thinking is the planning and implementation of measures and methods used by an organization to manage and control risks that affect its ability to achieve its intended goals. The risk-oriented thinking concept is based on risk management principles, aimed at assessing risks and opportunities. It should be noted that according to DSTU ISO 9001:2015, risks and opportunities are often identified together, but opportunities are not a positive side of risk. Opportunities are a set of circumstances that allow one to do something, using them or not using them presents different levels of risk.

As stated in the article [11], the term "risk" was also used in previous versions of ISO 9001, but in the form of "corrective and preventive actions". There was always risk, but there was no systematic and structured approach to assessing and managing it at the level of regulatory requirements. Thus, the QMS of educational organizations, as in 2015, should not just function and implement certain actions before or after the occurrence of a specific danger, but on a permanent basis it should identify, evaluate and take them into account while providing services, analyzing the possible likelihood of failure to meet customer requirements, applicable regulatory and regulatory requirements, etc. The risk-oriented thinking concept according to DSTU ISO 9001:2015 is an integral part of the process approach and is contained in every structural component of the requirements of the standard (see Table 1).

According to the table 1, risk-oriented thinking, introduced in accordance with the requirements of DSTU ISO 9001:2015 in the QMS of an educational organization, allows to reduce the number of policy requirements by focusing on efficiency-oriented requirements.

Table 1. Risk-oriented thinking in the requirements of DSTU ISO 9001:2015

Sections of the standard DSTU ISO 9001:2015	**Content requirements for consideration of risks**
Introduction (0.3.3 Risk-Oriented Thinking); Appendix A (A.4)	– explanation of risk-oriented thinking; – identifying risks and opportunities
Chapter 4, p. 4.1; p. 4.4	an organization should identify its environment, the needs and expectations of its stakeholders, identify processes and resources, as well as the risks and opportunities that determine them
Chapter 5 Leadership	top management has to: – promote the use of the process approach and risk- oriented thinking; – identify and take into account risks and opportunities that may affect the conformity of products (services) and customer satisfaction
Chapter 6 Planning, p. 6.1	the organization should identify risks and opportunities as the basis for planning, as well as develop actions according to the risks and opportunities
Chapter 7 Maintenance of Management System	the organization has to identify resources, monitor and measure them for the likelihood of results (risks are taken into account whenever the “right” or “appropriate” is mentioned)
Chapter 8 Production	the organization has to manage its operational processes (risks are implied whenever a “required” or “appropriate” is mentioned)
Chapter 9 Performance evaluation	the organization has to measure, analyze and evaluate the performance of the quality management system in place, including the effectiveness of actions taken on risks and opportunities
Chapter 10 Improvement	the organization has to correct, prevent or reduce undesirable effects and, if necessary, update the risks and opportunities identified during the planning

Source: compiled by the authors according to standard DSTU ISO 9001:2015 [10]

According to the results of our previous research of the identified problems, presented in [11], we can state that the introduction of the risk-oriented thinking concept in the QMS of an educational organization:

– allows you to identify risks for all processes of creating an educational service;

– ensures the achievement of higher education objectives;

– improves management;

– establishes a warning culture of improvement;

– assists with effective regulatory and legislative requirements;

– increases the trust and satisfaction of stakeholders in educational services.

At the same time, a formal approach is observed to the use of the risk-oriented thinking concept in the QMS of educational organizations because the standard [10] does not contain policy requirements for formalized risk management’s method. It is not required to provide and storage of documented information about the description of the risk management process from the organization implemented by the QMS.

Organizations themselves have to identify such needs, determine the risks of processes within the QMS, as well as vary levels of the impact of uncertainty on the achievement of their objectives, particularly in higher education.

For an educational organization, the possible risks appear from the context of its activities related to the education, upbringing, development and self-improvement of the individual under the current conditions of autonomy and democratization of the management of the educational process (as an example - the transition to a new system of financing and reduction of the budget component; services and their content to the modern requirements of employers; competition among educational organizations and reduction of the number of entrants), and they are at least political, economic and marketing risks [11]. In particular, according to V.M. Granaturov, "marketing risk is a component of organizational and management risks which determines the possibility of unplanned change of the end result of activity due to deficiencies in the organization of marketing activity" [6].

In order to understand the nature and the practical bases of applying the concept of risk-oriented thinking with the further formalization of the risk management process, it is necessary to use such fundamental documents that determine the applicable requirements for risk assessment:

– DSTU ISO Guide 73:2013 "Risk management. Glossary of Terms";

– DSTU ISO 31000:2018 "Risk management. Principles and guidelines" (ISO 31000:2018, IDT);

– ISO/TR 31004:2013 "Risk Management - Implementation Guidelines ISO 31000";

– DSTU IEC/ISO 31010:2013 "Risk management. General methods of risk assessment" (IEC/ISO 31010:2009, IDT).

All these documents, as well as DSTU ISO 9001:2015, and above all the basic one, in the new version of the standard - DSTU ISO 31000:2018, built on the cycle of PDCA improvements by Schuhart-Deming. It is through the interaction of the components of risk management (principles, structure, process (see fig. 1)) and the PDCA cycle that the effectiveness of the QMS based on risk-oriented thinking is enhanced. At the same time, risk management, as well as quality management, is an integral part of the whole management system of an educational organization, not its separate function.

For planning and implementation of activities in order to identify hazards associated with educational services, identify and evaluate risks, control these risks and monitor the effectiveness of such controls, it is necessary to use both technologies and methods for risk assessment, as well as methodologies and tools for improving performance, including such like: FMEA, benchmarking, QFD methodology, method $6-\sigma$ etc.

In order to apply risk assessment's methods and management decisions, educational organizations require the development of a specific process that includes the following elements:

– definition of risk conditions;

– risk identification;

– risk analysis;
– risk assessment;
– risk management;
– assessing the acceptability of full residual risk;
– risk management report;
– monitoring and analysis (informing on the provision of educational services).

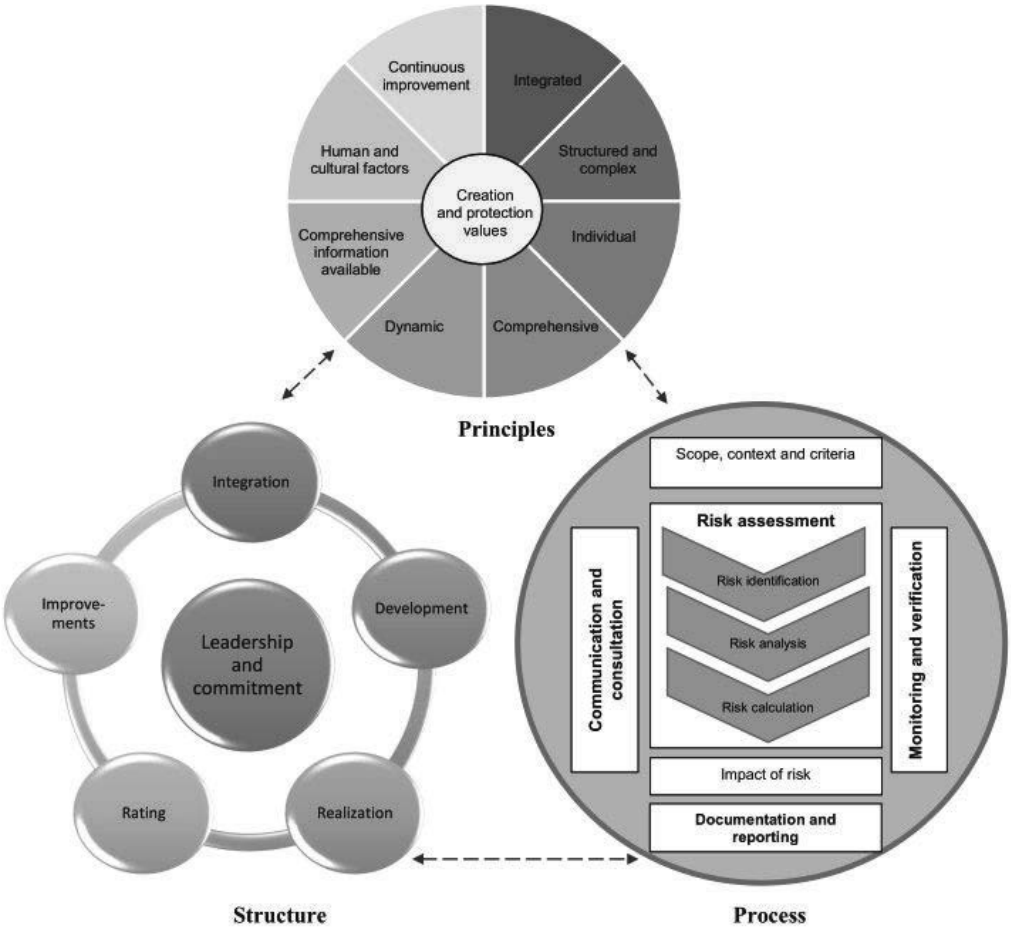

Figure. 1. Basic principles of risk management in accordance with DSTU ISO 31000:2018

Source: compiled by the authors according to the [9]

The management of the educational organization should provide risk management activities with appropriate resources, including trained competent staff, to establish documented risk tolerance criteria based on applicable legal and regulatory requirements, taking into account global educational experience, as well as needs and expectations of relevant stakeholders.

Risk assessment is a periodic process that is hold at least once a year and situationally. The situational assessment is performed in case of possible changes in the processes related to the education of higher education applicants when new sources of risk emerge. Acceptable statistical methods are used in analyzing data and results in risk management activities.

For a particular type of educational activity, the envisaged conditions for providing educational services (audience, program, procedures) and the predicted possibilities for incorrect services are determined. At the same time, all the qualitative and quantitative characteristics are noted and documented that can affect the education.

Documented information on the risk analysis of the educational organization should include:

- description and identification of the analyzed training;
- information about the qualifications of risk analysis professionals;
- a description of the risk analysis and its date.

Experts of educational organizations should develop a list of known and foreseeable dangers associated with the educational process, both in the foreseeable conditions of educational services and in the case of services with disabilities. Predetermined hazards are identified (see Table 2). Consecutive events are also anticipated and recorded that can lead to a dangerous situation.

Table 2. Form for documented identification, analysis of hazardous factors and calculation of risks of educational organization (sample)

No. in order	Potential hazards identified	Dangerous situations	Potential causes, mechanisms of occurrence and dangerous situations	Assessment of educational risk (R)			Is it necessary to reduce the risk	Measures to prevent dangerous situations	Residual risk assessment (R_z)			Is it necessary to reduce the risk	Notes
				S	P	Risk assessment (R)			S	P	Risk assessment (R)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Source: authors' development

The list of dangerous factors in the form of table 2 is the basis for identifying the stages of the process where there is a potential risk of a threat for the effectiveness of educational, students' and workers' health of the educational organization, etc., but at the same time it is possible to eliminate this risk through appropriate management measures or reduce it to an acceptable level.

For each identified hazard, it is necessary, according to the selected criteria, to decide on the acceptability of the risk or to take additional measures to reduce it. Risk

assessment, selection of appropriate methods and quantitative or qualitative assessment scales are performed in accordance with the recommendations and requirements set out in DSTU IEC / ISO 31010:2013 “Risk Management. General methods of risk assessment” (IEC/ ISO 31010:2009, IDT). “Risk assessment involves the comparison of quantified levels of risk with the risk criteria identified during the setting of the environment in order to determine the value of the level and type of risk” [7, p. 8]. It should be noted here that major mistakes in higher education institutions are made when unclear and complex terms are used to denote risks, as well as ambiguous units in which the level of risk is presented in different processes of the QMS. Such errors should be avoided at the beginning of the risk identification, which is ensured by the involvement of competent experts in the educational organization in the risk assessment process.

When it is necessary to choose a risk assessment method in an educational organization, it can be both the simplest and the most difficult in order to apply and process. It is appropriate to use a number of methods in a complex combination, depending on: the purpose of assessment; the specific situation, relevance and suitability of it; availability of information and data; the degree of professional competence of risk assessors; the assessment result which has to be concerted with the risk criteria; obtaining the results in such a form that they can be understood to determine the nature of the risk and how to handle it; ability to reproduce the method, check and trace; the needs of decision-makers; any applicable regulatory and legal requirements.

The risk assessment process consists of the following steps: risk identification - risk analysis (impact analysis - likelihood assessment - evaluation of the effectiveness of controls) - risk assessment. Each step of the process uses a specific method that is detailed and specified in the standard DSTU IEC/ISO 31010:2013 [7].

According to the authors’s analysis of the methods, their applicability during each of the stages of risk assessment and the characteristics presented in Annexes A and B of the standard [7], it is appropriate for the QMS of educational organizations to use consequences / probabilities matrix (hereinafter referred to as C / P) and the ALARP method. The C / P matrix is a means of combining qualitative or semi-quantitative consequences and probabilities in order to obtain a risk level and then rank it at defined scales. The use of the C / P matrix is due to the fact that educational organizations are complex systems where many risks can be identified depending on the stages and processes for providing educational services, and the available data are not sufficient for detailed analysis. In such a case, it is necessary to select and analyze precisely those risks that require immediate response from senior management. The latter one is provided by the criteria of the ALARP method, where the information obtained about risks is divided into three ranges: upper (unacceptable risk); average (acceptable); lower (accepted). The middle range has a moving school for low risks which allows to compare the costs of risk reduction proportionally with the safety advantage (see Figure 2).

The use of the ALARP method and the C / P matrix implies the availability of persons (expert groups) with appropriate competence, as well as the data relevant for making judgments about the consequences and probabilities. A semi-quantitative risk

assessment system should be developed by a group of experts in order to assess the risks and acceptability of the decision as to their eligibility.

The rating scale and the matrix can have different levels, with the most common from 3 to 5. The probability scale should cover the range so that the lowest probability is acceptable for the highest output, as stated in the requirements of the standard [7].

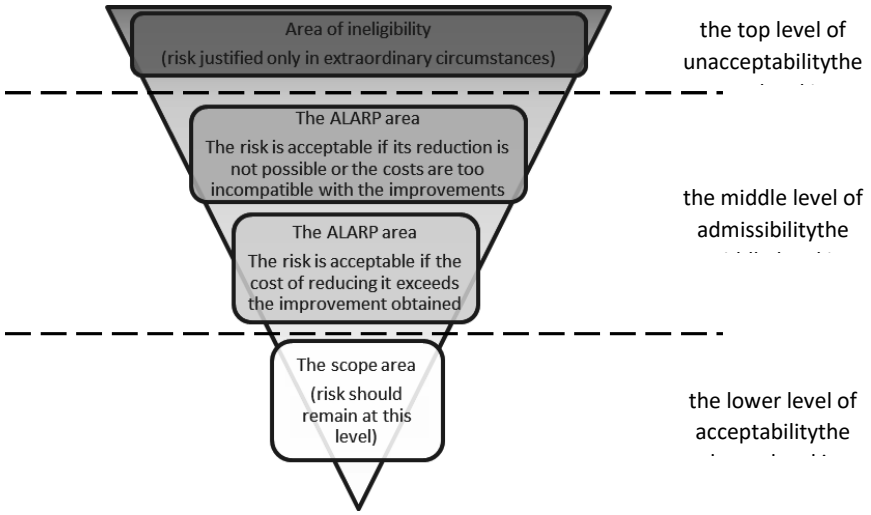

Figure. 2. Breakdown of risks by levels of acceptability or unacceptability
Source: compiled by the authors according to standard [7].

Examples of constructing such probability scales and levels of risk consequences are given in tables 3 and 4, where P - is the risk likelihood estimation, S - is the degree of risk consequence.

Table 3. The scale of semiquantitative levels of risk occurrence in a QMS of educational organization

Rating	The probability of an onset	Probability range	Definition
P_1	It is unlikely	$<10^{-6}$	Unlikely but possible
P_2	Rarely	$<10^{-5}$ - $\geq10^{-6}$	Probable occurrence
P_3	From time to time	$<10^{-4}$ - $\geq10^{-5}$	Single cases are possible
P_4	Perhaps	$<10^{-3}$ - $\geq10^{-4}$	Will occur repeatedly
P_5	Highly probable	$\geq10^{-3}$	Frequent probability of occurrence

Source: authors' development

Table 4. The scale of qualitative levels of the degree of risk implication in a QMS of educational organization

Rating	The degree of consequence	Definition
S_1	Minor	Damage borne by the educational organization
S_2	Moderate	Risks to the reputation of an educational organization
S_3	Serious	Reducing the effectiveness of the QMS of educational organization
S_4	Critical	Decrease in success rate of higher education students and quality of higher education
S_5	Catastrophic	Changes in the context (internal and external environment) of the educational organization

Source: authors' development

The C / P matrix is constructed, giving rise to a risk on one axis and a probability of its occurrence on the other. The matrix is constructed with a certain weight of consequences (probabilities) or symmetrically, depending on the case. An example of constructing such a 5 × 5 risk assessment matrix is given in table 5.

Table 5. The risk assessment matrix in a QMS of educational organization

	S_1	S_2	S_3	S_4	S_5
P_5	5	10	15	20	25
P_4	4	8	12	16	20
P_3	3	6	9	12	15
P_2	2	4	6	8	10
P_1	1	2	3	4	5

Source: authors' development

In the light of the samples presented by the authors, the risk assessment which is in the range of 15 - 25 refers to the unacceptable risk by the ALARP method, which indicates the refusal of an educational service or an appropriate process of the educational organization's QMS, primarily due to the lack of risk management measures. If it is determined that the risk is within this range, then the work of the educational organization should be prohibited from eliminating the impact of the dangerous factor or reducing its impact to at least the average level of the low risk range.

The internal auditors of the QMS who should be scheduled early in the calendar year and provided by the QMS documented information, review the implementation of risk control measures and their effectiveness. Any risk remaining after applying risk control measures is evaluated against the criteria set out in table 4. If residual risk is considered as unacceptable, additional risk control measures shall be taken. All the received information is recorded and documented in the risk management report.

CONCLUSION

On the basis of the conducted analysis, the article defines the essence of the risk-oriented thinking concept and peculiarities of its application in relation to the QMS of educational organizations which consist in the following:

– process approach and risk-oriented thinking are the basis for building the QMS;

– the QMS performance is achieved through the interaction of the PDCA cycle with the principles, structure, and risk management processes;

– a necessary effective prerequisite for risk-oriented thinking is to formalize risk management methods in the QMS and develop a documented description of the risk management process.

It has been determined that for the risks assessment in educational institutions it is appropriate to use comprehensively the matrix of consequences / probabilities and ALARP method which combine qualitative or semi-quantitative assessments of consequences and probabilities, which provides the possibility of obtaining the risk level with its further ranking on certain scales. The samples of scales and risk

assessment matrices developed by the authors allow experts of educational organizations to use them in practical activities, focusing their efforts on improving the effectiveness of the QMS and satisfaction of customers of educational services. The use of research results presented in the QMS of educational organizations provides an opportunity to structure the risk management process and identify factors that may affect the achievement of higher education goals which are the directions of further research of the article's authors.

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A STUDY OF THE SOCIO-DEMOGRAPHIC PORTRAIT OF A SOCIAL ENTREPRENEUR AS A REPRESENTATIVE OF MODERN MANAGEMENT

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Abstract
In the light of modern innovation transformations a clear change in approaches to entrepreneurship is occurred. The mission of the modern enterprise is increasingly becoming not only profit, but also the solution of socially oriented tasks. This study has purpose to define the typical characteristics of subjects of social entrepreneurship and to present socio-demographic portrait of a social entrepreneur as a representative of modern management. The research has been conducted via social networking; the respondents with a total of 32 representatives of small and micro business were invited to join the research with the links to application online. The survey was conducted during June-July 2019. The results show that social entrepreneurs are a special group of entrepreneurs that has specific features and differences from traditional businessmen. Practical and social implications of the research are to give impetus to strategic development of social entrepreneurship taking into account specific basic values and complex motivation of social entrepreneurs.

Keywords: social entrepreneurship, entrepreneur, social-oriented business, social problems, management

INTRODUCTION

One of the most progressive trends in modern entrepreneurship is socially-oriented enterprise, which has recently received increasing attention in various sectors of economy and management. The content of social entrepreneurship is solving social problems: ensuring social, cultural and economic rights of citizens, reviving cultural traditions, responsible use of natural resources, introduction of patriotic education, promotion of traditional values and the institution of family, development of sports and healthy lifestyles, etc.

Social enterprise today is a rapidly growing industry all over the world. It is powered by a variety of tools for social programmes, impact investing, e-business, venture projects.

As well as social entrepreneur – a new type of a businessman, who can be a business owner, private entrepreneur, self-employed worker, representative of large, medium, small and micro business, NGO member.

RESEARCH RESULTS AND DISCUSSION

This research has been conducted with a view to identify the typical characteristics of subjects of social entrepreneurship – social entrepreneurs – and to present socio-demographic portrait of a social entrepreneur as a representative of modern management.

The *objects* of the research are entrepreneurs (representatives of small and micro business) identifying themselves as socially-oriented ones or involved in various programs and activities related to social entrepreneurship.

The *methodological basis* of the research was the survey (formalized application online) developed for the research. The application questionnaire was focused on priority areas:

1. Ideas about the essence of the phenomenon of "social entrepreneurship", its basic components and characteristics. Self-identification as a social entrepreneur, parameters of self-identification.
2. Personal portrait of a "social entrepreneur" (socio-demographic data: gender, age, education level, occupation, marital status, place of stay: urban or rural), basic social statuses and roles.
3. Motivation for engaging in social entrepreneurship, factors stimulating entrepreneurship (material incentives, social responsibility, incentives for personal growth and self-realization).
4. Humanistic value orientations and social activity.
5. Social connections, participation in associations, communities, social networks.
6. Social responsibility, inclination to activities aimed at solving social problems.
7. Involvement in interaction with government and local government structures, public influence.
8. Experience in participating in other public practices, including value components: charity, social activities etc.
9. Innovative thinking and activity, business innovations, creativity.
10. Economic efficiency of business and the main elements of a business development strategy. The main areas of implementation (types of goods and services), sources of financing.

As a sample basis of individuals a database of one of the top business Ukrainian sites (UA region.Info) was chosen. The initial base for the recruitment of respondents (mailing invitations to the survey) included about 50 emails of social enterprises and specific individuals. As a result of recruiting 32 completed questionnaires were received to the primary survey database.

The following preliminary results describing the personal socio-demographic portrait of a social entrepreneur should be presented in Table 1.

In addition, according to the results of the data preliminary analysis, it can be argued that approximately 10 % of the total respondents are not currently strictly representatives of social entrepreneurs as their answers for the direct question about self-identification "Do you consider yourself a social entrepreneur?" 3 respondents (9, 38 %) answered negatively.

However, given the ambiguity of existing definitions of social entrepreneurship as well as the respondents' experience and future intentions in the sphere of social enterprise, such accuracy was not considered.

The same questions had been posed to the representatives of traditional business, after which comparative characteristics were done.

To characterise the concept of basic social statuses and roles, value orientation and social activity the respondents were proposed to answer next questions:

Table 1.Socio-demographic characteristics of a social entrepreneur

Socio-demographic characteristics	Frequency	Percentage
Gender		
Male	18	56,25 %
Female	14	43,75 %
Age		
Under 35 years	12	37,5 %
36-50 years	12	37,5 %
Above 51 years	8	25 %
Education level		
The second (third and so forth) higher education, postgraduate school, special business education and so on)	4	12,5 %
Higher education (bachelor's or master's degrees)	21	65,63 %
Uncompleted higher education (without a diploma)	5	15,63 %
Secondary education (including secondary specialized education)	2	6,25 %
Occupation		
Business owner	6	18,75 %
Private entrepreneur	8	25 %
Self-employed worker	4	12,5 %
Representative of large, medium, small and micro business	7	21,88 %
Member of NGO (public or voluntary organization, non-profit partnership, fund)	6	18,75 %
Other	1	3,13 %
Marital status		
Married	21	65,63 %
Single	6	18,75 %
Divorced	4	12,5 %
Widow-er	1	3,13 %
Place of stay		
Urban	28	87,5 %
Rural	4	12,5 %

Source: compiled by the authors

1. Do you feel that most people are worth trusting or one should be careful when dealing with people?

2. Do you think that today there is more accommodation, understanding and solidarity or disagreement, disunity among people?

3. Are you ready to team up with other people to achieve common goals, or would you rather act alone?

4. In your opinion, how often can one meet the readiness to help each other among people?

5. How often can one meet among people now the readiness to unite in order to solve together social problems that do not concern them personally?

6. Do you consider yourself a socially active person?

7. Do you take part in the work of public organizations and associations, including professional associations, unions?

8. Have you recruited representatives of socially disadvantaged groups over the past few years?

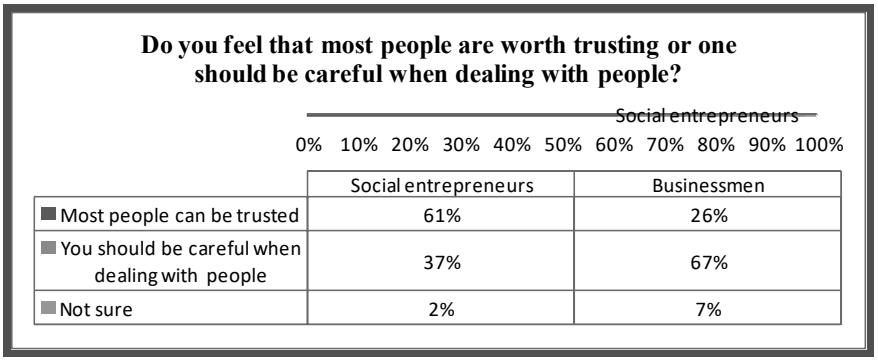
9. Do you think that public administration should play a more supportive role in assisting the development of social entrepreneurship?

10. Do you consider that innovative thinking contributes greatly to the economic effectiveness of business or conservative approach is more desirable for you?

On the whole, the data obtained show that social entrepreneurs stand out sharply from businessmen in terms of a much higher level of social trust, a high predisposition to social solidarity, and a general optimistic attitude in assessing these phenomena.

Thus, it was generally felt by the businessmen that they are more restrained in terms of manifesting their civic engagement than social entrepreneurs, who on the contrary, are more trusting in relation to other members of community.

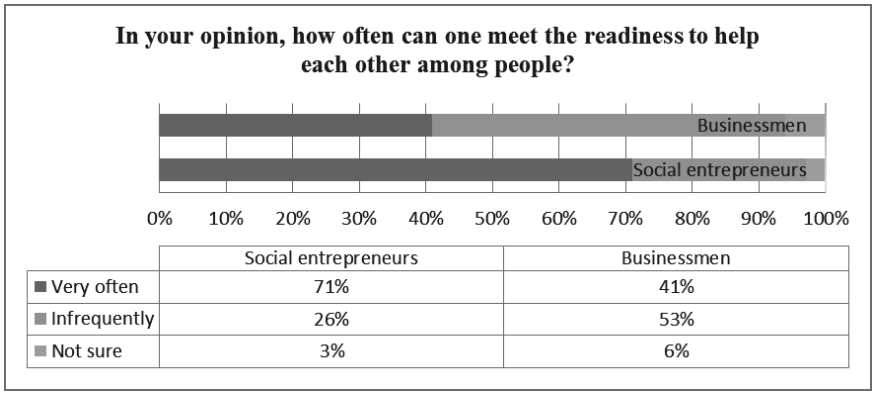
The most illustrative data on comparison of businessmen and social entrepreneurs, according to the questionnaire, is presented below (Figures 1–4):



	Social entrepreneurs	Businessmen
Most people can be trusted	61%	26%
You should be careful when dealing with people	37%	67%
Not sure	2%	7%

Figure 1. Do you feel that most people are worth trusting or one should be careful when dealing with people? (Business vs social entrepreneurship)

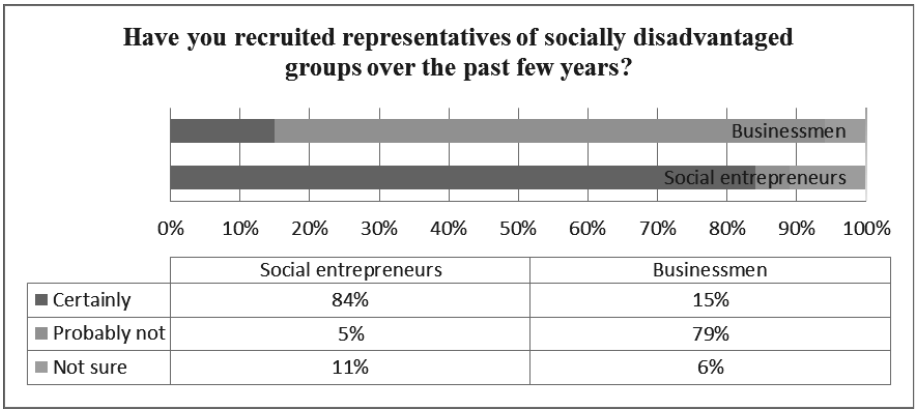
Source: own compilation



	Social entrepreneurs	Businessmen
Very often	71%	41%
Infrequently	26%	53%
Not sure	3%	6%

Figure 2. In your opinion, how often can one meet the readiness to help each other among people? (Business vs social entrepreneurship)

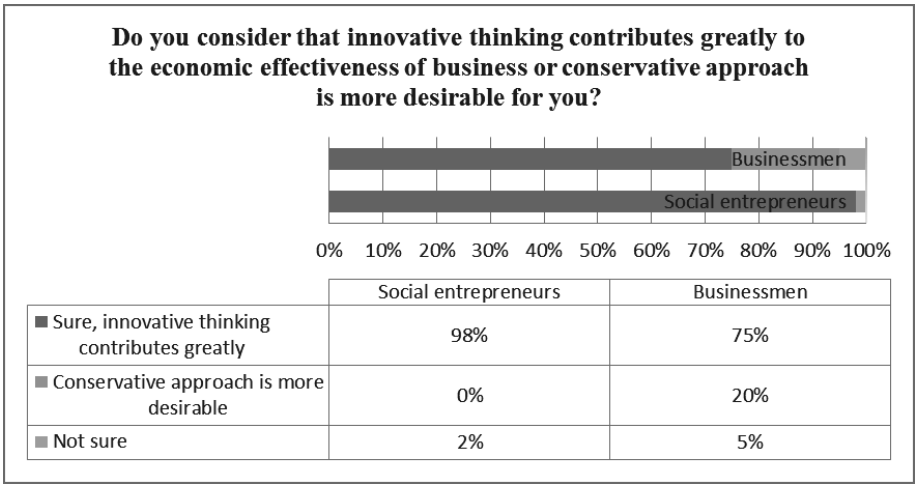
Source: own compilation



	Social entrepreneurs	Businessmen
Certainly	84%	15%
Probably not	5%	79%
Not sure	11%	6%

Figure 3. Have you recruited representatives of socially disadvantaged groups over the past few years? (Business vs social entrepreneurship)

Source: own compilation



	Social entrepreneurs	Businessmen
Sure, innovative thinking contributes greatly	98%	75%
Conservative approach is more desirable	0%	20%
Not sure	2%	5%

Figure 4. Do you consider that innovative thinking contributes greatly to the economic effectiveness of business or conservative approach is more desirable for you? (Business vs social entrepreneurship)

Source: own compilation

Another interesting feature identified during the study is gradation of responses within the group of social entrepreneurs depending on their socio-demographic characteristics. These differences are not as obvious as with representatives of business sector, but also must be considered.

Therefore, the answers vary most noticeably according to next categories: gender, age and occupation. For example, women social entrepreneurs proved to be more trusting with counterparties, than men; older representatives of socially-oriented business consider that there was more accommodation, understanding and solidarity in former times while younger social entrepreneurs insist on the opposite; members

of NGOs most often take part in the work of different public organizations and associations, including professional associations, unions; business owners are the most numerous group, recruiting representatives of socially disadvantaged groups over the past few years.

Data representing questionnaire answers within the group of social entrepreneurs is presented in Figures 5–7:

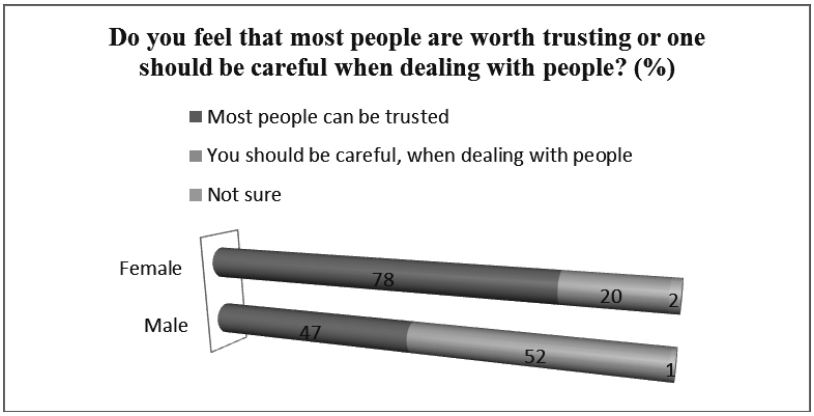


Figure 5. Do you feel that most people are worth trusting or one should be careful when dealing with people? (Within social entrepreneurs)

Source: own compilation

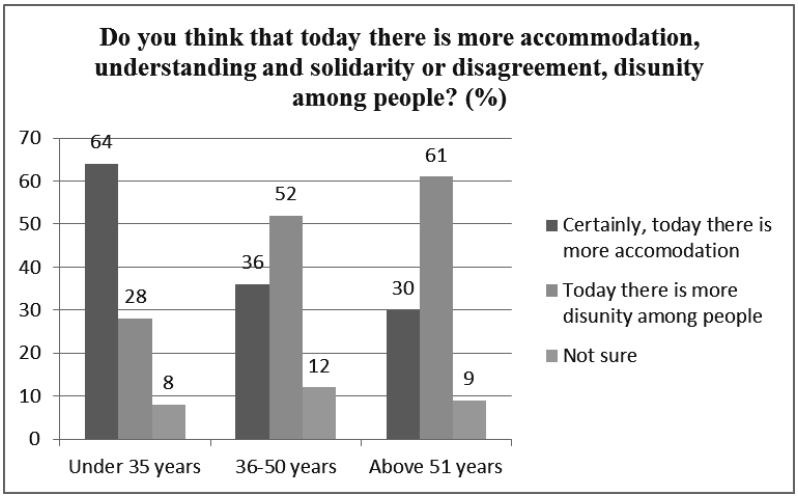


Figure 6. Do you think that today there is more accommodation, understanding and solidarity or disagreement, disunity among people? (Within social entrepreneurs)

Source: own compilation

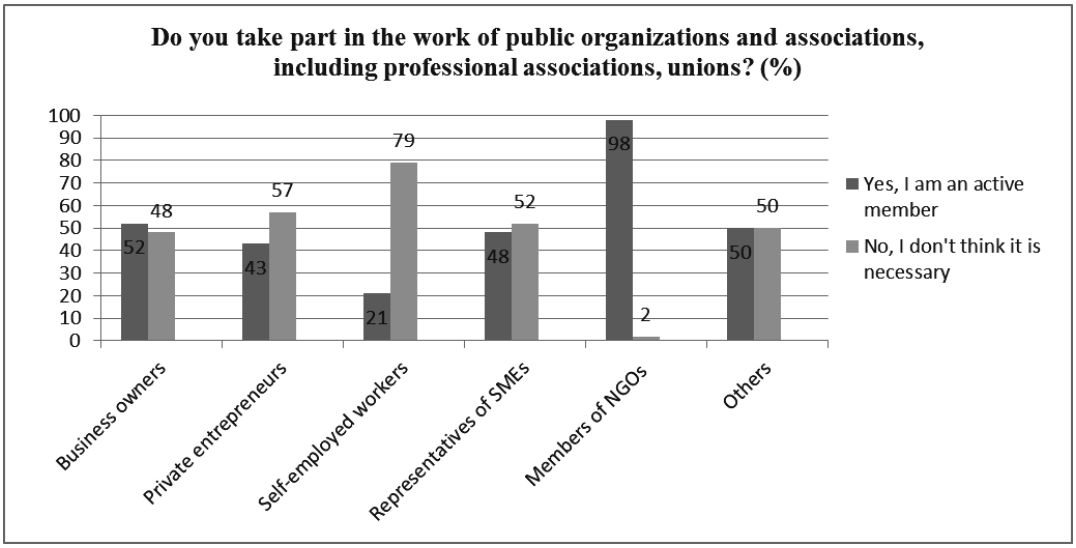


Figure 7. Do you take part in the work of public organizations and associations, including professional associations, unions? (Within social entrepreneurs)

Source: own compilation

The data obtained during the study confirm that social entrepreneurs are a special group of entrepreneurs that has pronounced specific features and differences both from traditional businessmen and within their own group. The study indicates a complex structure of motivation to create an enterprise and engage it in social entrepreneurship.

The most powerful motivator for the social activity of an entrepreneur is the desire to implement a certain idea, which lies, as a rule, in the field of actual social problems of society, as well as the desire for independence to develop another space for self-realization.

Other grounds to run a socially-oriented business, according to the study, could be specified:

1. Moral and ethical obligations, desire to create a favorable ecosystem of welfare, unity and reconciliation.
2. Business-friendly long-term prospects, desire to provide long-term profit guarantees.
3. Formation of favorable reputation in the society in order to increase sales, be able to hire skilled workers, gain access to public funding and other benefits.
4. Improvement of the external environment, solving social serious problems.
5. Reduction of state regulation.
6. Balance of responsibility and power.
7. Increase in enterprise income as social responsibility contributes to the increase in the price of its shares.
8. Better conditions for receiving resources.

CONCLUSION

An important result of this study is the conclusion that social entrepreneurship as a phenomenon becomes more understandable and accepted in the business environment.

In addition, it should be noted that the phenomenon of social responsibility gives socially-oriented entrepreneurship a moral and ethical right to exercise public authority, and the legislative regulation of social and economic activity of enterprises legitimizes the corresponding legal status. Accordingly, social enterprises aiming at meeting the needs of the society and participating in the process of self-management of the social system are endowed with public authority not only by legislative acts, but also by their very essence.

