

Ministry of Education and Science of Ukraine
Poltava State Agrarian Academy

**SECURITY OF THE XXI CENTURY:
NATIONAL AND GEOPOLITICAL ASPECTS**

Collective monograph

In edition I. Markina, Doctor of Sciences (Economics), Professor



Nemoros s.r.o.
Prague, 2019

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*Recommended for publication by Academic Council of
Poltava State Agrarian Academy
(Protocol No. 14 dated 5 February 2019)*

*Recommended for publication by Academic Council of
the Institute of education content modernization of
the Ministry of Education and Science of Ukraine
(Protocol No. 10 dated December 21, 2018)*

*Recommended for publication by Scientific Institution of
the Information Systems Management University
(Protocol No. 2-19 dated January 30, 2019)*

The monograph is prepared in the framework of research topics: Management of national security in the context of globalization challenges: macro, micro, regional and sectoral levels» (state registration number 0118U005209, Poltava State Agrarian Academy, Ukraine), «Macroeconomic planning and management of the higher education system of Ukraine: philosophy and methodology» (state registration number 0117U002531, Institute of education content modernization of the Ministry of Education and Science of Ukraine, Ukraine), «Business security: national and global aspects» (Protocol 2-19 of January 30, 2019, Information Systems Management University, Latvia).

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Eastern European Center of the
Fundamental Researchers,
Nemoros s.r.o.,
Rubna 716/24, 110 00, Prague 1

ISBN 978-617-673-845-9

Nemoros s.r.o.,
Rubna 716/24, 110 00, Prague 1
Czech Republic, 2019

PREFACE

In the early 21st century, the world faces with cardinal transformations accompanied by changes in geopolitical configurations, integration processes and other changes that affect the state of national and geopolitical security. The events of the last decade have revealed an exacerbation of the problems of global security and the ambiguous impact of the processes of globalization on the development of different countries. Under the circumstances, the rivalry between the leading countries for redistribution of spheres of influence is stirring up and the threat of the use of force methods in sorting out differences between them is increasing. The global escalation of terrorism has become real, the flow of illegal migration and the probability of the emergence of new nuclear states are steadily increasing, and international organized crime is becoming a threat. In addition, in many countries there is an exacerbation of socio-political and socio-economic problems that are transforming into armed conflicts, the escalation of which is a real threat to international peace and stability. These and other factors have led to the fact that the potential of threats to global and national security has reached a level where, without developing a system state policy to protect national interests and appropriate mechanisms of its implementation, there may be a question of the existence of individual countries as sovereign states.

The threat of danger is an immanent, integral component of the process of civilization advancement, which has its stages, parameters and specific nature. Obviously, the problem of security in general, and national one in particular, should be objectively considered in terms of its role participation in the development process, that is, to set it up as both destructive and constructive functions (as regards the latter, it is necessary to emphasize the undeniable fact that the phenomenon of safety is based on counteraction to the phenomena of danger, the necessity of protection from which exactly stimulates the process of accelerating the search for effective mechanisms of counteraction).

The formation of new integration economic relations in Ukraine and the intensification of competition objectively force managers of all levels to change radically the spectrum of views on the processes of formation and implementation of the security management system in unstable external environment that is hard to predict. Today, the main task is to adapt not to changes in market conditions of operation, but to the speed of these changes. In this regard, there is a need to develop effective security management mechanisms that are capable of responding adequately and in due time to changes both in the internal and external environment. Therefore, this problem is being paid more attention in theoretical research works of scientists and practical activity of business entities.

Taking into account the fact that the traditional means of national and geopolitical security as a mechanism in its various models, forms, systems have reached their limits, since they do not contribute to solving the problems of globalization of the

civilization development, there is an objective need to form a paradigm of security management in the 21st century, which aims to confront destruction processes; to harmonize activities of socio-economic systems: society, organization, the state, the world. The joint monograph “The Security of the 21st Century: National and Geopolitical Aspects” is devoted to these and other problems. The progress in the development of the theory of security management on the basis of the analysis of theoretical and methodological works of scientists and the experience of skilled workers presented in the joint monograph creates opportunities for the practical use of the accumulated experience, and their implementation should become the basis for choosing the focus for further research aimed at improving the security management system at the national and international levels. In the joint monograph, considerable attention is paid to solving practical problems connected with the formation of the organizational and legal mechanism of organization of the security system in terms of globalization by developing methods, principles, levers and tools of management taking into account modern scientific approaches.

In the monograph, the research results and scientific viewpoints of the authors of different countries are presented in connection with the following aspects of security management: national security, food, environmental and biological security, economic and financial security, social security, personnel and education security, technological and energy security, information and cyber security, geopolitical security.

The authors have performed a very wide range of tasks – from the formation of conceptual principles of security management at the micro, macro and world levels to the applied aspects of management of individual components of national security.

The monograph “The Security of the 21st Century: National and Geopolitical Aspects” consists of five parts and 70 subparts, each of which is a logical consideration of the common problem.

The structure of the monograph, namely the presence of particular parts, helps to focus on the conceptual issues of the formation and development of national, economic, financial, social, food, environmental, biological, personnel, educational, technological, energy, information, geopolitical security, and problems of the maintenance of the practical process of application of the developed cases.

The joint monograph is prepared in the context of three research topics: “National security management in terms of globalization challenges: macro, micro, regional and industry levels” (State registration number 0118U005209); “Macroeconomic planning and management of the higher education system of Ukraine: philosophy and methodology” (State registration number 117U002531); “Business security: national and global aspects” (Protocol 2-19 of January 30, 2019, Information Systems Management University, Latvia), which emphasizes not only scientific but also practical focus.

The results of the research works presented in the joint monograph have a research and practice value.

The advantage of the joint monograph is the system and logic of the structure, the simplicity and accessibility of the material presentation, the presence of examples and illustrations.

We believe that the monograph will become one more step towards a scientific solution of the problems concerning the formation of an effective system of security management under trying circumstances of globalization.

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PART 1. THE DEVELOPMENT OF THE MODERN PARADIGM OF SECURITY MANAGEMENT AT THE NATIONAL AND GEOPOLITICAL LEVELS

THE PECULIARITIES OF GEOPOLITICAL SECURITY OF THE COUNTRY UNDER GLOBALIZATION

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Globalization as a process and spreading tendency of developing social-economic and other kinds of relations is quickly becoming large-scale, bearing new contradictory consequences.

Global security, considered in the context of geopolitical imperatives and determinants, represents particular scientific and practical interest among many aspects, connected with globalization.

Geopolitical component is the most important element of the system of the state national security. The role and place of the country in the modern world space is much determined by its geopolitical position that is by the location, strength, and the correlation of forces in the world system of states. The geopolitical position of the country is considered by the majority of scholars taking into account geographical, political, military, economic, and other factors. The key moment is the fact that geopolitical security is an organic component of the national security, and its role consists in ensuring vitally important national interests by the management of real or potential threats and dangers, which are the consequence of other states' striving to establish control and ruling of the whole spectrum of the planet's resources. Besides, geopolitical security can be considered in a somewhat broader sense and envisage establishing control not over the resources of the own country, but conducting a complex of measures to influence the resources of other countries directly or indirectly.

So, the essence of management in the sphere of geo-policy, and as a result, the essence of geopolitical security consist in establishing and organizing the functioning of the guided process algorithms in the sphere of controlling and ruling the country's resources, based on the principles of space-time organization of states' development, regions, and the world on the whole, taking into account the systemic interaction of geographical, political, economic, military, ethnic, demographic, ecological, and other factors [4].

The effectiveness of geopolitical security is directly connected with the laws of geo-policy. For Ukraine, with its peculiarities of geopolitical position and social time, the accurate and timely analysis of the global geopolitical process is important, because this country is again in the center of the world events, historical fluctuations, and cataclysms. Thus, the future, safety and well-being will greatly depend on how exactly the algorithm of development in the modern complex and contradictory world will be determined.

The importance of geopolitical identity in the implementation of the national interests, in particular, in the sphere of foreign policy, is the evident fact. However, the question, how the transformation of geopolitical identity in the conditions of globalization takes place, requires complex scientific investigation [9].

It is known that globalization with its new subjects, among which nationalistic structures should be mentioned, transforms the geopolitical identity of states-nations. The given process began from erosion of the institute of state sovereignty and later on became one of the reasons of activating transnational relations [5]. All the above mentioned factors require deep and comprehensive research of geopolitical processes and tendencies, taking place in the modern world because of their impact on the conditions and prospects of the global safety.

The term of “geo-policy” was introduced by the Swedish scholar R. Kjellen, who formulated all principal positions of geo-policy. In R. Kjellen’s opinion, besides physical-geographical features, the state is represented by 4 features:

- as a definite form of economy with its peculiar economic activeness;
- as people with their national and ethnic characteristics;
- as a social community of different classes and professions;
- as a form of state administration with its constitutional and administrative structure [7].

Geo-policy under modern conditions is one of the fundamental notions of the theory of international relations, which characterizes the place and definite historical forms of the actions of territorial-spatial peculiarities, the position of states or blocks of states concerning the local, regional, continental, and global international processes. The area of the territory, length of the state border, climate, relief of the locality, flora and fauna, hydrological peculiarities belong to such territorial-spatial peculiarities. Generally speaking, geo-policy is determined as the theory of substantiating and practice of implementing the approaches to the state policy, characterized by geopolitical, economic, political, military, and other factors, aimed at ensuring one’s own vitally important interests.

Geopolitical factor is the totality of geographical parameters, stipulating the corresponding direction in the policy of the state, ensuring its vitally important interests at the definite stage of its development [8].

From the viewpoint of geopolitical measurement, the relations between states are determined by national interests. The national interests, through which the problems of national and geopolitical security with their aims and tasks are considered, are

represented as a variety of personal needs and the needs of the society and nation on the whole. As N.R. Nyzhnyk notes, according to their direction, they are oriented at ensuring the survival, progressive development, and, to some extent, the leadership of the society and the state [12].