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SOCIAL RESPONSIBILITY AS A STRATEGIC ORIENTATION OF MODERN BUSINESS DEVELOPMENT

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Abstract
The peculiarities of formulating and developing a concept of business social responsibility as one of the most important factors of strategic development have been described, the international documents regulating the enterprise activity in the sphere of corporate responsibility have been classified, the corporate social responsibility models and the role of the state in the European Union countries have been examined, the comparative analysis of US and European models of corporate social responsibility have been carried out.
The article identifies that many international corporations publish reports on corporate social responsibility, because it leads to increase company image and business reputation. Nowadays, the most developed countries in the world have joined international commitments in the area of corporate social responsibility.
It was investigated that the corporate social responsibility has become a key business ideology, a basis of social partnership with governments and civil society over the past two decades. The study showed that Ukraine does not use a number of CSR practices that have became common in Europe such as the cultural specificity of the consumer, social product labelling, consumer feedback, providing information on the product quality and safety, product life-cycle assessment, environmental monitoring, and avoidance of genetically modified products. Therefore, the article proposes a number of measures aimed at improving the corporate social responsibility in Ukraine.
Study results have been determined that for those companies that have a good track record for responsible behaviour in the developed countries, the social responsibility is one of the main factors of good business reputation, which enhances investment attractiveness of the company, promotes recruitment and retention of highly qualified employees, increases productivity, supports brand awareness, and creates positive opinion about company's products.

Keywords: corporate social responsibility, sustainable development, partnership, training policy, corporations, European Union countries.

INTRODUCTION

Business development in Ukraine, as well as business integration into the world economy, set new business requirements and tasks and revitalize corporate social responsibility. It is known that a business is a part of society, and therefore it determines both quantitative economic indicators and economic health of the nation, as well as improves physical, spiritual and social environment that is, acts socially responsible. Corporate social responsibility is an integral part of the EU Member States' social policy, aimed at ensuring high standard of living, increasing employment, reducing income inequality, enhancing social protection and reducing poverty.

RESEARCH RESULTS AND DISCUSSION

There are many definitions of corporate social responsibility (CSR). Investopedia defines the corporate social responsibility as "self-regulating business model that helps a company be socially accountable – to itself, its stakeholders, and the public. By practicing corporate social responsibility, also called corporate citizenship, companies can be conscious of the kind of impact they are having on all aspects of society including economic, social, and environmental" [4]. In the Electronic Cambridge Dictionary, we may find that "A company's sense of responsibility towards the community and environment (both ecological and social) in which it operates. Companies express this citizenship through their waste and pollution reduction processes, by contributing educational and social programs, and by earning adequate returns on the employed resources" [3].

Researchers realise its suitability to serve as a viable area or field of interest for academic research [12]. The managers are using it as a tool to strategise, comply with regulations and maintain set standards, build corporate reputation and get more customer loyalty which all culminates in increasing profitability and overall attainment of organisational objectives. CSR research is centred on practical analysis and assessment of CSR in relation to the impacts it creates on organisational performance. Theoretically, it explains the change from altruistic base to strategic or instrumental base for achieving sustainable development [9].

CSR has gained an institutional status for regulators because of its linkage with compliance to law and ethical practices. CSR has acquired different meanings over time and combined some features or characteristics making it to represent set of obligations, responsibilities, stakeholder rights, and all forms of philanthropic activities [11]. The area defined by advocates of CSR increasingly covers a wide range of issues such as plant closures, employee relations, human rights, corporate ethics, community relations, fair market operations and the environment. Business only contributes fully to society if it fulfils its economic responsibilities to stakeholders and is socially responsible. The objective of CSR is to build sustainable growth for business in a responsible manner [13].

According to our considerations, the corporate social responsibility is an impact of company' activity on society or way of doing business, which is based both on understanding and serving the most significant interests of society and on not causing harm to society through its activities.

The Governance & Accountability Institute (G&A) research team determined that eighty-six percent (86%) of the companies in the S&P 500 Index (500 large-cap companies operating in the capital markets) published sustainability or corporate responsibility reports in the year 2018 [1]. This research effort marks G&A Institute's eighth annual monitoring and analysis of sustainability responsibility reporting (Figure 1).

The analysis confirmed that entering 2019, just 14% of the S&P 500 declined to publish corporate responsibility and sustainability reports. In addition, the number of reporting corporations is increasing annually

Over the past two decades, CSR as a corporate governance strategy has become a key business ideology, a cornerstone of social partnership with government and

civil society. The foreign experience in the field of corporate social responsibility shows that CSR activities and CSR reporting contribute to business efficiency through improving image and business reputation, increasing capitalization and investment attractiveness, promoting sustainable national development.

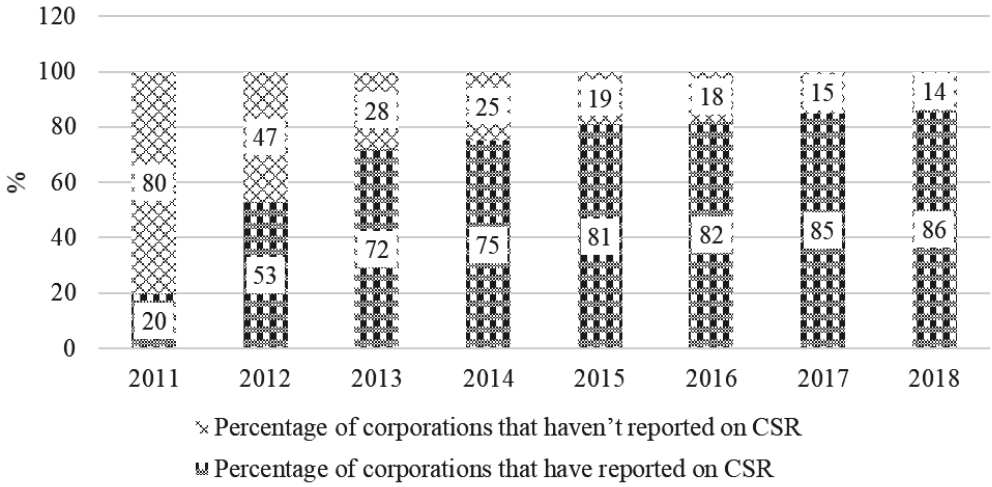

Figure 1. Trends of S&P 500 sustainability reporting over the last eight years

Nowadays, the most developed countries in the world have joined the international commitments in the field of sustainable development and corporate social responsibility. The main international documents are shown in Table 1.

Therefore, the first group includes those international documents that set out general principles and requirements for corporate social responsibility. At the same time, the most of them are declarative and do not provide with company' external audit to confirm adherence to the principles established by the international documents. Some of documents include provisions that require companies to self-report on CSR achievements (for example, companies that are subscribed to the Global Compact) and thus provide official or informal control. The second group covers the international documents containing clear requirements for company management and certification to the standards including the initial assessment, implementation and subsequent monitoring of certification requirements. Compliance with these requirements helps to extend the corporate social responsibility principles to enterprise life cycle and increases the overall level of stakeholder trust. The third group consists of international documents developed by various investment funds for the corporate social responsibility assessment. The content of these documents varies greatly depending on the fund. The fourth group consists of international documents that set out general requirements for accounting and reporting. These documents do not contain clear obligatory rules, but only define common rules for building stakeholder relationships.

Table 1. Classification of international documents regulating company activity in the field of corporate responsibility

Main groups of international documents in the field of CSR	Title of international normative documents
Group 1. International documents defining general principles and requirements for company activity in the field of CSR	UN Global Compact
	Global Sullivan Principles
	Organisation for Economic Cooperation and Development Guidelines for Multinational Enterprises
	ECCR / ICCR Principles for Global Corporate Responsibility: Benchmarks
	Caux Round Table Principles for Business
Group 2. International documents containing requirements for environmental management and certification	Social Accountability 8000
	International Organization for Standardization ISO9000, & ISO 14000 & ISO 26000
	Forest Stewardship Council's Principles and Criteria for Forest Management
Group 3. International documents concerning Corporate Social Responsibility Assessment	FTSE4 Good Selection Criteria
	Dow Jones Sustainability Group Index
Group 4. International documents defining common accounting and reporting requirements	AccountAbility 1000 Series
	Global Reporting Initiative Guidelines

Source: [14]

Reputation Institute's research revealed that Microsoft, Google, Walt Disney and BMW are the corporate social responsibility leaders. It should be noted that Rolex took first place in the social responsibility rating in the third quarter in 2019. Rolex has been one of the top 10 most reputable companies in the world for four consecutive years. The brand has a unique ability to connect its products to the company and trigger emotions to its stakeholders by anchoring its values in high-profile personalities. The Lego Group is on the top 10 list of the most reputable companies in the world for the third year in a row. The Danish brand already has a steady and strong presence as it builds a coherent story-line with its values of sustainability, education and societal contributions [5]. The company achieved these results by reducing the carbon footprint, decreasing packaging size and using wind power.

In general, investments in CSR have been increasing in the world. Total investments in CSR in the EU has accounted for 15 million dollars in recent years. Impact investing and Corporate Social Responsibility (CSR) have much in common. Both are founded on a belief that business can be used to affect positive social and environmental change. Both use market mechanisms and harness business expertise, though in different ways. And both are reflections of a global trend for aligning the goals of enterprise and with the needs of society [7]. CSR investment can be

beneficial for staff development and training, local governments, environmental protection, development of science, education and technology, as well as for aligning company activity with global industry standards. At the same time, an institutional support for CSR is a key to rapid spread of CSR practices in Europe. Corporate social responsibility has been assimilated into business practice through joint efforts of governmental bodies, public and scientific organizations, and businesses in EU countries.

There are four types of national corporate social responsibility policies in the EU countries, such as: 1) partnership (Scandinavian model); 2) business in the community (British model), 3) sustainable development and society (model of German-speaking countries and France), 4) Agora (Mediterranean model) (Table 2).

Table 2. Models of corporate social responsibility policy in the EU countries

Models	Characteristics	Countries
Partnership	Partnership is a joint strategy of governments at different levels to address social and employment problems. This model emphasises on transparency of CSR information and business activities, as well as on implementation and imitation of the best CSR practices.	Denmark, Finland, Netherlands, Sweden
Business in the community	A soft intervention policy that encourages business involvement in governmental actions aimed at community and private sector development (through entrepreneurship, volunteer services, staff development, start-ups, investments in depressed cities and rural areas)	Ireland, United Kingdom
Sustainable development and citizenship	It's an improved version of current social agreement emphasizing on sustainable development strategies and corporate citizenship. It aims on supporting sustainable development through regulatory policy and governmental support.	Germany, Austria, Belgium, Luxembourg France
Agora (a public open space used for assemblies)	One of a key element of the agora model is creation of committees and working groups with the participation of all the social actors (multi-stakeholder approach) to develop the national CSR strategy. Although key elements of the agora model are still at an early stage, others – such as Italy – have recently begun to consolidate their CSR public policy.	Italy, Spain, Greece, Portugal

Source: [2]

This typology points at convergence between government policy and real actions for corporate social responsibility development in the European countries, and national corporate social responsibility policies and the actors involved.

Given the significant differences in understanding of corporate social responsibility among contemporary scholars and entrepreneurs in Europe and the United States, driven by historical, cultural and social characteristics, scholars now identify three major models of corporate social responsibility, namely American, Japanese and European. It should be noted that the European model is divided into

corporate social responsibility models of continental Europe, the United Kingdom and the Scandinavian countries.

Comparative analysis of national corporate social responsibility models is shown in Table 3.

Table 3. Comparative analysis of US and European corporate social responsibility models

Differences	American model	European model	Asian (Japanese) model
Features of the environment	Individual approach	Collective approach	
The purpose of the enterprise	Maximizing shareholders' income	Achieving strategic goals with stakeholders' interests in mind	Income is a secondary goal; social unity and respect for each individual worker and society as a whole is a primary goal
Encouraging motives	The personal desire of the manager / owner of the enterprise, guided by their own moral principles	Social requirements of society	
The main participants	Enterprises	Businesses, state authorities, trade unions and professional associations of workers, members of local communities	
Regulatory documents	Internal Code of the enterprise	Legal and regulatory acts, internal codes of companies	
Basic methods	Charity activities	Activities defined in legislative acts	Implementation of internal business support programs for employees

Source: [10]

Thus, it is worth noting that the CSR models in Europe and the USA have a number of differences related to public perception, corporate structure and culture, and legal environment in these countries. This emphasizes the fact that it necessary to use adapted standards in the field of CSR and develop commensurate indicators to measure the sustainable development effectiveness.

In addition, the post-Soviet CSR model should not be ignored. This model based on the legacy of socialist enterprises with socially-oriented infrastructure such as kindergartens, summer camps and boarding houses, own hospitals, houses of culture, etc. that were used by all employees of the enterprise and their families. This infrastructure was not built as a concern for social responsibility, but as Party policy aimed at satisfying all social needs and carrying social costs by an enterprise. That is why under the post-Soviet model, the corporate social responsibility was not considered as a specific type of activity, but was merely manufacturer' activity.

The conducted research shows the high level of business social responsibility in the European Union countries, the USA and Japan as the result of long-lasting state policy aimed at realizing the entrepreneurs' awareness and their role in the socio-economic development of society. Social responsibility in these countries is seen as a new progressive way of doing business that promotes the socio-economic development of the country, reduces confrontation between social partners and ensures sustainable economic development.

Nowadays, it's difficult to introduce one of the foreign CSR models in Ukraine, but it is also impossible to use the post-Soviet CSR model, because the social infrastructure of enterprises has been lost [8]. Ukraine has specific economy, mentality of society, different business opportunities and material resources. It means we have to develop own CSR model taking into account mistakes and achievements of foreign colleagues.

Promoting CSR in the EU countries shows that a spread of socially responsible behaviour among enterprises depends to a large extent on effective state regulation. One of the most important state regulation instruments is clearly enshrined incentives in the legislation. The authorities perceive the business social responsibility quite one-sidedly as the "social partnership", "social dialogue", or "charity". As a result, there are a lack of public authorities support for social programs and projects of enterprises, the absence of an open dialogue on the appropriate incentives for business that seek at implementing the social responsibility principles.

The study showed that Ukraine does not take into account a number of CSR practices that have became common in the Europe such as cultural specificity of the consumer, social product labelling, consumer feedback, providing information on the product quality and safety, product life-cycle assessment, environmental monitoring, and avoidance of genetically modified products.

In order to spread the CSR practices in Ukraine, the Centre for Corporate Social Responsibility Development was established, whose members are well-known both Ukrainian companies and foreign companies operating at the Ukrainian market. The objective of the organization is to implement social responsibility (sustainability) projects for systemic and qualitative changes in Ukraine. The organization has 4 priority areas: CSR in conflict times, business-universities-schools cooperation, sustainability of municipalities and state-owned companies, green initiatives CSR. The Centre conducts a study on the CSR development in Ukraine tracking the success of Ukrainian companies in the field of CSR, as well as CSR problems and obstacles for several years [6].

Ukrainian business defines corporate social responsibility in its own way. Majority of the respondents (76%) agreed that social responsibility deals with improving working conditions to promote worker safety. One third of the respondents agreed that social responsibility deals with investments in regional development and consumer protection and support. A quarter of respondents reported that assistance to ATO soldiers and ATO area residents, charitable assistance and environmental protection refer to CSR. Minority of respondents think that social responsibility deals with the fight against corruption and assistance to displaced people.

The most common areas of development for CSR activities in Ukraine according to paper are:

– staff development and training policy, and working conditions policy (76% of survey respondents);

– charity (51% of survey respondents); although CSR is no longer associated with charity, but it deals with investments in the development of local community or region;

– assistance to ATO soldiers and ATO area residents (30% of survey respondents).

According to the paper [6], the main driver for the CSR policy implementation is moral consideration (Figure 2).

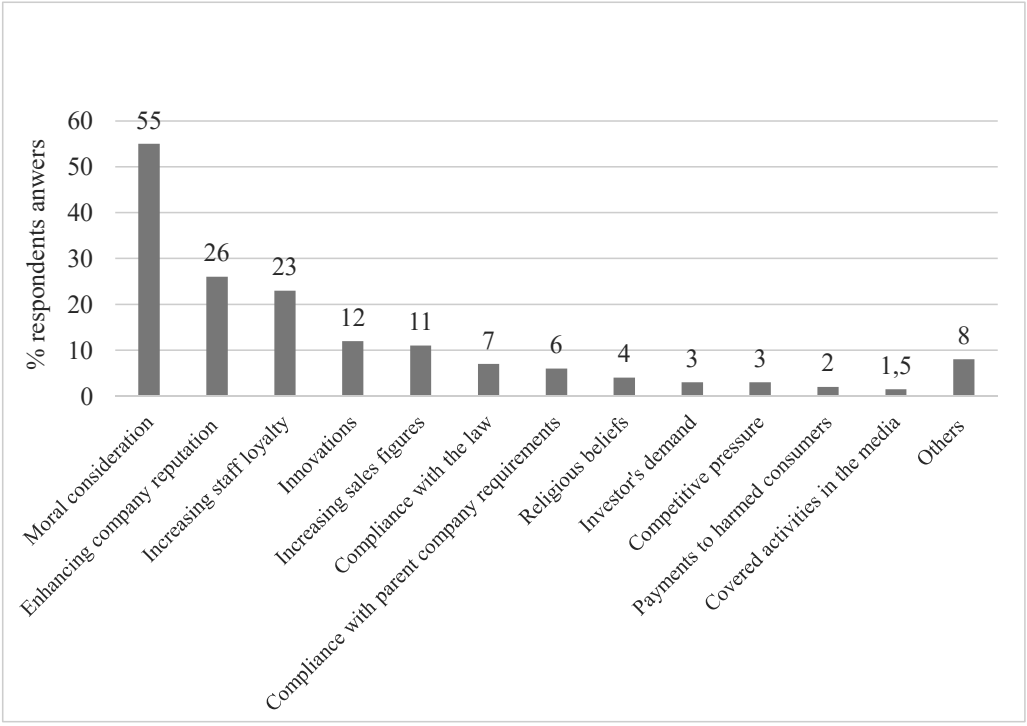

Figure 2. Survey results: "The main reasons why companies engage in CSR"

There are the most widespread practices of CSR implementation at the Ukrainian companies according to [6] are:

– labour relations: salary raise, payment of declared salary and bonuses. Almost half of the companies provide their employees with an opportunity to work under flexible working schedules and implement professional development programs;

– anti-corruption practices: more than one third of the companies have not bribed to solve their business problems, and the same number of companies are ready to allocate half of their profit to fight against corruption;

– environmental responsibility: introduction of energy saving technologies and waste management and recycling programs, one third of the interviewed companies have not implemented any environmental protection measures;

– consumer relations: support to product quality, providing reliable information and commercial, staff trainings on customer service, elaborated system of complaints management and "hotline" (Contact Center) for consumers;

– development of regions: allocation of funds for charity and assistance of land improvement.

The main barriers for the CSR policy implementation are lack of financial resources, political instability in the country, imperfection of legal framework, and tax pressure (Figure 3).

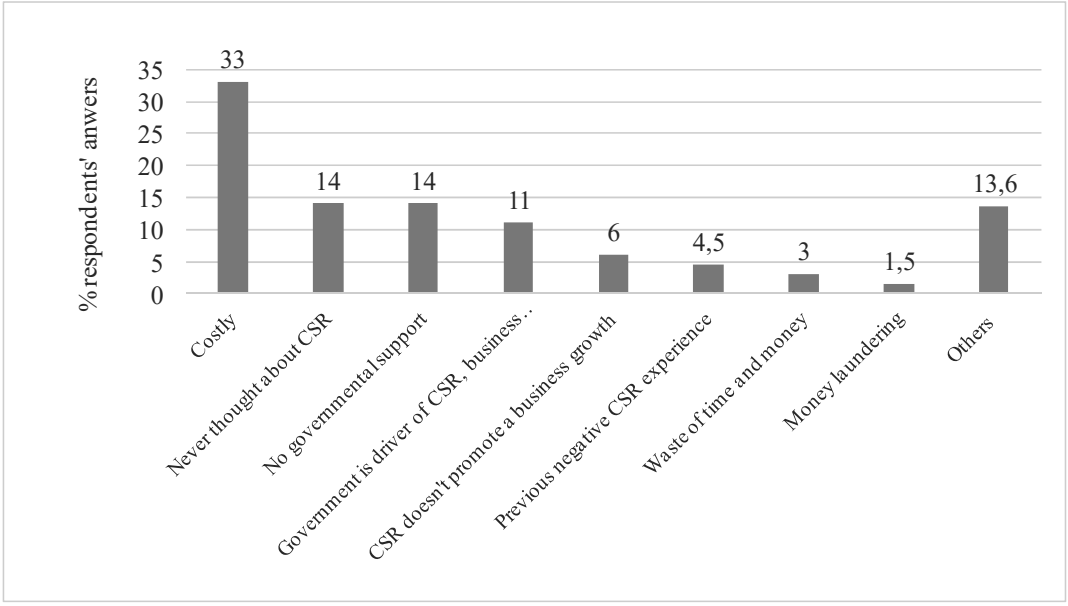

Figure 3. Survey results: "The main reasons why social responsibility programs are not topical for a business"

Global Corporate Social Responsibility Report shows that 70% of buyers in Ukraine are willing to pay more for the products of those companies that are responsible to society and the environment. Environmental branding concerns the purchase decision of 84% of Ukrainians (and 85% of the global consumers), while brand social initiatives are important for 68% of Ukrainians (and 80% of the global consumers). Therefore, one of the ways that a company can gain a competitive advantage is through corporate social responsibility (CSR), which is a term used to describe the initiatives a company takes to self-regulate its operations and take responsibility for its impact on environment and society [6]. At the same time, the corporate social responsibility attracts both customers and employees. Thus,

according to a Cone Communications survey, 64% of respondents will not work for a company unless it has a strong corporate social responsibility program.

Therefore, in order to develop measures to increase the level of the social responsibility at the domestic enterprises, it is worth to analyze and examine the experience of those states which have made a significant progress in harmonizing the interests of society, owners of the capital and the state by promoting their model of business behaviour.

For those companies that have a good track record for responsible behaviour in the developed countries, the social responsibility is one of the main factors of good business reputation, which enhances investment attractiveness of the company, promotes recruitment and retention of highly qualified employees, increases productivity, supports brand awareness, and creates positive opinion about company's products.

CONCLUSION

In our opinion, a number of measures aimed at developing of the CSR in Ukraine should be implemented. They include:

– promoting CSR role, its usefulness and necessity for society;

– improving regulatory framework that stimulates business to the social responsibility;

– conducting permanent anti-corruption policy;

– improving cooperation through social dialogue;

– reducing business pressure and implementing social responsibility policy;

– supporting business to implement the corporate social responsibility;

– incorporating social responsibility strategy into business development strategy;

– providing various tax benefits and implementing moral incentive measures for entrepreneurs who have invested into socially significant projects;

– introducing compulsory social reporting at the national and local levels;

– and promoting and implementing the international standards and corporate social responsibility management in Ukraine.

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COMPETITIVE ADVANTAGES IN THE IMPLEMENTATION OF THE CORPORATE SOCIAL RESPONSIBILITY STRATEGY

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Abstract
Effective management of social responsibility is manifested in the formation of production, economic and social goals of the organization, promoting their achievement, ensuring economic growth. The mechanism of social responsibility management should ensure formation of goals of regulating the activities of firms and the development of tools for achieving them.
The task of managing social responsibility is to ensure that in the short and long term market periods of production the effective performance of the necessary functions of all business partners, which means retaining a business team whose activities are aimed at solving current and strategic decisions in their dynamics. Advantages of enterprises from the implementation of social-corporate projects are divided into economic, social-organizational, social.
Competitive advantages for an enterprise that implements the principles of sustainable development in its day-to-day activities can be achieved through the following components: proper definition of priorities and directions of development, taking into account their social orientation; timely diagnosis of problems and implementation of measures to solve them; reduction of production costs by implementing modern logistics achievements, increasing resource efficiency and reducing waste; using of the benefits provided by law for the socially responsible enterprises; receiving the benefits during interaction with other manufacturing and financial institutions; reducing the risk of loss or loss of profit as a result of penalties or prohibition of activity; increase of investment attractiveness of the enterprise; increase of market segment due to awareness and desire of consumers to use the products of the enterprise; optimization of insurance costs.
Today's business environment requires business entities to be socially responsible behavior, which is a must-have for successful entrepreneurship, and adherence to corporate social responsibility concepts as one of the most effective tools for securing competitive advantage. Therefore, an important competitive advantage of domestic enterprises is the implementation of an effective corporate social responsibility strategy that will meet the social needs of different social groups and the state as a whole
The development and implementation of a corporate social responsibility strategy will allow to the management of the enterprise to improve relationships with staff, consumers, suppliers, public authorities, public organizations and other stakeholders as a whole, which will eventually increase the overall efficiency of the enterprise and give the competitive advantage.

Keywords: competitive advantages, corporate social responsibility, strategy.

INTRODUCTION

In modern conditions, corporate social responsibility is increasingly viewed not only as a bona fide, supported by society doing business, but also as a way to create value added and increase economic efficiency. The task of any domestic enterprise is to realize its potential through the adoption and implementation of the corporate social responsibility strategy. Social programs and projects do not have a direct focus on profit, but their competent implementation leads to additional benefits for the

enterprise. Good reputation and responsibility of the business, in turn, ensures the preservation of the customer base, increases the pace and time of growth of the enterprise and its profitability. Customer loyalty is achieved through the positive image of the enterprise and its products among consumers. By improving the quality of goods and providing services, disclosure of information, its transparency and accessibility, meeting the requirements in the field of social responsibility facilitates the access of national producers to investors' capital. The implementation of the CSR strategy also has an impact on the development and retention of intellectual capital. And this is not the full list of benefits for businesses from doing socially responsible business.

RESEARCH RESULTS AND DISCUSSION

Effective management of social responsibility is manifested in the formation of production, economic and social goals of the organization, promoting their achievement, ensuring economic growth. The mechanism of social responsibility management should ensure that the goals of regulating the firms' activities are formulated and the means and tools for achieving them are developed. The modern concept of social responsibility management assumes that it extends to all phases of the reproduction process, taking into account that business is responsible not only for the developed social programs, but also for the effective application of the principles of social responsibility in front of business partners.

The task of social responsibility management is to ensure that in the short and long term periods of production the effective performance of the necessary functions of all business partners, which means retaining a business team whose activities are aimed at solving current and strategic decisions in their dynamics. The role of the process of social responsibility management, as a technology of management activity, is to ensure the effective implementation of the set goals of the firm's regulation. We have divided the advantages of enterprises from the implementation of social-corporate projects into economic, social-organizational and social ones.

When implementing a social strategy, the company raises the question of the balance of two indicators - efficiency for society: social effect (social value added - the contribution of the enterprise in solving the social problem) and benefits for the enterprise: impact on the main activity (business value added - economic effect (income) from the sale strategy). However, when referring to the economic benefits of CSR for the enterprise, many authors point out that such benefits are most pronounced in areas such as finance, marketing and personnel management. In addition, valuable CSR measures in the area of risk management, that is reducing operational risks, increasing capitalization, increasing financial performance, improving productivity, developing innovations that contribute to market expansion, and so on.

There are three main indicators for business benefit assessments business benefit assessments related to their participation in social programs:

1) return on investment aimed at social programs (return on investment);

2) the effectiveness of charitable assistance and other social strategies compared to the effectiveness of advertising, sales promotion, etc. (efficiency measurement);

3) process of implementation of social strategies (process strategy)

In that in most cases it is not possible to give a value description of the last two indicators, the methods of expert evaluation are used for their quantitative interpretation.

The economic benefits of enterprises from the implementation of social-corporate projects are reflected in the following:

1) enterprises focused on socially responsible behavior usually are leaders in their industry and achieve greater success than those that pursue purely financial goals;

2) the value of shares of companies with high levels of staff involvement in voluntary programs is on average growing faster than the industry average;

3) the net profit of companies with a low level of corporate volunteering and the profitability of their operating profit is lower than that of companies with a high level of corporate volunteering;

4) more than half of consumers worldwide prefer to use the services of businesses that have a good reputation in CSR field;

5) 75% of investors recognize that aspects of CSR activity are important when making investment decisions;

6) increase in sales and market share happens as a result of mass support by the population of those enterprises that are constantly publicly following CSR;

7) optimization of operational processes and reduction of production costs as a certain benefit from CSR implementation.

Concerning regard to social and organizational advantages, socially responsible behavior of enterprises arises in response to certain expectations of society and is a reflection of a certain business and social position. Thus, socially responsible behavior is an important indicator of business maturity.

The right organization, socio-corporate strategies allow businesses to strengthen their corporate spirit, reduce staff turnover, and establish new contacts. According to international practice, through participation of employees in volunteer programs, labor productivity is increased by 20-28%.

Social programs and corporate volunteering are an important component of professional development and training through the provision of real life practice that is not part of any traditional curriculum. In new conditions, employees think more creatively and actively seek solutions to their tasks, which in turn develops innovative approaches to finding solutions, communication and organizational skills, including time management, stress and prioritization, understanding the values of teamwork , raising self-esteem.

This kind of social-corporate activity of the employees of the enterprise as transfer of business skills to local non-profit organizations promotes more effective social investments of the enterprise.

The most difficult issue for businesses is attracting and retaining skilled workers. More and more young professionals are choosing a socially responsible employer. This approach is closely linked to the level of remuneration, fullness of the social package, career opportunities and so on.

And last in our list are social benefits. Employees, involved in social projects, influence on market formation and customer loyalty. 86.9% of the 3,000 respondents graduates from China, the United Kingdom, the United States and other countries surveyed prefer to work in a company that is socially responsible.

Practice of socially responsible behavior can help to promote the enterprise, strength its image, gain competitive advantage, improve internal organizational relations, strengthen relations with local and regional authorities, access to new markets, engage more with target audiences, attract new employees and partners. In the Millennium Poll consumer survey of 23 countries around the world, 25,000 respondents were asked: "What is most influential in shaping your thoughts on any business?" As a result, 56% of the respondents considered the most important social responsibility of the company; 40% - quality of products and brand; 34% - financial indicators.

Doing socially responsible business leads to an increase in the number of consumers through social and environmental labeling, distribution of information on social and environmental programs, compliance with social norms and other CSR tools.

Corporate volunteering programs allow to the company to engage in an active dialogue with stakeholders and in a joint effort to identify local community needs, corporate objectives. Such increased engagement often leads to the formation of partnerships, where enterprise opportunities serve as a tool for additional resources and sustainability of socially important corporate programs in the long run.

Speaking about the benefits for business, it is also worth mentioning that the implementation of the CSR strategy also has certain benefits for society and the state as a whole (Figure 1).

Thus, the evolution of CSR strategies is shaping new approaches to its modern concept, but in the age of globalization, the need to apply CSR becomes vital for businesses and is characterized as "… the ability of businesses to meet the economic, legal and ethical expectations of society" [2].

Modern business environment requires business entities to be socially responsible behavior, which is a must-have element for successful entrepreneurship, and adherence to corporate social responsibility concepts as one of the most effective tools for securing competitive advantage. Therefore, an important competitive advantage of domestic enterprises is the implementation of an effective corporate social responsibility strategy that will meet the social needs of different social groups and the state as a whole. As the success and achievement of positive results of functioning of domestic enterprises in a market environment is increasingly determined not only by economic factors but also by social ones.

The competitiveness of domestic enterprises as entrepreneurial structures can be considered as a system of interdependent competitive advantages, which allows understanding competitiveness as the effectiveness of managing competitive advantages. Developed competition in many sectors of the economy is creating new requirements for all market counterparties. This situation requires the stability of enterprises, which is possible on the basis of the constant improvement of the quality of goods and services offered by the enterprises of industry, as well as the effective

management of their activities aimed at achieving their goals by increasing the level of competitiveness.

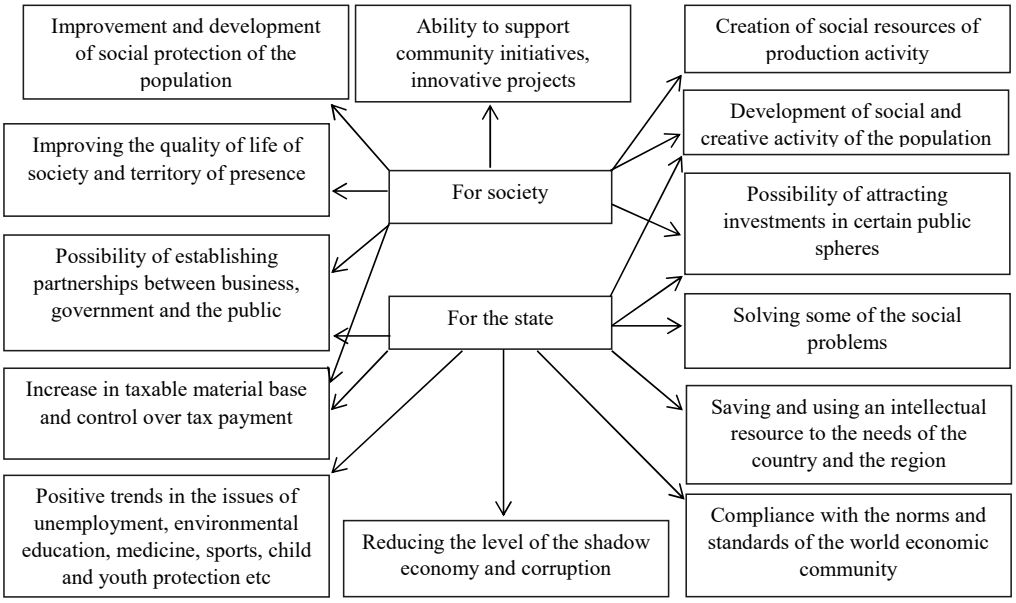

Figure 1. Benefits of implementing the CSR for society and the state

Competitive advantages for an enterprise that implements the principles of sustainable development in its day-to-day activities can be achieved through the following components: proper definition of priorities and directions of development, taking into account their social orientation; timely diagnosis of problems and implementation of measures to solve them; reduction of production costs by implementing modern logistics achievements, increasing resource efficiency and reducing waste; the use of the benefits provided by law for socially responsible enterprises; gaining the benefits of interacting with other manufacturing and financial institutions; reducing the risk of loss or loss of profit as a result of penalties or prohibition of activity; increase of investment attractiveness of the enterprise; increase of market segment due to awareness and desire of consumers to use the products of the enterprise; optimization of insurance costs.

Considering the Europe 2020 strategy [6], it is found that the concept of "corporate social responsibility" is equated with the concept of "social responsibility of business". The essence of this definition is interpreted as voluntary obligations of business entities that go beyond the current legal norms to be responsible for the results of their activities not only in the economic, but also in the social and environmental spheres. Thus, the responsibility of business structures extends to a wide range of stakeholders – owners, employees, business partners, public authorities, local people and society at large. It should be noted that corporate social responsibility of the enterprise is based on a set of general scientific and special

principles, namely: initial theoretical provisions, the most important requirements that fulfill the role of rules, the observance of which ensures the effective development of the enterprise. Under the principles, we understand the basic rules that underlie the process of forming, studying, analyzing and evaluating the effectiveness of the implementation of corporate social responsibility components with the enterprise strategy.

Separate the basic principles and strategic goals of CSR, which are integrated into the overall business strategy of the enterprise under conditions of development of integration processes (Table 1).

Table 1. Principles and goals of corporate social responsibility strategy formation under conditions of development of integration processes

Basic CSR principles	Strategic CSR Objectives
- Responsibility for results of activity. - Volunteering. - Taking into account the needs and expectations of stakeholders. - Integration into long-term enterprise development strategy. - Compliance with legal and ethical standards adopted by society at both national and international levels. - Transparency of activities. - Accountability. - Consistency with the goals of sustainable development of society	- Production of quality products and services for consumers. - Investments in staff development and human potential. - Fulfillment of the requirements of the current legislation (tax, environmental, labor). - Building mutually beneficial relationships with all stakeholders. - The concept of doing business that is focused on increasing national competitiveness. - Consideration of public expectations and generally accepted ethical standards of doing business. - Formation of civil society through partnership programs and community development projects

Source: compiled by the authors on the basis of [6; 7]

According to the list of CSR goals and principles, the goal of a social responsibility strategy is to address a range of socially significant issues by creating the preconditions for a decent level of social security and promoting social cohesion. Therefore, the formation and implementation of an effective CSR strategy of an enterprise involves the delimitation of the external and internal spheres of social responsibility programs.

From a practical point of view, the implementation of CSR can be implemented only through a specific practice of business activities, which will be aimed at minimizing the negative impact of the enterprise and to achieve sustainable development of the enterprise. That is, achieving the "triple result" of sustainable development, according to the theory of J. Elkington 3P (People-Planet-Profit), occurs in three quite different directions – social, environmental and economic performance.

At the present stage of development of economic relations, sustainable development of the enterprise is a new management philosophy according to which any management decision is made taking into account economic, social and environmental effects. Therefore, corporate social responsibility is one of the key management trends of the new millennium and characterizes entrepreneurial activity

as one that meets stakeholders' expectations of economic, legal, ethical, environmental and social indicators, which significantly influences the business strategy of the enterprise.

The positive result from the implementation of the CSR strategy is the creation of long-term sustainable competitive advantages of the enterprise, which is based on a special type of intangible assets – the so-called relationship assets, which are a factor in increasing the organizational wealth of the enterprise. Under relationship assets mean intangible resources that are formed as a result of interaction and sharing of specific assets, such as: information, knowledge, brands. The systematic implementation of CSR by the enterprise makes it possible to increase its income by increasing social capital, while at the same time influencing the strengthening of social capital of the society as a whole, facilitating the exchange of knowledge and information, which will create favorable conditions for strengthening social cohesion.

The CSR strategy "is a corporate document that defines the values and standards by which doing an operating activities of the enterprise", and the implementation of the CSR strategy involves the implementation of a long-term program of action aimed at one of the most important tasks for any enterprise – increasing its attractiveness for investors , public authorities and employees [3]. CSR is not only an internal organizational development strategy, but, according to the Forum of Socially Responsible Business of Ukraine, it can be considered as "an active social position of the enterprise, which consists in harmonious coexistence, interaction and constant dialogue with the society and manifests itself in the participation of the enterprise in solving the most acute problems of society and community" [4]. A broader understanding of CSR "as an enterprise strategy based on the principles of corporate responsibility for the impact of its decisions and activities on society and the environment, implemented through transparent and ethical behavior that respects stakeholder expectations, not contrary to the law and international standards of behavior" [5].

In general, the CSR strategy is a necessary factor in the formation of the corporate concept because it can be part of the overall enterprise development strategy - part of the business strategy or, in fact, the enterprise CSR implementation strategy.

The views of scientists on determining the stages of CSR strategy formation of an enterprise are divided. In one case, there are five steps to formulating a social responsibility strategy: defining a mission and vision for social responsibility; the formation of a system of goals; assessment of the influence of environmental factors; assessment of the level of social responsibility; analysis of alternatives and choice of strategies. Forming the mission and goals, it is proposed to study the needs of social responsibility entities and align with the goals of the enterprise development strategy. Choosing a strategy will allow to ensure a high level of socially responsible business in the following areas: development of the concept of personnel training, strengthening of social protection of workers, public and communities health, development of local infrastructure, business ethics, environmental and environmental activities, meeting the needs of consumers.

The development and implementation of a CSR strategy may include such steps as: carrying out analytical work (external and internal environments of the

enterprise); identifying strategic development alternatives (formulating CSR development scenarios at the enterprise); evaluation and selection of the optimal CSR development strategy; documenting the chosen strategy and assigning responsible persons; implementation of the measures taken; summarizing the intermediate results of the strategy implementation and evaluation of the results of implementation of the targeted programs, their finalization [1]. This algorithm assumes the basic tasks of CSR debugging and takes into account the main stages of development and implementation of any enterprise strategy.

In general, the development of CSR strategy at each stage requires coordination with other elements of the strategic set of the enterprise, namely: development strategy, competitive strategy, marketing, financial, production strategies, etc. In the process of forming a corporate strategy, it is necessary to identify and develop measures that would improve the competitiveness of Ukrainian enterprises. This should take into account the main areas in which the relationship between strategic management and corporate social responsibility should be improved, as well as the problematic aspects of CSR management in the enterprise should be determine. We have attempted to identify each of these components of the CSR strategy, the detailed characteristics of which are presented in Table. 2.

Therefore, in order to increase competitiveness, domestic enterprises when forming a corporate strategy should:

– incorporate CSR strategic measures into the corporate development strategy by establishing reporting standards in its corporate social responsibility program in the future, taking into account the principles of social responsibility;

– to implement a policy of responsible attitude of the organization to its employees, to support and develop the position of active citizenship, to train the staff of social responsibility at the level with other business goals, to introduce the competence "corporate social responsibility of the employee" in the personnel evaluation system;

– initiate dialogue with impact groups as a tool to obtain information on optimizing of social programs and minimizing enterprise risk. To foster social responsibility across all groups of influence from both business and non-business stakeholders;

– set up specialized units (for large in size and scale enterprises) that would be responsible for the CSR activity, or, if this is not possible (it is about small business), enter a separate position (functions) solely responsible for for administering this activity.

At the same time it is necessary to dwell in more detail on the problematic aspects in managing the CSR strategy at the enterprise, namely:

– lack of setting performance targets for managers related to social responsibility, which is a key point in the transition from concept to proactive action;

– lack of measurement of the commercial effect created by CSR initiatives. This is largely due to the difficulty of measuring the impact of CSR policies on such indicators as improving reputation, enhancing the professional level of employees and sales, so today there is no standardized methodology;

– the difficulty of measuring the social significance of CSR initiatives. Little attention is paid to assessing the real impact of donations or assistance in emergencies.

Table 2. Characteristics of measures, directions and problematic aspects in managing the corporate social responsibility strategy

Measures of increase of competitiveness of the enterprise	Areas of interconnection of strategic management and CSR	Problematic aspects of CSR strategy management
Incorporate CSR strategic measures into corporate development strategy	Developing cost-effective links between business and local government	Lack of performance targeting, related to social responsibility
Introduce a policy of responsible attitude of the organization to its employees	Formation of a clear idea of the leaders of industrial enterprises on the content of social responsibility as a social phenomenon	Lack of measurement of the commercial impact of CSR initiatives
Initiate dialogue with impact groups	Improving the quality of business culture at every domestic enterprise	The difficulty of measuring the social significance of CSR initiatives
Establish specialized CSR units	Establishing a close relationship between enterprises with nonprofits organizations	Undeveloped practice of providing detailed CSR reports and involving a third party to verify this information
To implement the principles of corporate social responsibility in the activity of public authorities and local self-government	Increasing the level of information openness, developing new channels of communication with various social groups	Unpreparedness to disclose information about the social and environmental impact of products on the environment
Increase enterprise budgets for CSR activities	Development of special documents containing the main directions of development of social relations within the enterprise	Tracking consumer preferences for their products, but insufficient attention to human rights, environmental and business ethics

Accurate measurements are needed, as the vast majority of stakeholders hold the positive importance of CSR activities and require greater transparency and accountability of enterprise activities;

– an underdeveloped practice of providing detailed CSR reports and involving a third party to verify this information, without which it is impossible to build trusting relationships between stakeholders. Basically, regular CSR reporting is provided by large enterprises whose stock is marketed, while small businesses and non-profit organizations practically do not practice reporting;

– tracking consumer preferences for their products, but lacking in attention to human rights, environmental and business ethics issues. Thus, businesses are missing out on serious opportunities to position themselves in the market, because more and more people are changing their tastes, habits and views on these issues.

CONCLUSION

Despite the complex challenges in managing the CSR strategy, understanding the strategic nature of corporate social responsibility enables the enterprise not only to rationally meet existing expectations in society, but also to actively build an appropriate systemic response to those expectations. Therefore, managers and business owners are tasked not with the accurate implementation of CSR elements in strategic management practices, but with the development of integrated CSR strategies, which is an integral part of the enterprise strategic management system. At the heart of the strategic approach to CSR management lies strategic analysis, which allows by tracking changes in

environmental elements, suggests that it will change and make relevant decisions in accordance with the changes.

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CONCEPTUAL FRAMEWORK OF DISABLED PEOPLE'S SOCIAL INCLUSION IN THE CONTEXT OF CREATING A HARMONIOUSLY DEVELOPED SOCIETY

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Abstract
The essence of the concept "social inclusion" is investigated and defined. Its content covers various aspects of life, including economic, social, political and psychological. It has been proved that today social inclusion is more than just education, it is a type of public environment organization that can be provided both in education, in a workplace, in cultural consumption, and at a crossroad. But inclusive education is the most important channel for introducing the practices and values of social inclusion, because a person enters the educational system almost immediately after birth and is there until graduation. Social inclusion is considered from the standpoint of economic, sociological and philosophical approaches. The process of social inclusion should take place simultaneously in all spheres of society; otherwise it will not be possible to ensure equal rights, equal opportunities and non-discrimination.

Keywords: social inclusion, society, disabled people, social justice, social policy, economic approach.

INTRODUCTION

Modern society is characterized by enhancing of humanistic tendencies, the desire to achieve equality of all citizens' categories. An important aspect of creating a harmoniously developed society is the full inclusion into the social life of vulnerable population groups, who act as subjects unable to enter into the social ties and relationships that are important for their socialization in the conditions formed in society.

The social inclusion concept emerged in Western European countries in response to the growing social injustice resulting from new conditions in the labour market and the inadequacy of the existing social protection system, which could not meet the needs of different population strata. The mentioned concept is of relatively recent origin and has been studied for the last three decades. In view of the above-mentioned social inclusion can be defined as a desirable situation in which all members of society have sufficient opportunities and resources for sovereign and full participation in all spheres of public life, and in terms of providing social security they are within the limits considered normal for a certain society.

The intentions to build a social state in Ukraine have determined new approaches to the social protection of disabled people, which implies the holistic system creation of social security, adherence to international norms of law, which are respected by highly developed civilized countries. Changing of moral stereotypes has led to the realization that it is the society that should adapt to the disabled people's needs, and not vice versa. This is how social inclusion emerged – as a result of society's transition to social policy based on the social model of disability. In fact, it is a process of changes in political, economic, social spheres, aimed at promoting social equality, by providing such conditions under which all children and adults can

participate in social life as equal members, who are respected and who contribute to social development. Social inclusion is important for the establishment of a democratic state and the development of social standards. Understanding and recognizing that people differ in their social, economic and cultural background; that community leaders are responsible for creating unity and harmony in the social environment; understanding the dynamics of the relationship between minority and majority are the main components of this standard.

PREVIOUS RELATED RESEARCH

The definition of the concept and essence of social inclusion is most widely represented in the researches of foreign scientists, based on the theories of stratification and social exclusion of K. Marks and M. Weber, the social structuration of E. Giddens and the concept of social changes of P. Shtompka. Foreign scientists such as R. Atkinson, R. Dimenstein, G. Endruweit, R. Levitas, E. Marlier, L. Wilson, E. Felpsta devoted their studies to define the concept of social inclusion. Among national scientists who investigate the nature and problems of social inclusion, one can name O. Davydiuk, H. Likhonosova, O. Makarova, S. Oksamytna, O. Rievnivtseva, N. Tolstykh, V. Khmelko.

Significant contribution to the development of theoretical and practical foundations of disabled people's social adaptation has been made by such well-known Western and national scientists as N. Avramenko, S. Bohdanova, N. Boretska, I. Bezsonova, N. Hauzner, N. Dementieva, K. Myched, S. Leonova, A. Ipatova, T. Voitchak, A. Nahorna, M. Pozdniakova, O. Prodius, N. Tarasova, A. Shevtsov, L. Shumna.

The theoretical and methodological foundations of integration of people with special needs in the context of the recovery problem of labour potential have been investigated in the studies of O. Andrieieva, Yu. Blynkova, S. Vasin, O. Kolesnykova, A. Konovalov, N. Klushyn, T. Malieiev, O. Malyshev, A. Makarian, D. Nekypelov, D. Riazanov, V. Safonov, I. Syrnikov, V. Tkachenko, Yu. Khaustov, S. Rykka.

Despite the numerous ground works and achievements of national and foreign scholars, the problem of improving the effectiveness of social inclusion mechanisms as an actionable and effective means of eliminating social exclusion of disabled people remains insufficiently studied.

Formulation the aims of the article. Research and generalization of conceptual approaches are dedicated to define the concept and essence of social inclusion, form directions for eliminating social exclusion of disabled people in the context of creating a harmoniously developed society.

RESEARCH RESULTS AND DISCUSSION

The emergence of the concept of "social inclusion" is connected with the most serious problem solving of modern times – the rejection of an increasing number of people from full participation in public life, so in scientific publications and socio-political discourse there is a complete subordination of the conceptualization of social exclusion. The social inclusion concept is inextricably connected with the theory of

social exclusion, which was formed in the early 70's of the XX century in France. The condition for a new theory creation was the transition to a post-industrial society, which contributed to the development of new forms of social stratification. The formation of social exclusion theory is an attempt to explain was an attempt to explain the problems of poverty and marginalization by Western European scholars. Later, the theory of social exclusion covered broader issues and was regarded as reflecting the gap between social and symbolic ties between individuals and society and the inability of the state to establish solidarity. The author of such approach is Hilary Silver [13, p. 538], who believes that solidarity is a key component in understanding the processes of social exclusion and securing social inclusion. It is such a "paradigm" of social exclusion that became most widespread in the 1980s in Europe, when the concept of social exclusion/inclusion in response to the crisis of the welfare state and the fear of disintegration of society caused by socio-economic problems began to emerge directly.

Subsequently, in the mid-1990s, it was formed a different view of social exclusion: unlike class stratification, which involves dividing people into vertical layers, exclusion reflects horizontal differentiation into "insiders" and "outsiders" [1, p. 158]. Such approach becomes as the basis for the concept of social inclusion, which replaced the concept of social protection in the EU. The EU countries, which had previously tried to fight poverty, switched to overcoming social exclusion, and in mid-1990s and early 2000 there was a transition from the state of "passive social protection", which contributed to the dependence and lack of initiatives, to the state of "active social protection" or social attraction, which gives an opportunity and forms personal responsibility [6, p. 35]. At the time when the first serious theoretical attempts to formulate comprehensive definitions of the terms "social inclusion" and "social exclusion" began to emerge, to identify possible consequences of social exclusion, to identify a set of key its indicator, and to develop optimal ways of overcoming this condition.

In many developed countries, social inclusion is a common practice aimed at solving many social problems, including income inequality, inequalities in the health care, education sector, housing difficulties etc. Accordingly, there are different interpretations to determine the essence of social inclusion from the standpoint of economic, sociological and philosophical approaches. Due to the economic approach, social involvement is a way of removing barriers (poverty and economic inequality) in the way to participation and access to resources and opportunities. According to the sociological approach, the phenomenon under investigation is a process aimed at overcoming restrictions on generally recognized rights and discrimination from institutions of integration. The philosophical approach considers social involvement as an opportunity to return a social subject to active social activity.

The analysis of numerous publications and studies shows that the essence of the concept of "social inclusion" is significant and its content covers various aspects of life, including economic, social, political and psychological. Despite certain differences in interpretations, there is a certain unity of them: firstly, social inclusion is defined as a phenomenon opposite to social exclusion, and secondly, these interpretations imply a common goal – the fight against social exclusion (Table 1).

Table 1. Definition of the term “social inclusion”

Authors	Definition
Social inclusion in the United States	We support initiatives and strategies that result in, for example, more equal income, better employment opportunities, improved skills, health, and better housing quality. Social inclusion allows us to focus on research and strategic solutions that take into account the fact that simply getting a job may not be enough to ensure full participation in the economic and social life of people’s community emerging from difficult situations where they have found themselves
State Department of Health, Victoria (Australia)	The social inclusion is based on the following values: everyone is ready, none of us need to be “tested” or tested to determine whether we meet a set of criteria and decide whether we can be “involved” or whether we should be “removed”, everyone can learn. As rational beings, we all grow, change, and make mistakes, but we all are able to learn. Everyone needs support. Sometimes some of us need more support than others. Everyone can communicate. The fact that someone does not use words does not mean that he has nothing to say. Everyone can make a contribution. We must recognize, support and evaluate the contributions of each persofantasize about the world where everyone is like us – our differences are the most important recovery resource
National Assembly of Disabled People of Ukraine	Social inclusion is a policy and process that ensure full participation of all members of society in all spheres of life
European Union	Social inclusion as a process that provides those at risk of poverty and social exclusion with the opportunities and resources needed to fully participate in economic, social and cultural life, to achieve standards of living and well-being that meet normal standards in the society where they live.
British economists A. Atkinson and E. Marlier	Social inclusion as a process directed by society to fight poverty and social exclusion
By the definition of the European Commission	Social inclusion is a process that provides those at risk of poverty and social exclusion with the opportunities and resources needed to participate fully in economic, social and cultural life, to achieve standards of living and welfare that meet normal standards in the society in which they live.
An American economist E. Phelps	Identifies the concept of social inclusion with overcoming the threshold of poverty and understands it as the presence of paid work in the formal economy, gives the earnings necessary to be self-sufficient.
Ukrainian economists N. Ilchenko and R. Zhylenko	Social inclusion can occur, firstly, by increasing the social status of a person or a group of people, provided that the new status will give them greater influence on all aspects of life of the community and society as a whole, secondly, by returning a person or a group of people to a generally recognized social hierarchy.
Nobel Prize winner, a British economist Amartiya Kumar Sen	The social inclusion process is characterized by the presence of social experience, which is used by all groups of people, the equality of conditions for success in life, which are given to each person to achieve the basic level of welfare. In compliance with the social inclusion principles, state strategies in the fields of education, health care, economy, employment, migration, construction, public works, etc. should be developed. But they should be applied in education in priority – first of all because the educational system is a reflection of a society’s position and at the same time an important means of its restructuring

Thus, nowadays, both in scientific and political discourse, an economic approach to determining social inclusion have become particularly widespread. Therefore, the current social inclusion practices in the EU are limited to fighting poverty, social exclusion and unemployment. This is due to the search for ways to eliminate poverty and overcome social exclusion, as well as to build a model for the EU's future development, which would contribute to the achievement of the EU's strategic goal of economic growth, increasing the number of workplaces, greater social cohesion, ensuring the well-being of citizens, increasing the level of human development.

It should be noted that the limits of social inclusion are difficult to define because each country has its own peculiarities in understanding this concept. However, it is widely recognized that social inclusion concerns the interests and rights of all people, including those living in social institutions, and socially inclusive society is where all people feel their value, where the difference and particularity of individuals are respected, and basic needs are met in order to make a decent life possible.

Social inclusion covers a wide range of strategies and resources that are targeted at those groups in an unfavorable environment. The concept of social inclusion is based on the following principles:

- Appreciation, recognition and respect for individuals and the relevant social group. This includes, in particular, the recognizing differences in people's development, spreading the belief that all people are the same in that, despite individual differences, everyone is of value.

- Human development – providing opportunities for learning and development, creative intellectual growth of personality, choice for children and adults to live a meaningful life that deserves support.

- Involvement and participation – availability of support in making decisions that are relevant to each individual in matters of a family and life in society. It means that young people make decisions on their own, can control the services they provide; parents participate in decision-making about the choice of an educational institution and in addressing other issues that affect their children's lives; citizens are involved in the participation and decision-making concerning policies and participation in the political life of society.

– Territorial proximity is the joint use of physical and social space, for example, public places – libraries, theatres, parks etc.

– Material welfare – availability of material resources and, in particular, financial support for social programs.

In our opinion, one of the most developed and successful studies of social inclusion can be considered inclusive education, which is an integral part of social policy. But social inclusion is not limited to education, so it is necessary to change the emphasis on inclusive education and to pay more attention to the problems of the society's inclusive education as a whole. Only inclusive education will allow changing the attitude of society towards people with disabilities, which in turn will allow them to become full members of that society.

It should be noted that taking into account Ukraine's European integration aspirations, it is necessary to develop and implement social policies aimed at social inclusion, according to existing practices in the EU countries. To achieve this, it is necessary to form one's own theoretical base on these issues (taking into account the peculiarities of national policies and the state system) and to develop appropriate practical tools for implementation of the social involvement process. Thus, social involvement is nowadays used both as a scientific term and as a social policy tool reflecting an active approach to social welfare aimed at human development, which involves not just eliminating barriers and risks, but in general changing the social policy concept.

Under the conditions of a multicultural society, attention to different kinds of cultural, ideological, behavioral, symbolic grounds for social exclusion should be even more exhaustive, while at the same time requiring minorities' active participation in realizing the benefits of cultural diversity and, therefore, in enhancing a society's social cohesion of on the basis of principles inclusions. Then social institutions that do not have sufficient own resources to move to social inclusion positions will receive from the agents the necessary nourishment in the form of new initiatives, additional loyalty to innovation, trust, openness, dialogue and active focus on social changes. In our opinion, in order to learn how to see in the social inclusion the common good, the state and the various social institutions need to overcome not only the mental inertia in terms of seeing social policy as the basis of a society based on the integration of its members, but also to become more receptive to new demands in terms of competencies of government employees and social workers, teachers, teachers and staff of preschool institutions, stop to be afraid of open dialogue with citizens and gradually transform the practices of social inclusion into a common norm of the whole society.

CONCLUSION

Summarizing all above-mentioned information, we should note that social inclusion will only be possible if the international standards of barrier-free space, reasonable accommodation and universal design, as defined by the Convention on the Rights of Persons with Disabilities and the Optional Protocol thereto, will be provided at the state level both in everyday life and in infrastructure, education, culture etc. The social inclusion process should take place simultaneously in all spheres of society; otherwise it will not be possible to guarantee equal rights, equal opportunities and non-discrimination. Only under this condition can we achieve both a real process of inclusive education and society's inclusion as a whole. Today, social inclusion is more than just education but it is a type of social environment organization that can be provided in education, in the workplace, in cultural consumption, and at the crossroad. But inclusive education is the most important channel for introducing the practices and values of social inclusion, because one enters the education system almost immediately after birth and is there until graduation. Inclusive education is the basis thanks to which special needs individuals can escape poverty, fully participate in the lives of their local communities and political and social life.

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MANAGEMENT DEFORMATION OF THE PERSONALITY AS A KEY THREAT TO SUCCESSFUL MANAGEMENT

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Abstract
The article raises the issue of the risk of unsuccessful management due to the deformation of the personal development of the manager. The preconditions for professional deformation of the manager are distinguished: constant tension of the nervous system, human intelligence, professional burnout, sense of threatening authority, crises of professional development, chronic shortage of time, high level of personal motivation, excessive personal responsibility, constant occurrence of emergencies, unconstructive relationships with chargers. It has been found out that professional deformation is a set of personal specific changes of a specialist, which are made primarily due to the peculiarities of professional activity and professional role. It is emphasized that professional development is influenced by personal qualities and the character and peculiarities of professional activity of the manager. The constant impact of work on the individual may be accompanied by the development of a process of professional deformation. Signs of deformation of the motivational sphere of the personality of the manager are: the focusing illusion of the motivational sphere only for their own interests, the lack of reflection of public needs in it; consideration of another position only as the means of personal success, which cause the avoidance of responsibility, the adoption of poor management decisions, since one of the most important factors becomes one's own gain; dominance over others, inflated self-esteem, which causes underestimation of the results of work of employees and the formation of an inhibition of own exclusiveness. It is emphasized that regressive development has an impact on all elements of the personal structure of the manager, thus the types of personal regression are described. The effectiveness of the development of the manager's personality is conditioned by their social and psychological support, identification of productive ways of solving the issues of their managerial development (modelling of the stages of development of the manager, systematic evaluation of results of manager's activities and development, psychological diagnosis of individual characteristics and determinants of specific social environment, providing a training system for managers, communicative training of managers, promoting of self-development, consulting on issues of managerial development).

Keywords: professional deformation, regressive development, personality of the manager.

INTRODUCTION

Skilful organization of activity of staff of any organization, enterprise or firm depends on the personality of the manager, namely on his professional competence and orientation, managerial abilities, communicative potential, traits of character and psychophysiological qualities, etc.

Due to the constant tension of the nervous system, human intelligence, chronic shortage of time, high level of personal motivation, personal responsibility, constant emergence of extraordinary situations that the activity of the modern manager is associated with, the neuro-mental health and personal development of the manager is always at risk [1; 2; 3; 4].

The excessive tension on specialist and the impact of negative factors results in professional deformation, which is understood as the set of personal specific changes

of the specialist, which are done primarily due to the peculiarities of professional activity and professional role.

PREVIOUS RELATED RESEARCH

The problem of professional deformation was investigated in the psychology of labour, where occupational deformation is seen as a change in a one's personal qualities under the influence of labour activity (Yu. Strelkov, R. Holt, L. Hough, D. J. Levinson).

It is believed that this phenomenon may develop on the background of nonspecific deformation of the personality, which happens to be its precondition (R. Lanyon, R. Tett). Other researchers have argued that professional deformation can also begin with the transformation of mental functions (J. Cortina, P. Costa, P. Ware). A number of researchers believe that professional deformation is connected with negative changes in the social and psychological structure of personality (E. P. Ilin, D. Day, M. Mount). There are also authors who have shown that this process arises as a result of transformations of the mental characteristics of the individual (I. Levin, J. Stokes).

RESEARCH RESULTS AND DISCUSSION

We are convinced that the professional development of a manager is influenced not only by objective factors, which are the nature and features of professional activity, but also by subjective ones, such as personal qualities, motivation, level of self-awareness, style of communication, stress resistance, etc.

The personal development of the manager can take many forms, as it can not only evolve from the lower forms to the higher (to progress), but stop in its development or degrade (move backward), which will indicate its regression.

Regression is a negative change, that is, the transition from higher forms to lower ones, change to worse, can be temporary, stable or irreversible. The personal regression of the manager is caused by gradual, continuous and irreversible changes, which can be related to age, mental peculiarities as well as peculiarities of management activity, the system environment. These features of management determine the deformation in particular.

Signs of deformation of the motivational sphere of the personality of the manager are: the concentration of the motivational sphere only for their own interests with no reflection of public needs; consideration of another position only as a means of personal success, which gives rise to the avoidance of responsibility, the adoption of poor management decisions, since one of the most important factors becomes one's own gain; dominance over others, inflated self-esteem, which causes underestimation of the results of work of employees and formation of an inhibition of own exclusiveness.

It is believed that one of the determinants of professional development may be processes in society: public relations, which largely determine the orientation of the individual and under certain conditions, can lead to narrowing of their interests. That is, at certain stages of social development, there is a mechanism of inhibition of

human activity, which is the most important for management personnel. It combines the following incentives:

– preservation and development of the achieved in the relations of people as the basis of career growth;

– avoidance of activities that contain the elements of risk, especially risk of breaking informal relations, stereotyping of thinking;

– absolutization of the administrative concept of management.

For example, as it is noted by L. E. Orban-Lembryk [1], at the stage of transformation of the political, socio-economic systems of Ukrainian society (90s of the XX century – beginning of the XXI century), two features of leaders that changed under the influence of social processes were clearly outlined:

1. The inability to take into account the interests of other individuals or organizations in their activities.

2. Orientation to the immediate goals, lack of vision perspective.

The basis of these changes is not career aspirations, but careerism that views job promotion as an end in itself. At the same time, the motivational spheres deformed. This arises when the leader is put before a choice, either to achieve the best results, or to organize his official promotion in the management system.

The regressive development of the manager can be caused by organizational conditions in the institution. On the basis of habits and inertia there is a widespread phenomenon in management practice called "organizational laziness". It is associated with improper scheduling, inability to set priorities, determine major goals, strategic steps, and actions. The likelihood of deformation of personality increases in the absence of stable requirements for activity, feedback, objective assessment of abilities and the behaviour of managers. The deforming influence of the social environment is manifested through the constant attention of the environment, admiration, capturing, fear of subordinates and lack of resistance to leadership. This generates inhibitions of job preferences and the syndrome of permissiveness. Hypertrophy (disproportionality) of the individual, which is a precondition for its deformation, arises as a reaction to certain social influences and gradually acquires its own logic of development. In such circumstances, the activity of the individual is manifested in the creation of an environment that would contribute to the dominance of negative qualities in its personal structure.

Symptoms of the deforming influence of the system environment are low efficiency of leadership style, cultivation of deformed management styles:

– domination of information training in the activity;

– minimal information training (wilful decisions cannot be based on the real state of the management object);

– decreasing of realization of decisions in activity.

The tendency of the personality of the leader to regress, professional deformation is evidenced by the following psychological factors:

– emotional stress that promotes the development of negative personal processes;

– chronic shortage of time;

– high intensity of work;

– lack of necessary freedom in the process of preparation and management decision-making;

– stresses caused by conditions and results of work (too high or low level of responsibility, suppression of initiative, lack of experience, qualifications, opportunities, etc.);

– inadequate support from managers;

– inadequate remuneration for work;

– occurrence and prolonged existence of conflict situations;

– constant and unjustified innovations, changes, relocation.

At the present stage of development of socio-economic processes, the manager is required to respond to changes flexibly, research constantly, learn and update his experience with new knowledge and modern methods of work. There are managerial situations when experienced managers apply the usual ways of working which are no longer effective in modern conditions. In addition, managers with extensive experience often work passively, using their position, delegate most of their authority to their subordinates, thereby limiting their competence, professional development, change the attitude of colleagues, which leads to the emergence of a complex threatening authority.

The regressive development of the leader's personality is driven by protective mechanisms. He can carry out his job role (deformation of activity), avoid inspections of senior management, be cross, to criticize his subordinates without reason, etc. Such protective mechanisms block and distinguish leaders from conflicts and the system environment.

Psychologists argue that regressive development has an impact on all elements of a leader’s personal structure. On this basis O. Mall highlighted types of personal regression:

1. Repetition of progressive development in the reverse order (involves the curtailment of the leaders' integral abilities to information preparation and implementation of management decisions, reducing the clarity in determining priorities under the influence of reduced activity).

2. Decrease in the integral ability to make decisions, associated with the change of attitude to oneself and to work (inflated self-esteem, making unreasonable decisions).

3. Loss of sense of perspective in the development of production (decreases demand, efficiency of interaction of the manager with the social environment).

4. Reduction of emotional stability and change of attitude to people.

Studies show that lowering the level of professional knowledge involved in management activities leads to a decrease in the effectiveness of management communication and vice versa. This feature combines the first three types of regressive leadership development into a group that determines the decline in management effectiveness. The fourth type may not lead to this result. The basis of regressive personal development is the violation of interaction with the environment and the system environment, as well as personal preconditions. The first and fourth types are related to changes in the biologically conditioned subsystem of the

individual. The second and third – are determined by the socially predisposed subsystem of the individual.

All this gives grounds to assert that not only the motivational sphere of the leader, his attitude towards himself, his work, but also all the elements of his personality, his whole structure, are prone to recourse. Self-doubt and peculiarities of an individual managerial concept can also provoke a regression of a leader's personality.

The professional deformation of the manager can be caused by the experience of stress, that is, the emotional state of the person, arising under the influence of strong stimuli and manifested in intense experiences, in response to various extreme influences (stressors) at the physiological, psychological and behavioural levels. Depending on the type of stressor (the factor that causes the state of stress), physiological and psychological stress are distinguished. Physiological stress in a person arises due to excessive physical activity, high and low temperature, painful stimuli, difficulty breathing and so on. Psychological stress is a consequence of factors related to threat, danger, insult, information overload, etc.

There are two types of psychological stress:

– informational type(occurs under information overload, when a person does not cope with the task, does not have time to make decisions at the required pace and with a high degree of responsibility for the consequences);

– emotional type (appears in situations of threats, dangers, insults and more).

G. Selie, studying the effect of stress on the human body, came to the conclusion that it is partly necessary to maintain well-being and that some of its species are useful. Stress is associated with any activity and can only be avoided by one who does nothing [3].

G. Selie considered work as the most effective means of coping with stress. At the same time, he offered techniques that minimize human vulnerability:

– to recognize that excellence is not possible, but remember that in every kind of achievement there is a pinnacle, one should strive for it and be content with it;

– necessity to appreciate the joy of true simplicity of life style;

– in any life situation, you must first consider whether to fight;

– constantly focus on the pleasant and the actions that can improve the situation and condition;

– try to forget about the disgusting, the hopeless and the difficult, because arbitrary distraction is the best way to relieve stress;

– nothing affects a person more than failure;

– nothing encourages more than success;

– even after a devastating defeat, to combat the oppressive thought of failure is best through the memories of past successes;

– intentional recollection is an effective means of restoring faith in oneself necessary for future victories;

– not to put off an unpleasant business if it is necessary for the purpose;

– knowing that in society there will always be leaders and those who lead them: the leaders need only as long as the followers need their help;

– not to forget that there is no ready recipe for success for everyone: people are different and their problems are too.

To maintain working capacity and vitality for every six-hour cycle (except for the time taken for sleep) manager should use one hour for recreation (lat. "recreation" – recovery) – to rest for work (to do from 4 to 6 gymnastic pauses during the working day, to walk no less than 7 km a day); relaxation (lat. "relaxation" - reduction, weakening) – mental relaxation and switching of emotions; catharsis (Greek "kotharsis" – purification) – moral purification.

No less threatening factor in the professional activity of the manager is the risky working conditions. The risk, which constantly accompanies the managerial activities of the manager, has a different effect on his moral-psychological and physiological balance.

CONCLUSION

Risk is a situational characteristic of an action that combines the uncertainty of its outcome and the possible adverse consequences of failure.

The ambiguity, dynamism and complexity of the market situation make risk inevitable in management. At the same time, it is known that the greatest success is achieved by the manager, who can safely take a well-founded, justified risk, the indicators of which are accurate calculation, intuition, control over emotions, chance situations, entrepreneur's abilities, etc.

Management is therefore a source of stress, risk, a constant threat to the health of those involved. Under these conditions, the human body produces protective mechanisms (fatigue, unwillingness to perform certain activities, stereotypical attitudes to certain problems, increased caution in communication, etc.) that help to respond more easily to business conflicts, work problems, psychological barriers, and other problems that are usual in the activities of the manager.

As for solving professional development problems, there is the orthobiotic, which studies the mechanisms of coping with stress, ways of protection from unexpected situations, job troubles and teaches to calmly perceive the success of one's colleagues, etc.

The effectiveness of the development of the manager's personality is conditioned by his social and psychological support, identification of productive ways of solving the managerial development problems of the manager.

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OPTIMAL STRATEGY DETERMINATION FOR THE HOTEL ENTERPRISE MANAGEMENT

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Abstract
This article is devoted to the management approaches of an effective strategy development in the hotel enterprise. On one hand, based on the need to find the optimal state between the resources available at the enterprise and opportunities for their use, on the other - satisfaction of market requests and requirements. Acceleration of changes in the environment, emergence of new inquiries and change of the consumer position, resources competition increase, internationalization of business, emergence of new unexpected business opportunities are opened by the achievements of science and technology, development of information networks that make possible the rapid expansion and receipt information, wide availability of modern technologies, changing role of human resources and a number of other reasons have led to a sharp value increase in the strategic management. The insufficient use of the strategic approach advantages in domestic hospitality enterprises caused not only by the instability of the political and economic situation in the country, but also by the inconsistency of the philosophy in market conditions. Domestic hotel industry companies use short-term development plans, which based on many factors: lack of strategic potential, financing, imperfection of state economic policy, etc. In Ukraine the hotel industry is developing at a slow pace, the obstacle is the political and economic crisis. In crisis conditions, the mechanism of using investment resources aimed at developing a strategy is even more complicated. Therefore, given the current state of the hotel industry, it is substantiated that the strategy for further development of the hotel enterprise (based on the example of the Poseidon hotel complex), which underlies the formation of a portfolio set of corporate strategy. By building the GE / McKinsey matrix, it is determined which competitive strategy to choose for the more successful development of the Poseidon Hotel. To determine the strategic directions for improving the competitiveness and efficiency of the hotel, was conducted a SPACE analysis. The characteristic features of the Poseidon hotel environment are an attractive and relatively stable industry. The hotel company was offered to use an aggressive strategy that involves taking new positions in the market while maintaining its existing market share and finding new competitive advantages.
Based on the portfolio implementation set of the corporate strategy on the example of the Poseidon hotel, modern methods combination of leadership and management of the hotel enterprise.

Keywords: development strategy, management, hospitality, SPACE analysis, GE / McKinsey matrix.

INTRODUCTION

Existing development strategies require significantly different systems and management structures; their formation is driven by the appropriate organizational style of behavior. On the basis of achieving unity actions and processes of management in the foreign and internal policy, it is possible to achieve managerial synergy in the management system and to obtain greater effect from the use of the staff forces, to eliminate gaps in strategies, to create the necessary prerequisites for active business activity. In addition, there is another important factor in determining the competitiveness of hospitality businesses – segmentation. Each market sector

needs its own specific strategy and capabilities, respectively, and the sources of competitive advantage in these sectors will also be different [5; 7].

RESEARCH RESULTS AND DISCUSSION

The implementation of strategic approach [8] to the hotel management industry in modern Ukrainian realities is slow enough, due to lack of proper staff experience and qualification, lack of scientific and methodological, information support of strategic management, etc. Therefore, it is relevant today to use foreign experience in the development and implementation of a portfolio set in corporate hotel enterprise strategy, which would be based on the fundamental principles of strategic management theory [1; 10].

In spite of the fact that hospitality industries throughout the world gives rather fast return of the invested funds, in Ukraine it is developing slowly. The obstacle to this is the political and economic crisis that is why the mechanism of using investment resources aimed at developing a strategy for the hotel industry was further complicated. Therefore, given the current state of the hotel industry, we substantiate the strategy of further development on the example of the hotel and restaurant complex “Poseidon”. For this purpose we will define the main stages of development and implementation of the portfolio set in corporate strategy [6]:

1. Adjustment of the existing mission, goals and objectives according to the structure of the chosen model.
2. Determination competitive position of the hospitality enterprise and its main strategic business units (SBU).
3. Alternative strategies using SPACE analysis is chosen.
4. Optimal strategy is determined.
5. Substantiation of the portfolio set in the context of its strategic economic zones (SEZ) and SBU [4].
6. Formation of strategic plan on the indicator “profitability of the hotel enterprise” using the methods of strategic planning.
7. Strategic plan implementation (or plan for changing the existing strategy) of a hotel enterprise.

We use the model of forming a strategic portfolio set for HRC “Poseidon”. The first step in the development of the strategy is to adjust the existing mission, since the company already applies certain elements of strategic management, formulate the vision of the hotel "Poseidon": "We tailor our services to the wishes of consumers, creating quality and comfortable conditions of stay in HRC "Poseidon".

For the development of a competitive management strategy in the second stage, a method based on expert and factor estimates will be used. Strategic zones (Figure 1) and strategic business units of Poseidon Hotel (Figure 2) were selected for evaluation: SBU 1 – catering services, SEZ 2 – accommodation services, SEZ 3 – additional services (conference room, services) laundry, dry cleaning, etc.) [9].

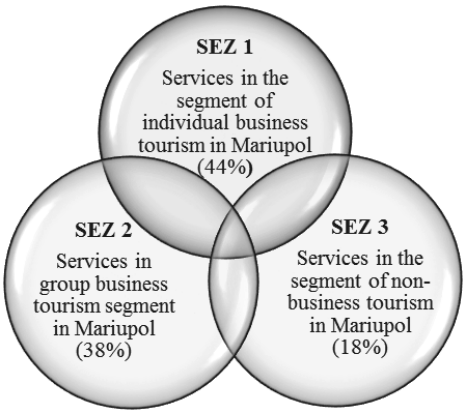

Figure 1. Structure of strategic management zones in the hotel complex "Poseidon"

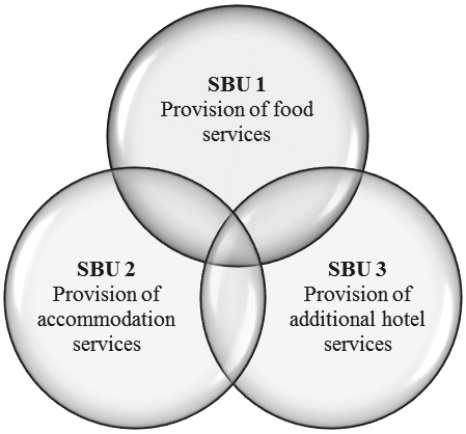

Figure 2. Types of strategic business units of HRC "Poseidon"

We identify the opportunities and threats (tables 1 and 2) for each strategic business unit (SBU) of the Poseidon Hotel Complex on the basis of expert assessments on a four-point rating scale.

Table 1. Potential threats assessment of HRC "Poseidon"

Potential threats	**SBU 1**	**SBU 2**	**SBU 3**
Changes in legislation and policy	3	3	2
Force majeure	4	4	3
Changes in consumer demand	2	3	2
Inflation	3	3	2
Reduced quality of services	1	2	1
The emergence of a larger competitor	4	1	1
Disruptions in supply	3	2	1
Total	*20*	*18*	*12*
GPA	*2,86*	*2,57*	*1,71*
Threat rate	*2,38*		

The potential threat factor is 2.38, which means that the degree of external factors influence beyond the control of the organization is negligible. But these factors should not be overlooked and should be constantly monitored.