The Law of Ukraine “About the foundations of the national security of Ukraine” [1] defines the national interests as vitally important material, intellectual, and spiritual values of the Ukrainian people as a bearer of sovereignty and unified source of power in Ukraine, the decisive requirements of the society and the state, the implementation of which guarantees the state sovereignty of Ukraine and its progressive development. Thus, the processes, taking place in different regions of the world, can directly affect the condition of the national security of Ukraine, the opportunities and prospects of its development, and hence, influence the understanding and determining of the national interests. That is why geo-policy is a part of the international security, the concept of which is based on recognizing the unity and interrelation of the world, the priority of general human values over class and narrow egoistic national values, the freedom and respect to social-economic choice of nations, the rule of law in politics [13].

The geopolitical position of Ukraine transforms it into a peculiar geopolitical center, the state, which performs communicative functions between two regional systems, the state, as determined by Z. Brzezinski, “the significance of which is not in its strength or motivations, but first of all, the place of its location”, the geopolitical center, which can become the defense for the state, which is vitally important on the geopolitical arena [3, p. 55]. The geopolitical center has the functions of the territory of intermediate position, and this geopolitical situation, passive by its nature, has to be activated in one’s own interests. This is the main task for the Ukrainian geo-strategy of security.

Under such conditions, as the Ukrainian scholar V. Manzhola thinks, “the concept of equal proximity, the essence of which consists in the development of the profound cooperation simultaneously with all the leading international participants in the region, in striving to establish the relations of the peculiar or strategic partnership, has to become the important element of the foreign political strategy of Ukraine” [11, p. p. 14-15].

A. Galchynskyi considers the complex of geopolitical interests through the prism of geo-economic paradigm in geo-policy, which is formed in connection with declaring and implementing the European integration strategy of Ukraine [6].

In the opinion of S. Bodruk, geo-policy, as a manifestation of influencing the geographical position of the state, the size of its national territory, natural resources, quantitative and qualitative indicators of the population, transit opportunities, and so on, remains an important initial point for determining foreign political priorities [2].

From the viewpoint of modern geo-policy, the elements, which define and ensure the living space for any ethnos, are at the same time the main objects of their struggle and competition. These elements are the following:

- the space as a physical value (the area of land, water space, air space, and cosmic space);
- the sources of raw materials and energy;
- the deposits of mineral resources;
- the control of strategic transportation corridors;
- the global control of manufacturing key highly technological products, affecting the quality of national economies (aviation and cosmic machinery);
- the control of foreign markets of selling national products and protecting one's own market from competitive imported goods;
- the control of the foreign markets of capital investments;
- the control of the market of labor force;
- the control of the districts of utilizing industrial wastes, including chemical and radioactive;
- direct or indirect control of the internal and international policy (or its separate aspects) of foreign countries.

Thus, geopolitical security should be considered as:

- the state of protection from challenges, risks, dangers, and threats;
- the state of the sustainable existence (development) of the object, when the probability of undesirable changing any parameters (characteristics) of its vital activity is not big.

So, in geo-policy it is expedient to understand the state of objects' protection and the degree of protection of vitally important values and interests of the society from different threats [14].

Geopolitical factors, affecting the current and prospective position of the state in the world system of international relations and the development of the system itself, can be manifested differently. Firstly, they can assist in stabilizing the situation in case of strengthening international cooperation and interaction. The states, which are in similar geopolitical conditions, have the similar or close national interests, leading to the strengthening of their cooperation, including the sphere of strengthening military security. Such cooperation, implemented on the collective basis, assists in sustainable developing both at the regional and global levels.

Secondly, geopolitical factors can result in competition between states. Territorial arguments, geopolitical contradictions, striving to put the other state in unfavorable conditions on the international arena play the important role in this process. Such actions and situations can cause the state of confrontation and have destabilizing impact on the regional and world processes.

Thus, the analysis of the state of geopolitical factors and definition of their priority are the bases of foreign political concepts of modern states, the important components of which are the doctrines of ensuring national security, including the strategy of military security. The key structure forming elements of Ukraine's geopolitical doctrine must envisage:

- 1) monitoring of the processes, capable to create the factors of external threat

to the existing political borders of Ukraine and territorial integrity of the state, effective activity of marine, land, and air communications, informational security of the state, and so on;

2) taking into account the national interests in the economy modernization, and also the analysis of the processes, capable to create threats in the sphere of economy (for example, the character and level of Ukraine's dependence on the suppliers of raw and energy materials, the position of the state on the traditional trade markets, the level of the Ukrainian goods' competitiveness;

3) taking into account the factors, which ensure the stability of financial and monetary system of Ukraine;

4) creating the rational strategy of foreign economic activities;

5) introducing the protection policy, ensuring the introduction and investments in science-based technologies, and also the information system development of the society;

6) developing the opportunities of going into aero-cosmic space, aero-cosmic technologies and the competitiveness of the corresponding branches of the Ukrainian industry;

7) strengthening the position of the state on the market of weapons and military machinery, expanding the opportunities of military-technical cooperation;

8) analyzing the processes, assisting in the beginning or liquidating regional conflicts, the potential participant of which Ukraine can become;

9) analyzing the processes, assisting in the beginning or liquidating ethnic and religious extremism;

10) studying the irrational ideological schemes in the social thinking and taking them into account while conducting foreign economic activities;

11) raising the effectiveness of the system of ensuring the national security and defense potential. Later on, the defense policy has to be oriented at integrating the system of the collective security (the integration to the security measurement of geopolitical space) [8; 10; 14].

Based on the above mentioned, it is expedient to generalize the mechanism of forming and implementing the geopolitical security of the country (Fig. 1).

Of course, in case of geo-policy, not the theoretical generalizations and concepts bear the threat, but the construction of states' foreign policy and its practical implementation on the basis of these generalizations and concepts. For example, as some scholars maintain, geopolitical imperatives are present in the activity of states, and recommendations of geo-politicians are taken into account during making foreign economic decisions by many countries, irrespective of not simple treating geo-policy as a theoretical direction [15].

Thus, the geopolitical measurement of security in the conditions of forming the new world order can be defined as a system of correlations between the geographical position of the state, its national potential, and foreign economic policy [8].

These three components, taking into account their close interconnection

and mutual conditionality, determine in general the position of the state on the international arena and its perception by the world association. Moreover, the formation of security system of any state takes place at three levels – national (within the country’s territory), regional (between states), and the global (the world).

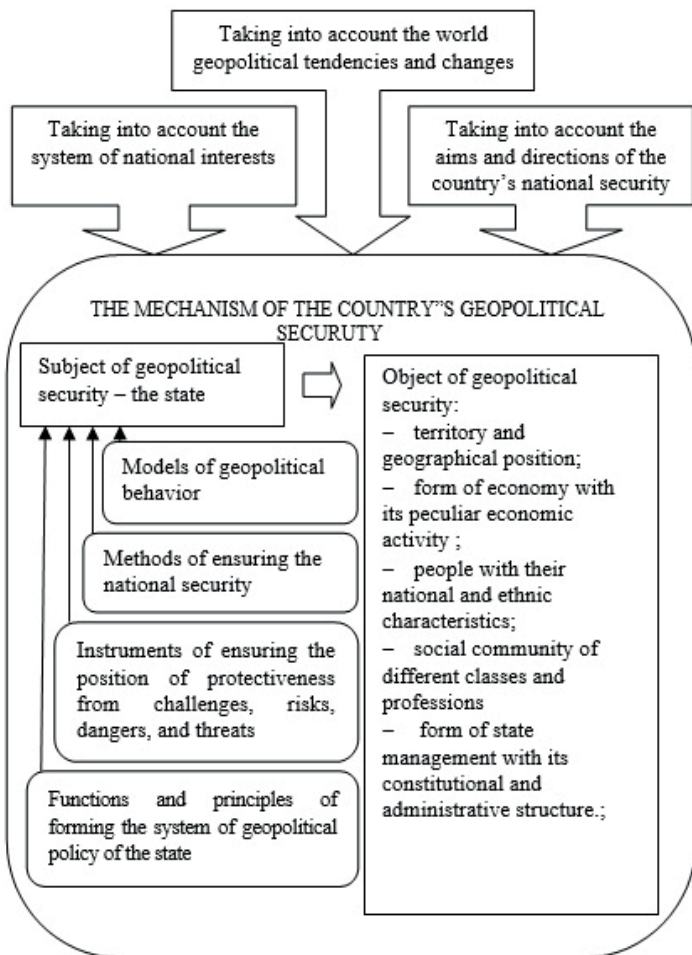


Fig. 1. The bases of forming the mechanism of geopolitical security of the country [composed by the author]

On the other hand, the formation of the new world order, development of international relations, and creation of the system of collective security must be conducted taking into account the real state of affairs, the available balance of forces, and national interests and opportunities.

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INNOVATIVE FACTORS OF TNC INVESTMENT BEHAVIOUR TRANSFORMATION IN THE CONTEXT OF INTERNATIONAL SECURITY

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Statement of the problem. In recent years, TNCs have been one of the most powerful investors around the world, changing not only economic development but also the economic security of host countries. However, on the basis of the foreign market, they face problems and obstacles to the efficiency of international investment.

It follows that TNCs gain competitive advantages through the introduction of new technologies, innovations, and not exclude also extensively threatening ways of development. However, under the condition of a strong system of national cyber security, effective social and economic security mechanisms, innovative factors are the driving force for development, not only the TNC itself but also raise living standards and social standards in host countries. In this context, there is a need for a thorough study of the influence of innovative factors on the transformation of the investment behaviour of TNCs and, in turn, on improving socio-economic indicators in different regions of the world.

Many international and domestic scientists such as M. Warren [13], O. Golovnyia [2], S. Cohen [1], D. Lukianenko [3], L. Potters [4], O. Rogach [8], L. Rudenko-Sudarieva [9; 10], and the World Economic Forum experts [11].

Their deep work suggests that innovative factors and their study in terms of impact on TNCs are relevant and require further scientific development taking into account changes in the global economic system.

The purpose of this study is to research and scientific analysis of the transformation of the investment behaviour of TNCs, taking into account modern

innovation factors and changes that arise in the global economic space.

In the process of research, both general scientific and special methods were used: scientific abstraction, analysis and synthesis, historical-logical method, system approach, method of theoretical generalization.