Table 2. Assessment of HRC "Poseidon" possibilities

Possibilities	SBU 1	SBU 2	SBU 3
Enter new markets	2	3	3
Expanding the range of services	3	3	4
Improving the quality of services	3	4	3
Staff training	3	3	2
Reputation, image	2	2	1
Implementation of innovations	3	4	3
Accelerating competitors	4	4	3
Total	*20*	*23*	*19*
GPA	*2,86*	*3,28*	*2,71*
Threat rate	*2,95*		

Opportunities are factors that contribute to an organization's activities. Their ratio is 2,95, the degree of opportunity for enterprise development is quite large and these factors must be used to the full.

The next stage of strategy development is to determine trends in sales volume, cost and profit by calculation method and expert.

For the analysis of the strategy, we use the General Electric / McKinsey matrix, where the competitive status of the company and the attractiveness of strategic management areas are determining factors (tab. 3, tab. 4).

The attractiveness is calculated by the formula (1):

$$P = L \cdot G + B \cdot R + Y \cdot Q - H \cdot T \ , \quad (1)$$

where

L, B, Y, H – indicators of growth prospects, investment, opportunities and threats respectively;

G, R, Q, T – the respective weights.

The growth attractiveness rate of the business unit is quite high, due to the fact that the hotel is designed for middle-class people and business clients. Hotel rates correspond to the level of customers who use the services of the establishment. The hotel provides a wide range of services, which more than meets the needs of customers. Investing in hotel advertising is high enough, marketing efforts make sure that customers always have access to the full information about the hotel and the services provided in it. Advertising has an impact on customers through the media: newspapers, banners, online sites, and more.

Table 3. Calculation of attractiveness SBU for the Poseidon Hotel

Criteria for attractiveness	**Factors weight**	**SBU 1**	**SBU 2**	**SBU 3**	**Final SBU score 1**	**Final SBU score 2**	**Final SBU score 3**
The growth rate of attractiveness	0,30	8	7	7	2,4	2,1	2,1
Investing in advertising	0,25	6	7	6	1,5	1,75	1,5
External factors risks(political, economic, investment)	0,25	8	8	6	2	2	1,5
Positioning a hotel product in the mind of the consumer	0,20	6	9	7	1,2	1,8	1,4
					7,1	7,65	6,5

Given that political, investment and economic situations in the country affect the level of wages and the incomes of the population, investment and development of the hotel business are important factors for attracting new customers.

Table 4. Competitiveness assessment of HRC “Poseidon” services

Competitiveness criteria	Factors weight	SBU 1	SBU 2	SBU 3	Final SBU score 1	Final SBU score 2	Final SBU score 3
Innovative technologies	0,15	6	7	6	0,9	1,05	0,9
Meeting the needs of the target audience	0,15	7	8	6	1,05	1,2	0,9
Sufficient resources for the enterprise	0,10	7	8	6	0,7	0,8	0,6
The level of competition in the segment	0,2	9	9	8	1,8	1,8	1,6
Brand strength, image, high skill level, audience loyalty	0,15	6	9	9	0,9	1,35	1,35
Hotel location	0,05	8	8	8	0,4	0,4	0,4
The price of services compared to other hotels	0,2	9	8	7	1,8	1,6	1,4
					7,55	8,2	7,15

After the calculations, we will construct the GE / McKinsey matrix and determine what competitive strategy should be chosen for the more successful development of the HRC “Poseidon” (Figure 3).

The attractiveness of segment				
	High (8-10 points)	Growth zone	Growth zone	Selective development zone
	Medium (4-7,99 points)	Growth zone	Selecti development zone SBU 1 SBU 2 SBU 3	Harvesting area
	Low (0-3,99 points)	Selective development zone	Harvesting area	Harvesting area
		Low (0-3,99 points)	Medium (4-7,99 points)	High (8-10 points)
		Competitiveness of services in the segment		

Figure 3. Determination of Positions for Security Service of Hotel and Restaurant Complex "Poseidon"

According to Figure 3, SBU 1 and 3 are in the sampling area and SBU 2 is in the harvesting area. Due to the fact that in SBU 2 the competitiveness of services is higher, the market attractiveness is kept at an average level, but the advantages of SBU in this market are also strong. For SBU 2, first of all, it is necessary to identify the most attractive market segments and invest precisely in them, to develop their advantages and to resist the influence of competitors.

Next, we identify the most feasible options for the future strategic development of the Poseidon Hotel based on the SPACE method [3], which is based on the analysis of companies position and its conditions of operation in four coordinates: the competitive advantage of the company, its financial position, attractiveness of the industry and the stability of the economic environment.

Each hotel business must properly evaluate its competitors and their interests, the industry in which it operates in order to develop the most effective competitive strategies that would ensure its high competitiveness [2]. Let's perform a point of criteria evaluation by the method of SPACE analysis for the hotel complex "Poseidon". Each of the indicators will be assigned a score from 1 to 10. To summarize the information provided, we form a Table 5, with the results of the point scores. To do this, we introduce weights and get a weighted estimate for each indicator.

When justifying the strategic choice according to the presented method, it is necessary to:

1. Identify the critical factors (criteria) of the enterprise assessment by the specified groups (in this case 4-5 criteria are selected for each of 4 strategic choice factor groups).

2. Conduct a weighted average assessment of all 4 groups in confidence intervals, also using analytical information.

3. Determine the range of recommended strategies in the selected coordinate system by constructing a "triangle of recommended strategies".

Table 5. Calculation of a weighted criteria evaluation for choosing a Poseidon hotel strategy using the SPACE method in confidence interval format

Criteria	Score, number of points		Weight	Weighted score, points	
Internal indicators					
1. The financial strength of the Poseidon Hotel (FS)					
Asset turnover	5	6	0,2	1,0	1,2
Financial stability	6	7	0,25	1,55	1,75
Liquidity indicators	6	7	0,25	1,5	1,75
Return on assets	5	6	0,3	1,5	1,8
Total		-	*1*	*5,55*	*6,5*
2. Competitiveness of Poseidon Hotel (CP)					
The coefficient of the structure range	6	7	0,2	1,2	1,4
Average Price Index	6	7	0,25	1,5	1,75
Quality of basic services	6	8	0,2	1,2	1,6
Image and corporate identity	5	7	0,15	0,75	1,05
Customer loyalty	6	7	0,2	1,2	1,4
Total		-	*1*	*5,85*	*7,2*
External indicators					
3. Attractiveness of the hotel industry (AI)					
The level of industry's profitability	7	8	0,25	1,75	2
Life cycle stage	5	6	0,2	1	1,2
Easy market access	6	7	0,3	1,8	2,1
Competition state in hotel industry	6	8	0,25	1,5	2
Total		-	*1*	*6,05*	*7,3*
4. Industry Stability (SG)					
Profit stability	6	7	0,25	1,5	1,75
Development level of innovative activity	3	8	0,15	0,45	1.2

Continuation of the table 5					
Marketing and advertising opportunities	6	9	0,2	1	1,8
Inflation rate	8	9	0,25	2	2,25
Price elasticity	2	5	0,15	0,3	0,45
Total		-	*1*	*4,5*	*6,7*

The use of deterministic numbers in strategic analysis does not always make it possible to assess the situation correctly, especially when the level of environmental uncertainty is high. An alternative way of representing numbers is the confidence interval format, which painlessly adapts to most strategic analysis tools, including the SPACE method.

To determine the recommended strategy in the chosen coordinate system instead of a vector, we construct a triangle whose vertices will be the origin and the points P1 (x1, y2,), P2 (x2, y1,). We transform the above formula for confidence intervals:

[x1, x2] = [AI1, AI2] (-) [CP1 CP2];
[Y1, Y2] = [FS1, FS2] (-) [SG1, SG2].
As a result of the calculations the obtained values are presented in Table 6.

Table 6. Calculation of two-year intervals

X_1	0,2	
X_2	0,1	
Y_1	1,05	
Y_2	-0,2	
P_1	0,2	-0,2
P_2	0,1	1,05

According to the above calculations, we construct the coordinate plane (Figure 4) and find the points P1 (0.2; -0.2), P2 (0.1; 1.05).

Thus, point P1 is in the right upper quarter of the coordinate plane, this corresponds to an aggressive strategy and point P2 corresponds to the competitive strategy of the hotel enterprise. Competitiveness estimates of the hotel are in line with the strategy recommendations in the SPACE coordinate system:

1. The industry is attractive.
2. The atmosphere where Poseidon Hotel is located is relatively stable.
3. The financial condition of the hotel is quite stable: all the analyzed indicators are within the norm or significantly exceed it. But the hotel needs to keep in mind that these figures are gradually declining, so special precautions should be taken.

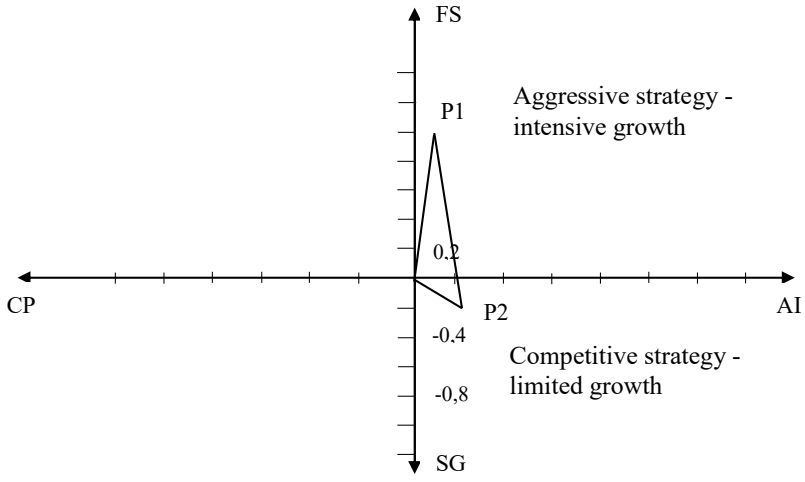

Figure 4. Recommended strategies for Poseidon Hotel in the SPACE coordinate system

Based on the HRC "Poseidon" SPACE simulation, it is advisable to choose an aggressive strategy above all and focus on intensive growth in the volume of core and ancillary services or a competitive strategy aimed at limited growth. Moreover, the company has more opportunities to implement a rather aggressive strategy.

Based on our research and forecasts, we will form a portfolio set of corporate hotel strategy for 2019-2020, which is shown in Figure 5.

Figure 5. Portfolio set substantiation of corporate strategy for managing the Poseidon complex for 2019-2020

SPACE analysis has identified the characteristics of the environment in which the Poseidon hotel complex operates: an attractive and relatively stable industry. The competitiveness of the hotel compared to its competitors is higher than average. In such circumstances, the hotel company is encouraged to use an aggressive strategy that involves taking new positions in the market while maintaining its existing market share and finding new competitive advantages to complicate competitors' activities.

CONCLUSION

The scientific result is portfolio set implementation to the corporate hotel business strategy based on the Poseidon Hotel, which, unlike the existing approaches, combines modern methods of leadership and management of the hotel industry. This revealed the competitive advantages and offered a portfolio of corporate hotel strategy for 2019-2020.

The possibility of gradual implementation for proposed methodological approach in practice will reveal the competitive advantages, taking into account the possibility to adjust the portfolio set of the hotel corporate strategy and thereby attract a certain category of consumers.

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MARKETING TECHNOLOGIES FOR REFORMING STATE SOCIAL POLICY AS A MECHANISM OF TRUST IN AUTHORITIES

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Abstract
The article deals with the application of state marketing mechanisms in the context of reforming the state social policy system. It is stated that the use of state marketing mechanisms is important, first and foremost, as a means of harmonizing managerial innovations with the social context of the functioning of public authorities. It is proved that in the process of using such mechanisms the inconsistency of the directions of development of the system of social services is eliminated, the development of public administration is consistent with the directions of social modernization of society, it is constituted as a socio-political function of civil society with the establishment of systemic polyarchical ties between them. The complex of marketing technologies as a mechanism of trust in the authorities through the reform of state social policy in Ukraine is substantiated. The main directions of the use of state marketing for carrying out the reform of the state social policy in Ukraine are determined. It is determined that state marketing gives social reforms of a systemic and procedural nature - as a permanent mechanism of orientation of public administration to the needs of society and its social actors. It is stated that the use of marketing technologies as a basis for social reform allows to solve a number of problems of this process regarding the elimination of the dominance of administrative methods in public administration. Directions of influence of state marketing on formation and realization of strategic directions of social reform of public administration are determined.

Keywords: public marketing, public administration, social policy, social management, marketing technologies, social policy.

INTRODUCTION

In order to reform the system of state social policy, the use of state marketing mechanisms is important, first of all, as a means of harmonizing managerial innovations with the social context of the functioning of public authorities. This eliminates the inconsistency of the development directions of the social services system, the development of public administration is consistent with the directions of social modernization of society, it is constituted as a socio-political function of civil society with the establishment of systemic polyarchical ties between them.

PREVIOUS RELATED RESEARCH

The problems of using marketing mechanisms for reforming public administration in Ukraine are explored in the works of V. Yevdokimenko, I. Kresina, V. Tsvetkov, V. Shcherban and other scientists. In general, the necessity of using a number of marketing technologies to improve the activity of public authorities in the conditions of development of a socially oriented market society is substantiated. However, a generalized analysis of marketing mechanisms as a coherent tool for reforming state social policy as a mechanism for building trust in government remains beyond the reach of most researchers.

The purpose of the research is to substantiate the complex of marketing technologies as a mechanism of trust in the authorities through the reform of state social policy in Ukraine.

RESEARCH RESULTS AND DISCUSSION

The technological aspect of the state marketing mechanisms formation is most evident in the process of implementation of state social policy. The latter determine the nature of the administration and governance of the entire social system, which is why they are crucial for the success of the whole process of social modernization in Ukraine. With regard to public administration, social reforms are aimed at systemic changes in the principles and mechanisms of its functioning, and concern both all aspects, in particular, of the activity of the executive power, as well as its relations with other elements of state power and society in general. The reform of the government apparatus is first and foremost a political project aimed at restructuring the configuration of the legal elite, giving the state and society a new impetus for development. In its narrowly substantive terms, it is a change in the key component of the decision-making system for the society, which allows optimizing the realization of collective goals, improving the quality of managerial staff, using public resources more effectively and building trust in the authorities. [10, p. 3].

The fundamental importance of marketing mechanisms is that they serve as an effective means of providing the government with dynamics of development in a direction that is consistent with the general tendencies of modernization of the Ukrainian society. Many researchers note that in today's Ukraine the state apparatus does not keep up with the rapid changes, while the experience of successful reform indicates that public administration must be ahead of economic reforms. And the initial social cause of this situation is the inconsistency of state administration with market reforms. “In most cases, especially at the regional and local levels, direct administration is preferred from the whole arsenal of methods of influence on the subject of management” [6, p. 65]. The main directions of the use of marketing mechanisms for the reform of the State social policy are presented in Figure 1.

State Marketing promotes the formation of a new conceptual nucleus of the management paradigm, within which a priority is the understanding of public administration as the social and political function of civil State activities, and the law as a certain function of law and state and fundamentals of management activities that will contribute to the formation of confidence in the authorities [9, p. 364].

Marketization of public administration is a mechanism for establishing systemic links between the functioning of public authorities, articulation and the realization of social interests. Most researchers agree that social sector reforms are determined not by the content of the actual management activity, but by the nature of modernization processes in Ukrainian society. The object of reforming public administration, obviously, should be understood as its rationalization, which would lead to qualitative changes not only in the system of public administration, but also in the whole in the system of social life of people [7, p. 40]. Therefore, the process should be based on the study of public administration, and the main mechanism of reform should be considered not so much the activities of public administration personnel or the

development of special reform projects as the social partnership between government, business and the general public which is the key to trust [7, p. 41].

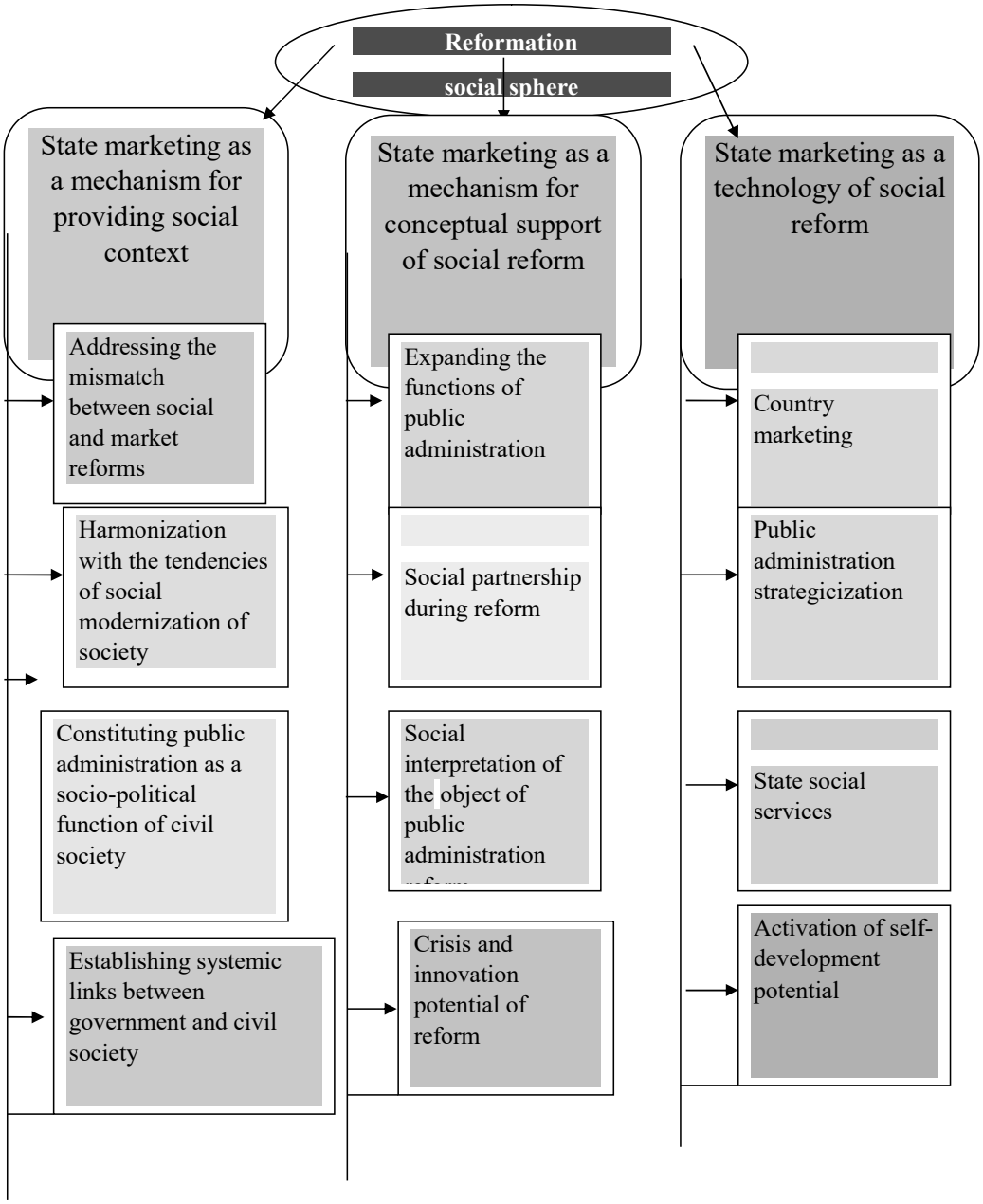

Figure 1. State Marketing as a mechanism for reforming the social sphere

Without reconciling social reforms with the processes of shaping a market society in Ukraine, they remain conceptually ambiguous. Their purpose is social and is beyond the sphere of public administration, since the Concept of social reform

indicates its purpose for the formation of modern society [4, p. 7]. Changes in organizational structure, implementation of the civil service, transformation of territorial structure and local self-government, envisaged by the Concept, have value not in themselves, but as tools for the formation of a socially oriented market society [1].

State marketing is an effective mechanism for reconciling socio-economic reforms in Ukrainian society, facilitating the establishment of a dialogue between government and society and building confidence. Without this, any positive changes in the sphere of public administration are impossible at all; since in the process of transition to a new model of state regulation, it is necessary, first of all, to take into account the conditions and peculiarities of the country's existence, to be guided by the elaborated program of social development [2]. The restructuring of public administration, first and foremost, concerns the economic system. The basis of motivation factors of a market economy on the mechanisms of self-regulation, emergence of a system of exchange, domination of private property, free competition, etc., market interaction of sub economic conditions under the conditions of adaptability, flexibility, departure from tradition contribute to the reform of the management system of society. Management modernization should, in our view, be adequate to the process of market formation and its types" [3, p. 16]. Thus, the technological role of state marketing in the process of social reform is to ensure the priority of social, not corporate Without the introduction of the state marketing system in social reform, the priority will be given to the process of state formation, that is, the development of the state and the formation of its institutions, not the development of society. The social sphere authorizes the authorities, suppresses civil society and is distrustful. The state should reform not for its own sake, but as a tool for public management of people's life processes, not only through a bottom-up tool, but also through election mechanisms.

The reform of the social sphere, which adapts the state administration to the needs of the state, in the conditions of the market formation, is simply impossible. It should also be borne in mind that state marketing gives social reforms of a systemic and procedural character – as a permanent mechanism of orientation of public administration to the needs of society and its social actors. In developed countries, "there is an ongoing process of social reform at all levels of government, and this process is increasingly gravitating toward the formation of civil society through the democratization of government" [7, p. 38]. The bureaucratic corporate understanding of social reforms interprets them as a one-off action to improve existing mechanisms of public administration, which is contrary to the nature of modernization processes in Ukraine. It should be borne in mind that the orientation of state marketing to the subordination of management activities to the needs of society does not really mean narrowing of the state-administrative functions. On the contrary, the reorientation of public administration to the needs of citizens requires a significant expansion of the powers of the executive, including in the sphere of aligning their actions with the will of civil society. Following the implementation of political reform, "it seems appropriate to resume the practice of granting the government the right, under certain conditions and within certain limits, to issue acts having the force of law (acts of

delegated legislation)" [8, p. 14]. Foreign experience testifies the effectiveness of such an innovation. It will also solve the problem of regulatory norm-creativity, as well as the problem of compliance with the decisions of the state administration of law (by-laws). Thus, it is not a question of narrowing the functions of public administration, but of giving it a different social dimension in the context of establishing social market factors of managerial activity.

The use of marketing technologies as a basis for social reform allows the solving the main problems of this process in eliminating the dominance of administrative methods in public administration, namely:

– to link state development programs with the overall context of market reforms in Ukraine. At the technological level, this means that when developing socio-economic development programs, their separate components will reflect a holistic picture of the real needs and trends of the country or region;

– to provide scientific basis and reliable forecast of activity of state bodies on management of market processes in Ukrainian society on the basis of proven in the market conditions of marketing technologies;

– to substantiate and formulate clear mechanisms of interaction between public social services and entities of all forms of ownership (especially the private sector) regarding the formation of partnerships in the process of influence of public authorities on market processes;

– to ensure transparency, clarity, accessibility and coherence with social actors and their policy frameworks. At the technological level, this means overcoming administrative bureaucracy primarily due to the maximum specification and stage planning of the activities of public administration, which in the conditions of applying marketing technologies is impossible without their inclusion in the system of subject-object relations of market type [11]. Marketing mechanisms set out such an important feature of social reform as reorienting public administration to the needs of the consumer (citizen). Researchers point out that marketing technologies in management make it possible not only to orient it to an individual, but also to segment the needs of a management object to an individual, and across the spectrum of its socio-cultural characteristics. In this sense, it is advisable to talk about the need to introduce through the administrative reforms the principles of public administration of the information society within the new theory of management and the marketing paradigm.

General features of the new paradigm include understanding the nature of managerial decisions, defining the new essence of the strategy of government bodies in the context of state marketing, creating information systems of communication between government and society.

CONCLUSION

Adapting marketing technologies to the needs of forming a social reform of public administration strategy, it is advisable to determine the following directions of influence of public marketing on determining the strategic directions of this process:

1. Orientation of activity of public authorities to the needs of consumers – recipients of social services.

2. Collaboration with consumers – recipients of social services to create mechanisms of public administration and establish relationships of the subject-object type.

3. Individual-object adaptation of management decisions and the means of their implementation and subject-object interaction with respect to each consumer – recipient of social services of the results of the activity of public administration.

4. Ongoing dialogue of public administration bodies with consumers of their services with interactive individualization of the means of delivery of messages (messages) through social mechanisms of the information society in order to build trust in public authorities.

5. Extension of the object of public administration beyond the immediate consumers in the direction, when not only consumers but also all participants of management relations become its object.

It is in this context that further reform of state social policy should be undertaken, using state marketing to build trust in public authorities.

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USAGE OF MATRIX METHODS FOR DEVELOPING THE STRATEGY OF AGRICULTURAL ENTERPRISE

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Abstract
In a rapidly changing environment, fierce competition requires businesses not only to focus on their internal environment, but also to develop a long-term strategy that enables businesses to adapt to changes in their environment. Therefore, the issues of improving the marketing planning system are of particular importance. Especially when it is an agricultural enterprise. Essence and differences of the strategic planning are exposed in the article. The basic matrix methods of the strategic planning and possibility of their application for development of strategies of activity of agricultural enterprises are analyzed. Such as: matrix of marketing mix; matrix of ABC-analysis; matrix of PEST analysis; matrix of SWOT analysis; matrix of BCG. The purpose of the article is to analyze the usage of matrix methods for developing the strategy of agricultural enterprise. Complex methodological aspects of enterprise marketing planning were studied by well-known foreign scientists, including I. Ansoff, G. Assel, B. Karloff, F. Kotler, M. Porter, A. Thompson. The works of L. Balabanov, O. Vyhansky, A. Voychak, S. Garkavenko, V. Nemtsov, S. Pokropivny, K. Redchenko N. Kudenko, A. Mohylova, Razina O. and others are well-known among Ukrainian scientists. The study used methods for theoretical generalization and comparison, analysis and synthesis, matrix method (for the formation of matrix for marketing strategy). Matrix methods play a very important role in marketing. The matrix method is very convenient – this explains its prevalence. However, the only use of matrix methods is not sufficient, since matrices allow you to explore marketing from separate parties and do not show a complete picture, but in combination with other methods, the matrix approach allows you to clearly see the patterns in the processes occurring in the enterprise and make the right conclusions.

Keywords: marketing, marketing strategy, agricultural marketing, matrix method, agricultural enterprise.

INTRODUCTION

Changes in the external conditions of business in Ukraine, European integration vector of the country development, and possibilities of import and export operations facilitate foreign trade and open of the new markets.

Strategic management and strategic marketing are important parts of the overall management system in agricultural enterprises. They include strategic analysis, planning, directly elaboration of the development strategy, its implementation, realization and monitoring.

RESEARCH RESULTS AND DISCUSSION

The main instrument of strategic marketing is using matrix methods in strategic planning. The matrix methods in strategic planning can help entrepreneurs and analysts scan possible solutions to the constraints they face. It is crucial to note that successful inclusive business models typically combine several strategies to address several constraints. Different methods are using for the analysis and planning, such as:

– matrix of marketing mix;
– matrix of ABC-analysis;
– matrix of PEST analysis;
– matrix of SWOT analysis;
– matrix of BCG [4, p. 19].

Before considering the above matrix methods, it should be noted that the data was taken of State Enterprise "Experimental farm of the Institute of Agriculture of the North East of the National Academy of Agrarian Sciences of Ukraine".

State Enterprise "Experimental farm of the Institute of Agriculture of the North East of the National Academy of Agrarian Sciences of Ukraine" is a state agricultural statutory entity that carries out experimental, economic and commercial activities for obtaining corresponding profits, subordinated to the Institute of Agriculture of the North East of the National Academy of Agrarian Sciences of Ukraine.

Main directions of activity of the economy:

– active assistance to scientists of the Institute, as well as other scientific institutions in the work on conducting scientific research, production verification and implementation of scientific and technical developments;

– promote, on a mutually beneficial basis, the scientific institutions in their activities for the dissemination of scientific achievements among state, collective, as well as other agricultural organizations and peasant (farmer) farms;

– production of original, elite and reproductive seeds of agricultural crops, breeding of breeding young animals;

– effective self-management as an example of applying the results of organizational and scientific achievements;

– develops subsidiary production, industry, in particular for the processing of agricultural products [5].

The dynamics and structure of net income from the sale of products (goods, works, services) of the State Enterprise is represented in Table 1.

Table 1. Dynamics and structure of net income from the sale of products (goods, works, services) of the State Enterprise

Product	Years						In average for last 3 years	
	2016		2017		2018			
	Sum, thous. UAH	Share,%	Sum, thous. UAH	Share,%	Sum, thous. UAH	Share,%	Sum, thous. UAH	Share,%
Wheat	509.00	17.33	732.00	17.87	1234.00	26.19	825.00	21.07
Corn	9.00	0.31	955.00	23.32	965.00	20.48	643.00	16.42
Buckwheat	73.00	2.49	92.00	2.25	10.00	0.21	58.33	1.49
Legumes	246.00	8.38	108.00	2.64	0.00	0.00	118.00	3.01
Soybean	707.00	24.07	773.00	18.87	951.00	20.18	810.33	20.70
Sunflower seeds	1393.00	47.43	1436.00	35.06	1552.00	32.94	1460.33	37.30
Crop production	**2937.00**	**21.07**	**4096.00**	**24.51**	**4712.00**	**23.44**	**3915.00**	**23.14**
Cattle	2251.00	20.46	2175.00	17.24	2055.00	13.36	2160.33	16.62
Pigs	3503.00	31.84	2263.00	17.94	3338.00	21.69	3034.67	23.34
Milk	5247.00	47.70	8176.00	64.82	9994.00	64.95	7805.67	60.04
Livestock production	**11001.00**	**78.93**	**12614.00**	**75.49**	**15387.00**	**76.56**	**13000.67**	**76.86**
Total	**13938.00**	**100.00**	**16710.00**	**100.00**	**20099.00**	**100.00**	**16915.67**	**100.00**

It can be seen from the Table 1 that wheat, corn and other products have increased in the last three years, and the rest of the products have also shown a small rise. This proves that the management of enterprises and other aspects of outstanding performance. Wheat's share rose from 17.33 percent in 2016 to 26.19 percent in 2018, and the average in the last three years was 21.07 percent, with wheat products performing well as a whole. Milk`s share rose from 47.70 percent in 2016 to 64.95 percent in 2018. Total production rose nearly 31% from 13938 in 2016 to 20099 in 2018, a testament to good management.

1. Matrix of marketing mix. McCarthy classified various marketing activities into marketing-mix tools of four broad kinds, which he called the four P's of marketing: product, price, place, and promotion.[6, p. 292]. The marketing mix of the State Enterprise is represented in Table 2.

Table 2. Marketing mix of the State Enterprise

Product	Price (UAH/center)	Place	Promotion
• Wheat • Corn • Buckwheat • Soybean • Sunflower seeds • Cattle • Pigs • Milk	• 537.67 • 357.74 • 885.71 • 886.02 • 817.01 • 1818.30 • 3576.13 • 747.27	• Sumy • Poltava • Kyiv • Kharkiv • Bila Tserkva	• Strong supplying channels • Free delivery • Special packing • E-promotion

While analyzing the matrix of marketing mix it is important to build specific strategies for every element of this matrix.

As far as product strategy is concerned, it is a need to:

1. Breeding excellent varieties, controlling core quality.

2. Make full use of Ukraine's local fertile land, develop regional brand advantages, and actively introduce more advanced cultivation methods.

3. On the basis of the regional brand to expand the company's advantages of wheat and corn features.

4. Packaging innovation and subdivision, out of the quagmire.

5. Strictly control product quality and do green and high-quality products; optimize after-sales service to improve customer satisfaction.

As far as pricing strategies are concerned, the following should be done:

1. Expectations: to attract consumers with product leadership, to attract mid- and high-end markets through high-end products and excellent taste of quality, so as to gain recognition from major customer groups and enhance the brand visibility of wheat and corn. While ensuring the quality of the product, expand on the basis of maintaining the customer group, so as to obtain a good profit.

2. Consider the market and demand: high prices can reflect high-quality; high-end food crops are naturally much higher than the price of ordinary products on the market. The high income characteristics of the target customers determine that they attach more importance to the quality of the food and are not sensitive to the price.

The purchase for the purpose of giving gifts does not care about the price. Although the customer is not sensitive to the price, but the mentality of taking advantage is very common, this can be used to attract customers to farm leisure and picking, such as personally harvested products to give 20% discount to meet the customer's mentality of taking advantage of the advantage.

With the development of modern agriculture and modern agricultural circulation system in the world, the marketing channel mode of agricultural products in Ukraine has changed dramatically. That is why our enterprise should change the system of placing and presenting. They can choose:

1. Through the official website or corporate customer service direct marketing channels.
2. E-commerce channels.
3. Commercial Super Channel.
4. Expand major customer group purchase channels.

Grain is one of the products most in need of promotion, which is determined by its characteristics. Free samples testing to distribute o target consumers through offline stores, or invite guests to taste on the spot, to attract consumers' attention to products and brands. And affect the user's late purchase of the product. Send small samples, try to eat must be the appropriate practices of the product. You can also use the pre-sale mode. When crops are still growing in the fields, they can take the form of land-to-people. At the early stage of self-love planting, the product will be pre-sold, waiting for maturity to give a certain discount according to the market price to consumers, and even can invite contractors directly to the field to collect.

2. Matrix of ABC-analysis. Activity Based Classification, The full name should be ABC classified inventory control method. Also known as Pareto analysis or Barretto analysis. This rule identifies a few of the more controversial by ranking the same type of problem or item. Through long-term observations, Pareto found that 80 percent of Americans own only 20 percent of their wealth, while another 20 percent own 80 percent of the country's property, and many things follow this rule. So he applied the law to production. His main point is that by reasonably allocating time and power to a small fraction of the total, you will get better results. Of course, ignoring Class B and Class C is also dangerous. In Pareto's rule, they receive much less attention than Class A.

The accumulative frequency of class A factor was 0% and 80%, which was the main influencing factor. B factor, the cumulative frequency of 80% to 90%, is the secondary factor. C factor, the cumulative frequency of 90% to 100%, is a general influencing factor [2, p. 126].

The matrix of ABC-analysis of the State Enterprise is represented at the table 3.

From the above analysis, we can see that there is only one product in Class A, so we should focus on milk. Take positive attitude and measures to respond to market changes and needs. At the same time, cattle and pigs is also a product that cannot be ignored. They both belong to Class B products. Although not the main, but also can provide no small market profit. In the face of most class C products, enterprises can reduce the production and operation of the products by reducing the product line, so as to better serve class A products.

Table 3. The matrix of ABC-analysis of the State Enterprise

Product	Volume of sales, thous. UAH	Specific weight, %	Cumulative share, %	Group of priority
Wheat	1234.00	6.14	90.41	C
Corn	965.00	4.80	95.21	C
Buckwheat	10.00	0.06	100.00	C
Soybean	951.00	4.73	99.94	C
Sunflower seeds	1552.00	7.72	84.27	C
Cattle	2055.00	10.22	76.55	B
Pigs	3338.00	16.61	66.33	B
Milk	9994.00	49.72	49.72	A
Total	20099.00	100.00	-	-

The graphic representation of matrix of ABC-analysis you can see in Figure 1.

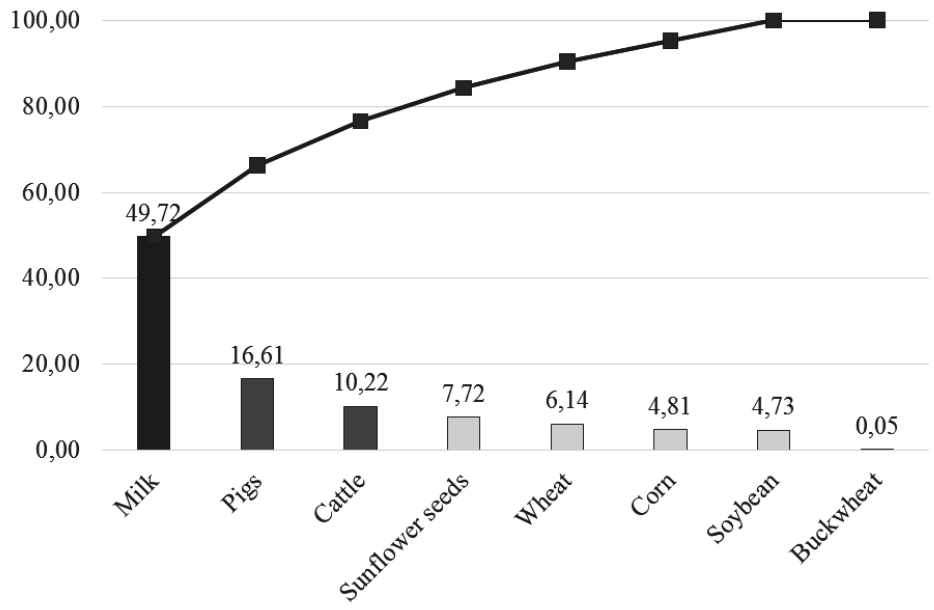

Figure 1. Pareto chart

3. Matrix of PEST analysis. PEST analysis is the analysis of macro environment, P is politics, E is economy, S is society, T is technology.

PEST analysis needs to master a large number of relevant research data, and has a deep understanding of the enterprises analyzed, otherwise, this analysis is very difficult to carry on. The main contents of the economy are economic development level, scale, growth rate, government revenue and expenditure, inflation rate and so on. There are political systems, government policies, national industrial policies, relevant laws and regulations, etc. There are population, values, moral standards and so on in society. There are breakthroughs in high and new technology, process technology and basic research in technology [3, p. 36].

Matrix of PEST analysis is presented in Table 4 and Table 5.

Table 4. The PEST matrix of the State Enterprise

Factors	Opportunities	Threats
Political / Legal	1) competition regulation; 2) government attitude; 3) employment regulation and protection	1) consumer protection; 2) international trade regulation
Economic	1) economic growth; 2) government spending; 3) stage of the business cycle	1) monetary policy; 2) policy towards unemployment; 3) taxation; 4) exchange rates; 5) inflation; 6) economic "mood"
Social	1) income distribution; 2) demographics; 3) attitudes to word and leisure; 3) education; 4) fashions and fads; 5) health and welfare	1) social mobility; 2) lifestyle changes; 3) living conditions
Technological	1) government spending on research; 2) government and industry focus on technology; 3) new discoveries and development; 4) impact of changes in Intellect technology	1) speed of technology transfer; 2) energy use and costs; 3) changes in material sciences

Table 5. Analysis of the significance of the factors

Factors	Weight	Score	Weighted score
Threats			
Consumer protection	0.1	4	0.4
International trade regulation	0.15	3	0.45
Monetary policy	0.25	5	1.25
Policy towards unemployment	0.1	3	0.3
Inflation	0.15	5	0.75
Economic "mood"	0.15	5	0.75
Taxation	0.15	3	0.3
Total	1	-	4.2
Opportunities			
Competition regulation	0.3	5	1.5
Government attitude	0.1	3	0.3
Employment law	0.25	5	1.25
Regulation and protection	0.15	4	0.6
Economic growth	0.15	4	0.6
Government spending	0.1	5	0.5
Stage of the business cycle	0.01	3	0.03
Demographics	0.04	4	0.16
Total	1	-	4.94

PEST analysis of agricultural products industry refers to the analysis of political, economic, social and technological factors to determine the influence of these factors on the strategic management process of agricultural products industry development in such ways:

1. From the political and legal point of view, the change of government departments has also brought about new changes in the agricultural industry.

2. From the economic point of view, market competition is increasingly fierce, and transnational corporations have become industry leaders.

3. From the social point of view, green agricultural products market ups and downs, but the momentum of development is good 4.5%.

4. From a technical point of view, new changes have taken place in the R & D, production and marketing of the agricultural industry.

4. Matrix of SWOT analysis. SWOT analysis, based on the internal and external competitive environment and the situation analysis under competitive conditions, is to enumerate the main internal strengths, weaknesses and opportunities and threats that are closely related to the subject of the study through investigation. And according to the matrix form arrangement, then with the systematic analysis thought, the various factors match each other to analyze, from which obtains a series of corresponding conclusion, and the conclusion usually has the certain decision-making character. Using this method, we can make a comprehensive, systematic and accurate study of the situation in which the research object is located, so as to draw up corresponding development strategies, plans and countermeasures according to the results of the research [1, p. 147].

The matrix of SWOT analysis is presented in Table 6 and Table 7.

Table 6. The SWOT matrix for the State Enterprise

Strengths		**Opportunities**	
1. State enterprise	+5	1. Not very big accountment	-3
2. High quality	+4	2. Poor technology	-5
3. Good price	+4	3. Poor management	-4
4. Not very far from Sumy	+4	4. Poor salary	-3
Total: +17		*Total: +15*	
Weaknesses		**Threats**	
1. To go to the international market	+4	1. High taxes	-5
2. Government support	+4	2. High cost	-5
3. Investment	+4	3. Exchange rate	-3
4. Inurement of new technology	+4	4. High level of the competition	-4
Total: -16		*Total: -17*	

After having performed the SWOT analysis, the company will use these findings to define the main issues that must be addressed in the strategic marketing plan. Decisions of these issues will lead to the subsequent setting of objectives, strategies and tactics.

5. Matrix of BCG. Boston matrix is also called market growth rate-relative market share matrix, Boston consulting group method, four quadrant analysis method, product series structure management method and so on.

Table 7. Enhanced SWOT analysis

Strengths-Opportunities	Strengths-Threats
1. State enterprise can go to international 2. Good quality and price make good investment 3. Good quality require	1. State enterprise done have light taxes 2. High quality and good price can obtain competitiveness 3. Not very far away can save cost
Weaknesses-Opportunities	**Weaknesses-Threats**
1. Not very big associated require government 2. Poor salary and management need government 3. Poor technology require the new technology invention	1. High taxes make salary lower 2. The poor technology and management make high cost 3. Not very big assortment make high level of the competition

Boston Matrix was pioneered by Boston Consulting Group, a large business consulting firm in the United States, as a way to plan an enterprise's portfolio. The key to the problem is to solve the problem of how to adapt the product variety and the structure of the enterprise to the change of the market demand. Only in this way can the production of the enterprise be meaningful [3, p. 69].

At the article the authors use the data from table 8 to build the matrix of BCG which is represented in Figure 2.

Table 8. Data for the BCG matrix

Product	Volume of sales (million UAH)	Specific Weight, %	Market Share of the Strongest Competitor,%	Market Share of Enterprise, %	Relative Position (market share), %
Wheat	1234.00	6.14	79.20	75.20	94.95
Corn	965.00	4.80	72.40	45.41	62.72
Buckwheat	10.00	0.05	10.50	1.70	16.19
Soybean	951.00	4.73	70.70	69.56	98.39
Sunflower seeds	1552.00	7.72	72.00	67.65	93.96
Cattle	2055.00	10.22	92.30	89.30	97.40
Pigs	3338.00	16.61	98.00	97.60	99.59
Milk	9994.00	49.72	95.00	92.26	97.12
Total	**20099.00**	**100.00**	-	-	-

Through the interaction of the above two factors, there will be four kinds of product types with different properties, forming different product development prospects:

1) the product group with “double high” sales growth rate and market share (star products);

2) the product group with “double low” sales growth rate and market share (lean dog products);

3) the product group with high sales growth rate and low market share (question mark products);

4) low sales growth rate, high market share of the product group (cash cow products).

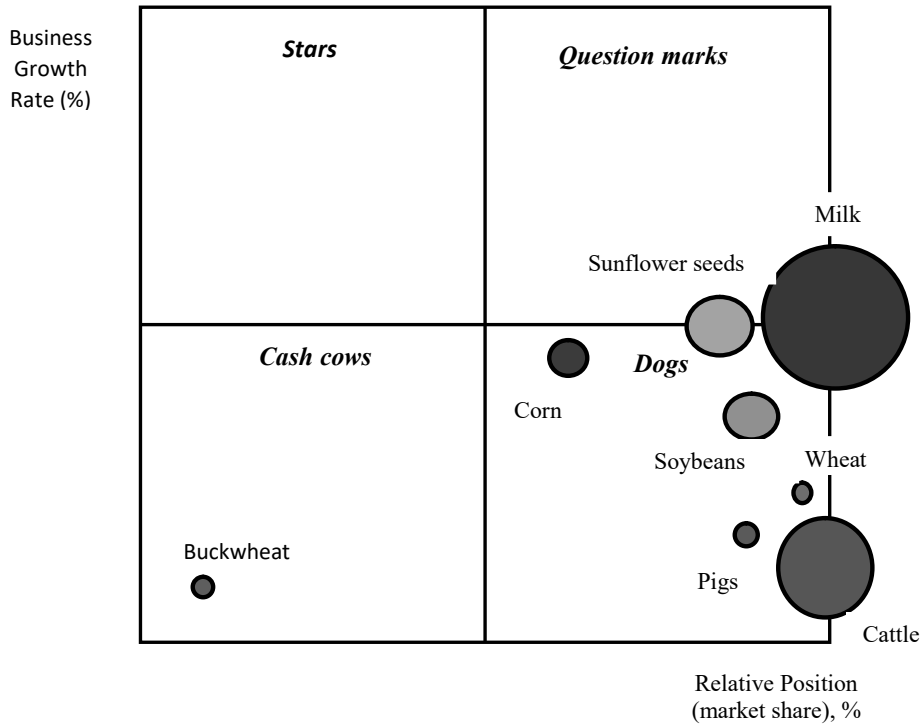

Figure 2. BCG Matrix

When choosing ways of matrix analysis it is important to notice the main steps:

1) simultaneous use of several methods of matrix strategic analysis to ensure versatile monitoring;

2) organization of regular monitoring of the strategic objectives achievement using the methods of matrix assessment;

3) strategic plan of the agricultural enterprise should be prepared for 5 years based on the phased algorithm with a systematic review of the objectives relevance;

4) organization (systematically) of comprehensive strategic analysis at the micro-, meso- and macro- level.

CONCLUSION

Matrix methods play a very important role in marketing. The matrix method is very convenient – this explains its prevalence. However, the only use of matrix methods is not sufficient, since matrices allow you to explore marketing from separate parties and do not show a complete picture, but in combination with other methods, the matrix approach allows you to clearly see the patterns in the processes occurring in the enterprise and make the right conclusions.

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THE INTRODUCTION OF FABLAB PLATFORMS AS DETERMINANT OF THE UKRAINE'S ECONOMY INNOVATIVE DEVELOPMENT

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Abstract
Results of the implementation of the Erasmus+ project "Development of a network infrastructure for youth innovation entrepreneurship support on fablab platforms" (FabLab project), an active participant of which is Ternopil Ivan Puluj National Technical University (TNTU), are presented in the paper. The concept and meaning of fabrication laboratory are identified. Open laboratories' origin and development both in Ukraine and all over the world are described. Hackerspaces', makerspaces', FabLabs' activities, aims and objectives are characterized. The number of FabLabs globally, in Europe and in Ukraine is estimated. FabLabs, operating at Ukrainian universities, are studied. Achievements of TNTU in the framework of the FabLab project are identified and analyzed. It is determined that FabLabs must be considered in terms of education and training of talented youth focused on scientific, technical and engineering activities.

Keywords: open laboratories, hackerspaces, makerspaces, fabrication laboratory, Fab Labs.

INTRODUCTION

The creative economy, as a model of growth, is based on the infrastructure and achievements of the knowledge economy with institutions, ideas and norms. The innovative ecosystem of creative industries includes a variety of formal and informal institutions that shape social interaction in the process of idea creation and commercialization. The growth of a creative economy depends foremost on the quality of human capital, the number of innovations and investments which should be provided with an appropriate "soft" infrastructure of creative spaces and effective management.

In 2015, implementation of the Erasmus+ project "Development of a network infrastructure for youth innovation entrepreneurship support on fablab platforms" (FabLab project) has started. Its participants are universities of European Union (EU) countries, Ukraine (including Ternopil Ivan Puluj National technical University, TNTU) and Belarus (http://fablab-erasmus.eu/) [1]. The goal of the FabLab project is to create conditions for the development of innovations and engineering creativity, to improve students' employment through the university interaction with business and industry based on FabLabs. The coordinator of the European project FabLab is the Buckinghamshire New University (United Kingdom, UK).

Specific project objectives are stated as: establishment of university fablabs; development of teaching methodology and courses content, and modernization of the partner countries universities curricula; creation of a network infrastructure to support innovative youth entrepreneurship through networking of universities, business and industry.

RESEARCH RESULTS AND DISCUSSION

FabLab is a cut-across initiative that bridges the gap between people, educational institutions and business organizations, it educates by providing hands-on learning opportunities for all users, and also providing means for users to develop their ideas through rapid prototyping machines and other technological apparatus [2].

The concept of FabLab (fabrication laboratory), which is based on the idea of personal digital production, was invented 20 years ago by Neil Gershenfeld, a researcher at the Massachusetts Institute of Technology (MIT) and coined by MIT's Centre for Bits and Atoms. Since then, the FabLab idea has spread throughout the world, has gained particular popularity in such European countries as France, Denmark, Spain and the UK, and has been rapidly developing in Africa and Asia. FabLab is a broad movement, better known as "open laboratories". These open spaces are established by different communities, united around common values, sharing of knowledge, ideas and practices. Their establishment is followed by the rapid development of the novel production technologies, which are being actively implemented.

FabLab is a small-scale workshop equipped with flexible computer-controlled tools and systems for the production of digital fabrications of widely distributed products, which are used to encourage creativity and innovation among individuals irrespective of their geographical and demographical status. Since the inception of FabLab at MIT in 2001, FabLab have been duplicated throughout the globe at an exponential rate (Figure 1) [2].

Open laboratories' movement origin and development

The open laboratories' history in Ukraine takes its origin from large industrial centers, where the industrial development and the development of scientific centers were taking place simultaneously.

Technical workshops, technical work groups, aircraft, automobile, ship and space modelling groups and workshops, radio amateur groups have been existing in Ukraine for over 60 years. Mainly they are out-of-school educational establishments for development of students' creative flairs through creation of new and useful material technical objects. The stations for young technicians should be pointed out among them. They are the out-of-school educational children's art institutions that have the courses on modelling, radio design, folk crafts, technical design, toys design and informatics. As a rule, they are equipped with small universal machine tools for electric circuits mechanical processing and assembling. The stations for young technicians are financed from the city budget and have their own teaching staff.

Junior Academy of Sciences of Ukraine (JAS), with its branches in all regions of the country, is an important institution for development of students' scientific work in Ukraine. The JAS is the educational system that provides organization and coordination of students' scientific research activity, creates the terms for their intellectual, spiritual, creative development and professional self-determination, assists the increase of scientific potential of the country.

At the technical universities of Ukraine, and at the TNTU in particular, there is a specialist preparation system that involves the obligatory students participation in

research work from the very beginning of their studies. In almost six years of studies a student passes all the stages of a classic scientific research: preparation of literature review, implementation of patent information research, experimental and/or design work. Over 30 years ago, a course called "Fundamentals of engineering art" was introduced in Ukraine. It is oriented to increase the qualification of a future engineer as an innovator, creator that must in short terms implement new technical ideas in life.

Open technical creative associations such as makerspaces and hackerspaces have begun to appear in Ukraine since 2010. Such first well-known foreign associations are the Tech Model Railroad Club at the MIT, Steve Wozniak's Homebrew Computer Club and c-base hackerspace in Berlin. Some of the most well-known hackerspaces also are Chaos Computer Club in Cologne, Metalab in Vienna, HackerbotLabs in Seattle, HacDC in Washington, NYC Resistor in New York, Noisebridge in San Francisco and Cyberpipe in Ljubljana [3].

A hackerspace or hackspace is the real (oppossed to virtual) place, where people with alike interests, mostly in science, technology, digital or electronic art, gather, communicate and collaborate. Firstly, hackerspace is a community of like-minded people who share the interest to mastering and non-standard use of new technologies, free distribution of knowledge, nonhierarchical forms of self-government. Secondly, hackerspace is a particular appartment, physical space, where the community meetups and communication, ideas exchange, collaborative creative and productive activities take place.

Some of the typical hackerspace activities include: gaining the knowledge and knowledge exchange, presentations and lectures, social activities including games and entertaining activities. Hackspaces provide the necessary infrastructure for these activities: apartments, food and drinks, electricity, servers and computer networks with the Internet access, audioequipment, videoprojectors, play stations and various tools. The membership fees usually constitute the main source of hackspaces' income, although some have third party sponsors.

There are the following key differences between the hackerspaces, makerspaces and fablabs in Ukraine [4]:

1) time of foundation (hackerspases appeared earlier – the world's first hackerspace called c-base was opened in 1995 in Berlin);

2) own international network and identification:

– hackerspaces have Hackerspaces Passports [5];

– fablabs are the members of Fab Lab Fundation at MIT with the obligatory list of hardware equipment and software [6];

3) hackerspaces work mainly with the programmes while fablabs work with the physical materials. But this division is gradually erased as many fablabs turn into makerspace or co-working for engineers, and hackerspaces acquire their own 3D printers and machines.

There are also establishments that are different from hackerspaces and fablabs. Technoshops, first established in 2006, sell the products created by skilled craftsmen.

Since 2011 makerspaces (originate from the Make Magazine [7]) serve as creative spaces for inventors [8].

The common thing for all these creative associations is that they work with the open-access information and open-access technologies. That is why such creative associations as hackerspace, makerspace, technoshop and fablab can be presented all in one place.

As of October 2019 the number of fablabs in the network around the world accounts for 1789 laboratories (see Figures 1, 2) [10].

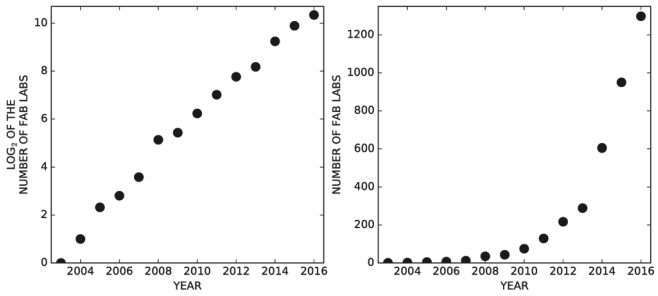


Figure 1. The number of fab labs, on logarithmic and linear scales

Source: Cutcher-Gershenfeld, Joel & Gersheneld, Neil & Gershenfeld, Alan (2017). Designing Reality: How to Survive and Thrive in the Third Digital Revolution [Online]. – Available at: http://designingreality.org/

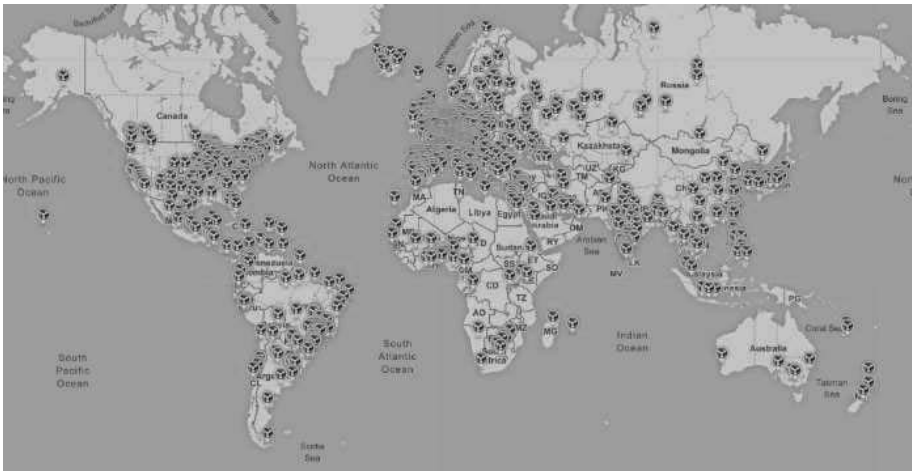


Figure 2. Worldwide network of FabLabs

Source: FabLabs map [Online]. – Available at: https://www.fablabs.io/labs/map

There are 225 FabLabs in the United States; in Europe, France is leading with 216 fablabs, 190 ones operate in Italy, 66 – in Spain, 60 – in Germany, 39 – in the Netherlands, 16 – in Poland (Figure 3) [10].

In [2] analysis if the FabLab initiative plays a part (if any) in a country's innovativeness (i.e. standing in the index) was carried out. The research results testify that the FabLab initiative intangibly contribute to the human developmental attributes

(such as science, technology, engineering, arts, and mathematics (STEAM)), thereby enriching some of the factors that promotes innovation and sustainability as a whole.

Ukraine holds 47th position in the Global Innovation Index (GII) 2019, being the second one among lower-middle income innovation economies. Switzerland is the most innovative country in the 2019 report, followed by the United States, the Netherlands and the UK [11].

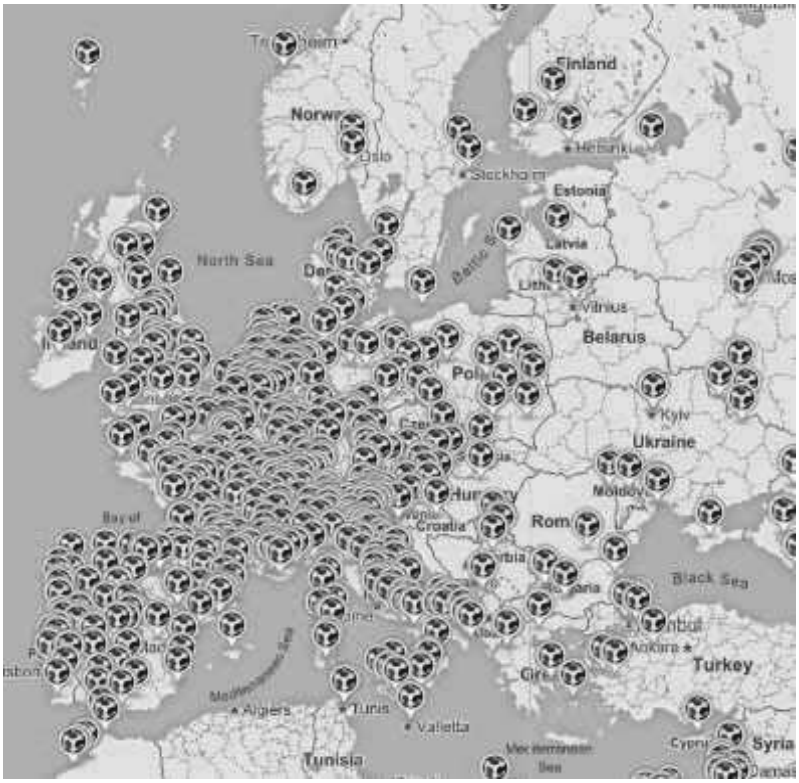


Figure 3. FabLabs in Europe

Source: FabLabs map [Online]. – Available at: https://www.fablabs.io/labs/map

It should be noted, that experts from the GII 2014 report [12] pointed out on three key factors:

– the inexistence of FabLab in a country does not necessarily mean the country would not be innovative; – the numbers of FabLab's workshops present in a country does not signify that the country is more innovative than the others;

– FabLab's contributions in a country's innovation index is not quantifiable (yet).

Despite the factors stated above, the FabLab initiative contributes immensely in ensuring sustainable development thereby creating long-term values.

The association of radio amateurs is considered to form the basis for creation of the opened technical creative associations in Ukraine [13]. The festival called "de:coded" became the place for communication for young specialists in computer

technologies. It took place every year from 2006 to 2011 in Lviv, and positioned itself as an IT-festival [14]. There a network of the personal contacts of future leaders of the hackers' movement was created.

Based on the popularity of the profile Internet resources (makezine.com, instructables.com, hackaday.com) around 2010 and due to the growth of the personal interest to the idea of hackerspace among the techno-enthusiasts in Ukraine, the first Ukrainian hackerspace, called Hackerspace, was founded in 2012 in Kyiv [13; 15].

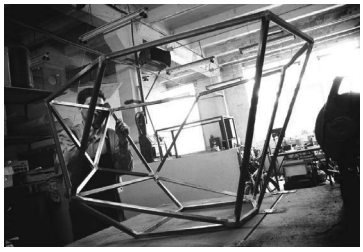
Since 2013, in the powerful hackerspace a team of techno-geeks, programmers and inventors has been working on the projects featuring 3D printer design, 3D scanning and automated devices. Nowadays, the Hackerspace Kyiv, which since 2014 is called HackLab, mostly works on the original hardware and robotics systems development (Figure 4, a) [13; 16].

In summer of 2013, the hackerspace called KHackerSpace was established in Kharkiv. In 2015 there were about 30 members in Kharkiv hackspace community. Many of them are the authors of original technological designs and projects. The hackerspace members take active part in educational scientific activity. During 2014-2015 KHackerSpace took part in numerous public events (Figure 4, b) [13; 17].

Another important centre of hackers movement in Ukraine is Lviv. In November, 2013 a small apartment was found in Betaplace (Betalab since 2015) co-working [13; 18]. In May, 2015 Lviv Hackerspace took part in the interdisciplinary project called Cyber Pills for Mental Health and from the organizational point of view, it is close to the fablab format. Current projects include: electronics, Arduino, Linux, ARM, Raspberry, motion control, measurement, etc., 3D printing with the substances for different applications, CNC, numerical control, R&D, new technologies, electromechanical devices, lasers, robotics and others (Figure 4, c).

a) HackLab in Kyiv, Ukraine

b) KHackerSpace in Kharkiv, Ukraine



c) Hackerspace Betalab in Lviv, Ukraine

Figure 4. Main centres of hacker's movement in Ukraine

Sources: HackLab [Online]. – Available at: http://hacklab.kiev.ua/, KHackerSpace [Online]. – Available at: https://www.facebook.com/khackerspace/, Hackerspace Betalab [Online]. – Available https://www.facebook.com/betalablviv

Among three main centres of hacker's movement, the two ones – in Kyiv and Lviv – have obtained some external features of Fablab/Makerlab format. Yet they have kept the organizational features of traditional hackerspace community. In its turn, Kharkiv KHackerSpace is an example of large public association which follows the European line of development with the considerable number of projects on

software and radio electronics development. Furthermore, Kharkiv community demonstrates an outstanding activity in various public events, scientific and educational area and art projects.

FabLabs in Ukraine

Support of EU programs significantly contributes to the development of FabLabs. Also the state decentralization policy has allowed local governments to allocate some funds for independent projects from communities through public initiative contests. As a result, in 2018, open space creative projects on fablab platforms won competitions in Kyiv and Odessa.

In Ukraine as of 2019 at fablab.io nine fablabs are being registered in Kyiv (Fabricator, IZOLAB, ProtoRoboLab), Odesa (MiRONAFT, .buro, HUB LAB), Kharkiv (Garage Hub), Sumy (3dinnovationlab), and Vinnytsia (Kvadrat).

IZOLAB (izolab.ua) is considered to be the first Ukrainian fablab platform. It is due to the official registration of this fablab on the website of the nonprofit organization called The Fab Foundation (USA) [19] (Figure 5, a). The laboratory of digital production IZOLAB was established in 2014 in Kyiv after the fund "Isolation" moved from Donetsk. Currently, IZONE is a creative union that functions at national and international levels. The IZOLAB laboratory was founded as a profitable private initiative and simultaneously a public organization. Currently there are seven workshops in the creative space of IZONE: IZOLAB, fotolab, wooden, etching, IZONE – café and silkprint. It is possible to say, that this fablab is a makerspace, a technoshop and a co-working at the same time, which has the necessary set of fablab equipment [20].

In June, 2016 the second Ukrainian fablab, called Fablab Fabricator, was established in Kyiv – an opened innovative workshop in accordance with The Fab Foundation regulation (Figure 5, b) [21; 21a].

a) IZO LAB / FabLab, Kyiv, Ukraine Workshop on building robots, 2016

b) FabLab Fabricator in Kyiv, Ukraine

Figure 5. Biggest Ukrainian FabLab platforms

Sources: Fabfoundation [Online]. – Available at: http://fabfoundation.org/fab-labs/, IZONE Creative Community [Online]. – Available at: https://izone.ua/ru/lab/1, FabLab Fabricator [Online]. – Available at: http://www.fabricator.me/, https://www.the-village.com.ua/village/business/businessmen/263279-business-owners-fablab-fabricator

FabLab Fabricator develops the wide range of interesting educational programmes for people of different age. Fablab Fabricator staff has adopted the

courses to satisfy the professional needs. They are intended to expand the knowledge horizons for the interested enthusiasts in different areas of science and technology: IT, product design, wearables, robotics, 3D-modeling and 3D-printing, electronics, virtual reality. Fablabs offer their visitors an access to 3D printers, milling machines with CNC, laser cutters, radioequipment.

In 2017 in Sumy, an ATO veteran created an open fabrication factory "Bobry" (Figure 6) [22; 22a]. It is an association of engineers, inventors, handmakers, startupers who are ready to share their experience, equipment and take part in interesting projects. The community creates socially-oriented products, such as recumbent bicycles for the sports rehabilitation of soldiers with severe injuries, or wooden toys and dollhouses

Figure 6. Open laboratory "Bobry"in Sumy, Ukraine

Source: Open laboratory [Online]. – Available at: https://bobry.in.ua/, https://www.facebook.com/bobryinua, https://www.radiosvoboda.org/a/veteranskyj-biznes/29903217.html, Veteran Business: Successful Passing Experience to Beginners [Online]. – Available at: https://www.radiosvoboda.org/a/veteranskyj-biznes/29903217.html

FabLabs at Ukrainian universities

The establishment of new fablabs in Ukraine is most intensively done at universities – active participants and drivers of innovative knowledge. As a rule, the laboratory is operated on the basis of a combination of commercial and non-commercial models, the latter one can be fully used in universities. Its realization is possible through a common creative space for individual and collective work on scientific and technical projects, creation and implementation of educational courses for student audience and teaching staff.

Among the Fablabs established on the basis of higher educational establishments (HEIs), MiRONAFT FabLab, since 2014, [23; 24], the Research Laboratory of Mechatronics and Robotics, – the largest innovative FabLab laboratory (acquired the status of FabLab in 2017) in Ukraine and Europe, established on the basis of the Odesa National Academy of Food Technologies (ONAFT), which hosts 400+ residents and is currently carrying out 15 projects, should be named first (Figure 8, a). MiRONAFT has become a place where everyone, regardless of age, skills, place of study or work, with due consultation from the staff, will be able to realize his/her idea completely free of charge. Each resident is provided with a workplace for the development, assembly, testing of the prototype, as well as hand tools, software, specialized literature and expertise advice upon one condition – 20% of the time spent in the laboratory such person should voluntarily devote to the assistance in organizing and conducting events in the laboratory: festivals, exhibitions, master

classes, trainings, etc. Among the main activities of the laboratory are robotics clubs for schoolchildren, master classes on the basics of modern robotics (pneumatics, hydraulics, electric manipulators, programming controllers, CNC machines). As a regional center for the development of 4.0 technologies within the framework of the Association of Industrial Automation Enterprises of Ukraine, the laboratory carries out a whole range of activities to popularize 4.0 technologies in industrial segments at the local level. On the basis of the laboratory, the All-Ukrainian Olympiad in Mobile Robotics "RoboRace Odessa Grand Prix" takes place.

Since 2015, the opened laboratories are being established also at different universities of Ukraine – the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute (NTUU KPI), Sumy State University (SSU), National Aviation University (NAU), Volodymyr Dahl East Ukrainian National University (SNU) in Severodonetsk. It is planned to open one more university-based FabLab at Lviv Polytechnic National University [25].

In 2018 within the FabLab Project three FabLabs have been established at Simon Kuznets Kharkiv National University of Economics (KhNUE) (Figure 7, a) [26; 26a] and at the Integrated Manufacturing Engineering Department and the Educational and Scientific Complex "Institute of Applied Systems Analysis" (IASA) of NTUU KPI (Figure 7, b) [27] and at TNTU (Figures 9–11) [28].

a) FabLab at KhNUE, Kharkiv, Ukraine

b) FabLab at the IASA of NTUU KPI, Kyiv, Ukraine

Figure 7. FabLabs established within the Erasmus+ project "Development of a network infrastructure for youth innovation entrepreneurship support on fablab platforms" implementation in Ukraine

Source: Erasmus+ FABLAB [Online]. – Available at: https://www.hneu.edu.ua/erasmus-fablab/, FabLab of Simon Kuznets KhNEU [Online]. – Available at: https://www.hneu.edu.ua/fablab-fabryka-laboratoriya-hneu-im-s-kuznetsya/, FABLAB KPI [Online]. Available at: https://itm.kpi.ua/fablab/

FabLab KhNEU is a modern factory for 3D modeling, 3D printing, prototyping and technical creativity, created in 2018 as part of the European project Erasmus+. FabLab KhNEU provides free access for initiative young people and students to the modern equipment – 3D printers, laser cutters, milling machines, Arduino kits, raspberry platforms and sensors for the Internet of Things. The purpose and objectives of FabLab KhNEU: to develop of engineering creativity and innovativity for youth, to train students and creative people.to encourage youth entrepreneurship, to promote engineering specialities, to improve the skills of univesity teachers.

FabLabKPI was established in framework of Erasmus+ project have an equipment for machining, 3D printing, work with electronics, technical measurements and auxiliary equipment. FabLabKPI implements projects of students and professors of the Igor Sikorsky Kyiv Polytechnic Institute and cooperates with business. The most interesting projects: Formula Student KPI, City Electric Vehicle ZEUS, Modular Camper CangUA, Agricultural Robotractor FLIbot, Robot-andriod POPPY, Mobile Platform.

The electronics laboratory Lampa [29], also at NTUU KPI, is the opened laboratory for high-quality, free and interesting studying of electronics (Figure 8, b). It functions on the basis of the Department of electronic numerical apparatus constructing. The laboratory works in both educational and student development directions, starting with the implementation of the diploma and courseworks prototypes and resulting in own startups.

Sky Lab at NAU is an opened laboratory with scientific engineering designs developed by students and teachers (Figure 8, c) [30]. It functions on the basis of the Department of electronics at Scientific Educational Institute of Aeronavigation of NAU. In the laboratory there is minimal necessary equipment for studying electronics, that includes electronic boards (arduino uno / due, rasberry pi, intel edisson / galileo), educational boards, components, soldering station and more. Any student can come and accomplish a coursework or diploma project, or a startup prototype. Students can also get recommendations concerning modern software and board design both from teachers and advanced students, and from engineers-designers.

Laboratory “3D-innovation” was opened on the basis of SSU at the Faculty of Electronics and Information Technology in 2015. The main activities of the laboratory are: development, testing and use of 3D-printers, scanners and Embedded Electronic Systems based on Arduino and Raspberry Pi, design, simulation and manufacturing complex unique products from different types of plastic, manufacture of metal products using CNC-milling, development and implementation of augmented and virtual reality, production of unmanned aerial vehicles (quadcopters, hexacopters and gliders), holding seminars, conferences and courses related to 3D-printing and using artificial intelligence algorithms in embedded systems (Figure 8, d) [31].

On the basis of FabLab Sever at (SNU) in Severodonetsk students and pupils create a variety of objects made of wood, plastic, metal or cardboard, trainings and workshops, IT forums are held (Figure 8, e) [32]. FabLab was initiated by “Terre des hommes” (Tdh) organization and funded by the Ministry of Foreign Affairs of the

Netherlands. The project aims to support children and young people affected by the conflict in eastern Ukraine. Tdh started using FabLab for educational and humanitarian purposes in Greece in 2017 to help young people and communities affected by the refugee crisis. Both refugees and locals use this space to turn their ideas into life and develop their skills while improving their integration and resilience [32a].

a) Robotics club at MiRONAFT FabLab, ONAFT, Odesa, Ukraine

b) Open electronics laboratory Lampa at NTUU KPI, Kyiv, Ukraine

c) Sky Lab at NAU, Kyiv, Ukraine

d) 3dinnovationlab at SSU, Sumy, Ukraine

e) FabLab Sever at SNU, Severodonetsk, Ukraine

Figure 8. FabLabs operating at Ukrainian universities

Sources: MiRONAFT FabLab [Online]. – Available at: https://www.robot.onaft.edu.ua, Lampa [Online]. – Available at: https://www.facebook.com/lampa.kpi/posts/1664814657110749/, Department of Electronics at NAU [Online]. – Available at: http://kafelec.nau.edu.ua/IoT-ukr.html, 3dinnovationlab [Online]. – Available at: https://www.fablabs.io/labs/3dinnovationlab, FabLab.Sever [Online]. – Available at: https://www.facebook.com/FabLab.Sever/

FabLab at TNTU

On the 2nd of May 2018 at Ternopil Ivan Puluj National Technical University the TNTU FabLab within the Fablab project [28] as the 3D technologies center "FabLab" was established by the Rector's Decree. It was established to set up the interaction between the university and industrial enterprises, stimulate youth entrepreneurship, improve the quality of education, teach graduate and post-graduate students, and creative youth from Ternopil the engineering fundamentals of 3D modeling and computer-aided design, prototyping and 3D printing, the theory of inventive problem solving, innovative marketing and project management, retrain teachers in the field of 3D modeling and 3D printing and prototyping.

"For the educational institution, FabLab has to become an integral part of the innovative infrastructure. We hope to actively introduce prototype creation technologies, 3D printing and 3D modelling into the educational process of all specialties and, in particular, into machinery engineering", – said Rector Petro Yasniy during the Opening Ceremony.

The FabLab laboratory at TNTU is equipped, according to the requirements of the world Fab Foundation association, by two 3D printers, laser and milling machines with numerical control software, 3D scanner which are connected to computer automated production technological preparation stations based on modern software, as well as Arduino electronic prototyping kits.

Primary challenge of the TNTU FabLab is to provide students the opportunity to realize their technical and creative ideas. There are 5 well-skilled TNTU experts and plenty of modern equipment, which ptovide an opportunity to create almost anything.

The TNTU FabLab located in the TNTU campus on premises of Faculty of Engineering of Machines, Structures and Technologies. Work areas of the Fablab TNTU are demonstrated in Figure 9.


a) 3D modeling and design work area




b) 3D printing work area

c) laser cutting work area




d) CNC milling machine work area

e) workbenches and tools' box

Figure 9. Work areas of the FabLab TNTU

Source: 3D technologies center "Fablab" [Online]. – Available at: https://fablab.tntu.edu.ua

Events organized by the TNTU FabLab so far:

1. Presentation of Fablab equipment for teachers and students of Technical college of TNTU in Ternopil, June 21th, 2018 (Figure 10, a). Participants of FabLab project have shown the peculiarities of the application of 3D printing for teachers and students of Technical college of TNTU in Ternopil.

2. Workshop for students and meeting participants of partner universities within the Project, September 14th – 15th, 2018 (Figure 10, b): demonstration of equipment's possibilities in Fablab TNTU. During the short time of the Fablab Laboratory existence, researchers at the University have already been able to develop 2D and 3D

models of unique equipment and to produce prototypes of workpieces with complex geometry in the form of 3D printing.

a) Presentation of Fablab equipment for teachers and students of Technical college of TNTU




b) Workshop for students and meeting participants of partner universities within the FabLab project


c) Demonstration of 2D and 3D modelling and equipment for students of vocational school

d) Demonstration of 2D and 3D modelling and equipment for participants of Students Intellectual Festival “Vunderkinder”

e) Presentation of the Fablab equipment for secondary school pupils from Ternopil technical lyceum

f) Rector TNTU, Doctor of Technical Sciences, Professor P.V. Yasniy, the head of the Western Scientific Center of the National Academy of Sciences of Ukraine, the director of the Physics and Mechanics Institute named after. G.V.Karpenko, Academician of NAS of Ukraine Z.T. Nazarchuk, Chairman of PJSC "Ternopilgaz" O.I. Karavansky during a master class with a laser cutter

Figure 10. Events organized by the FabLab TNTU, Ternopil, Ukraine, 2018-2019

Source: 3D technologies center "Fablab" [Online]. – Available at: https://fablab.tntu.edu.ua

3, 4. Presentation of the FABLAB project results. Demonstration of 2D and 3D modelling and equipments for students of vocational school, 9 October, 2018 (Figure 10, c) and for participants of Students Intellectual Festival "Vunderkinder", November 4th, 2018 (Figure 10, d): technological capabilities of the Fablab laboratory equipment have been demonstrated. Students have created models for laser cutting and 3D printing.

5. Introductory Workshop. Presentation of the Fablab equipment for secondary school pupils from Ternopil technical lyceum, held on 14 November, 2018 (Figure 10, e). Pupils have created models for laser cutting and 3D printing. The models were cut on a laser cutting machine.

6. Extended meeting of the Supervisory Board of Ternopil Ivan Puluj National Technical University, 12 December, 2018 (Figure 10, f). Supervisory Board members, scholars and entrepreneurs took an excursion to the FabLab Innovation Laboratory based on the 3D Technology Center. The equipment of the laboratory was demonstrated to the scientists, heads of industry companies and master classes for laser machine and 3D printer were conducted.