The main scientific results. Foreign investors, including TNCs, are constantly exposed to certain dynamic factors and rapidly changing global economic environment. According to Rudenko-Sudarieva L.V., rapid information and technological modern changes caused by the global transformations of the fourth industrial revolution, demonstrate manifestations of fundamentally new investment behaviour of new generation of TNCs [10]. The benefits of corporations which catalyzed by accelerated technological development and cognitive expansion, such as the technological giants as Microsoft, Amazon Inc. or Facebook, provide them with unprecedented growth in capitalization (681.58 billion US dollars; 628.78 billion US dollars; 518.37 billion US dollars respectively [12]) against the backdrop of global popularity. Separate studies of these «accelerators from TNCs» are not yet deep enough, but give reason to assume the emergence of the sixth generation of corporations, the prospects of which are characterized by a singular future [10].

During the process of our study, it was found that the investment behaviour is influenced by a variety of factors that have similar characteristics in a number of host countries. They make them transform to the challenges and threats of the present.

It should be noted that the main tendencies of such a transformation are the existence of an unstable situation and fluctuations in the outflow of FDI from TNCs, whose parent companies are located in developing and transition countries. Thus, recently TNCs from the People's Republic of China have been gaining leadership in increasing investment. In 2016, having increased by 44% the outflow of FDI to 183 billion US dollars, and placing China in second place in the largest countries that host FDI in the world. It should be emphasized that Chinese corporations are investing abroad in order to gain access to new markets, the acquisition of assets generating foreign exchange earnings. This tendency is also caused by the state's investment policy [8].

In turn, the African region has small investment indicators, for example, in 2016, one can observe the growth of FDI outflow by only 1% to 18 billion US dollars.

It should also be noted that world economic journals such as *The Economist*, *Fortune*, *Euromoney*, the most reputable expert agencies such as Moody's, Standard&Poor's, IBCA provide aggregated estimates of the investment climate and risks, the results of which are systematized in the national ratings of investment attractiveness of regions and countries published by these institutions [1; 9].

Because of this, host countries and home countries are trying to improve their own investment climate in order to effectively use their own and attracted financial resources. Financial crises strongly change the direction of investing in TNCs in terms of prudence and discretion [3].

For such investors as TNCs, a rational assessment of their own investment flows by region is a necessary part of conducting optimal management measures for investment placement and creating, adjusting their own investment behaviour for the future.

In the process of studying the factors of the transformation of investment behaviour of TNCs, it is necessary to distinguish innovations that make TNCs rebuild their own management system and interactions between divisions. To access new markets and generate cost savings, TNCs are transforming management strategies into new investment directions based on innovation and sustainability based on sustainable development.

In this context, the most competitive TNCs are from the European region, the prevailing form of investment such as mergers and acquisitions, the volume of such deals in 2017 increased to 40%, to 435 billion US dollars. In turn, investing in North American TNCs remains stable, albeit with a significant reduction in the cost of cross-border mergers and acquisitions.

Innovative development strongly changes the investment behaviour of TNCs in terms of investing in new technologies that reduce the cost of the corporation. It should be noted that the innovative development has undergone an evolutionary path from the period of the birth of innovations (XIII century - the end of the 1930's) to the period of intensification of innovative efforts (1980-s - the end of 1990's) (Table 1).

Innovative development, changing the investment behaviour of TNCs is the result of a number of factors that can both restrain investment at the same time, thus contributing to the growth of innovation and investment potential in host countries. Innovative factors are strongly intertwined with other types.

Modern innovative factors should be distinguished such as: electronic revolution, financial crises, attraction to high-yielding and liquid investments, increase of the role of innovations and «green investments». As a result, even digital cells, clusters of TNCs that cooperate with each other are created [1; 9; 10; 11].

In turn, the main investment areas of TNCs in 2018 are: the development of new markets, especially BRICS countries; artificial intelligence and robotics; cryptocurrency and bitcoins; development of financial technologies. We noted that, for example, in the field of artificial intelligence, with the help of the so-called «work-consultant», portfolios of investors are selected and guided by computer algorithms in the context of the hybrid approach [11].

The cryptocurrency market is causing fluctuations and instability in the global financial market [2].

Creating bitcoins for attachment to futures and derivatives may also lead to further instability, as investors can for the first time «cut» the market by raising rates against price increases [4].

Table 1

Evolution of innovation development and relevant stages of TNC's growth

No	Evolution of innovation development	Stages of TNC's growth	Features of TNC's growth	Examples
1	Period of origin of innovations (XII century-the end of 1930's)	The first generation of TNCs (from the end of the 19th century to the beginning of the First World War of 1914-1918. Second generation of TNCs (1918-1939)	Development and extraction of raw materials in the colonial countries of Asia, Africa, Latin America (the form of TNCs - cartels and syndicates); Production of armaments and military equipment for military needs of Europe, America and Japan (trusts)	Coca-Cola (USA), British American Tobacco (UK), Danone (France), Siemens (Germany), General Electrics (USA), Mercedes (Germany), Ford Motor (USA), East India Company
2	The period of innovation (the beginning of the 1940s - the end of the 1960's)	The third generation of TNCs (after the end of the Second World War (1945) and the collapse of the colonial system (1950-1960)	Generators of scientific and technological achievements of science and industry (atomic energy, electronics, space, instrument making, etc.) (concerns)	Mcdonalds (USA), Airbus (France)
3	Period of rethinking of innovations (1970's - the beginning of the 1980's)	Fourth generation of TNCs (1970-1980s)	Concentration of capital and production of TNCs, successful development of international business (M&A)	Google (USA), Apple (USA), Netflix (USA)
4	The period of intensification of innovation efforts (1980s - the end of the 1990s)			
5	Nanotechnological transformations of the XXI century	Fifth generation of TNCs (early twenty-first century)	Reliance on modern science, innovation business, nanotechnology, telecommunication development (economic integration)	Uber Technologies Inc. (USA); Airbnb (USA), Alibaba Group (PRC), Viber (Belarus with Israel), Facebook (USA), ArcelorMittal (Luxembourg), LATAM airlines (Chile)

Source: compiled by author based on [5; 11]

We outlined that interest in goods, private investment, real estate investments and infrastructure is expected to increase in 2018 and in the future. Also, financial data protection technologies will gain popularity. For example, fingerprinting technology, voice and face recognition will also become increasingly popular

investment objects.

For example, wind energy, green bonds [9; 13] are promising areas for investment in Europe.

Investments in wind energy in 2017 were less focused than in 2016. A third of the investor countries had 64% of the volumes in 2017, compared with 73% in 2016. Northern and Western Europe occupied the bulk of new investments. Germany was the largest investor in 2017 in the amount of 6.7 billion euros for the construction of new land and offshore wind farms. The UK has taken another place with a volume of 5 billion euros, or 22% of the total investment in wind energy in 2017 [9]. In turn, the issue of green bonds grew from 1.9 billion US dollars to 17.5 billion US dollars over 2013-2017 (Fig. 1).

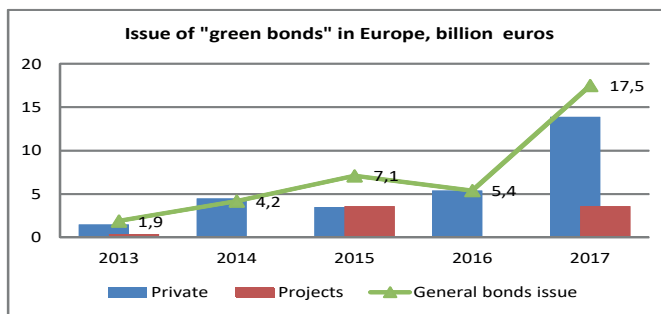


Fig. 1. Issue of «green bonds» in Europe, billion US dollars

Source: compiled by the author based on [11]

The issue of green bonds has steadily increased over the past five years. In 2017, the volume of bonds issued amounted to 17.5 billion euros, both at the project and at the corporate level. The funding received from these issues is intended to finance renewable energy portfolios, including wind energy projects and offshore power lines.

We should also be noted that TNCs are expanding their investment directions every year. One of the features of the transformation of the investment behaviour of TNCs is the investment in the development of the space industry. For example, private investors in 2017 placed 3.9 billion US dollars in commercial space companies, which it is a record in accordance with the report of the investment company – Space Angels. In 2017, more than 120 companies invested in space development, and in 2015 - 89. Over the past eight years, the volume amounted to about 25 billion US dollars. Those investors still take moderate investment behaviour, taking into account financial crises and financial markets' volatility.

Conclusions. With the development of innovation and information, TNCs are faced with a variety of factors and conditions that change the direction and potential

of TNC's investment activity, taking into account the deductibility and development of the digital economy in host countries.

The innovative development and forms of TNCs have undergone evolution from raw material companies to innovative business, based on economic integration and the use of high technology.

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SECURITY CHALLENGES TO INTERNATIONAL TOURISM: NATIONAL AND WORLD TRENDS

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Introduction. Despite the global economic challenges, the development of international tourism has lately exceeded all expectations and projections: according to the International Tourism Barometer of the World Tourism Organization (UNWTO), in general, the number of trips taken in 2017 was the highest over the past seven years, as reported by the United Nations World Tourism Organization. This year, the number of international trips increased by 7% compared with previous years. France continued to take the leading positions among countries visited by travelers. Spain, which outstripped the United States, took the second place. In general, the number of trips taken in 2017 was the highest over the past seven years, as reported by the United Nations World Tourism Organization. Last year, more than 1,300 million people from different parts of the world traveled abroad. Travelers showed the greatest interest in European countries. The tourist flow to these countries increased by 8%, that is, by 671 million tourists. Mediterranean countries and countries located in the north of the continent were particularly popular: the number of tourists who traveled there increased by 13%. This allowed this region to take the lead. In addition to Europe, interest in Africa has also grown. The number of travelers who visited this continent in 2017 increased by 8% (by 62 million tourists). At the same time, there had been a noticeable decline in the interest in the African continent before.

In modern world economies, tourism industry plays an important role of a factor responsible for the stable growth of welfare and employment of the population. Tourism attracts entrepreneurs, because of a high level of profitability, a growing demand for travel services, and a minimum payback period. Tourism accounts for about 7% of world investments, every 16th job, 11% of world consumption expenditures, etc., while the scale and stability of the growth rate make tourism one of the priority business areas, taxes from which alone, according to experts' calculations, could bring up to 4 billion US dollars annually to the state budget of Ukraine.