There are five courses developed within FABLAB to support the innovation and creativity within the five partner countries universities: 3D Design and

Manufacturing, Rapid Prototyping and Manufacturing, Theory of Innovative Problem Solving, Market Diffusion, and FABLAB Project management (Figure 11).

The project aims at piloting the courses on at least 20 students in each of the FabLabs established in order to test the relevance and to fine-tune the mode of delivery that is the most appropriate for each of the participant university. Universities where the FABLAB courses are being implemented are using the generic training materials developed within the Project. However, the aim of piloting is to create the condition for enhancing the content of the learning materials and to find the best mode of delivery.

Assoc. Prof. Valeriy Lazaryuk,
Theory of Innovative Problem Solving,
Fablab Project Management

Assoc. Prof. Volodymyr Shanaida,
3D Design and Manufacturing, Fablab Project Management

Prof. Tetiana Vitenko,
3D Design and Manufacturing, Fablab Project Management

Prof. Nataliia Marynenko,
Market Diffusion, Fablab Project Management

Figure 11. FABLAB cources delivered by the FabLab TNTU team members

Source: 3D technologies center "Fablab" [Online]. – Available at: https://fablab.tntu.edu.ua

Network developed by the Fablab TNTU includes cooperation with such legal entities as LLC "SAYUZ", LLC "SPE "Teplobak", TC "SINAY", TC "3DDevice", PBS "Marketing Techology Ltd", LLC "VATRA Corporation", Corporation "Science Park "Innovation-Investment Cluster of the Ternopil Region".

The FabLab is able to provide the necessary conditions under which the formation and development of all the necessary practical skills and creative thinking become possible.

CONCLUSION

Nowadays, FabLabs significantly contribute to the promotion of high-tech, original projects. Such laboratories make it possible to ideas to become real, technical implementation of which required significant costs and complex production facilities earlier.

Existing FabLabs are laboratories with a set of standard equipment for the realization of participants' diverse interests, encourage innovative activities through open access to tools and advanced equipment for creation of the prototype, facilitate participants' intellectual development through the implementation of training courses and the ability to learn and practice own things making, are communication, knowledge and experience dissemination centers among FabLabs participants worldwide.

Thus, FabLabs must be considered in terms of education and training of talented youth focused on scientific, technical and engineering activities. Establishment and operation of such structures enables representatives of science, business and education to meet, experience and competences to be exchanged, teams for implementation of specific projects to be formed, specialists to be trained. This should be considered as an important indicator of economic development in a particular region, raising the index of creativity, the degree of self-realization of young professionals and the widespread involvement of advanced technologies in a variety of industries and creative activities.

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INNOVATIVE SUSCEPTIBILITY IN THE CONDITIONS OF UKRAINE DIGITAL INFRASTRUCTURE DEVELOPMENT

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Abstract
Objective. The objective of the article is to evaluate the status and prospects of digital infrastructure development as a necessary condition for increasing the innovative susceptibility of Ukrainian regions.
Methodology. Theoretical and methodological basis of the research is the fundamental work of foreign and domestic scientists on innovative susceptibility, formation and development of digital economy and digitalization of society. Methods of analysis and synthesis (to determine the nature and basic components of digital infrastructure and highlight the main factors affecting the uneven development of digitalization in the regions of Ukraine), graphical method (to illustrate the dynamics of the share of households by regions having access to Internet services at home in 2010-2017), a method of comparison (to estimate population distribution across Ukrainian regions for the purpose of using Internet services in 2017).
Results. The need for the development of broadband networks in order to overcome the "digital divide" among the population in some regions, cities and villages is proved. The essence and basic components of digital infrastructure are considered. The distribution of population by regions of Ukraine in relation to the purpose of using Internet services in 2017 is analysed. The main factors influencing the uneven development of digitalisation in the regions of Ukraine and thus holding back the growth of their innovative susceptibility are defined, such as: lack of financial; problems that are supported for cyclical economies (necessary mailings used by average standards, adjustments to the regular program); use of "digital divide" and "digital inequality", imperfect inclusive work for residents of urban and vulnerable consumer groups; lack of motivation regarding information about the amount of digital data that was previously available; digital infrastructure is needed and accessible; displays new regulatory governance for the widespread legal regime for the emergence and development of digital technologies.
Conclusions. Overall, high-performance nationwide and regional digital infrastructure has enormous potential to promote economic and innovation growth, new socio-economic phenomena, new quality of life, and innovative innovation.

Keywords: digital economy, digital infrastructure, broadband networks, innovative susceptibility.

INTRODUCTION

Digital innovation began to spread in the world since the 1960s. The first stage of the development of digital innovation technology came down to the automation of existing technologies and business processes. The second stage started in the mid-1990s and was characterised by the global penetration of the Internet and mobile connection into human life. Currently, the development of technological infrastructure and using large databases have led not only to the extended access to the Internet of millions of consumers but also to the integration of a wide range of digital services, products and systems into a single cyber physical system [1].

The recognition of the digital economy importance is the annual increase of its share of GDP in the world by almost 18%, and in developed countries – by 7%.

According to the World Bank, a 10% increase in the number of high-speed Internet users can increase the annual GDP growth from 0.4 to 1.4% [3].

One of the promising directions for improving the efficiency of innovative development of Ukraine and its regions can be to support their competitiveness, taking into account the need and susceptibility of innovation by the society [8]. In the digital economy, when innovations are most often getting digital, the public's susceptibility of innovation depends on the availability of a high-quality Internet access, i.e. on the development of the digital infrastructure.

PREVIOUS RELATED RESEARCH

Some value in considering the issues of origin and development of digital economy, digitalisation of society is presented in the works of domestic and foreign scientists, in particular W.Isaacson, D. Bell, E. Williams, B. Gates, G. Karcheva, S. Kolyadenko, R. Lipsey, J. Von Neumann, E. Peters, E. Toffler, V. Fischuk, S. Huntington, and others.

Despite the abundance of research with different approaches to the development of the digital economy and information and communication technologies, their impact on the economic and innovation growth, the issue of digital infrastructure and its impact on innovation susceptibility in Ukraine as a whole and in its regions in particular need further study.

Stating the objective of the study. The objective of this study is to evaluate the status and prospects of digital infrastructure development as a necessary condition for increasing the innovative susceptibility of Ukrainian regions.

RESEARCH RESULTS AND DISCUSSION

In early 2018, the Concept of Digital Economy and Society Development of Ukraine for 2018-2020 was adopted in Ukraine [6]. According to this Concept, the creation of digital infrastructures is a major factor in increasing citizens' access to the global information environment and knowledge. The main objective of the digital infrastructure development is to ensure that all citizens of Ukraine, without restrictions and technical, organisational and financial constraints (including socially vulnerable groups), can take advantage of digital opportunities, regardless of their location or residence, and not be in the digital divide [6].

The Concept mentions National Broadband Internet Development Plan, which should define coverage models, models and mechanisms for intensifying the investment activity of market operators, as well as mechanisms for creating demand and forming citizens' needs to obtain broadband Internet access services.

Demand for high speed Internet is increasing worldwide. Needs of society are changing. The use of fixed and mobile digital devices, the learning process with digital devices, medical video services, interaction with government agencies, the use of various applications and automated systems, etc., is increasingly affecting the volume and speed of data transmission. In December 2018, the International Telecommunication Union (ITU) announced that 3.9 billion people or 51.2% of the world's population use the Internet.

In Europe, 79.6% of the population had access to the Internet at the end of 2018. EU leaders are linking the future with technological changes, which is the beginning of the digital era – the introduction of the achievements of the 4th Industrial Revolution in the regions and the entry into a period of steady growth [7, p. 24]. For example, the strategy "Europe 2020" [4] envisages the implementation of "The Plan of Digital Technologies Development in Europe". The goals of this plan are to achieve a sustainable economy and social benefits through the creation of an EU-wide digital market based on the broadband Internet.

Speaking of Ukraine, about 60% of Ukrainians currently use the Internet on a regular basis, with even fewer users having access to the high speed Internet. The state of the broadband Internet in Ukraine indicates that there are some disproportions in the penetration of the broadband Internet by regions (Figure 1) and a fairly noticeable gap between the city and the village – about 30%.

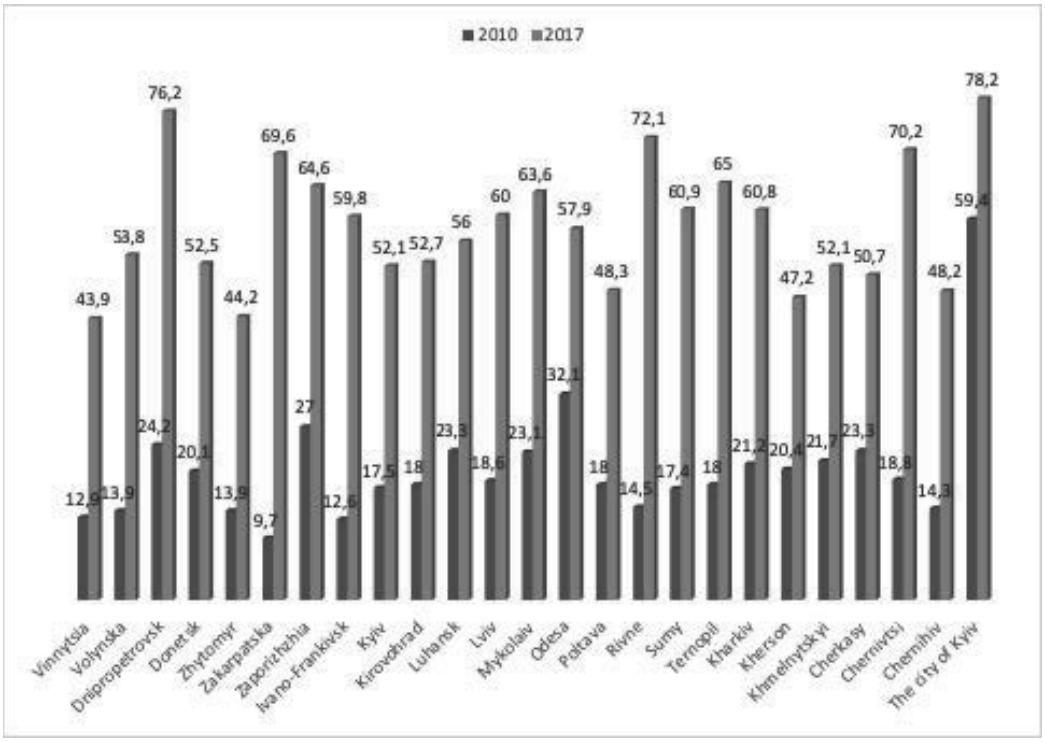

Figure 1. Dynamics of the share of households by regions with the access to Internet services at home for 2010-2017

Source: compiled by the author according to [2]

For example, a significant number of rural population (33-35%) do not have the broadband Internet, but could connect to it. However, studies show that for vulnerable consumer groups, such as low-income families, retired and disabled

people with low-income, the broadband Internet is not accessible at all, regardless of a city or a town.

The main reason for this is technical barriers, namely the lack of connectivity, i.e. there is a gap between the demand and the technical supply of the broadband connection. Due to the development of digital infrastructure in rural areas, the broadband indicators of the city and the countryside can almost get equal.

Therefore, the basis of digital economy development is a developed digital infrastructure. At present, there is no comprehensive research on the status and strategy of digital infrastructures development in Ukraine, the digital infrastructure in Ukraine is traditionally restricted only by telecommunications. However, in a general sense, digital infrastructure is not just telecommunications, it is a complex of technologies, products and processes that provide computing, telecommunication and networking possibilities and operate on a digital (rather than analog) basis [5].

At the national level, digital infrastructure is divided into hard and soft (Figure 2).

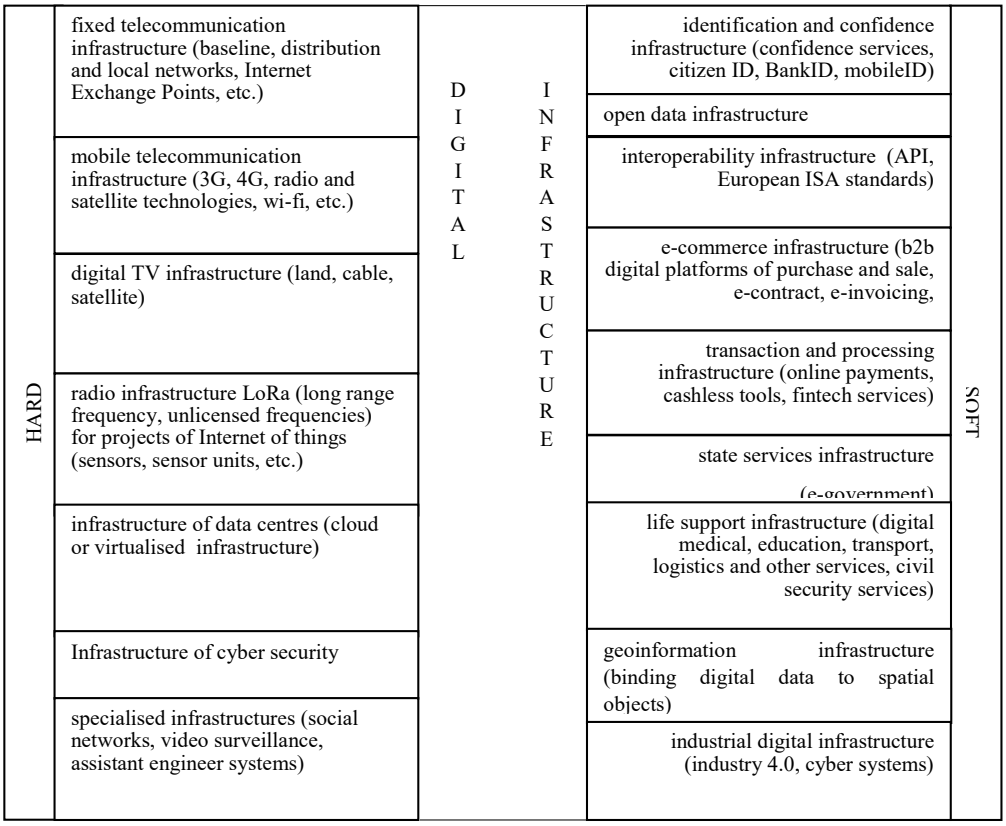

Figure 2. Basic components of digital infrastructure

Source: developed by the author according to [5]

Each contains relevant components that separately and together contribute to the economic growth of the country and the regions. The loss of one or more

infrastructure components reduces the pace and quality of digitization of the economy and society.

All the components of the national digital infrastructure are key ones to digital transformation of the economy and life activity, that is, it is the basis for many digital applications, services and implementation of digital platforms.

Digital infrastructures are bridges that contribute to the open, intelligent and integrated access to the vast amount of data available today and to taking full advantage of its potential, opening up new possibilities for research and innovation. The digital infrastructure is necessary to make progress in major areas of digital transformation, such as the Internet of Things (IoT), "Industry 4.0", network mobility or cloud services. It enables the automatic and decentralised exchange of information between machines, devices and sensors ("machine-machine" or "M2M"), which, in its turn, is the basis for a virtual network, for managing largely autonomous processes of production and maintenance in "smart" systems in the near future.

The underdeveloped digital infrastructure reduces the ability of households to benefit from digital transformation and, as noted above, especially in rural areas (home office work, digital administration, healthcare, educational services, etc.).

The distribution of population by regions of Ukraine for the purpose of using Internet services in 2017 is shown in Table 1.

Table 1. Population distribution by regions of Ukraine for the purpose of using Internet services in 2017

Regions	Population, thous. pers	Using I-net service, thous. pers	Purpose of using Internet services (% of population, that have stated, that they have used Internet services)												
			M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8	M 9	M 10	M 11	M 12	M 13
Vinnytsia	1566,7	797,0	25,2	3,5	36,0	25,9	62,3	31,8	7,1	48,7	54,3	20,7	31,8	22,0	0,5
Volynska	1021,5	505,4	31,4	0,4	24,7	42,2	70,4	47,3	0,6	30,9	31,1	7,4	22,9	14,9	14,3
Dnipropetrovsk	3216,9	2360,0	22,5	3,3	32,0	26,8	62,2	45,1	7,1	43,3	48,2	21,9	30,8	14,4	15,6
Donetsk	2169,8	1194,2	21,4	2,3	26,4	24,2	65,8	37,4	4,8	57,2	43,1	15,5	27,8	21,1	21,6
Zhytomyr	1225,6	623,0	15,3	2,0	35,5	22,7	42,8	38,2	1,6	29,1	39,2	4,4	28,8	10,8	17,0
Zakarpatska	1237,8	773,1	7,6	-	26,1	19,3	65,6	49,2	1,4	56,8	66,5	5,9	36,7	11,3	34,1
Zaporizhzhia	1755,9	1106,2	25,2	1,8	25,1	19,9	65,4	43,3	4,5	52,6	52,4	9,3	27,3	18,3	33,8
Ivano-Frankivsk	1352,8	874,6	13,6	-	29,4	19,5	68,1	44,6	3,9	74,8	65,0	16,3	19,7	6,9	24,0
Kyiv	1719,2	919,3	18,9	0,9	20,5	26,5	51,0	30,4	7,8	20,2	53,4	11,0	42,4	20,2	18,6
Kirovohrad	955,4	511,1	24,8	2,5	24,8	16,5	70,2	39,2	3,5	40,2	58,7	10,4	42,8	24,1	19,2
Luhansk	803,1	416,1	19,0	2,1	25,4	24,2	66,9	24,5	2,8	53,2	40,4	15,0	31,2	29,8	19,9
Lviv	2480,6	1395,2	21,8	1,0	28,2	30,3	64,6	35,8	2,0	54,6	49,8	7,3	26,3	21,4	25,5
Mykolaiv	1132,2	679,2	5,8	-	28,7	32,3	67,2	33,1	4,9	52,1	29,6	15,5	31,4	19,2	18,5
Odesa	2349,8	1156,5	32,0	1,6	23,8	17,8	66,0	37,9	5,9	52,0	50,4	10,5	41,1	15,4	25,4
Poltava	1406,0	755,6	21,6	3,3	23,1	29,4	40,4	39,6	3,5	40,0	48,4	16,1	40,4	29,3	10,7
Rivne	1143,3	614,7	21,3	1,1	26,9	17,1	61,0	42,3	6,8	45,0	38,8	4,2	18,4	11,8	11,8
Sumy	1085,0	648,4	14,5	-	20,0	34,4	71,6	35,8	1,3	32,1	40,7	18,4	38,4	11,8	24,3
Ternopil	1041,8	633,7	27,9	0,5	29,2	33,4	58,0	25,9	1,3	61,8	41,6	7,0	23,5	8,9	25,7
Kharkiv	2706,0	1682,0	25,5	0,7	27,5	27,2	55,8	40,3	9,0	51,7	58,2	15,4	47,2	11,2	19,4
Kherson	1049,4	522,3	27,5	2,9	27,7	22,7	60,0	31,9	7,9	54,0	52,2	21,1	32,0	11,4	15,5
Khmelnytskyi	1261,8	754,7	14,5	1,0	29,5	21,9	65,2	37,8	5,4	52,6	50,3	9,1	31,3	15,2	9,5
Cherkasy	1221,7	637,0	17,0	3,6	31,6	33,5	73,7	32,0	2,3	38,1	50,5	8,0	29,0	21,5	23,5
Chernivtsi	890,4	602,3	10,3	2,6	29,9	16,6	57,0	36,0	2,7	57,3	47,8	5,1	33,4	12,5	13,2
Chernihiv	1012,1	525,1	22,7	2,8	30,1	11,4	63,4	35,8	6,8	35,6	53,9	14,4	28,0	17,5	17,9
The city of Kyiv	3893,1	2102,3	44,9	3,8	30,1	28,2	54,9	21,3	7,4	48,3	52,9	22,7	37,4	16,0	23,3

where M1 is sending (receiving) e-mail;
M2 is interaction with public authorities (e-government system) - downloading / requesting forms, filling in / submitting forms online, making online payments to government institutions and purchasing from them;

M3 is educational purposes. It refers to the purposes of formal education, such as research related to school and higher education courses, as well as distance education, including online activities;
M4 is reading / downloading newspapers, magazines online - reading/ downloading newspapers, magazines, eBooks online, subscribing to online news services, access to news websites for a fee and free;
M5 is downloading movies, images, music; watching TV or video or listening to the radio or music – public access to files and using web radio or web TV both for a fee and free;
M6 is playing video or computer games or downloading them- games that enable public access to files, online games both for a fee and free;
M7 is software downloading - downloading patch files or updates, both for a fee and for free;
M8 is telephone calls via Internet / Volp (Skype, iTalk, via webcam);
M9 is communication (hobby) - including posting messages or other information on chat sites, blogs, newsgroups, online discussion forums or similar resources, use of instant messaging;
M10 is banking - electronic transactions with the bank for payments, transfers, etc. or a review of the account information. Electronic transactions are not included in other financial services, such as stock purchases, insurance;
M11 is a search for health related information (medicines, medical services, pieces of advice, etc.) for yourself as well as others - including trauma, illness, nutrition and health improvement information ;
M12 is ordering (purchase) of goods and services - refers to orders for the purchase of goods and services placed on the Internet, e.g. the purchase of products such as music, tours and housing rent. Cancelled or not completed orders are not included.
M13 is getting information about products and services not previously mentioned.

Source: developed by the author on the basis of [2]

Despite the fact that there is a significant inequality in the distribution of the share of the population for the purpose of using the Internet in some regions of Ukraine, the purpose that has the highest percentage (from 42.8% in Zhytomyr region to 73.7% in the Cherkasy region) among the surveyed population is watching television or video, downloading movies, images, music, etc. A large percentage of all regions also have other entertainment purposes: online computer games or downloading them; negotiations via the Internet; communication in chats, blogs, forums, etc.

The smallest share (from 0.4% in Volyn region to 3.8% in Kyiv) has the use of the Internet for the purpose of interaction with state institutions, and the population of four regions (Transcarpathian, Ivano-Frankivsk, Mykolaiv and Sumy) did not use eGovernment system in 2017 at all.

The main factors influencing the uneven development of digitalisation in the regions of Ukraine should be considered:

– lack of funding;

– the problem of training qualified personnel for the digital economy (the need to develop appropriate educational standards, adjust educational programs, etc.);

– the presence of “digital divide” and “digital inequality”, the incompleteness of inclusive policies for urban dwellers and vulnerable consumer groups;

– insufficient motivation of the society for the use of digital means, including financial;

– development of high-quality and accessible digital infrastructure;

– the slow formation of a new regulatory environment to ensure a favorable legal regime for the emergence and development of digital technologies.

CONCLUSION

In general, high-performance nationwide and regional digital infrastructure has enormous potential to promote economic and innovation growth, new social and economic phenomena, new quality of life, and innovative susceptibility.

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FORMATION OF THE DIGITAL ECONOMY THEORY IN THE WORKS OF N. NEGROPONTE AND D. TAPSKOTT

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Abstract
The evolution of the scientific views of N. Negroponte and D. Tapscott regarding the conceptual foundations of digital economy development is revealed in the paper. The concept of "digital being", based on the release and sale of a personalized digital product in the form of bits of information, is analyzed. It is determined that for the effective development of the digital world it is important to assure the development of the following components: the means of creating and distributing a digital product; devices for receiving and processing content; network bandwidth for content transmission; easy and intuitive interface of devices for digital product consumption. It is analyzed the Don Tapscott theory of the "new economy" as a "network intelligence phenomenon", which develops as a result of the convergence of three traditional sectors: communications, computer technology and content. It is justified that an integral part of the "new economy" in the era of "network intelligence" is the process of creation and use of "digital capital" as a result of the interaction of human, consumer and structural capital of the company. The basis for the formation of the digital economy is business webs (b-webs), which act as the heirs of industrial corporations and are represented by a system of suppliers, distributors, intermediaries, infrastructure providers and customers which use the Internet for their core business communications and transactions.
The paper describes the main types of b-web companies. Among them are Agora, Aggregator, Value Chain, Alliance, Distribution Network. The emphasis is on the growth of a new generation of "digital people" who use the Internet not only as a way of communication, but also as an opportunity to create digital business using new business models. The theory of the formation of "Wikinomics" is also analyzed, as the idea of self-organized mass collaboration of people in order to unite efforts to create new dynamic products and services. It is determined that "Wikinomics" is based on four basic principles: openness, peering; granting for access, global character of activity. It is noted that mass collaboration is the basis for the emergence of "platforms for participation", which arise with the development of prosumerism as a social movement to transform digital resource products and services into a common space for innovation. The logical result of the development of "Wikinomics" is the emergence of open Internet platforms, which will become a place to create innovations, values and new areas of business for a wide number of partners.

Keywords: digital economy, new economy, digitalization, business networks, Wikinomics.

INTRODUCTION

The transformation of the industrial economy into an information economy under the influence of information and computer technologies and the Internet, changes in business models of companies and employment structure, led to changes in economic models in different countries of the world, which was reflected in a number of new concepts and theories. Almost simultaneously with the theories of M. Porat's "Information economy" and M. Castels's "Internet and Network economy", appeared the concepts of "Electronic, Digital, and Platform economy", based on the growing value of information networks, the Internet, and the software products.

RESEARCH RESULTS AND DISCUSSION

Supporting the idea of the importance of the development and use of computer programs in the maintenance of modern business, American programmer Nicholas Negroponte in his work "Being Digital" [4] formulated the conceptual foundations of the "Digital economy", which is based on the idea of atoms and bits as units of measurement in information and digital economies. The researcher argued that "the best way to evaluate the benefits and consequences of being digital is to reflect the difference between bits and atoms" [4, p. 11], which is the difference between the material world and the virtual. For example, the production of print newspapers, magazines, and books is a product of the industrial and information economy, while the development and distribution of their electronic versions is a product of digital economy. The same product provides different peculiarities of expenses for its creation, advertising and sales, which demand the changes of approaches for the interaction with consumers, contractors, and state authorities based on active use of digital technologies and networks.

Developing his concept of "digital being" N. Negroponte emphasizes that modern society is entering a post-information era [4, p. 163-164]. According to the scientist, the main difference is in the priority of the release of a tangible product (represented as atoms) both in the period of industrial society with its mass production and standardization, and post-industrial (information) society with savings due to computerization. Instead, in the post-information society, the much more development get a personalized digital product, in form of bits of information.

The main advantage of a post-information society is the ability to quickly transmit a digital product via the Internet, which, according to the researcher, is an "information line for the global movement of weightless bits at the speed of light" [4, p. 12]. The bit has no color, size or weight. This is the smallest atomic element in the DNA of information – a combination of numbers 1 or 0 [4, p. 14]. The development of binary code became the basis for the "digitization" of various information products, such as videos, photos, books, articles, which significantly influenced the development of these industries. For example, a song on a CD is compressed 44.1K times per second in code form. To display gray in black and white, the digital camera records its level using 256 combinations of 8 bit encoding, where 0 is black and 255 is white. Printing books or magazines does not require as much cost for their production and delivery to the consumer, their circulation is unlimited, they become available since their appearance on the Internet for consumers from all over the world.

Digitizing of information leads to two fundamental consequences:

– the information provided by the binary code can be easily merged, mixed and reused indefinitely;

– digital information processing results in a new information that can be used to analyze and develop a new digital product.

For example, when listening to music or watching a video on the Internet, the consumer sees only the names of the media products, instead, his computer reads hidden information, so-called "tags", such as keywords in a scientific article. This allows the digital service provider to get to know their customer better, to offer them

personalized content and to develop new services, such as on-demand videos or personalized newsletters according to the client's interests.

However, for the effective development of the digital world, it is important to develop the following components:

– digital product creation and distribution facilities (use of powerful computers and special software by digital service providers);

– devices for receiving and processing content (personal gadgets and devices owned by individuals and legal entities);

– network bandwidth for content transmission (using different approaches, such as telephone cable, fiber optic, mobile or satellite communications allows to transfer data with different speeds and volumes. It forms the consumer's perception of the digital product);

– easy and intuitive interface for digital product consumption devices (computers and first programs appeared in the early 60's, at the same time, only in the 90's with the development of Windows and other intuitive software, computers began to be used not only as a working tool, but also as a device for entertainment, reading newspapers, books, watching movies, and playing games) [4, p. 89].

Thinking critically about the processes of digitalization of public life, in 1996, Canadian economist-theorist Don Tapscott in his study "Digital Economy: Promise and Peril in the Age of Networked Intelligence" [8] for the first time emphasized the existence of a "New economy" as a "network intelligence phenomenon" that evolves as a result of the convergence of three traditional sectors: communications (telephony, cable, satellite, wireless), computer technology (computers, software) and content (publishing, entertainment, information services).

At the heart of D. Tapscott's study is the essence of the "new economy". According to the scientist, it is characterized by such components [8, p. 12-68]:

– Knowledge. A "new economy" is a knowledge economy. Creativity together with a high level of education, form the human capital that is a key resource in the development of a new economy.

– Digitization. A "new Economy" is a digital economy which main resource is the knowledge that is being created, stored and transformed digitally through the widespread use of digital devices.

– Virtualization. A "new economy" is a virtual assets economy that requires appropriate changes in government and social institutions, as well as the nature of economic relations.

– Molecularization. A "new economy" replaces the classic heavy structure organizations with new light business models allowing free work schedule and remote work capabilities.

– Integration / Internetworking. The development of the Internet and networking technologies helps to promote individual entrepreneurship by reducing the cost of finding suppliers and clients.

– Disintermediation. Digitization of information and free access to it on the Internet significantly reduce the need for classic intermediary services.

– Convergence. A “new economy” is an economy formed by the convergence of computing, communications and content. Together, they create an interactive multimedia product that is the basis for platform business foundation.

– Innovations. At the heart of developing a new economy is a steady stream of digital innovations, so the main task is to create an environment that encourages and rewards innovation.

– Prosumption. In contrast to the industrial economy with its mass standardized production, the main trend of the “new economy” is the emergence of prosumerism (prosumer, from professional or producer + consumer “professional consumer” or “producer-consumer”, this term was firstly used by E. Toffler in the book “The Third Wave” [2]) is a social phenomenon that involves the unification of production and consumption of a customized (personalized) digital product by one person. With the development of the Internet, every consumer is a digital product maker. For example, YouTube users, social network users or blogging platforms users share their content for other people while consuming their content. An online Ebay marketplace users advertise products for sale online and buys other products online.

– Immediacy. In the era of “"network intelligence”, the awareness of customers about the products and services of different manufacturers is growing significantly. Due to the feedback and evaluation system, consumers understand the advantages and disadvantages of goods, and therefore require exceptional service (overload of choices – the problem of “too much choice” by E. Toffler [3]). Thus, success in the new economy is achieved by companies that have a shorter time between ordering the product, creating and delivering it. This can only be achieved through the digital information technology.

– Globalization. The development of digital and network technologies made it easier for both consumers and manufacturers to access different markets. There is only one global economy in the digital economy, even if companies are legally operating in different countries.

– Discordance. A “new economy” companies that have access to and actively use digital technologies will gain significant market benefits, which can impair the financial standing of non-digital companies.

An integral part of the “new economy” in the era of “network intelligence” is the process of creating and using “digital capital” as a result of the interaction of human, consumer and structural capital of the company [9, p. 5]. Conceptual foundations for the formation of “digital capital” were made by D. Tapscott, co-authored with D. Lowy and D. Ticoll in a monographic study entitled “Digital Capital: Harnessing the Power of Business Webs” [9].

Scientists describe human capital as the sum of the capabilities, knowledge, skills, intelligence, creativity of the company’s employees in the context of their ability to create value for clients. The key difference between the human capital in the digital economy is the realization of its capabilities in the network, which, according to the growing demand of companies for creating new products and services, will facilitate growing involvement of independent contractors (networked e-lancers) and loyal customers to the process pf product creation.

“Customer capital is the wealth contained in an organization’s relations with its customers and its suppliers” [9, p. 27]. It involves having own brand of the company, customer accounts, their trust and positive feedback, vendor agreements, the willingness of the company to share plans with its major stakeholders. The difference between consumer capital in the digital economy is the replacement of the brand concept as a one-sided image of the company by dynamic bilateral relations with the customer, based on the analysis of online feedback, the consideration of offers and wishes in the dialogue with the user communities.

Structural capital consists of codified knowledge and core business processes that enable a company to meet market requirements. The main task is to develop effective methods and tools of human capital management for the growth of consumer capital, taking into account the dynamics of changes in their needs and preferences, as well as the development of new business models of companies functioning in the era of networks.

Scientists believe that the basis for the formation of the digital economy of the new economy are "business webs", abbreviated b-webs), which act as the heirs of corporations of the industrial era and are represented by “a clear system of suppliers, distributors, intermediaries, infrastructure suppliers and customers who use the Internet for their basic business communications and transactions” [9, p. 17]. Using a networked business structures allows companies to access human resources without owning them, launching a wide product line while at the same time lacking production capacity, capitalize company’s and market value, without having equivalent assets on their balance sheets. Investing much less in physical capital (stores, warehouses, inventory), b-web companies have lower fixed costs, which allows them to earn higher returns on invested capital. And the cost of attracting a new customer is much lower than that for “classic companies” (for example, to attract 10 thousand new customers to the Wal-Mart network, you need to open a new store, instead, for Amazon it takes only 2 new servers). This contributes to the exponential growth of network companies’ income with a linear increase in expenditures.

Instead, b-web business customers are more demanding about service, range, speed and quality of service, due to the ease of replacing the seller with only mouse click on the Internet. Digital technologies increase consumer expectations that suppliers’ offerings will meet their unique needs and tastes. This, of course, creates competition between digital companies and promotes the development of “business networks” as a form of business.

It is identified the following basic characteristics of effective and competitive business networks [9, p. 18]:

– developed Internet infrastructure (participants of the “business network” capitalize the benefits from lower costs, using the Internet as a source of communication between departments, suppliers, customers, intermediaries);

– creating value innovative propositions (“business networks” offer a unique, new value proposition that makes the old way of behaving obsolete);

– entrepreneurial opportunities (the “business network” manages the contributions of many participating companies. The network leaders rely on partners to maximize their return on invested capital);

– five types of “business network” participants (clients who create “business network” value; context provider in the form of an electronic service provider; content providers who develop and create product information; service providers providing operational, financial and information management, network security, logistics and delivery; infrastructure providers providing network communications, maintaining electronic and physical records, servicing buildings, offices, etc.);

– “coopetition” (members of the b-web community collaborate and compete with one another);

– customer focus (analyzing customer data, business networking companies build personalized relationships with customers, offering customized products);

– domination of the context (the leader of a business network is its context provider, who manages the principles of customer relations, develops a development strategy and receives the highest share of rewards);

– rules and standards (the main participants of the “business network” know and adhere to the rules of interaction, standards of quality of customer service);

– bathed in knowledge (business network members exchange customer engagement data to promote new products).

Key aspects for the classification of “business networks” are the degree of economic control (self-organized or hierarchical) and the integration of values (low or high) in the network.

Some b-web companies are hierarchical. They are characterized by the presence of a leading company that controls the content of the product or service, pricing, and operations flow. For example, automakers operate an integrated supply chain of partner companies. Retailers like Amazon.com and Wal-Mart also function hierarchically, taking responsibility for product selection, pricing, and customer satisfaction.

In contrast to the hierarchical type, there are self-organized “business networks” that co-operate around an open-access network platform. For example, eBay is an online auction of products and services that sell thousands of individuals and businesses, the value of which is determined by the demand and supply on the platform.

Focusing on value integration, some b-web companies create new products or services by integrating other companies’ contributions. For example, Dell, one of the world’s largest computer manufacturers, uses components manufactured by IBM, Cisco, Nvidia, and others. They define value as the benefit a user receives from a product or service. IBM achieves high integration by taking contributions from many vendors and converting them into a computer. Examples of b-web companies with low value integration are aggregator companies that offer a wide range of products or services to consumers, with their description, classification and support. For example, Alibaba is a company that is a platform that offers proposals of entrepreneurs from China. The same example is Prom.ua in Ukraine.

It should be noted that the level of economic control and integration of values became the basis for determining D. Tapscott, A. Lovie and D. Ticoll the main types

of “b-web” companies: “Agora”, “Aggregator”, “Value chain”, “Alliance” , “Distributive Network” [9, p. 30].

Scientists used the ancient Greek name “Agora” to define the type of “b-web” business, which is based on the idea of a place as a center of public and commercial relations, negotiating the purchase and sale of goods and services on the basis of determining a fair market price. The main pricing mechanism is one-on-one trading, multilateral auctions and exchanges. Ebay is a world-wide example of Agora-based digital b-web business. The advantage of this type of “business network” is the wide variety of sellers and buyers, convenience, low costs for distribution and marketing of products, a lot of information about all aspects of the transaction, participation in the auction as a form of entertainment. Agoras tend to prevail where transaction costs are lower than the range of uncertainty over the final price. Interestingly, the companies under this scheme are not resellers, they act as contextual third-party suppliers, facilitating negotiations and transactions between buyers and suppliers of a product or service, providing a mechanism for their secure interaction. Additionally, this type of business network has a significant impact on other sectors of the economy. For example, PayPal, now the leader of online payments, set up its business to make it easy to pay for eBay items. Unlike regular mail checks and payment orders, which were the norm of the day for classic financial services, PayPal offered its own electronic payment system to pay for auctions from around the world using only one PayPal client account.

“Aggregator”, as a form of organization of “business network” involves the presence of an intermediary with additional value between manufacturers of products and customers. The lead aggregator is fully responsible for the quality of the goods and services, perform market research, segmentation and market analysis, sets prices and decides on discounts and promotions. There are the following forms of aggregators: supergregators (they provide an extremely wide selection of traditional products. Examples are Amazon.com, Checkout.com); electronic resource aggregators (providing clients with a wide range of information); electronic brokers; industrial hubs; consumer portals [9, p. 92].

In the “Value Chain” as a business network type, the context provider structures and manages the b-web network to create a highly integrated offer that meets customer needs. Unlike industrial-era companies that are focused on manufacturing goods and then looking for marketing opportunities, value chain companies identify customer needs and then develop products form them. They sell not only a product or service but also a service and ongoing support that not only builds more loyal customer relationships, but also provides valuable insights into the use of the company’s products by consumers, which will then become a source for new products and services. For this, the parent company delegates material production to its partners around the world, instead concentrating on the creation of specific design and product characteristics. A prime example of this form of business organization is Cisco, which owned only 2 of the 38 networking factories in the late 1990s. The company delegated almost all sophisticated manufacturing, assembly, configuration and distribution activities to its partners. The company itself is responsible for coordinating common business processes and solving problems that arise for each

customer. Considering the fact that the clients of the company are large corporations, small and medium-sized business and even household consumers, the company needs to take into account the unique requirements of each group of consumers. To do this, Cisco must develop special projects, deliver and install special hardware and software systems, customize them and provide service.

"Alliance" is the most virtual form of b-web business that strives for high value integration without hierarchical control. "If the value chain is like a marching band, the Alliance is a jazz ensemble. The leader of the value chain, as a conductor, chooses music and manages the performance. The Alliance leader sets the direction, but each player contributes independently to the overall value experience. An orchestra member simply watches the score; jazz musician improvises with the musical style of the group" [9, p. 121]. The "Alliance's" value proposition is cooperation for the common good. Participants form a creative community that develops innovative products, creates and shares knowledge, or just have fun together. "Alliance" as a form of "business network" is represented by open source teams that develop software solutions for the overall development of the Internet. The design architecture is modular; each participant can work on their own snippet that connects to the common product. Participants are not paid for their contributions, but they are free to share the results. Alliances, as a rule, depend on the rules and standards governing the engagement, the acceptable conduct of the participants, and the determination of value. Quite often, buyers or users play a prominent role in creating value as participants in an online forum or as designers. A striking example of this type of b-web business is the development of the MP3 music standard, Linux and Android operating systems.

Also, "Distributive networks" are an equally important type of b-web business. Acting as postal services, telephone companies and power grids in the age of the industrial economy, they provide digital information transmission in the digital economy. Distribution networks include data network operators, new logistics companies and financial institutions. They do not create a single digital product or service, but instead transfer it between customers and consumers, as well as between companies within other business networks. The basis for their operation is the speed and ease of delivery of information, goods, money or other resources from digital service providers to users.

The analysis of the components of digital capital as a key to the development of the digital economy, according to D. Tapscott, implies the creation of new types of organizations, where the use of information technology and creative work of employees will improve organizational productivity and efficiency of the organization. It was the idea of the growth of the next generation of "digital people" that D. Tapscott dedicated his next study, entitled "Growing Up Digital: The Rise of the Net Generation" [6]. In this study, the scientist hypothesized the difference between a new generation of children growing up in an era of rapid Internet development. Calling children born between 1977 and 1997 a "network" generation" (N-Gen), the researcher emphasizes on their better adaptability to the digital world. Network kids can easily use e-mail, participate in chats, conduct video blogs. They

use the internet not only as a way of communication, but also as an opportunity to create their own digital business, which business models did not exist before.

Supporting the idea of D. Tapscott and analyzing the behavior of contemporary students, American education expert Marc Prensky proposed to use the term "digital natives" to refer children of the 1990s as representatives of digital society where official is digital language of computers, video games, mobile phones and the Internet. M. Prensky emphasizes that "today's students think and process information fundamentally differently than their predecessors ... they have a different kind of experience [ed. digital], which leads to another brain structure and thought processes" [5, p. 1]. They are accustomed to quickly get the information they need, enjoy parallel processes and multitasking, prefer graphic images as opposed to plain text, and feel easily online when working with hypertext. They feel the need for instant gratification and frequent reward. They prefer the game forms of work, making appropriate requirements for the organization of their jobs.

A generation that came into being in the early 1980s, Marc Prensky proposed to define as "digital immigrants". Despite the efforts in adopting digital technologies, people of this generation are characterized by a digital "accent" as a kind of "echo of the past", an attempt to combine digital capabilities with the habits of the analogue period (for example, confirming receipt of an email by phone, editing pre-printed text instead of typing on a computer, reading the instructions before using the electronic device or a new program that are intuitively understandable for "digital natives").

In support of hypothesis about the existence of the "network generation", in 2008 D. Tapscott published a new book, entitled "Grown Up Digital. How the Net Generation is Changing the World" [7]. Analyzing ten years of growth experience of "network generation", the researcher noted that "for the first time in history, children are more capable, knowledgeable and literate than their parents by using digital innovations as a center of social life" [7, p. 2]. With an internal awareness of the capabilities of digital technology, young people of this generation are transforming all the institutions of modern life [7, p. 10]:

– as employees and managers, they foster collaborative work, breaking down tough hierarchies and forcing organizations to rethink how they recruit, compensate, develop, and control employees. The very idea of managing from a corporate approach to a startup approach changed;

– as workers, they need less of a paycheck than a sense of satisfaction from work, involvement in creating a product or service that changes the world. The advantage is the free work schedule and the possibility of having remote work [7, p. 150];

– as businessmen, they have access to a global consumer market on a par with large corporations. Even by offering a fairly niche product with little demand in a small town, thanks to social networks and online shopping sites, young people have the opportunity to build a successful small or medium-sized business.

– as consumers, they want to be "prosumer" - work with manufacturers to create innovative personalized products and services, transforming value concepts and branding. Representatives of the "network generation" make purchases whenever they want, relying not so much on advertising and brand of the company, but on the

feedback of like-minded people on social networks and the Internet (N-Fluence networks) [7, p. 187];

– as students, they require changes in pedagogical models that focus on the needs of students to develop not so much knowledge as the ability to adapt, communicate and collaborate;

– as family members, they change the relationship between parents and children, because children are often more experts in new technologies;

– as citizens, they require digital transformation, principles and approaches to public service delivery. Comparing the effectiveness of government with the services of Internet companies, the "network generation" appreciates the openness and accessibility of data on the state of public finances, available social programs and opportunities for people.

– as members of society, they are less politicized than their parents, at the same time, through the use of video services such as Youtube, or social networks, it allows every citizen to receive and disseminate information that is almost impossible to control by government agencies, which contributes generally to the development of democracy and civil society.

Noting the profound changes in the technologies that have led to the emergence of the digital economy, the emergence and development of "network businesses", and the growth of a new generation of people for whom the use of the Internet is a natural environment, Don Tapscott, along with Anthony Williams, put forward the theory of a new type of economics, which they called "Wikinomics" [1]. At the heart of this economy is the idea of self-organized, peer-to-peer mass collaboration in order to unite efforts for creation of new dynamic products and services. "Wikinomics" is based on four basic principles [1, p. 176]:

– openness (with the development of the Internet it became easier for companies to communicate with their clients and partners sharing information about themselves, their mission, values, development strategies, which provide opportunities to attract their clients' ideas and services for their own development);

– peering (a new form of horizontal business organization that involves the cooperation of different associations of people on equal terms);

– granting access (companies treating intellectual property as a mutual fund partially relinquish their intellectual property rights in favor of supporting open-ended research associations to share ideas for the development of a new technology or approach. For example, since 1999, more than ten pharmaceutical companies have renounced from their own projects in the field of human genome research and supported the creation of an open association SNP Consortium [1, p. 144]. Companies invest in the development of a whole industry that ultimately contribute to the development of all companies.

– globalization (most companies are multinationals rather than global ones. They have a federated structure with duplication of geographical features. At the same time, in the digital economy, companies incorporate regional features and strengths into the companies' structure, building integrated ecosystems that bring together hundreds or thousands of partner firms).

Web 2.0, or the "New Network", according to scientists view, brings together "network generation" people for whom the Internet is no longer a library of knowledge and resources, a repository of information or a shopping directory. They perceive it as a kind of glue that connects their social networks. MySpace, Facebook, Flickr, Instagram, Youtube are not just websites, they serve as dynamic online communities, which is a convenient tool for realizing people's propensity for expression, communication and entrepreneurship [1, p. 45-46]. Along with globalization and increasing competition, social networks are changing the culture of consuming goods and services (text and video reviews on the product or service that carry the emotional component of their owner become the mainstream), information sharing (any news is covered and commented on by a wide range of people , directly during the event), doing business (assuming openness and constant communication with customers). As a result of the spread of mass collaboration ideas that have encompassed the culture and business processes of companies, changes have been made in the organization of employees, whose workplace is becoming a "self-organized mini-enterprise" with decentralized forms of control and management.

The development of the Web 2.0 has revealed and harnessed the potential for innovation in thousands of people who were not full-time employees of companies. The emergence of online auctioneers of ideas – global marketplaces, dubbed "Ideagoras", such as InnoCentive, Nine-Sigma, InnovationXchange Network, Eureka Medical, YourEncore, Innovation Relay Centers, allowed people with specific skills or knowledge to offer their services of non-standard, faster and more effective solutions for different problems of companies for a fee. This form of collaboration has proven to be very beneficial for companies that have gained access to unique freelance ideas, as well as performers who earn extra money without changing their primary place of work. It is interesting that not only individuals, but also large companies can be suppliers of ideas in "Ideagoras". For example, IBM shares some of its intellectual assets with partners and competitors.

Mass collaboration has become the basis for the emergence of "platforms for participation", which have become widespread with the development of prosumerism, a social movement of transformation the digital resource products and services into a shared space for innovation. For example, the Wikipedia, an online encyclopedia with more than 920,000 articles in Ukrainian language and over 5.9 million articles in English [10] was created by the efforts of volunteers. It became the largest and most accessible collection of knowledge in the history of humanity.

The logical result of the "Wikinomics" development is the emergence of open Internet platforms, which have become a place for creating innovations, values and new areas of business for a wide number of partners. For example, the Google Maps, an online mapping service, that rely on the pro-loyal customer network, has become the basis for developing such online services as CheapGas, a service that shows the location of the cheapest gas stations, or the HousingMaps project, that shows houses and rental prices on the map. Amazon and Aliexpress have their own affiliate program, which for a fee, provides a payment and distribution network, placing products and services on their platforms. Similarly, SAP, the world leader in software

market, accessed its leading software platforms and contributed over half a million programs to software development freelance developers.

CONCLUSION

Thus, the concepts of "digital being" by N. Negroponte and "New Economy" by D. Tapscott laid the conceptual basic development of the digital economy theory as a phenomenon of the information society evolution and the development of the spheres of communication, computing and related content software. The main business model of the digital economy is the so-called "business network" or b-web, which is represented by a system of suppliers, distributors, intermediaries, infrastructure providers, and customers who use the Internet for their core business communications and transactions. The basis for the development of the digital economy is the emergence of a new generation of "digital people" who use the Internet not only as a way of communication, but also as an opportunity to create their own digital business, which is the basis of new business models. The organic step in the evolution of the digital economy is the formation of "Wikinomics" as an idea of peer-to-peer self-organized mass collaboration platforms on a global scale that bring together new dynamic products and services.

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DEVELOPMENT OF DIGITAL COMPETENCIES IN THE CONDITIONS OF SOCIAL DEVELOPMENT INFORMATIZATION

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Abstract
The article deals with the content and peculiarities of the introduction of the digital competencies concept, the prospects and advantages of the formation of a competent approach in the conditions of the information society. The article justifies that the active use of information technology in the educational process at all levels and directions enables the learning process to be more intense, complex and productive. In this context there were analyzed the "digital competency framework" where it was set out eight key competences: communication in the mother tongue; communication in foreign languages; mathematical competence and basic competences in science and technology; digital competence; learning to learn; social and civic competences; sense of initiative and entrepreneurship; cultural awareness and expression. The paper discloses the stages of the development of a competent approach in European education, in particular on the example of Great Britain. The research gave the opportunity to conclude that the growing need to use modern computer technology in the workplace leads to the need for increasing computer literacy for most professions. That will be an important motivation factor for changing education system of Ukraine and its entry into the European educational space.

Keywords: digital competency, informatization, professional competence, information society, educational process.

INTRODUCTION

Rapid development of information technology that fundamentally changes the life of society is a characteristic feature of the last decade. Economic relations became extremely dependent on infrastructure information support, social relations moved from the sphere of purely direct interaction to the geographically and temporally remote due to the possibilities of digital space.

Such radical transformations require a new approach to understanding the consequences of these processes, the ability to adapt digital technology to the modern requirements of society, and to protect it from the negative manifestations of total informatization of social development.

Particularly important is the introduction of a competent approach to education as the basis of the link “science-research-innovation”. Therefore, the objective of this article is to reveal the content and peculiarities of the introduction of the concept of digital competencies, to determine the prospects and advantages of the formation of a competent approach in the conditions of the information society. There is an attempt to study the stages of formation of a competent approach in European education, to carry out the analysis of “the framework of digital competence”.

RESEARCH RESULTS AND DISCUSSION

Taking into account the time requirements towards expanded understanding and use of information technology in everyday and professional life, both in business processes and public administration lays the foundation for the progressive development of the ultimate national economy.

It is important to differentiate the notion of competencies from skills. The relation between competence and skills is defined in an OECD project as follows: "A competency is more than just knowledge and skills. It involves the ability to meet complex demands, by drawing on and mobilizing psychosocial resources (including skills and attitudes) in a particular context" [1]. That is, competency itself, not a simple set of knowledge or skills, determines the competitiveness of a person on the labor market.

The International Commission of the Council of Europe in its documents considers the concept of competency as general or key skills, basic skills, fundamental learning routes, key competencies, cross-curriculum skills, key perceptions, or background knowledge [2].

Combination of digital skills with social time requirements is an important condition for acquiring competencies.

Digital competence is a combination of knowledge, skills and attitudes, through technology, to perform tasks, solve problems, communicate, manage information, collaborate, create and share content effectively, appropriately, securely, critically, creatively, independently and ethically [3].

At the state level, improving the digital competency in all areas of functioning is a source of increased competitiveness of the country, since access to information, digital interactions and the intensity of use and improvement of information and communication technologies are the basic elements of almost all global competitiveness indices. As the UNESCO experts state, the notion of competence is identified as a combination of knowledge, skills, values and attitudes applicable in everyday life. [4].

Similar to IQ or EQ, that are being used for measuring the level of intelligent quotient and emotional intelligence, DQ (Digital Quotient) measures the digital skills, or digital intelligence.

DQ comprises 3 levels:

– "digital citizenship", that is, the use of digital technologies in everyday life for interacting with each other, communication, viewing digital content, etc .;

– "digital creativity", that is, the use of digital technologies for creating content, media, applications, etc.;

– "digital entrepreneurship", i.e. the use of digital technologies for business and professional activities, etc. [5].

The definition of digital competencies is extremely complex and is explained by a set of determinants of the qualities of processes and properties that they must be characterized by.

The definition can be broken down into several building blocks, namely (Figure 1):

– learning domains;

– tools;
– competence areas;
– modes;
– purposes.

Training of skilled personnel should take into account the requirements of employers within the framework of new organizationally distinct forms of study. It is the implementation of the dual training system that opens up new perspectives in improving the efficiency of engineering education.

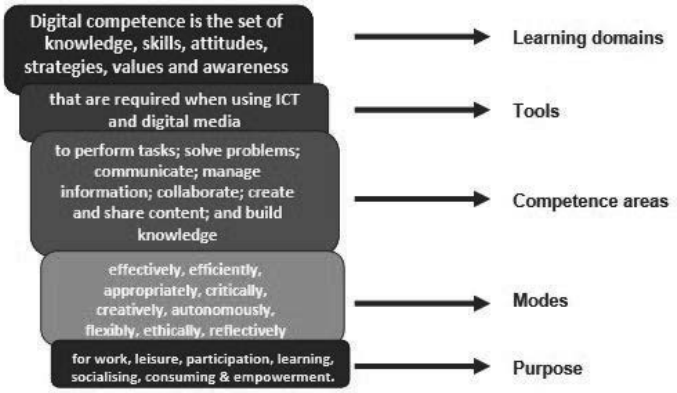

Figure 1. Parts of the definition

Source: [6]

Dimension 1: Competence areas identified to be part of digital competence. There were defined areas: 1) information and data literacy; 2) communication and collaboration; 3) digital content creation; 4) safety; 5) problem solving.

Dimension 2: Competence descriptors and titles that are pertinent to each area. There were defined 21 competencies.

Dimension 3: Proficiency levels for each competence. There are 4 main levels (foundation, intermediate, advanced and highly specialized) and their decompositions. Each level represents a step up in citizens' acquisition of the competence according to its cognitive challenge, the complexity of the tasks they can handle and their autonomy in completing the task.

Dimension 4: Knowledge, skills and attitudes applicable to each competence.

Dimension 5: Examples of use, on the applicability of the competence to different purposes. There were provided scenarios for two areas of use: employment and learning.

Since education remains the initial basis for the acquisition of digital competences, it is worth examining in more detail the peculiarities of its development in the context of facilitating the acquisition of these competences by pupils and students in Europe, the possibilities of adapting the experience of European countries in Ukraine.

The active use of information technology in the educational process at all levels and directions enables the learning process to be more intense, complex and productive. The combination of traditional techniques with modern interactive means is understandable and natural for the 21st century.

The European Union is active in expanding the ideas of informatization of development and the growth of professional competences, as reflected in such initiatives on the development of the "digital" economy:

– An Integrated Industrial Policy for the Globalisation Era Putting Competitiveness and Sustainability at Centre Stage [8];

– A Digital Agenda for Europe [9];

– The Entrepreneurship 2020 Action Plan [10] and many others.

These strategic documents contain the principles of development of professional activity on the basis of digital competences acquired by a person throughout the life, since the realized human potential is the source of the formation of values in the conditions of the information society.

As it is mentioned in [11], "Education forms the basis for a creative and productive workforce that drives R&D and innovation and is able to steer technological and digital developments, rather than react to them; education and training equip people with the skills they need on the labour market and enable them to respond to changing circumstances and structural change or disruption; education, training, re- and up-skilling help to smoothen the transition between jobs; education and training give people the chance to create jobs themselves; a highly-qualified and flexible workforce forms the backbone of a resilient economy that deals with shocks well and plays a pro-active role in the global economy".

Strategy "Europe 2020" [12] is aimed at transforming approaches to the functioning of European countries. The document identifies three main areas for achieving this goal, namely:

– intellectual growth (promoting knowledge, innovation, education and digital society);

– balanced growth (promoting industry development, increasing competitiveness);

– inclusive growth (raising the level of employment of citizens of European countries, acquiring appropriate skills that would correspond to the modern labor market, combating poverty).

A reference point for educational institutions in most European countries has long been the creation of a basis for the learning outcomes not to be mastered by certain tools for solving a problem, but for pupils' achievement of integrated competencies of a critical, creative and adaptive approach to outlining and solving a problem.

Increasing the level of digital competence for the use of information and communication technology (ICT) potential is a key priority of Europe 2020 strategy. [13].

Its main initiative "The Digital Program for Europe" [14] aims at achieve this goal. The low level of digital literacy and skills is considered inadmissible for the digital society and the digital economy as a whole. It also constrains the multiplier

effect that is characteristic of the use of information and communication technologies.

Great potential of ICT can be mobilised through a well-functioning virtuous cycle of activity. Attractive content and services need to be made available in an interoperable and borderless internet environment. This stimulates demand for higher speeds and capacity, which in turn creates the business case for investments in faster networks. The deployment and take-up of faster networks in turn opens the way for innovative services exploiting higher speeds. This process is illustrated in the outer ring of Figure 2 [14].

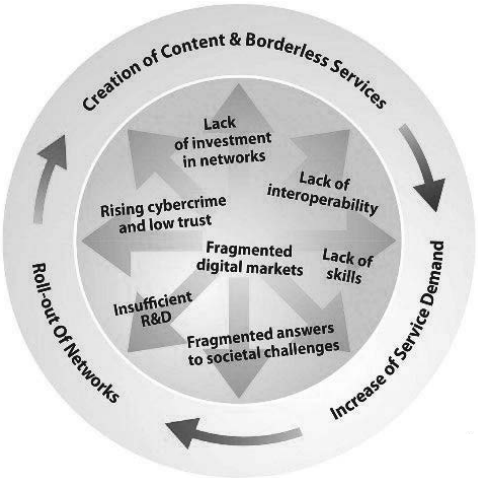

Figure 2. Virtuous cycle of the digital economy

Source: [14]

An important document, according to which the educational system in Europe has been centred is The Reference Framework, "Education and Training 2020" (ET2020) [15]. It provides common strategic goals of European Union countries in the realm of strengthening the efficacy of education and learning.

The 6 priorities for the 2016-2020 period are:

- relevant and high-quality skills and competences for employability, innovation, active citizenship and well-being (e.g. creativity, sense of initiative and critical thinking);
- inclusive education (i.e. including the increasing diversity of learners), equality, non-discrimination and the promotion of civic competences (e.g. mutual understanding and democratic values);
- open and innovative education and training, including fully embracing the digital era;
- strong support for educators (e.g. improved recruitment, selection and training processes as well as continuing professional development);
- transparency and recognition of skills and qualifications to facilitate learning and labour mobility (e.g. by means of the European quality reference framework);

– sustainable investment (including exploring the potential of the investment plan for Europe), performance and efficiency of education and training systems.

The Reference Framework sets out eight key competences [16]:

1) Communication in the mother tongue;
2) Communication in foreign languages;
3) Mathematical competence and basic competences in science and technology;
4) Digital competence;
5) Learning to learn;
6) Social and civic competences;
7) Sense of initiative and entrepreneurship;
8) Cultural awareness and expression.

Some European countries are actively implementing the declared strategic priorities of education. Thus, the analytical review "Learning to grow: what employers need from education and skills", Education and skills survey 2012, which was conducted by The Confederation of British Industry) revealed a very low level of proficiency in English (grammar, reading) 56%, mathematics 55%, information technology 66% of the modern British labor market. The same survey provided recommendations and requirements of employers addressed to education and government officials to improve educational standards, in particular, to increase the motivation of students aged 14-19 to acquire skills in technology, computer literacy, as well as to encourage them to enroll in IT specialties which will be in great demand in a few years [17].

This situation prompted educational reform in the state, in the field of computer technology and ICT, in particular. ICT curricula were considered obsolete, with a rather burdensome documentation, more focused on the ability to use technology, rather than the development of creativity in the use of software and digital content. Given the demands of the labor market and the appropriate training of students for a full-fledged life in digital society, the subject of ICT has been replaced by a new core subject "Computing", the training of which is more focused on the study of computer technology, programming. It is emphasized that the cognitive component of Computing helps develop skills of computational thinking (for example, algorithmic, logical, visual) for pupils of all ages at all key stages of training. Taking into account that "Computing" consists of two parts: informatics (including the academic part and programming) and information technologies (focusing on the use of computers in industry, trade, art and other fields), the National Curriculum in Computing has been developed after an in-depth consideration of the disciplines of Information and Communication Technologies and Computer Science, in terms of their teaching in schools of Great Britain (Table 1) [18].

In the development of the curriculum for the course "Computing" apart from educational institutions of Great Britain, such as Department for Education, Office for Standards in Education, Children's Services and (Ofsted) and business establishments, like Department for Business, Innovation and Skills, BCS, Confederation of British Industry, the companies of Google, Microsoft, Intellect have been involved.

A detailed analysis of the study materials (international documents of the European Union and the UK public education documents) has proved that for the

successful development of the countries of the European Union, the key to their competitiveness, overcoming economic crisis, creating a digital economy is a prerequisite for improving the quality and efficiency of education aimed at preparing young people for life in digital society. At this point, it is essential to stress on the importance of acquiring the appropriate digital skills, digital literacy, motivating young people to get enrolled in IT specializations.

Table 1. Comparative characteristics of the disciplines "Information and Communication Technologies" and "Computer Sciences" (a case in Great Britain)

No.	"Information and Communication Technologies" course	"Computer Sciences" course
1	Study of the main types of computer systems and their applications	Study of the structure of computer systems and the basic principles of their work
2	The main focus is on the human needs	The main focus is on the correctness of computing
3	Concentration on design, development, and evaluation of systems, with emphasis on user data requirements, functionality and availability	Concentration on algorithmic thinking and finding ways in which the problem can be broken into separate parts for its further solution
4	Focus on building or programming solutions using a combination of devices and software available at this time	Solving the problem and developing new systems by writing new programs and developing innovative computing directions
5	Focus on selecting, evaluating, designing and configuring relevant software and devices. Programming is the only way to achieve the desired results	Focus on the principles and technologies of creating new software and design for the formation of fundamentally new computations. Programming and coding are the main technologies for achieving the desired results
6	Integrated computer technologies help people, increase the efficiency of their activities, stimulate further development	The calculation is a "lens" that helps see and understand the nature of thinking in a new way
7	Focus on improving the level of education and the application of integrated computer technologies in different contexts, from academic to professional	The focus is on increasing the academic level of learning about computers and studying computer science

The growing need to use modern computer technology in the workplace leads to the need for increasing computer literacy for most professions. Understanding computer applications and programs becomes all the most important for getting a job.

CONCLUSION

Further research and study of the experience of the reform processes of the education system of leading European countries in the field of the implementation of integrated computer technologies in education is important for changing education system of Ukraine and its entry into the European educational space.

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INTERNATIONALIZATION OF HIGHER EDUCATION: CHALLENGES AND OPPORTUNITIES: A SUCCESS STORY OF SAVITRIBAI PHULE PUNE UNIVERSITY

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INTRODUCTION

Internationalization in European higher education has developed over the last 30 years, from marginal point of interest to a central factor also called mainstreaming of Internationalization. Globalization of our societies and economies has expanded the influence of competition and market process on the way internationalization is implemented. There are misconceptions myths about internationalization whereby internationalization is regarded as synonymous with a specific programmatic or organizational strategy to promote internationalization in other words, where the means appear to have become the goal.

There are myths of internationalization of higher education in the age of globalization i.e. education in English language, studying or staying abroad, an international subject, having international students, few international students guarantee success and no need to test intercultural and international competencies, The more partnership the more international, higher education becomes by nature, However there are truths about internationalization acknowledge and builds on national and regional priorities, policies and practice, Internationalization is a process of integrating an international, intercultural, and global dimension into the goals, functions, and delivery of higher education. Internationalization focuses on the worldwide flow of ideas, resources, people, economy, cultural values, ethos, knowledge, goods, services, and technology. Internationalization focuses on strategic partnership between and among the state, people, cultures, institutions and system. Internationalization of higher education has been positively and negatively influenced by globalization. The fundamental principles guiding internationalization always means different objects to various people, institutions and countries. This paper deals with new trends of Internationalization of higher education in India and challenges and opportunities and it will take an overview of success story of Savitribai Phule Pune University for internationalization of higher education.

Conceptual Framework

The concept of international education was actually born soon after the World War I, when a sense of peace had set in and young minds were keen to explore the World through the media of higher education. The Institute of international Education a on for profit institution in the US was established in 1919 in the aftermath of World War I by Nobel Peace Prize winners led by Nicholas Murray Butler, President of Columbia University, in the USA as they believed that is was not possible to achieve lasting peace without greater understanding between nations, and that international educational exchange formed the strongest basis for fostering such understanding. After the First and Second World War there was a paradigm shift in global political

system including international institutions. Creation of organizations such as the Institute of International Education in US, German Academic Exchange Service in Germany in 1925, British Council in the United Kingdom in 1934 are examples for political initiative for internationalization of higher education. There was a strong belief that the academic community could help build international solidarity and contribute to peacebuilding and overall development of humankind.

In Europe, student's mobility, staff mobility from the former colonial empires to Western Europe were the main focus of international higher education activities but they were rather scattered and fragmented. During the Cold War period, the concept of "Soft Power" initiatives, such as the Fulbright Program, established in 1946, the National Defence Education Act of 1958 were a direct reaction to the launch the year of Sputnik I by the Soviet Union. Many academic Partnership programs, funded through the US agency for International development and other organizations, linked American Universities with those in many developing countries including India. After the Cold War in the 1980s, the first sign of increased academic cooperation between Central and Eastern Europe and Western Europe as well as with the United States became manifest. Still academic cooperation was mainly a political issue and little institutional and personal autonomy was possible. After 1980s, international cooperation in higher education increase rapidly. The transnational European Mobility Program for University Studies Scheme (TEMPUS) of the European Community, established in 1990 for Hungary and Poland, extended to the other central and eastern European countries over the years. A program of CEEPUS, of the Australian Government, Programs like the Framework Programs for research and development and ERASMUS and European Union sponsored exchange, research, and collaboration programs both for the core and EU community and a wider a European audience, were related to the broader political and economic goals of the European Union.

Internationalization of Higher Education in Indian Context

The idea of India as a global destination is not new to India. It is as old as history, starting with the great migration of people from across the globe to India. However, in contrast, the last two decades in higher education is about outward mobility of Indian students. This trend is economically affecting India. This dismal ratio of inbound to outbound mobility in India represents a major challenge: It is not human capital that is flowing out of India but a substantial amount of revenue as well. Further, the spread of Education as soft power is gaining eminence as countries have started emphasizing on the cultural aspect of education through various programs and incentives.

A Descriptive Analysis of Education as Soft Power

Soft power in the words of Joseph Nye, "is the ability to get what you want through attraction rather than coercion or payments. It arises from the attractiveness of a country's culture, political ideals and policies. When our policies are legitimate in the eyes of others, our soft power is enhanced." The OECD suggests that by 2025 there will be no fewer than 8 million international students studying outside their

home country, an astonishing number in comparison to the 2 million registered in 1998. Certainly, the rising number of students studying abroad positively affects their host countries. International students promote intercultural relationship on the campuses where they contribute to local economies, and they often fill gaps in the labour market entering as highly qualified workers if they stay after graduating.

China experience

One can learn from the case study of China as to how it transformed into a hub for international students through soft power, cultural engagement and transitions. China aspires to become the new focal point of educational and research excellence. This marks the paradigm shift in global prospects as China is utilizing the asymmetries better than any other country in the world. In October 2011, at the National Congress of the Central Politburo of the communist party of China, General Secretary Hu Jintao focused on developing "Cultural Soft Power" as a foreign policy priority. The principle idea was to increase China's language and culture abroad and increasing its international impact. By 2017 there were 525 Confucius Institutes and 1,113 Confucius classrooms in countries with an enrolment of 9.16 million students. Institutes have offered 410,000 language courses to around 46,000 full and part-time and overseas Chinese teachers. China has increased the number of scholarships up to 30,000 especially to students from Central Asia and invited 10,000 teachers and students from the region's Confucius institutes to participate in training programs in China. China has invested in infrastructure projects in over 70 countries in Eurasia, South Asia, Southeast Asia, Africa, and Latin America and facilitated staff and students exchange programs. The number of Chinese graduates that have returned home has more then doubled since 2011. According to official statistics, if 339,700 Chinse students that studied abroad in 2011, 186,200 returned to China that year. 2016 upwards out of 544,500 Chinese students who were studying abroad, 432,500 returned home. Chinese policy makers established clear targets and were able to attain their initiatives that included utilizing higher education as the vehicle to achieve policy goals. As a result, International students, perhaps unwittingly, become actors in China policy. Recognizing China's skill at reaching goals through peaceful means is a demonstration of global policy that leverages soft power to advance a large geopolitical agenda.

The Current trends in India for enrolment of International Students in year 2018-19

In 2018-19 total international students enrolled in India is 47,427 from 164 different countries from all across the globe. The highest share of international students come from the neighbouring countries of which Nepal contributes 26.88% of the total, followed by Afghanistan 9.8% Bangladesh 4.38%, Sudan 4.02%, Bhutan 3.82%, Nigeria 3.4%, United States of America 3.2%, Yemen 3.2%, Sri Lanka 2.64% and Iran 2.38%. Among major contributors, Nepal has more male students than female. On the other hand, Sudan87.2% Yemen 90.9% Afghanistan 87.7% have a considerably higher number of male students. Although the maximum number of international students (295) enrolled in Ph.D. are from Ethiopia followed by Yemen

149, there are also 1518 international students from the USA of which 53.3 are female students. The highest number of international students are enrolled in undergraduate courses that is 73.4% of the total international students followed by post graduate with about 16.15% enrolment. Enrolment in rest of the levels constitutes 10.4% international students.

What is being done

Study in India Campaign: The campaign focuses on bringing international students to study in top ranking higher educational institutions in India. India has historically been a destination for higher knowledge. In continuation with this historical strength, 100 top institutions in the country are identified to admit 30,000 international students every year. The aim of the campaign is to make available high-quality premier education in India at affordable costs, for international students.

Under the Campaign Sector Scheme

Government of India is offering 2500 scholarships to worthy students covering their living costs as well as tuition fees. In order to improve living facilities for the international students, international hostels are being constructed at the cost of Rs.10 Crore per institution. The Ministry of Human Resource (MHRD) provides 1.000 scholarship for Syria, a special dispensation is provided for Syrian students of high merit.

India has emerged as the fastest growing economy in the world and it is expected that it will be one of the top three economic powers of the world, in the years to come. The advancement of new technology has changed the entire face of education. In this regard, innovative technology has been incredibly helpful. Innovative technology brings about dramatic changes in the world and there can be no sustainability without innovation. Innovation is very important for students as it motivates them to explore, research and use all the means available at their disposal to unveil something new. Students thus learn to deal with problems from different perspective. Creativity and problem solving skills of the students are thus developed due to the thinking process developed due to innovative ideas.

As per the 2014 report of the United Nations Educational, Scientific and Cultural Organization (UNESCO), “India is gradually emerging as preferred destination for international students”, particularly from the South Asian region. In 1977- 978, India hosted 16000 international students and in 2017- 2018, the total number went up to 46144. It means there has been an increase of 65%. In 2007-2008, the total number of students were 41275 i.e. 61.2%. In three decades (from 2007-2008 to 2015- 2016), enrollment of students jumped from 41275 to 45424. In nine years, there was an increase of 01.12% . Over a period of time, students from African countries, especially from Nigeria, Ethiopia and South Asia have been attracted to India because of Government of India initiative to sponsor international students through Indian Council for Cultural Relations (ICCR).

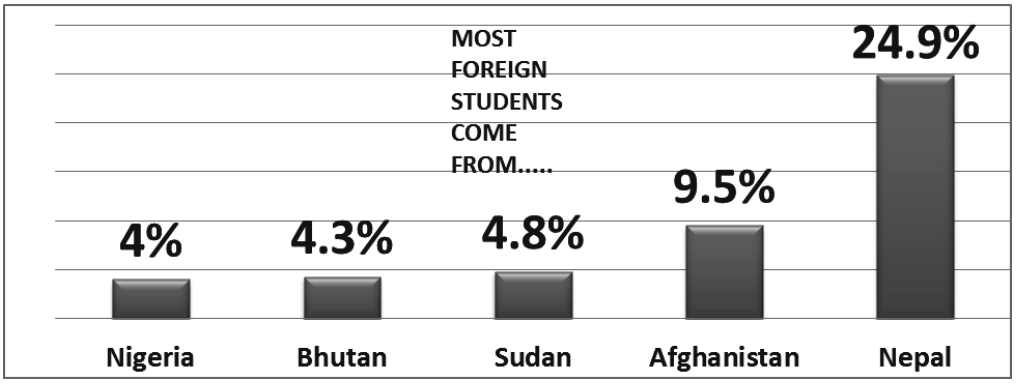


Figure 1. Countries from which most foreign students come to India

Source: Ministry of Human Resource Developments All Indian Survey on Higher Education 2017-18

As per UNESCO data, around 3,05,970 Indian students have been pursuing courses in foreign countries. As per the Reserve Bank of India (RBI) report, spending on tuition and hostel fees by Indian students studying abroad has shot up by 44% (from 1.9 billion in 2013-14 to 2.8 billion in 2017-18). The sequential growth in overseas education expenditure indicates that more Indian students are going abroad to pursue higher education.

The Sequential Growth

The sequential growth in overseas education expenditure indicates that more Indian students are going abroad for pursuing education.

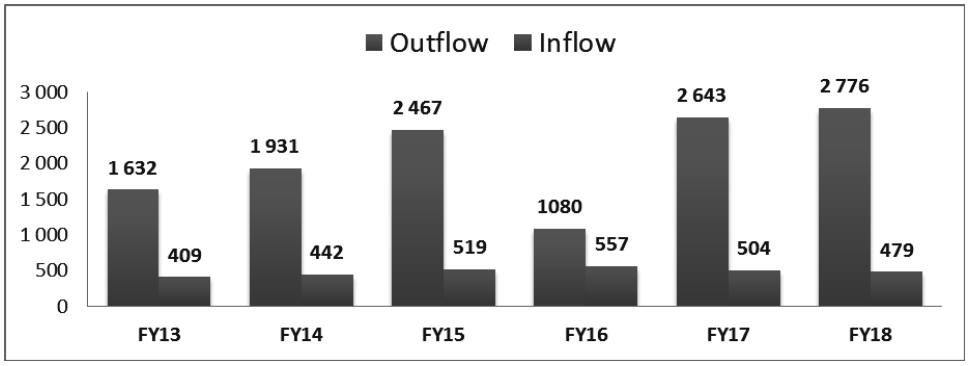


Figure 2. Education-related forex expenses (in $ million)

Source: Reserve Bank of India

While analyzing the international students data for internationalization, India ranks as 22nd source country, whereas as destination, India ranks at 26th position in the world for international students. Expenses of international students in India

declined from $557 million in 2015-16 to $479 million in 2017-18 and the main cause of concern is that Indian outreach is limited to developing countries.

Challenges for Internationalization of Higher Education in India

India has potential to become global actor in the field of higher education. However, there are structural issues while framing the international strategy.

I) Multiple agencies looking at this aspect

As per the Constitution of India, education is a subject included in the concurrent list. Federal and State Governments have different yardsticks, while framing education policies. The main concerns are regional identity, language barriers, political intention and other related issues. Apart from that, at national level several different national agencies are involved with issues related to international students like, Foreigners Registration Office (FRO), University Grants Commission (UGC), All Indian Council for Technical Education (AICTE), Medical Council of India (MCI), Agricultural Council of India (ACI) and so on. Therefore, it is difficult for International Students to have a single window system at National Level.

II) Multiple Stakeholders

There are a number of stakeholders for international students, such as, State funded universities, Central universities, Private universities, Agricultural universities, and Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs) and others have different strategy for internationalization of higher education.

III) Systematic Mechanism of Data Collection and Data Tracking

Presently, data collection of international students is a big challenge. International students come for short and long courses. At national level, All India Survey on Higher Education (AISHE) is responsible to collect and compile data. Furthermore, Association of Indian Universities (AIU) also collects data of international students from different agencies. However, there is hardly any scope to match the data.

Challenges at Ground level

India has around 800 universities, 40,000 colleges, and several national institutes of importance but only 150-200 universities host international students. Lack of good quality residential facilities is a major issue and the most important are perception issues- news headlines such as, “India Mob Strips Tanzanian student in Bangalore”, in 2016 or, “ Attacks on Nigerian Students Shock India”, highlight the security concerns about studying in India.