The number of visitors who traveled to the Asia-Pacific region in 2017 increased by 6% (by 324 million). Countries of South Asia were the most popular. The number of tourists who visited the countries of the Middle East in 2017 increased by 5%

(by 58 million) compared with the previous years. In some countries, there was a tremendous increase in the interest in local culture and historical heritage [3].

In the North and South America, the number of visitors increased by only 3% (by 207 million tourists). At the same time, the USA showed the worst results – about 2% of increase in the number of tourists. The UNWTO press service also reported that they are expecting a further increase in the interest in international tourism by another 4-5% in 2018. We would like to remind you that experts have recently announced the least visited country in Europe. It was the Republic of San Marino. It is located in the center of Italy, has no access to the sea, and covers an area of about 60 square kilometers.

Tourism is a vital industry characterized by a significant effect of income and employment growth, foreign currency earnings, and growth of other sectors, which also contributes to the development of communications and infrastructure. In most countries, tourism is a priority sector of the economy and a subject of regional development programs between partner countries [1].

In the opinion of the UNWTO Secretary-General, Taleb Rifai, «the tourism sector has demonstrated its excellent ability to adapt to changing market conditions, contributing to economic growth and creation of jobs around the world, despite economic and geopolitical challenges. In fact, tourism is among the few sectors that have a positive influence on most world economies.»

The United Nations World Tourism Organization predicts that annual tourism expenditures will be growing until 2020 and will eventually amount to \$2 trillion (that is, 5 billion a day) and the number of foreign tourists will reach 1.5 billion people. The Middle East will take the lead in terms of tourist flows, mainly due to the enormous amount of natural, historical, and cultural resources that attract tourists from all over the world. In the report published by the Global Futures magazine, it has been estimated that in 2020 the number of tourists in the region will exceed 150 million people (compared to 61 million in 2009) [4].

On the other hand, tourism is much more than just a share of revenues in the structure of GDP and employment. Tourism is an industry of personal contacts and intercultural communications. Successful tourism industry needs political stability, peace, safety, and capacity for dialog between different groups of people. It is a dynamic and competitive industry that requires the ability to constantly adapt to consumers' changing needs, while fulfillment of their desires and ensuring safety are key objectives for the tourism business.

Under today's conditions of the development of international system, there is a considerable number of global problems that are in particular related both to internal and external aspects of the functioning of many states. Among them, the problem of terrorism is particularly significant. It should be noted that in the XX1st century, terrorism has become probably most widespread, becoming an integral part of international processes; it threatens security at the national, regional, and global levels [2].

First of all, terrorism stems from deep social crises (including a crisis of ideological foundations for the development of the society and the entire state system), which result in the emergence of various political, national, and religious groups that oppose the rule of law and the administrative system of the state. Inability of such groups to achieve their goals and interests lawfully makes them resort to violence (in their opinion, violence is morally justified, first of all, because of the so-called «purity» of their beliefs). It was previously believed that terrorism is a phenomenon that is inherent in countries with religious or national problems (Northern Ireland, Palestine, Israel, Libya), but today it is already perceived as a threat to the security of the entire world community. In particular, since the mid-1990s and during the last decade, there were many terrorist acts in different countries, which resulted in a new political situation in the world and reorientation of the leading states and international organizations towards strengthening of large-scale measures aimed at preventing terrorist threats.

Despite the huge scale of the problem of terrorism, there is currently no generally accepted definition of terrorism. There are more than 100 interpretations of this concept. In the broadest sense, terrorism (in Latin «terror» literally means «fear, horror») is a socially dangerous activity of certain groups of people, which consists in deliberate and purposeful use of violence, seizure of hostages, arsons, murders, torture, intimidation of the population and the authorities, or other infringement on the life or health of citizens and state leaders, threats of committing criminal acts for the purpose of achieving own goals. Terrorism is a harsh and purposeful form of violence in the struggle against political opponents – mainly state authorities – for the implementation of program or local, party, group, or confessional interests [7].

In the majority of encyclopedic dictionaries terrorism is defined in its international dimension and is interpreted as follows: violent acts committed against individual citizens or objects, in particular those protected under international laws, murders of the heads of foreign states and governments (their diplomatic representatives), blasting of embassies, representative offices of organizations, headquarters of international organizations, explosions in public places, in the streets, at the airports, railway stations, etc.; a combination of activities that are socially dangerous on an international scale and which involve unjustifiable death of people.

Among the definitions of terrorism, the following are noteworthy:

- terrorism consists in dangerous acts – or threats of such acts – which are committed publicly, encroach on social security, and are aimed at creating a situation of fear, anxiety, and depression in the social sphere for the purpose of exerting direct or indirect influence on the adoption of a particular decision – or refusal to adopt it – in favor of those who commit such acts;
- terrorism is the use of extreme violence or threats of violence in order to achieve certain political, religious, or other public goals, provided that there is the main constructive element – the motive for a criminal terrorist act – intimidation of the state authorities or the society;

- terrorism is a threat of violence that forms a sense of fear both in individual citizens and in the society in general, which is aimed at intimidation and formation of distrust of state authorities with regard to their ability to counteract these manifestations of crime;

- terrorism is a politically motivated and substantiated method of using radical violence the main purpose of which is to achieve a certain psychological effect; systematic use of extreme violence and threats of violence in order to achieve public and political goals;

- terrorism is a pre-thought-out politically motivated violence which is most often committed against non-military objects by certain groups within the state – or by secret agents of a particular state – for the purpose of exerting effective influence on the society, which is extended to citizens or territories of two or more countries [5].

Signs of terrorism:

- communicativeness: a combination of violent acts and a political message aimed at various sectors of the target audience;

- intense intimidation, terrorizing particular individuals or groups and inciting others (potential accomplices);

- organized violence, which is objectively expressed in a certain manifestation — in a terrorist act;

- terrorism pursues political goals and motives; it is a specific form of political violence;

- it combines a high level of political motivation and low participation of the masses, which distinguishes it from war, partisan struggle, national liberation movement, and other mass political phenomena;

- terrorism is directed against more powerful state apparatuses. The phenomenon of modern terrorism lies in the fact that innocent people die of terrorist acts before the very eyes of ultra-modern armies. Classic military schemes do not work under these conditions, which results in the fact that collective security systems are inadequate for the modern challenges and cannot actively counteract terrorism;

- conscious focus on the death of numerous people, destruction of material and spiritual values, provocation of war, distrust and hatred between social, national, and religious groups, which contributes to the emergence and development of antagonisms in the world;

- it causes general danger, which is either in the form of a threat, or actual explosions, murders, arsons, etc.;

- it is aimed at intimidation, which involves a sudden and unexpected action; in particular, terrorists use a sense of fear in order to make their opponents fulfill certain requirements;- the political features of terrorism are publicity, transparency, and demonstrativeness, which are used when declaring socially dangerous demands, that is, acts committed by terrorists are always accompanied by advertising. The greater the public resonance a terrorist act gets, the more frightening and paralyzing effect it has on the population, government, and other institutions of power;

- high social danger, since in order to achieve their goals, criminals try to harm the most important values of the human society: life, personal freedom, health, property, and public order;

- it is aimed at the aggravation of socio-political and economic situation in a particular country or region of the world;

- indifference to victims, the gap between the immediate victim of violence and the group which is the object of influence and the purpose of violence, as opposed to selectivity in case of political assassinations.

According to the European Convention on the Suppression of Terrorism (adopted on January 27, 1977 in Strasbourg), terrorist acts are:

- serious offenses with an infringement on life, physical integrity, or freedom of people who are protected under international laws, in particular diplomatic agents;

- offenses with the seizure of hostages, their illegal detention; the use of bombs, grenades, missiles, automatic firearms, letters or packages with an explosive device, which pose a threat to the public, etc.

The motives of massive terrorist acts include:

- attempts to destabilize the interior of a particular region or state by spreading fear in the society and forming distrust of the authorities;

- attempts to influence the outcome and the course of particular political events, political or economic problems, etc [4].

Thus, in the modern world, the most harmful manifestations that impede effective tourism activities include international and local armed conflicts, and, as a result, international terrorist activities.

The geography of terrorism is rapidly expanding, and today it becomes impossible to predict which country will be the next on the list. Such events undermine popularity of many tourist destinations – in particular, popularity of Muslim countries is falling [5].

Conclusions. The tourism industry, which turned out to be the most unprotected industry for terrorists, suffers the largest economic losses from terrorism. In this regard, the issue of combating terrorist organizations and ensuring countries' economic security, including proper functioning of the tourism industry as one of the main sources of foreign investments under the modern conditions, are very closely interconnected. This is due to the fact that when preparing and committing terrorist acts, terrorists mostly select crowded places and objects of critical infrastructure, that is, places of tourists' recreation.

Together with the globalization of the tourism industry, there is a growing need to implement the latest security systems in order to ensure tourists' safety. First of all, this concerns tourist trips to countries with a difficult socio-political situation, where there are military conflicts, and where terrorist acts, which can endanger tourists' lives and health, are not rare. That is why analysis of the crime rate in a particular state and a system of measures taken at the state level to prevent terrorist manifestations and ensure tourists' safety are among factors that must be taken

into account when choosing a travel destination and recreational facilities. Thus, in order to ensure safety, coordination of the activities of law enforcement agencies of different states must be improved.

In this regard, special attention needs to be paid to the activities aimed at improving domestic and international legislation in the field of tourism security and combating radical terrorist organizations. At the same time, first of all, a unified methodology for assessing terrorist threats and risks in the countries should be developed and approved at the international level, and national anti-terrorism policy strategies, consistent with the strategies of tourism development in a particular country, should be formed. It also necessary for countries to develop and approve criteria for putting recreational facilities on the list of objects of possible terrorist attacks.

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THE INVESTMENT PRIORITIES AND SECURITY OF NATIONAL ECONOMIC DEVELOPMENT IN THE CONTEXT OF GLOBALIZATION

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The development of a world economic system is increasingly dominated by processes that, by their nature, significance and depth, can be described as global. Humanity is faced with the world's biggest problems, among which an important place is occupied by the problem of investment globalism. The specific nature of global transformation processes necessitates their deep scientific understanding, which will lead to the development a fundamentally new approach to the formation of a national investment development strategy in the long run.