Past Initiatives

In 1978, ICCR review Committee brought to notice the lack of activities and quality of education, which resulted in some students returning to their respective countries, dissatisfied with their stay in India. In 2007, a report was prepared by the Ministry of External Affairs, on the directions of the Prime Minister’s Office to study how foreign students are being treated. In 2008, Inter-Ministerial Committee was formed to examine the report and implement it. In 2012, Inter-Ministerial meetings were held by the foreign secretary and in 2015, ICCR organized, education conference on the subject matter.

Advantage India

With increased access to information, Indians and foreigners are more comfortable than before, sharing knowledge with each other. India is progressing well and the image of the 3rd world poor country is being eliminated, slowly. Since that last two decades, India has developed the image of being a home to successful tech companies. Our top institutions, specially the IITs are world class and feature in the top 200 world rankings.

Success story of Savitribai Phule Pune Univesity for Internationalization

The Savitribai Phule Pune University (formerly University of Pune), since its foundation in 1949, has been one of the premier institutions of higher learning and research in India. With a picturesque campus sprawling over 416 acres of area, the University is a state university and one of the best universities in India, with jurisdiction over the districts of Pune, Nashik and Ahmednagar in Maharashtra. The University is not only one of the favoured educational destinations among students from different parts of India, but also draws international students from various parts of the globe. There are 4 faculties, 49 teaching and research departments on campus. Besides that there are 629 colleges and institutes and 194 research centres affiliated to the University. Under the dynamic leadership and support of the Hon'ble Vice-Chancellor, Prof. (Dr.) Nitin R. Karmalkar, Savitribai Phule Pune University, SPPU (Formerly University of Pune) has been working towards the advancement of innovation, creativity and sustainability. It has earned a place of distinction in the UK based Times Higher Education World Rankings 2018-2019. It is ranked first amongst traditional Indian Universities and is placed between 501 and 600 among universities worldwide. In the rankings from the preceding three years, that is 2016, 2017 and 2018, SPPU has consistently ranked among the top 600 to 800 universities in the world. As per the current National Institutional Ranking Framework (NIRF) ranking, which takes into account all Indian universities and institutes, SPPU holds a commendable tenth position. SPPU is one of the top ranking universities in India with highest established credential in education since 1949. As a part of our mission, we have collaborated with global institutions and universities to form a Centre of Excellence in teaching, research and extension activities.

The International Centre, Savitribai Phule Pune University (formerly University of Pune), is a pivotal department, providing a single-window service to international students who wish to study at the University. Savitribai Phule Pune University is a preferred educational destination for many foreign nationals who come to study in India. The objective of the International Centre is to coordinate between various departments of SPPU and affiliated colleges and institutes. The University has been actively involved in the **Internationalisation of Higher Education** programme, a Government of India initiative under the Twelfth Five Year Plan**.** The International Centre, SPPU, is a dedicated internationalisation unit and is also responsible for conducting all kinds of international academic and cultural activities involving the international student community.

In line with this recent endeavour, the Savitribai Phule Pune University (formerly University of Pune) has been actively involved in the internationalisation of higher education through its participation in several collaborative programmes with

leading national and international universities and institutes. Since its inception in 1949, the aim of the University has been to achieve a high level of excellence in academics and research to match global standards. It has not only welcomed international students from all corners of the globe but has also encouraged Indian students to go global and take part in different academic and research activities.

With the goal of internationalisation, the Savitribai Phule Pune University has entered into global academic partnerships with some renowned international universities. The University has initiated multi-disciplinary collaborative programmes with the Pennsylvania State University (Penn State), USA, for which the Joint Centre for Collaborative Engagements has been set up at the International Centre, SPPU. The University is also the 2013 Grant Recipient of the 'Obama-Singh 21st Century Knowledge Initiative Awards', now known as 'Indo-U.S. 21st Century Knowledge Initiative Awards' and has undertaken a joint research project, 'Inclusive Universities: Linking Diversity, Equity and Excellence for the 21st Century' with the University of Massachusetts, Amherst, USA.

Since the last several years, SPPU is involved in several international projects which were funded by the European Commission, under Erasmus Mundus. Students, staff and faculty got tremendous benefits from these projects. Presently, the SPPU is actively involved in the Erasmus + projects wherein a number of windows are open for bilateral thoughts and ideas in selective areas.

Apart from hosting Erasmus scholars, faculty and students, SPPU has hosted various international delegates. Savitribai Phule Pune University has signed various memorandums of understanding (MOUs) with international universities from Asia, Europe, Australia and America. Memoranda of Understanding (MoUs) have been signed with universities of high international standing such as the Pennsylvania State University, USA, Udayana University, Bali, Indonesia, Pukyong National University, Korea, George-August University, Gottingen, Germany, Salisbury University, USA, University of Warsaw, Poland, Adam Mickiewicz University of Ponzan, Poland, Geumgang University, Korea, University of Central Florida, USA, Institute Eutdes Politiques de Paris, France, University of Camerino (Italy), University of Bamiyan, Kabul, Afghanistan, Hanyang Univeristy, Seoul, Korea, Ontario University, Canada, Jonkoping University, Sweden, University of Kelaniya, Sri Lanka, Thammasat University, Bangkok, Thailand, Eberhard Karls Universitat Tuibengen, Germany , Dharma Drum Buddhist College, Taiwan, Telemark University, Norway, Fachschule fur Liftfahrzeugfuhrer, flying Institute in Germany, University of Central Florida, USA, Kanazawa University, Japan, Monash University, Australia, the University of Tokushima, Japan, University of Bolonga, Italy, Mount Crest University College (MCU), Ghana, University of Santiago, Spain, WuFeng University, Taiwan, University of Galati, Romania, The Delft, Netherlands and University of Cyprus, Cyprus.

Erasmus+ Inter-institutional Agreements have been signed with Universidad de Deusto, UD, (University of Duesto), Spain, University of Applied Sciences, Nysa, Poland, University of Santiago de Compostela, Spain and University of Goettingen, Germany.

Letters of Intent have been signed with Pennsylvania State University, (Penn State University), USA; TVET (Technical Vocational Education and Training) Authority (TVETA), Government of Afghanistan; Indo-European Education Foundation (IEEF), Poland, International Mind Education Institute (IMEI), South Korea and Lincoln University College (LUC), Kuala Lumpur, Malaysia.

SPPU is also a partner in the Erasmus + Capacity Building Higher Education [CBHE] Projects, Social Innovation for Local Indian and Israeli Communities and Graduate Entrepreneurs [SILICE] coordinated by IDC Herzliya, Israel and Tuning India project coordinated by University of Deusto (UD), Spain

SPPU also has been awarded "Social Science and Humanities Research Projects", funded by the European Commission. It is an international research project titled Cultural Heritage and Identities of Europe's Future (CHIEF) under the Horizon 2020 research program of the EU. It is an ambitious project that will investigate processes of transmission of cultural knowledge and how they impact the construction of cultural identities among young people within and outside Europe. The University will be a partner in this project along with nine other European Universities. Aston University, Birmingham, UK will coordinate the project. SPPU is the only Indian University participating in this project.

So far SPPU has been engaged in more than 12 Erasmus Mundus projects, namely, Erasmus Mundus, Erasmus + , EXPERTS4ASIA, Experts Sustain, EMINTE, EUPHRATES, Euro Culture, EXPERTS I, II, III, Strong Ties, INDIA4EU, Lund Lot 13 (EMECW), Erasmus Mundus External Cooperation Window, EuriIndi and three Capacity Building Higher Education [CBHE] Projects with several Indian and European partners.

SPPU also set up a Global Language Park, where new innovative ideas, were received through speaking trees. 100 trees were planted on International Centre premises. Ideas came from our international students. Global Language Park was setup in collaboration with Poets, Essayists, Novelists (PEN) International. It is one of the first language parks where trees will speak. Poets, authors, writers, thinkers from more than 67 countries planted trees on campus.

SPPU is the unique and one of the best learning institutions in India. It is called the "Oxford of the East". While enrolling students from three different districts, the strategy implemented by SPPU is to give more weightage to first learner and second learner generation. 70% first and second generation learners are from marginal sections of the society who are granted admission. Inspite of having such diverse population on campus, SPPU plays an important role not only at national but also international level by setting up new practices in higher education and administration.

SPPU as a dynamic and fast-growing Indian state university, is committed to nurturing and developing knowledge and talent and thereby contributing towards the social and economic advancement of the country. We, at the University, work tirelessly together towards the growth and well-being of a global society.

Table 1. International Students Country Wise Data (2013 to 2019)

Sr. No.	Country	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14	Total
1	Afghanistan	248	319	350	244	407	578	576	2722
2	Angola	0	0	0	0	0	0	3	3
3	Austria	0	0	0	1	0	0	0	1
4	Australia	3	2	0	0	0	0	0	5
5	Bahrain	4	1	8	0	1	3	69	86
6	Bangladesh	14	8	13	10	5	4	41	95
7	Belarus	0	0	0	0	0	1	0	1
8	Benin	0	0	0	0	1	0	3	4
9	Bhutan	3	1	0	1	2	8	32	47
10	Botswana	2	1	3	1	0	3	6	16
11	Brazil	0	0	0	0	0	2	0	2
12	Burundi	1	0	0	3	2	9	15	30
13	Cambodia	2	0	0	3	0	3	14	22
14	Cameroon	0	0	0	0	1	2	6	9
15	Canada	1	1	0	1	0	4	6	13
16	Cape Verde	0	0	0	1	0	0	0	1
17	Chad	0	1	0	2	4	9	16	32
18	Chile	0	1	0	0	0	0	0	1
19	China	9	3	5	4	17	6	4	48
20	Congo	2	2	0	4	9	16	48	81
21	Congo(DR)	0	0	2	3	1	0	4	10
22	Cote D'Ivoire	0	0	0	1	0	0	0	1
23	Czech Republic	0	0	0	2	0	0	0	2
24	Djibouti	2	1	2	3	2	9	7	26
25	Egypt	0	0	0	0	1	0	0	1
26	Eritrea	0	1	1	0	1	9	17	29
27	Ethiopia	0	0	6	4	4	9	28	51
28	Fiji	1	1	2	1	0	3	29	37
29	Finland	0	0	0	4	0	0	0	4
30	France	0	0	1	0	0	6	11	18
31	Gabon	0	0	0	0	2	6	0	8
32	Gambia	0	1	9	4	0	0	12	26
33	Germany	0	0	9	21	13	4	9	56
34	Ghana	2	0	1	0	3	4	29	39
35	Guinea	0	0	0	1	0	0	0	1
36	Hungary	0	0	0	0	0	2	6	8
37	Indonesia	1	0	2	1	0	2	0	6
38	Iran	3	4	9	28	76	222	161	503
39	Iraq	4	2	40	60	395	207	87	795
40	Ireland	0	0	0	1	0	0	0	1
41	Italy	0	2	1	2	2	0	2	9
42	Ivory Coast	0	0	0	0	1	3	0	4
43	Japan	1	1	4	7	9	5	0	27
44	Jordan	0	1	1	0	1	2	0	5
45	Kazakhstan	0	0	0	1	0	1	0	2
46	Kenya	0	0	1	0	0	5	36	42
47	Kuwait	5	15	16	2	0	1	0	39
48	Kyrgyzstan	0	0	0	1	0	0	0	1
49	Laos	0	0	0	1	0	2	7	10
50	Lesotho	1	0	0	1	0	0	0	2
51	Liberia	1	0	0	1	0	0	0	2
52	Libya	0	0	0	0	6	3	0	9
	Madagascar	1	0	0	0	0	0	0	1
53	Malawi	1	1	3	3	0	0	0	8
54	Maldives	1	2	0	0	2	0	0	5
55	Mauritius	13	5	11	12	4	5	21	71
56	Maxiso	0	1	0	0	0	0	0	1

57	Maynmar	0	0	0	2	1	6	14	23
58	Mongolia	0	1	0	5	7	19	18	50
59	Mozambique	2	3	10	10	15	3	16	59
60	Namibia	0	2	5	1	0	0	7	15
61	Nepal	15	10	13	26	31	98	77	270
62	Netherlands	1	1	0	0	1	1	3	7
63	Nigeria	6	3	2	9	29	26	18	93
64	NRI- GULF	0	0	5	111	129	176	287	708
65	Oman	0	4	13	0	0	0	0	17
66	Pakistan	0	0	0	0	1	1	0	2
67	Palestine	0	0	0	0	4	4	0	8
68	Peru	0	0	0	0	0	1	0	1
69	PIO/OCI	0	0	0	19	31	35	56	141
70	Portugal	0	0	0	0	0	1	2	3
71	Qatar	0	0	19	0	0	2	0	21
72	Russia	0	0	0	0	0	0	2	2
73	Rwanda	0	0	0	1	3	3	7	14
74	Saudi Arabia	6	9	14	1	0	15	19	64
75	Seychelles	1	0	0	1	1	0	2	5
76	Swaziland	0	2	0	0	0	0		2
77	Singapore	0	0	1	0	0	0	0	1
78	Somalia	0	1	7	9	10	2	7	36
79	South Africa	11	5	5	12	0	0	14	47
80	South Korea	0	11	16	12	30	7	39	115
81	South Sudan	3	7	4	3	35	6	16	74
82	Spain	0	0	3	3	2	4	3	15
83	Sri Lanka	28	10	40	41	3	12	17	151
84	Sudan	5	6	6	14	34	80	26	171
85	Sweden	0	0	2	3	0	0	0	5
86	Syria	0	1	1	1	9	6	6	24
87	Taiwan	0	0	0	1	0	0	0	1
88	Tajakistan	2	1	0	0	0	0	3	6
89	Tanzania	1	1	0	2	5	2	16	27
90	Thailand	3	11	16	29	28	45	28	160
91	Togo	1	0	0	0	1	0	0	2
92	Tonga	0	0	1	0	1	3	7	12
93	Tunisia	0	0	0	0	0	2	0	2
94	Turkey	0	2	1	9	7	3	2	24
95	Turkmenistan	100	52	38	45	49	44	54	382
96	UAE (Emiria)	10	13	25	1	1	2	2	54
97	Uganda	1	1	2	3	2	0	31	40
98	United Kingdom	4	1	0	1	1	1	0	8
99	USA	17	12	11	1	1	1	2	45
100	Uzbekistan	4	2	7	7	5	16	17	58
101	Vietnam	12	2	17	2	4	9	4	50
102	Yemen	9	8	18	33	125	101	61	355
103	Zaire	0	0	0	0	0	0	6	6
104	Zambia	1	0	0	1	2	0	7	11
105	Zimbabwe	0	0	1	0	0	3	0	4
Total		**569**	**560**	**803**	**859**	**1580**	**1898**	**2201**	**8470**

Source: International Centre, Savitribai Phule Pune University

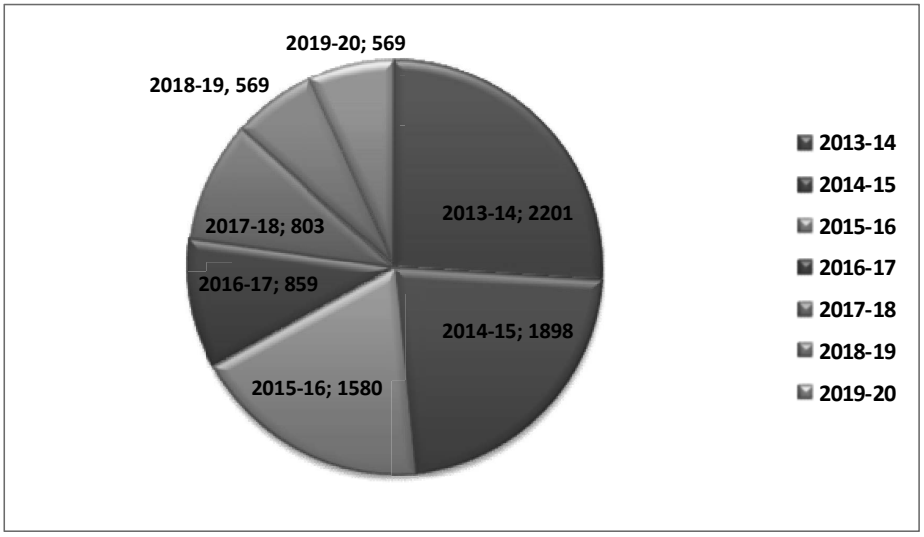
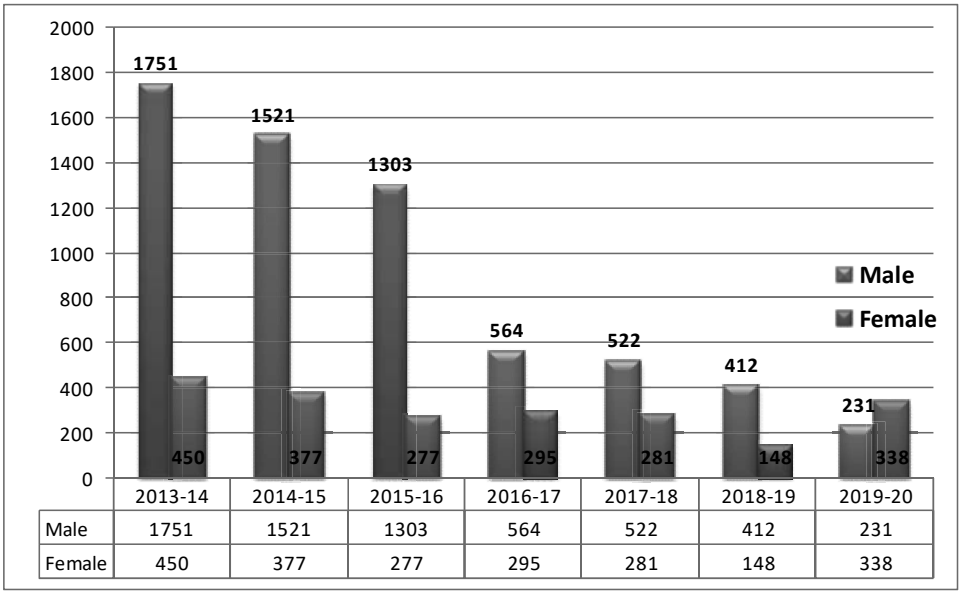


Figure 3.International Students Data 2013 to 2019 (Total Students = 8470)

Source: International Centre, Savitribai Phule Pune University



	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Male	1751	1521	1303	564	522	412	231
Female	450	377	277	295	281	148	338

Figure 4. International Students Data 2013 to 2019 (Total Students = 8470)

Source: International Centre, Savitribai Phule Pune University

Table 2.Indian Council for Cultural Relations (ICCR) Students Data (2013 to 2019)
Total Students = 1996

Academic Year	Under-Graduate		Post-Graduate		Total
	Male	Female	Male	Female	
2013-14	287	59	0	1	**347**
2014-15	519	136	0	0	**655**
2015-16	22	5	4	4	**35**
2016-17	97	80	19	10	**206**
2017-18	167	88	32	31	**318**
2018-19	102	33	27	16	**178**
2019-20	133	47	45	32	**257**
Total	**1327**	**448**	**127**	**94**	**1996**

Source: International Centre, Savitribai Phule Pune University

CONCLUSION

There is an urgent need to develop high quality and competitive educational programs that match international standards. The institutional ranking of Indian Universities on global platforms needs to be increased. There is a need to revamp new curriculum, teaching pedagogy, and pattern of examination. According to IIE 26% of students were studying STEM fields while the rest choose business 20.7%, Social Sciences 17.2%, Languages 7.3% and applied arts 6.3%. It would be safe to assume that destination countries for STEM field swill remain European universities, not Indian universities. So Indian universities could focus on short-term programs in other fields of study-particularly the social sciences and business that may be of greater interest to international students.

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UKRAINE'S PERSPECTIVES IN INDUSTRY 4.0

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Abstract
Globalization processes and technology innovations trends point out the importance of determining the role of Fourth Industrial Revolution on contries' socio-economic development. Key features of Industry 4.0 are identified in the paper. Fourth Industrial Revolution Initiatives of World Economic Forum are determined. Analysis of countries by their digital infrastructure and ability to use Information and Communication Technologies (ICTs) is conducted with regard to interrelation between levels of technological and socio-economic developments of the country. Reasons of these countries being ranked as top-10 are identified. Ukraine's economy performance according to Networked Readiness Index (NRI) is analyzed. The analysis of Ukraine's competitive advantages, key competencies and factors of long-term demand at domestic and foreign markets is given. Government Programs aimed at innovative economic development are described. Higher Education Institutions and Scientific Institutions activities on Technology Transfer and Academic Entrepreneurship are described.

Keywords: technology, digital era, network readiness index, R&D, Industry 4.0

"We are at the beginning of a global transformation that is characterized by the convergence of digital, physical, and biological technologies in ways that are changing both the world around us and our very idea of what it means to be human. One of the main features of the fourth industrial revolution is that it will not change what we do, it will change who we are"
Klaus Schwab,
Founder and permanent president of the World Economic Forum

INTRODUCTION

Globalization opens wide range of opportunities for humanity to expand the exchange of goods, services, information, technology and capital, humanitarian engagement, and spiritual enrichment of the individual. Globalization and technology are transforming our economies, workplaces, communities and families. At the same time, for many people in particular as well as for countries in general, globalization poses significant threats, causing the division of countries into "civilization centers" and "peripheral zones", deepening their differentiation in socio-economic, scientific and technological development. For example, R&D (research and development) spending in North America accounts for more than 40% of global R&D expenditures, while in Latin America and Africa together it contributes to less than "1%."

More and more experts from various fields associate technological growth with economic prosperity of the country. Nations with developed economies are considered to be more capable of fostering educational and research growth. Conversely, poor nations that are unable to provide basic needs to their citizens not only develop fewer technologies but have more difficultlies accessing them.

The exponential speed of technologies developments; their impact on the entire systems of production, management, and governance bring many benefits as well as

risks for the society. If managed well, they have the potential to give rise to innovation that will drive growth and social impact. If not handled appropriately, challenges brought up by the introduction of technologies, especially on labor markets could derail those benefits. Countries and businesses that embrace these developments, meet challenges, and deal with them are more likely to prosper, while those that do not that are more likely to leg behind. Information and communication technologies (ICTs) are the backbone of this revolution. The future of countries, businesses, and individuals will depend more than ever on whether they embrace digital technologies.

Richard Samans and Margareta Drzeniek Hanouz mention that "the future holds an even higher potential for human development as the full effects of new technologies such as the Internet of Things, artificial intelligence, 3-D Printing, energy storage, and quantum computing unfold" [1].

This research paper is devoted to the review of Ukraine innovation policies and technologies development analysis in the era of "Industry 4.0".

RESEARCH RESULTS AND DISCUSSION

To better understand and define trends, features and risks of technologies usage in modern world, interrelation between level technological and socio-economic development of the country, there were analyzed different stages of technological innovations called "technological waves". By observing them it can be seen a significant jump in the society development in general as well as for companies that understood the essence of the new wave and benefits it brings.

The first industrial revolution used steam power to mechanise production. The second used electric power to mass produce products while the third introduced computers to automate production. The fourth revolution is happening now, disruptive technologies including the internet of things, virtual reality, robotics, and artificial intelligence are changing the way we interact, work, and live. Highly automated, intelligent systems promise to transform people's lives and even question the very role of humans [2].

According to the OECD Science, Technology and Innovation Outlook 2018 the simplest and most obvious indicator of technology diffusion and transfer is improvement of production, exports which leads to economic growth. Education is defined as one of the core component in this process, especially those educational initiatives that specialize in technical fields. It is defined that the host country must develop the educational infrastructure necessary to take advantage of this new technology [3].

That is why it is considered to be essential the collaboration between universities, R&D insitutions and business entities. At the same time, it is fairly clear that the ground basis for such cooperation is set withing the Government policies. With government support, foreign and domestic investments can help launch countires as the global tech hubs.The importance of such cooperation is proved also by the fact that World Economic Forum is partnering with civil society, companies, philanthropy and other stakeholders through cross-sector learning, collaboration and investment to investigate shared challenge areas and accelerate systems change interventions

needed to influence civil society readiness and impact in the Fourth Industrial Revolution. Fourth Industrial Revolution Initiative (CS4IR) includes [4]:

1. Providing a broader multi-stakeholder platform for discussion and cross-sector learning across ongoing expert civil society networks on innovation and technology.

2. Connecting academia, philanthropy and the private sector with a network of 200 regional and global expert civil society leaders in innovation, digital and emerging technologies.

3. Helping to create, contextualize and disseminate critical strategic intelligence on digital and emerging technology for broader understanding and guidance for civil society organisations.

4. Building evidence for change through both accelerating existing initiatives and co-creating multi-stakeholder "prototypes" for collective action and evidence aimed to scale civil society learning and innovation.

The use of technology in country's economic life make interests of the individual to become increasingly important and interest in their material being and the wellbeing is entirely legitimate and ground for more innovations to come up. Thus, the potential for production can be developed through investment and one of the possible forms of investment is in technological innovations, which are the product of scientific development and the application of scientific thought in practice [5].

The Fourth Industrial Revolution is rapidly driving transformational disruption across every sector. By 2022, over 60% of global GDP will be digitized. An estimated 70% of new value created in the economy over the next decade will be based on digitally enabled platforms [6].

If to have a look at top-10 countries by their digital infrastructure and ability to use Information and Communication Technologies (ICTs) it is seen that there is interrelation between levels of technological and socio-economic developments of the country. These countries are considered to be the ones who generate economic growth, foster innovation and improve the well-being of their citizens. They are: Finland, Singapore, Sweden, The Netherlands, Norway, Switzerland, The United States, Hong Kong, The United Kingdom, South Korea [7]. Having analyzed the reasons why these countries ranked as top-10 the following conclusions come up:

1. Countries with high level of the ability to use ICTs have also have high levels of innovation, making truly knowledge-based society with stable business and innovation environment.

2. It is essential the support of the government with a clear digital strategy, which offers an ICT infrastructure which also contributes to quality education system and makes it possible for the country to become a knowledge-intensive economy and ICT powerhouse with a large number of government services available online.

3. Governments in these countries are aware of the importance of connectivity for the economic and social development of the country.

4. Countries have strong education systems that provide the necessary skills to create a knowledge-based, technology-rich economy.

5. Stable political and regulatory environment are excellent conditions for innovation and entrepreneurship, which have resulted in outstanding digital uptake and use by businesses.

6. Countries' focus on developing their technological capacity as part of their economic development strategy improved their reputation for innovation.

7. These countries are leading the world when it comes to generating economic impact from investments in ICT.

The Global Information Technology Report 2016 (which is the latest edition available currently) highlights the ways in which the digital revolution is changing both the nature of innovation and the rising pressure for firms to innovate continuously. The analysis yields four key findings [1]:

Key Finding 1: The digital revolution changes the nature of innovation.

Key Finding 2: Firms will face increasing pressure to innovate continuously.

Key Finding 3: Businesses and governments are missing out on a rapidly growing digital population

Key Finding 4: A new economy is shaping, requiring urgent innovations in governance and regulation.

Moreover Klaus Schwab, talking about the Fourth Industrial Revolution says that changes it brings "…are historic in terms of their size, speed, and scope… these individual technologies will fundamentally alter the way we produce, consume, communicate, move, generate energy, and interact with one another.." [1]. He points out attention at the fact that this revolution is already affecting labor markets, income inequality, and geopolitical security as well as social value systems and ethical frameworks.

Talking about the impact on labor market, it is necessearily to mention that digital technologies are already harming many existing jobs and entire sets of skills, creating necessity in new ones. At the same time, it is visible more freelance activity. That is why it is important to ensure that policies regulating technologies usage will not lead to the loss of social protection for workers. In this term it is defined that education and life-long learning will play key roles in ensuring economic and social stability in digital era. Thus it is proved that cooperation between policy makers, business, education and science must be on continuous mode. Therefore technology era creates winners and losers at the labor market and has huge impact on the employment trends in the country. Automation of jobs which is possible because of technology usage, decreases the necessity of people to conduct them which at the end leads to higher level of unemployment in the country. On the other hand, it might have a positive impact at the labor market situation in a sence of the necessity to improve upgrade workers' skills and makes population also receive the necessary training to prosper in the digital globalized world.

Another important feature of digital era is that it puts pressure on firms working at the market because of "winner-take-all" dynamics which means that it matters who gets there first. As a result companies have to innovate continuously not to be displaced. It has to be taken into account the following ways digital technologies affect innovation:

– boosting R&D and basic research;

– product and process innovation;
– business model innovation;
– increasing market size;
– reducing barriers to entry;
– acquiring and leveraging knowledge of consumer preferences.

The above mentioned shows the importance of technologies usage in creating an attractive business and innovation environment.

According to The Global Information Technology Report 2016 which presents data on the Networked Readiness Index (NRI), 139 countries were analyzed. The research presents country's economy performance in each of the 53 indicators composing the NRI. The indicators are organized by pillars, evaluated as [1 = not effective at all – it is deadlocked; 7 = extremely effective etc.] Ukraine's position in this ranking is presented in Table 1.

Table 1. Ukraine's performance according to Networked Readiness Index (2016)

NRI pillar	Rank Value (out of 139)	Value (1-7)
Networked Readiness Index	**64**	**4.2**
Environment subindex	94	3.8
1st pillar: Political and regulatory environment	113	3.2
2nd pillar: Business and innovation environment	67	4.3
Readiness subindex	30	5.7
3rd pillar: Infrastructure	51	4.7
4th pillar: Affordability	6	6.6
5th pillar: Skills	33	5.6
Usage subindex	88	3.6
6th pillar: Individual usage	76	3.9
7th pillar: Business usage	63	3.6
8th pillar: Government usage	114	3.1
Impact subindex	69	3.7
9th pillar: Economic impacts	59	3.4
10th pillar: Social impacts	75	4.0

Source: Insight Report The Global Information Technology Report, (2016). Innovating in the Digital Economy Silja Baller, World Economic Forum Soumitra Dutta, Cornell University Bruno Lanvin, INSEAD Editors [Online]. Available at: http://weforum.org.

Based on data shown in the Table 1, Ukraine has potential in ensuring proper innovative development which will lead to better socio-economic development. The most beneficial feedback from innovation implementation is shown in Figure 1.

The analysis of Ukraine competitive advantages (CA) shows that main of them are as following: qualified and educated human capital [9]; low cost of labor; land resources (33% of the world's black earth reserves); geographical location; raw materials resource base.

Key competencies (C) can be defined as: high level of training and a significant number of specialists in engineering and natural sciences; IT specialists (in the top-3 countries in Central and Eastern Europe); distributed transit infrastructure; existing

multi-sectoral industrial infrastructure; aerospace; a growing agro-industrial complex (AIC).

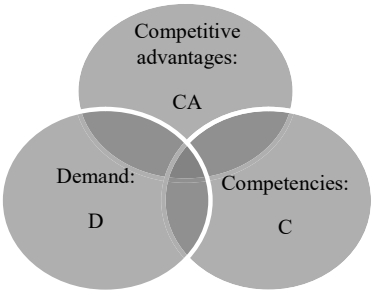

Figure 1. Conditions for most effective feedback from technologies usage

Source: What can be the future of Ukraine with Industry 4.0 like? (2016). Available at: https://knn-systems.com/en/what-can-be-the-future-of-ukraine-with-industry-4-0-like/

Factors of long-term demand (D) at domestic and foreign markets are:

– *domestic market* demand is determined by: modernization of transport and energy infrastructure; development of military-industrial complex; reduction of energy consumption of products, energy saving; import substitution; growth of industrial productivity and agroindustrial complex;

– *foreign market* demand is caused by: increase of labor productivity; increase of the level of agricultural products competitiveness industry; creation of new materials and components; creation of high-tech services and digital jobs; cost reduction and business process outsourcing.

Ukraine has been home for technological innovators for years. De facto, IT is the only industry that is integrated into the global market [8].

Taking into account the will to get most effective feedback from tehncologies usage and with the aim to boost the development of high-tech industries as well as to join the Revolution 4.0 it requires crucial reforms of all spheres of Ukraine, development and implementation the new strategies which meet new challenges. In this regards it was established the Strategy of high tech industries development till 2025 (Table 2).

The mentioned programs in Table 2 aim at creating attractive environment for innovations to be implemented in business, educational sector and households activities.

For further analysis of Ukraine's potential for technologies transfer and successful joining to Industry 4.0, it was conducted a survey "Activities of Higher Education Institutions and Scientific Institutions on Technology Transfer and Academic Entrepreneurship" [11].

The survey evaluated 147 higher education institutions (hereinafter – HEA) and scientific institutions of the Ministry of Education and Science of Ukraine.

Table 2. Government Programs aimed at innovative economic development

Program	Purpose	Expected outcomes
1. High Tech Office	Support and stimulation of innovative enterprises and start-ups development by providing funding and the necessary expert and technical assistance at all stages of innovation development from the idea to the final product	- improvement of legislation in the field of innovation development; - improvement of legislation on innovation finance instruments; - strengthening the protection of intellectual property rights, promoting their registration in Ukraine; - facilitating access to finance for innovative businesses and startups; - strengthening cooperation with local authorities and businesses to support innovation; - financing innovative projects at early risky stages and increasing the number of innovative companies in Ukraine; - creation of a "manufactory" of start-ups and strengthening the venture capital industry; - motivation of innovators and entrepreneurs to create and conduct business in Ukraine
2. Development of export-oriented innovative ecosystem	Development of high-tech products and services export, integration of Ukraine into the world scientific and technical information space and laying the foundations for the development of high technologies in Ukraine	- deepening scientific and technical cooperation between Ukraine and developed countries, increasing the number of joint research and development; - strengthening and developing links between Ukrainian and foreign scientists; - increase in the share of high-tech products and services in the overall export structure; - harmonization of national standards in high-tech industries with international standards; - growth of scientific and research activity
3. Digital Agenda	Creation and implementation of a digital agenda for Ukraine that will include both the development of ICT infrastructure and the “digitalisation” of the public sector and the economy as a whole	- increasing the level of high-speed broadband Internet access penetration; - reduction of “digital inequality”; - modernization of public administration through optimization and automation of business processes; - forming a strategy for a rapid transition to Industry 4.0.
4. Welcome Multinational Corporations	Encouragement of world high-tech leaders to develop production and conduct researches in Ukraine, working with leading global companies and improving technology transfer mechanisms	- creation of new jobs in high-tech industries and related fields; - introduction of modern innovative technologies and advanced training of Ukrainian specialists; - creation of an effective technology transfer system; - strengthening of cooperation between scientific organizations, universities and business; - increasing the investment attractiveness of Ukraine
5. High Tech Nation	Promotion of STEM technologies and science among young people, improving the quality of specialists training and creating the conditions for retaining talents in Ukraine as well attracting talented young people from abroad	- increase in the number of students and graduates of STEM specialties; - modernization of curricula in higher education with a focus on digital technologies; - reduction of the level of "brain drain" abroad; - increase in the number of foreigners studying and creating innovative businesses in Ukraine

Source: Strategy of high tech industries development till 2025, (2016). http://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=c9b6f0b0-1ed5-4aba-a25e-f824405ccc64&title=ProektRozporiadzhenniaKabinetuMinistrivUkrainiproSkhvalenniaStrategiiRozvitkuVisokotekhnologichnikhGaluzeiDo2025-RokuTaZatverdzhenniaPlanuZakhodivSchodoYiiRealizatsii

The results were as following: 29 respondents reported lack of technology transfer activities and academic entrepreneurship, 118 provided relevant information.

Regarding the use of technology transfer networks, 79 HEAs mentioned that they do not use the opportunities of national and international technology transfer networks, 40 – use such opportunities; 28 HEAs indicated that they are registered users of the National Technology Transfer Network (NTTN), 4 – use the capabilities of the Ukrainian Integrated Technology Transfer System (UITTS) and 3 – use the resources of the Automated System Formation of Integrated Interstate Information Resources (ASFIIIR); 15 HEAs use opportunities of International Technology Transfer Network, including 11 HEAs using EEN (Enterprise Europe Network); 1 HEA – International Innovation Transfer Network; 1 – International Technology and Knowledge Transfer Network; 1 – International Ukrainian-Slovak Center for Innovation and Technology Transfer; 1 – Technology and Innovation Support Center of the World Intellectual Property Organization.

With regard to cooperation with small and medium-sized enterprises (hereinafter referred to as SMEs), 39 HEAs indicated absence of such cooperation and 76 HEAs indicated existence of cooperation with SMEs. In total, according to the information provided, the number of SMEs whom the HEAs cooperate with is over 1800.

Another aspect of analysis of country's readiness to technologies introduction is enterprises involvement into innovative activities. Enterprises' expenditures for innovation activities are an important economic factor for both their development and the development of the country as a whole. Data on the volume of enterprises' expenditures by areas of innovation is presented in Table 3.

Table 3.The total amount of expenditures by areas of innovation

Year	Share of innovation driven business	Total Costs	including					
			research and development[1]	including		acquisition of other external R&D	purchase of machinery and software	other expenditures
				internal R&D	external R&D			
	%	UAH, mln						
2013	16.8	9562.6	1638.5	1312.1	326.4	87.0	5546.3	2290.9
2014[1]	16.1	7695.9	1754.6	1221.5	533.1	47.2	5115.3	778.8
2015[1]	17,3	13813.7	2039.5	1834.1	205.4	84.9	11141.3	548.0
2016[1]	18.9	23229.5	2457.8	2063.8	394.0	64.2	19829.0	878.4
2017[1]	16.2	9117.5	2169.8	1941.3	228.5	21.8	5898.8	1027.1

[1] data are given without taking into account the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and parts of the temporarily occupied territories in Donetsk and Luhansk regions

Source: State Statistics Service of Ukraine [Online]. Available at: http://www.ukrstat.gov.ua

Despite of the problem of weak interconnection between business and science, there is a considerable interest from enterprises side in financing R&D - they make up almost a quarter of all the expenses for the implementation of scientific researches, while in industrialized countries this share reaches 50%.

From the above mentioned, it is seen the role of collaboration between governments, businesses, R&D centers, HEAs and individuals for maintaining sustainable growth of each of them as well as country as a whole. Moreover the public sector can help identify and realize the benefits of technologies innovations, primarily by providing a framework for collaboration across different sectors of the economy.

CONCLUSION

Thus, in competitive economies, the only way to further development is more innovations activities to be conducted. Although it is essential to distinguish positive and negative outcomes it has on country's socio-economic development. Careful government policies should be established as they play a very important role here. Work between governments, companies, and the emerging industries is an essential building block for realizing the massive potential of the Fourth Industrial Revolution. This includes both economic potential and social benefits.

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