The issue of identifying investment factors of the development of national economic, international investment interaction and transformation of investment flows in the context of globalization had been the subject of research by many scientists. For example: Je. Aninat, O. Bilorus [2], Y. Gayday [6], B. Hubs'kyj, S. Sokolenko, D. Luk'ianenko [3], Y. Pakhomov, V. Novickij and other. To determine investment priorities in the context of global trends in scientific, technological, innovative development, technological activity and the development of an innovative economy, an important place is occupied by scientific papers of E. Lenchuk, N. Semenova, N. Sheljubskaja, I. Shul'gina [11] and other. Actual research in the aspect of identifying features of the formation of the global economy was conducted by V. Andriyash [1], S. Baburin, O. Bogomolov, I. Bochan [4], I. Wallerstein, D. Held [7], V. Dolgov, L. Zevin, V. Klavdienko, A. Ljamenkov, V. Lukashevich, A. McGrew [7], I. Mihasjuk, M. Muntjan, R. Robertson [10], M. Os'mova, V. Oreshkin, A. Ursul, A. Utkin and other.

Without taking into account the influence of global factors, it is impossible to reveal the essence of modern investment processes in the national economic system, to explore ways of investment interaction at the international level. Considering complexity and urgency of the current changes in the investment sphere, it is of interest to establish necessary strategic priorities of investment while elaborating new concepts for the development of social and economic processes in the country.

In today's globalized world economy, individual countries cannot be regarded as

something self-contained, each of them is in a tough system and under the powerful influence of a complex set of global economic relations. The process of continuous interaction of the internal environment with external factors of development stabilizes, strengthens some and weakens, or even completely destroys, disintegrates others. Each of the participants of the world economic process, pursuing its own interests in a competitive interaction in the influence of a set of parameters, both external and internal, reaches either strong and leading positions, or is omitted, as a rule, due to inadequate perception of modern realities and trends, errors in forecasting which led to the failure. The widespread use in modern practice, along with the internal sources of financing various programs and foreign investments and external debt loans, almost no countries that would rely solely on their own investment opportunities seems entirely logical in the context of the internationalization of the monetary and financial sphere and the general globalization of world economic relations. Moreover, the financial openness of the country initially assumes the possibility of participation in international financial and credit operations with final results, both positive and negative for the macroeconomic of the economic stability.

World experience has shown that significant flow of investment into the country doesn't guarantee increase of competitiveness of its products, the fight against unemployment and social degradation, temporary peak may change into deep depression. On the whole, statement that the financial investments significantly tighten up the underdeveloped, socially and economically backward countries to the level of the advanced is not possible at the present time. The gap between the world of rich and poor countries continues to increase. International economic relations among nations are increasingly based on the policy of double standards, and the most important factors for successful development are the availability of effective scientific and technical activities in the country, the strength and greatness of the economy. Globalization of market relations assists prosperity, growth and differentiation between those who achieve success, and those who fail.

Therefore, when it comes to purposeful formation of conditions for effective long run development, first of all to assume the creation and support of highly competitive organizational structures, the concentration of financial and investment resources in priority, breakthrough industries, assistance in the accelerated creation of a full-fledged infrastructure, etc. Studies of western economists prove that 70% of GDP growth of economically developed European countries is provided through investing in innovative processes [5], and more than 15% of all investment in the country is directed to it. Among the factors that guarantee a stable and growing advantage of one country above others in the process of international competition, the most important are new, high technology. Global experience illustrates that the implementation of the state policy of comprehensive support for development and implementation of new technologies makes it possible to reach the level of high-tech production in competitive struggle and to compete with developed western countries. The countries of the Asia-Pacific region have followed this path

at one time; at present, steadily increasing investment in new technologies in the Persian Gulf countries; this is the most promising way to overcome the one-sided economic specialization and the development of world-science and education in the country. At this stage, the wealth of natural resources does not guarantee a prosperous future for the country; unless the funds are invested in the development of high technologies; then the danger of gradual developing of the raw-material orientation of the economy is inevitable. The lack of opportunities to have first-rate education, science and everything necessary for scientific and technical innovations causes country's gradual transformation to lagging and poor one [9]. Conversely, technological improvements seemed to be increasingly in to avoid the bottlenecks associated with the use of scarce natural resources.

Thus, in modern conditions technological innovations become the determinant of economic growth, its impact can be more than 80% [3, p. 404]. At the same time, the underestimation of the role of intellectual capital and science in progressive transformations leads to the loss of the potential of the country's technological and social development. Studies show that investment into science and education are very profitable; they guarantee high efficiency, creating a reliable basis for scientific and technological progress. However, innovative investments and technologies lead to success only if there is an ability of a particular system to track and master foreign research and development achievements. Therefore, the main task of every country is not to let lag behind global patterns of technological development, become technologically dependent on more developed countries. It can be carried out only through gradual and priority-driven state support of investment and renovation and modernization of production.

An important part of the investment to ensure long run development of the economy is the effective involvement of borrowed funds. It is credit dependence, which totally covers all developing countries, that proves the large-scale practice of unequal exchange between powerful and weak countries. Investment flows are becoming tools of economic pressure, this follows from the concept of ensuring the commercial benefits of such operations. Powerful European countries with a steady-state and prosperous economy have more favorable opportunities to attract foreign funds. It creates the conditions that contribute to the concentration of own investment resources and attract foreign, and in the most effective forms. However, weak countries find themselves in difficult situation, they expose their uncompetitive economy to a risk, as the result domestic business is being put out by foreign ones, and the cost of foreign investment is increasing (highly developed countries benefit from a policy of both domestic and global liberalization).

A certain problem for the financial markets of countries with relatively small foreign exchange reserves is uncontrolled changes in the volume of real investment due to rising interest rates in global financial markets. Therefore, the full liberalization of the transnational flow of investment, and particularly short-term, should not be the target benchmark of an efficient market system.

If a country artificially inflated exchange rate, which is very often observed in terms of market reforms or because of certain political factors, there is a possibility of loss of a significant part of foreign exchange reserves and to increase the volume of external debt obligations. The potential of individual investors and lenders, which is used in the early stages, is the most expedient method of reducing and more evenly distributing the debt burden.

An important trend in the modern development of the international capital market is the constant change in the conditions for attracting private capital. This is particularly true in view of the fact that the severe consequences of the latest global financial crisis, investors have become very shocked to take risks, especially in countries that have only recently begun to building of a market economy. Consequently, global trends and analysis shows that local companies that have experienced a crisis, seek greater access to long-term financing and external funds of non-residents in order to restructuring. Therefore, in the affected countries, mergers and acquisitions are becoming increasingly active. In the short term, foreign direct investment is likely to remain the most desirable source of funding for developing countries, even despite the loss of management control over investment objects.

However, sometimes it seems that for economic reform programs in the post-Soviet area, attracting foreign investment is not a mean to solve actual economic problems, but an independent goal, so important that to achieve it, it is worth sacrificing national interests. Many investors reoriented from the low-profit industrial business to the highly profitable financial industry; fast pay-back businesses are still investment attractive, such as wholesale and brokering; investors are interested in real estate activities, joint ventures are mainly focused on production of goods that are already present on the world market, and on the service sector. It is also necessary to note that the limitations of western partners on large-scale investment, intense activity of small foreign firms focused on brokering and quick return of capital; it should be noted that distribution of investment across sectors and regions of countries are uneven; use of stock market mechanisms for investment is weak; the real value of the foreign partner's contribution to the authorized fund of the enterprise is overestimated; foreign currency is concealed and exported to foreign banks [9]. And foreign investors are not interested in the innovation sphere.

It is particularly impressive that instead of investing in the sphere of material production, huge amounts of national funds are leak abroad [8]. A newly-created capital and a part of attracted foreign capital disappear from the investment sphere due to not effective use.

The increasing occurrence of global financial crises has led to a shift in the IMF's approach to regulating the international financial system as a whole, which, accordingly, has also affected its investment component. Thus, the process of capital outflow is functionally related to the general investment climate and, in fact, serves as an indicator of the possibility of attracting external resources into the country. Therefore, if there is a massive outflow of capital, then the chances of obtaining

external loans and investments immediately decrease. There are doubts about the advisability of capital investments even in potentially promising and priority projects. It is not only about the funds of international financial organizations, but also about private investors.

The process of exporting capital is carried out in both legal and illegal ways. Taking into account possible volumes of capital outflow, especially in an unstable, transformational economy, the possibility of transition of short-term crisis phenomena into a protracted phase, during which investment of industrial enterprises, agriculture, design development becomes unprofitable, besides it, enterprises may have a persistent shortage of working capital. Moreover, the capital outflow causes the further development of numerous negative socio-economic processes, which results in criminalization of economic activity and an increase in the level of corruption in the country [12].

Thus, the strategic task to ensure national economy development is not only to attract domestic and foreign investment, but also to stop the capital outflow from the country, create conditions for investment's productive functioning in the state economy, encourage investment in innovative activities, technical re-equipment and modernization of production [9]. It should be taken into account that the formation of an attractive investment climate for foreign investors, for a number of parameters, negatively affects the country's investment climate for domestic investors.

The transition of the economy to market conditions of functioning in the post-Soviet area is accompanied by an increasing scientific and technical gap between the industrialized countries. Nevertheless, the development of country's own high technologies is unprofitable, unpromising, since most inventions have already been implemented in the West. We also note that so far we have come across the reluctance and lack of interest of developed countries in importing truly advanced technologies to us. Therefore, in such conditions, it is important to restore country's own scientific potential, not only to refine and update old technologies, but also to develop new ones. It is necessary to support enterprises that introduce and adapt foreign basic technologies by providing tax and credit incentives.

The blurring of boundaries and administrative obstacles between countries, integration of regional financial markets, the compulsory opening of the economies of different countries through international competition require an appropriate consideration while improving the principles of forming strategies for investment development of national economies in modern conditions [9]. We can already say that leading countries will develop high-intellectual production and modern management technologies while transferring traditional production to lagging nations. Export of capital should be replaced by export of technologies. Accordingly, the main task of individual countries will be to create favorable conditions for the realization of individual advantages and branch features of their economy, including mandatory participation in regional integration when entering the world markets.

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SPATIAL COMPONENT OF PROVIDING THE BASIC CONDITIONS FOR THE SECURITY OF THE NATIONAL ECONOMY

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Centralization and decentralization are mutually supportive processes in the management of social systems: increasing the degree of centralization leads to a decrease in the degree of decentralization and vice versa. But to determine the most acceptable level of centralization and decentralization, individual countries have

been trying for decades. For example, in Denmark, the search for an optimal level of decentralization began in 1958 and lasted until 2007, when the new distribution of powers in the new structure came into effect and directions for further stimulation of integration processes for the consolidation of municipalities were determined. The decentralization reform initiated by the Polish government in the 1990s allowed Poland to transform and become an integral part of the European Union. France has 25 years of experience in decentralization, Italy has been actively implementing measures to decentralize power in the country since 2000. According to the World Bank, 63 of the 75 transformational countries and major developing countries took steps towards decentralization in the mid-1990s [9].

In 2014, Ukraine declared the beginning of full-fledged reforms in all spheres of public life, where decentralization of public authority takes priority, because without a mature and powerful local government it is impossible to build a strong state. This process involves a depart from the Soviet model, which Ukraine received as a legacy after the collapse of the USSR, when a man with a gun and a flag was put in each village. It was power in place, but economically it was not capable. Today in Ukraine there is a de-communization of public administration, which provides formation of capable local self-government at the level of amalgamated hromadas (AH).

Analysis of the literature on the research topics [2; 3; 9; 10] made possible to highlight the spatial factors for providing the basic conditions for the security of the national economy (Fig. 1). Let us consider each of them in detail.

The practice of European countries shows that the key internal resource for the development of a territory is people, more precisely, their knowledge, skills and competences – both as individuals and as a community of citizens. However, at the present stage of development, most territorial communities are characterized by a complex demographic situation, which is about a deterioration in the quantitative and qualitative parameters of human resources through depopulation, a high level of population aging, a low birth rate, a distortion of marriage and family foundations in a spiritual and value development, a reduction in life expectancy and a migration outflow of active youth [11].

About a third of Ukrainians live in rural areas, but over the past 18 years, rural residents have decreased by almost a quarter (from 16.9 million to 13.0 million), while the number of urban residents has decreased by almost 16% (from 34.8 million to 29.3 million) [8]. According to official figures from 1990 to 2018, only 426 rural settlements disappeared from the map, but the true number of “extinct” villages is much more: in 2014, 369 deserted villages were not removed from the state registration [1]. Another 4684 villages are on the verge of extinction, whereas of 2015, there were up to 50 people in each. It is appropriate to note that the average age of the rural and urban population is almost the same (40.5 and 40.7 years, respectively). In rural areas the situation is very heterogeneous: the smaller the village, the ‘older’ it is. If in large villages (more than 1 thousand residents) elderly

people is 21% of the population on average, in small ones (less than 50 people) – 38.0% (with the average Ukrainian indicator for the village – 21.6%). The mortality rate also differs accordingly: if in large villages the number of dead exceeds the number of births 1.9 times, then in small ones 8.3 times.

Another factor in the depopulation and “aging” of rural areas is labor migration. For example, in 2001, 25.6% of rural residents worked outside it, and in 2014 – 54.9%. Among the latter, 66.9% of people worked in cities, 20% – outside their area, 12.7% – abroad [1]. Unfortunately, such migration is very often irreversible.

The key condition for maintaining the unity of the state space and the stability of the state is to reduce imbalances in the economic development of the territories through creating conditions for inter-territorial solidarity and mutual understanding. In Ukraine, the successful implementation of these processes is hampered by socio-economic problems, which, in the first place, are characterized by the differentiation of the income level of the rural and urban population. In July 2018, the average wage in agriculture was 7.5 thousand UAH, while in industry – 9.8 thousand UAH, in trade – 9.7 thousand UAH [8]. In addition, rural areas are characterized by an increased proportion of unskilled or low-skilled workers: as of 2015, 38.7% of them were employed in the simplest professions (for comparison: in the city – 9.1%), but specialists and professionals made up only 17.1% (in the city – 35.5%). The level of informal employment is also high. According to estimates, in 2015, 42.6% of the rural population worked in the “shadow” (in the city – 17.2%) [1].

The provision of rural residents is mainly due to pensions, various payments and resources of their households, and income in the form of wages, on average, is only 34.4% of the total (55.7% in the city). Households that have no workers at all are common in rural areas: in 2014, 46.2% of these were [1].

Own households cannot provide rural residents with a decent income. So, in 2015, only 17.5% of private agricultural enterprises owned agricultural equipment, 15.2% of them attracted employees, and income from the sale of agricultural products amounted to only 11.5% of total household income [1].

Theoretically, instead of an inefficient collective-farm system, farmers should have become the mainstay of the local economy. As of 2014, there were 52.5 thousand business entities in Ukraine’s agriculture (1.7 units per village on average), among which 71.3% were farm households. However, they did not revive the labor market. According to statistics for 2014, a little more than 3% worked on farms among the population employed in agriculture. Agricultural enterprises and agricultural holdings, have not revived economy as well because using modern equipment do not need as many workers as Soviet collective farms or pre-Soviet model farms. As a result, the poverty level in the village is much higher than in the city. In 2017, this indicator (in terms of the subsistence minimum) in the city was 11.8%, and in the countryside – 28.9% [5].

The formation of a single economic space in Ukraine involves overcoming inter-territorial differentiation and spatial integration of territories by establishing

the most intensive interaction between their economic entities through all possible channels of communication. One of these integration tools is transport.

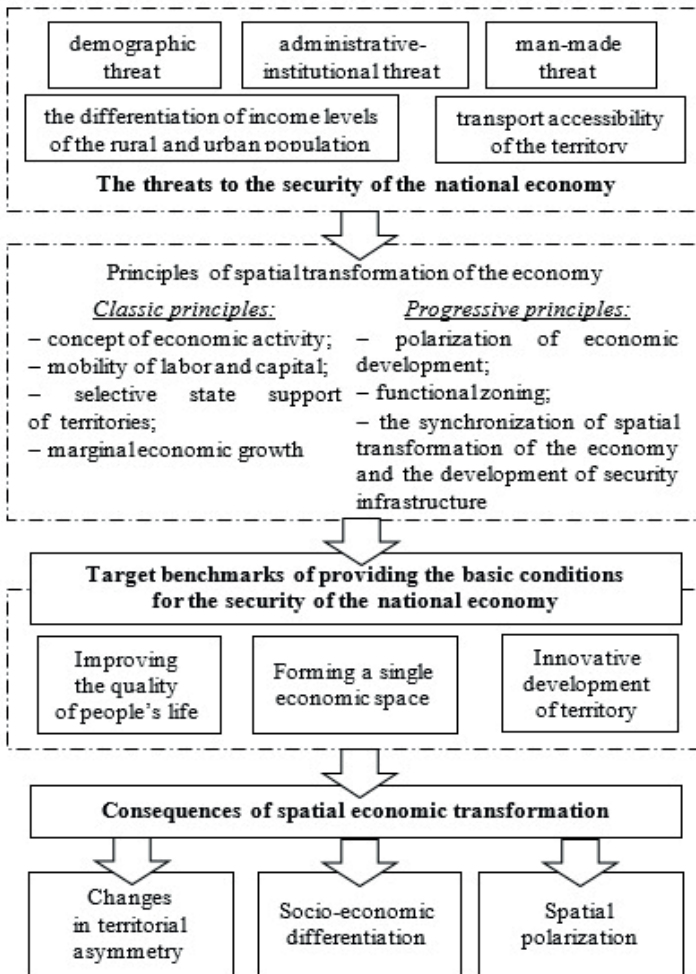


Fig. 1. The spatial factors for providing the basic conditions for the security of the national economy (developed by the authors on the basis of [2; 6; 9; 10])

The evolution of the theories of the productive forces distribution and the regional economics confirms that the transport factor that significantly influences the formation of economic centers of space. So, in the XV-XVII centuries, the centers of gravity of the population and the formation of new territorial settlements were fair as a place for the development of trade and transport infrastructure. With

the development of industrialization processes, large cities become the centers of space formation, and the key factors of spatial development were transportation costs and concentration of enterprises and objects of various industries as locations for employment places for the population.

The transport sector is economically significant: in 2017, almost 1 million enterprises in the EU specialized in providing transportation services, generating 308 billion euros of value added in the EU-28, which amounted to 12.7% of the value added of the services sector (excluding financial services). 7,400,000 people were employed in transport, or 10.9% of those working in the services sector (excluding financial services) [7].

In Ukraine, in 2016, transport, warehousing, postal and courier activities accounted for about 6.7% of GDP and 6.0% of the total number of employed people [8].

Providing basic security conditions of the national economy determines the need to improve the role of the transport infrastructure, and first of all, the state of the roads: 51.1% of which do not meet European requirements for equality, 39.2% – for durability. In Ukraine, the total area of holes on the roadway to the beginning of spring was 12,2 million m², of which 4,6 million m² – on national roads and 7,6 million m² – on local roads [7]. After analyzing the state of the transport infrastructure of rural areas in Ukraine it is worth noting that only 58% of villages have paved roads, 33% have road lighting, and 24.4% daily transport links with developed settlements [7].

In addition, in Ukraine, in the motor transport, the renewal of rolling stock occurs at a slow pace – almost 70% of the rolling stock is technically and / or morally obsolete, and 50% of buses have been in operation for more than 10 years.

Providing basic conditions for the security of the national economy being place-led is also possible by minimizing the impact of man-made threats. The main objective of the development strategy of the amalgamated hromadas in Ukraine is to keep people locally, which is based on an understanding of their needs. The latter are stand on three aspects: where a person works, where he lives and where he rests. If desired, they can be narrowed down to two: self-realization and comfort [10]. Such things as the Internet, electricity, roads, public services, landscaping, water supply, high-quality medicine, safety – are the key to create comfortable living conditions at the place of residence for each inhabitant of the community.

According to 2015, 61.8% of rural households did not have sewage systems, in 45.7% of settlements there were no institutions providing basic services (hairdressing salons, dry cleaners, workshops, etc.). 41.8% of them were not provided with timely emergency services aid, 28.5% – with medical facilities near housing. Only a third of the country's villages are provided with kindergartens, and 41% of them – with schools. Residents of many villages do not have guaranteed sources of high-quality water supply. The number of unorganized municipal and industrial waste dumps is gradually increasing. In addition, it remains important to address issues related to civil protection of the population and territories, as well as the elimination of fires

and natural disasters in the most remote settlements.

Partially, these threats can be mitigated by reforming the system of medical and educational institutions, the system of the State Emergency Service of Ukraine. However, with the existing spatial development model, it will be increasingly difficult to maintain and develop the infrastructure of individual territories.

In such conditions, it is the decentralization of power that is able to provide communities with the opportunity, through their own resources, to ensure the livelihoods and sustainable development of their territories and, above all, the ability to provide quality services to residents. In addition, the experience of existing amalgamated hromadas shows that only those who are able to apply new management tools to the society become successful ones. Communication and the joint solution of complex problems with other communities (regions) are coming to the fore, which will save money by distributing expenses among the participants in solving a particular problem. Not all communities can maintain on their own such objects, for example, as the archive, roads, security centers (fire stations), etc. In turn, this opens up wide opportunities for the development of intermunicipal cooperation and interregional cooperation. Over time, when man-made threats will be partially minimized and become the operational activities of representatives of local authorities, it is appropriate for society to focus on narrow specialization, which will determine its uniqueness and specificity [3].

Providing basic security conditions of the national economy also involves overcoming the administrative and institutional threats to ensure the harmonious spatial development of the country. The modernization of the existing system of spatial arrangement of the country provides for the formation of a new “geography of responsibility centers” for the improvement of public life and ensuring territorial economic development. The project model of an effective territorial organization of local self-government at a basic level involves the formation of 1285 AH in Ukraine by combining 8846 territorial communities [4], which will contribute into improving the quality of local development management and avoiding the phenomenon of functions duplication between different levels of public authority.

The processes of transformation of the country’s spatial model, primarily related to human development. Its integral part is the approximation of services to a person and the provision of quality services, including administrative services. In this regard, the development of the system of Administrative Service Centers (ASC) is a marker of the success of the reform [3].

As of January 1, 2019, 775 ASCs had already been created in Ukraine (125 in the AH), the main criterion of which is 30-minute availability. Kyiv, Kharkiv, Dnipropetrovsk, Odessa, and Lviv regions are among the leaders in creating the ASCs. In 2018, local government received an additional income of UAH 3.40 billion due to the provision of administrative services [4].

When developing the place-led system of providing administrative services it is important to choose the model for organizing this process (ASC is in the

center of the community – separate buildings or premises of state institutions, inter-municipal cooperation, remote workplaces and territorial divisions of ASC, mobile ASC administrator, mobile ASC), as there are cases when the development of infrastructure for providing services at the local level is funded, but there are virtually no recipients of local services. As a result, the irrational use of local budget funds leads to a slowdown in the development of the “smart growth” society’s priorities and an increase in budget expenditures on the maintenance of the ASC, whose activities in the community are unprofitable.

The key indicators to choose the model of ASC are the number of inhabitants of the community and administrative center, the geography of society and the characteristics of settlements, location in the district center or far from it.

Modern challenges require a reassessment of the traditional principles of economic activity and the development of new spatial planning models for the purpose of creating real prerequisites for ensuring economic security and sustainable development of Ukraine in conditions of external turbulence.

However, a significant number of settlements’ general plans of the country were developed in the 1970s and 80s and are no longer suitable for use [6]. Thoughtless and haphazard distribution of land plots, primarily for private development, does not generate the tax capacity of local communities, and it is useless to hope for serious investments without the availability of planning documentation.

Spatial planning is extremely important for new amalgamated hromadas, which territory sometimes covers more than 50 settlements. Understanding this, on November 16, 2017 the Verkhovna Rada of Ukraine adopted in first reading a draft law on amending the Law of Ukraine “On the regulation of urban planning”, according to which communities are given the opportunity to plan integrated spatial development of AHs settlements as a single settlement system, including phasing of the territory development. The development of such documentation for the AHs will cost less than the development of general plans separately for each locality [6].

The development of a community planning scheme should be carried out taking into account the key obstacles to provide the basic security conditions of the national economy (the differentiation of income levels of the rural and urban population, transport accessibility of the territory, demographic, man-made and administrative-institutional threats) .On the basis of such a comprehensive assessment of the territory, proposals are being formed on the prospects for the town-planning development of the community territory. An improved planning organization is proposed. It also substantiates the directions of economic and territorial development of human settlements (including their design limits), calculates the prospective population, the required power of social and engineering infrastructure, and develops recommendations for the protection of the environment.

Thus, providing basic security conditions both at the level of the national economy and at the level of individual territories requires corresponding changes in the spatial model of the economy. The development of theories of the productive

forces distribution is determined by extraordinary weight. The industrial-oriented model of spatial development, formed in Ukraine, requires transformation. The reason is not only the lack of due attention to the problems of spatial planning since the USSR, for economic and political reasons, but also the changing role and weight of economic development factors, changes of technological requirements and forms of business organization, and the development of communication systems. The accumulation of these problems has exacerbated the need to reorient the spatial model of development of territories from the priority of allocating productive capital to the priorities of human capital, the weight of which is significantly increasing in modern conditions. The choice of the territorial development strategic priorities in modern conditions is necessary, but to a certain extent is conditional without an established system of spatial planning. Solving this problem is an important challenge to the strategy of regional development of the national economy for the period after 2020.

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RISKS INSURANCE OF MINING ENTERPRISES IN UKRAINE: AN INNOVATIVE APPROACH

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Problem statement. Mining industry is one of the strategic industries of Ukraine. Given that about 50 percent of the industrial potential of Ukraine and up to 20 percent of its labor resources are related to the extraction and use of minerals. Along with this, it is characterized by significant risk-generating factors, which is caused by the specifics of mining enterprises. The presence of a large number of risks and the magnitude of possible losses, as a result of their occurrence, supports the necessity of their management. For this purpose, mining companies transfer part of their risks to insurance companies through the purchase of insurance products.

However, there are a number of risks that are not covered by insurance protection (for example, the risks associated with the life and health of miners). In addition, the scientific and technological progress and produced innovations, generate, along with the traditional risks of mining enterprises, completely new, little investigated risks that require an innovative approach to their management. Improvement of the approaches to risk insurance of mining enterprises is one of the priority tasks on the way of innovative development of the state. The risk insurance of mining enterprises on an innovative basis is important in ensuring the stability of their activities and financial stability, development of the insurance industry, increasing social guarantees, as well as for the economic development of the country as a whole. In view of the above, the issue of risk insurance of mining enterprises on the basis of an innovative approach is becoming especially urgent.

Definition of an unresolved issues. The research of theoretical and practical aspects of enterprise risk insurance was carried out by such scientists as V.D. Bazylevych [1], S.S. Osadets [2], R.V. Pikus [3], N.M. Vnukova [4], L.A. Orhaniuk-Malitska [5], V.M. Honcharov, G.M. Kovalenko, O.V. Rodionov [6], L.I. Donets [7] et al. Some aspects of the risks of mining enterprises were studied to a certain extent by the following domestic and foreign scholars and practitioners: O.A. Temchenko [8], G.Yu. Boyarko [9], O.M. Sukhina [10], A.Yu. Tsvetkova [11] et al. Analysis of the specifics of insurance in the management system of certain types of risks of mining enterprises are examined in the works by V.S. Taltykin, A.P. Malkova, M.S.

Ostrovskiy [12] et al.

The ambiguity of approaches to the development of the theoretical and practical principles of risk insurance of mining enterprises in Ukraine, as well as the lack of proper reflection in scientific works, proves the necessity of further investigation of the risk insurance of mining enterprises taking into account the current industry problems and innovative risks.

Analysis of recent research and publications. Mining activity is associated with a variety of hazards, and therefore can be described in terms of presence of a significant number of risks. In view of this, there is a need for clarification of the nature of the risks of mining enterprises, identification of their types and justification of protection taking into account the innovative approach. Insurance can be one of the effective methods of protection against risks of mining enterprises. The research of the scientific literature on the given area has shown, that the problem of insurance of risks of the enterprises is studied in works of numerous scientists and economists. In particular, the works of V.D. Bazylevych [1] are devoted to theoretical principles of insurance as a method of enterprise risk management. Similar aspects were researched in the works of S.S. Osadets [2], N.M. Vnukova [4], L.A. Orlaniuk-Malitska [5] et al.

The issue of the necessity of risk insurance for enterprises in the agrarian sector is explored by R.V. Pikus [3]. Another group of authors – V.M. Honcharov, G.M. Kovalenko, O.V. Rodionov [6] – Investigates the environmental risks of enterprises and appropriate management methods. The economic risks of enterprises and the peculiarities of their management are investigated by L.I. Donets [7].

Despite the abovementioned studies, the issue of the risks of mining enterprises and their management is not sufficiently investigated in Ukraine. Several papers deal only with certain risks of mining enterprises. For example, some of them are devoted to issues of environmental risks of mining companies and the possibility of their insurance [12]. The risks of mining companies in the system of their competitive positions were explored in their work by O.A. Temchenko. The author divided all the risks into two large groups (external and internal), where the subgroups are identified and, on this basis, the carriers of the risk of reducing of the mining enterprises' competitiveness are identified. Thus, within the limits of the external risk group, the scientist distinguishes foreign economic risks, risks of market conditions, natural-climatic, informational, scientific-technical and legal risks. The author considered the internal risks from the standpoint of four groups: mining equipment, personnel, mineral raw materials and end products [8]. The division of risks on internal and external is suggested by G.Yu. Boyarko [9.] as well. At the same time, the author considers them from the standpoint of the possibility of measuring and evaluating (the risks that can be quantified and the risks that are not subject to quantification or limited in their assessment).

Certain works explore the entrepreneurial risk associated with the implementation of an investment project in the mining industry. An interesting point is the statement

of the author, which, from our point of view, we should agree on - the division of risks into the following two groups: the first combines the risks inherent to any industrial enterprise, the other - the specific risks associated with its activities [10].

Thus, the study showed that today there is no holistic approach to determining the types of risks of mining enterprises, and only some aspects of this issue are addressed. In addition, there are not enough scientific developments in the field of risk insurance of mining enterprises in general and insurance of such risks in particular, which are related to the life and health of miners and cyber-risks.

The purpose of the research. The purpose of the research is to study the theoretical aspects of risk insurance of mining enterprises of Ukraine, as well as to develop practical recommendations for insurance of certain types of them in order to ensure the financial stability of mining enterprises and their continuous operation.

Research results. In our opinion, mining enterprises are characterized by both general risks inherent to any enterprise, and specific ones, inherent only to these enterprises and related to the peculiarities of their activities (Fig. 1).

According to the data presented in Figure 1, an important role belongs to political and economic risks among the general risks of mining enterprises. The urgency of these risks in the process of activity of mining enterprises predetermines the peculiarities of the domestic economy and the continuous process of reforming in the country. After all, any changes in the authorities' mood lead to changes in legislation, impact on tax policy, fluctuations in exchange rates, changes in the level of inflation and interest rates, which is reflected in the peculiarities of the operation of mining companies (for example, the devaluation of the national currency causes a change in the price of materials and raw materials, which is especially relevant when signing foreign contracts).

In addition, processes of privatization, nationalization and liquidation of enterprises, as a result of the implementation of political risk, are possible.

It is important to note that today the development of the political risk of domestic mining enterprises takes place not only at the state level, but also at the international level. After all, any changes in the political course of the country can affect the markets for deliveries of products and their value (both CIS countries (Republic of Moldova, Russian Federation) and European countries (for example, Poland, Slovakia, etc.) were present at the main markets of Ukrainian coal exports in 2016) [13].

Along with the political and economic risk, the marketing risk of mining enterprises is developed, which appears in the violations of the contract for the supply of raw materials and changes in prices, changes in demand in the market, changes in features of the goods, etc.

The ecological risk is related to the activities of mining enterprises, the nature of which is the negative impact on the external environment caused by the enterprise's activity (pollution of the air, pollution of surface and groundwater, the deposition of the earth's surface in places of extraction of minerals, etc.). It should be noted that the constant processes of climate change can make their adjustments in particular in

the activities of mining enterprises. The issue of environmental risk is very relevant and the issue of insurance is gaining special attention in its study. However, these issues require a more in-depth study and will be the subject of further research by the authors.

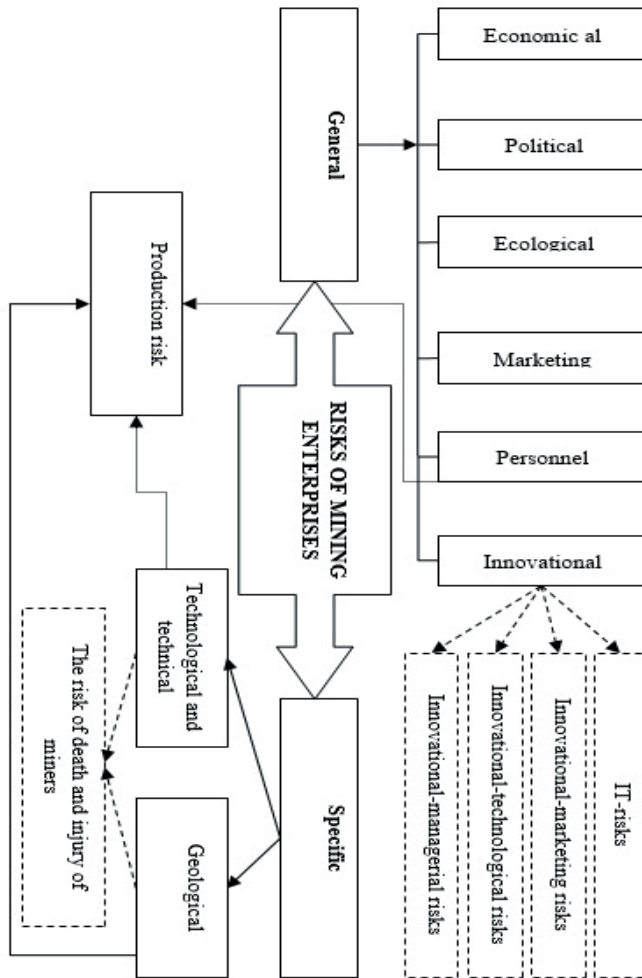


Fig. 1. Types of risks of mining enterprises
 * Source: developed by authors

The development of the mining industry in accordance with the modern requirements leads to the emergence of personnel risk. After all, the growing role of automation of the production process leads to the need to find highly skilled

professionals, who are able to ensure optimization of production and high efficiency of the mining enterprise. Personnel risk is manifested not only in a shortage of highly skilled personnel, but also in the aging of staff, which can lead to production interruptions and loss of production experience, fraudulent and unskilled employee actions, etc.

It is extremely important to take into account the innovative risks. Indeed, it is known, the innovations open not only new opportunities for enterprises (improve productivity, increase the efficiency of equipment operation and the enterprise competitiveness, ensure continuity of activities, improve the products quality, etc.), but also create new threats and new risks. Thus, innovation risks of mining companies include innovation-marketing risks, innovation-technological risks, innovation-managerial risks and cyber-risks.

Innovational-technological risks of mining enterprises are connected with the emergence of substitute products, new technologies for extraction and processing of minerals. In turn, an example of innovational-marketing risks is the inability to increase the competitiveness of a mining enterprise by introducing innovations in the process of production and sales of products, the coverage of new markets, the emergence of new raw materials, etc.

The necessity of introducing changes in the management structure of mining enterprises and its non-conformity with modern market requirements give rise to innovational-managerial risks in the system of innovation risks of mining enterprises.

In our opinion, special attention should be focused on IT risks, namely on cyber-risk. After all, they are of an increasing nature and among the ten most common risks of mining companies [14]. Such risks involve the use of electronic data, its accumulation, storage and transmission via computers, portable devices, servers, the internet and telecommunication networks (today the use of network systems can be traced in all aspects of the activities of mining companies: starting from mining and processing, ending with marketing).

Today, most of the domestic mining enterprises are vulnerable to cyber-risk. The causes of insecurity of mining enterprises against cyber-attacks are: insignificant level of financing of the information security department; irrational distribution of responsibility for the level of security between different departments; insufficient level of “attention” to the information security and lack of qualified professionals at the enterprise, capable of developing an effective risk management system and internal control measures [14].

It should be noted that the annual losses from cyber-attacks in the world amounted to 445 billion US dollars [15]. The losses from cybercrime in Ukraine during the first eight months of 2016 amounted to 27 million UAH [16].

Based on the above, there is an urgent need to find effective methods for protecting mining companies from the negative effects of cybercrime. After all, the leakage of trader information by the mining company may result in the loss of the market

benefits, and theft of backup copies can lead to loss of trade benefits as a result of price manipulation by the intruders. Due to the source of confidential information, cyber attacks can cause significant damage to the reputation of the company and result in huge losses [14]. Insurance is one of these effective methods. The main task of cyber-insurance is to protect against large-scale hacker attacks. This type of insurance provides the financial mechanism of recovery after major losses, helping enterprises to return to normal functioning, maintain stability, solvency and reduce losses due to a break in production [17].

Cyber insurance in recent years has gained significant development in the international market. Today, such insurance services are provided by more than 60 insurers all over the world. [17]. However, in the domestic insurance market, the offer of insurance products that would protect enterprises, including mining, from cyber-risk, is extremely low, and therefore, the level of penetration of cyber-insurance is almost zero. This situation was confirmed by a study of the range of insurance products offered by TOP-10 insurers of Ukraine in terms of collected premiums (Kremin, Ingostrakh, AXA insurance, Arsenal insurance, PZU Ukraine, UNIQA, INGO Ukraine, Providna, Ukrainian insurance group, TAS AG). As a result of the study, it was found that market leaders do not offer specialized insurance products for cyber risk insurance. Insurers provide for the coverage of risks of “illegal actions of third parties” only in the framework of other insurance products (for example, insurance of property or insurance from breaks in production). However, even under these conditions, cyber-risk is not always taken into account.

Consequently, today the domestic insurance market lags significantly behind from foreign insurance markets in the development and introduction of cyber insurance products. We believe that such an insurance product, designed to protect miners from cyber-risk, should be self-contained and provide coverage for various risks. Since today there is no required product in Ukraine, we propose to introduce a specialized insurance product for cyber-risk insurance of mining enterprises in the product line of insurance companies. Its main characteristics, which can ensure the restoration of the normal activities of mining enterprises, their stability, in the presence of an insured event, is given in Table 1.

Thus, the use of cyber-insurance in the management of cyber-risks, along with information security products, will allow mining companies to build an effective mechanism to protect against cyber-threats under active informatization and computerization, and to ensure a continuous process of its activities.

Another group of risks, as noted above, is specific, which includes technological-technical and geological risks.

The geological risk of mining enterprises is related to the non-confirmation of mineral reserves, the complexity of the geological structure of the deposit, and the technological-technical risk covers the risk of an industrial accident, including the risk of mine collapse; the risk of low quality products due to outdated technology and equipment; the risk of interrupting the technological cycle, etc.

**Features of the insurance product for the insurance
of cyber-risks of mining enterprises**

No	Features	Key provisions
1	2	3
1	Purpose	Financial support of the insured by reimbursement of expenses in case of commitment a cyber-crime
2	Object	The insurer's property interests related to the reduction of income and (or) additional costs in connection with the commitment of a cyber-crime
3	Subjects	Insurers (insurance organizations entitled to insurance in accordance with the requirements established by the Law of Ukraine "On Insurance"); Insured (legal entities (mining companies) that have concluded insurance contracts with insurers on cyber-risk concerning the damage caused by the cyber-incident).
4	Insurance amount	The amount of the insurance amount is set individually
5	Insurance payment	Is established depending on the amount of insurance coverage and the availability of additional options, as well as from the state of information security of the enterprise
6	Risks that are subject to insurance	- breaks in production due to a cyber-incident; - loss of corporate data due to a cyber-incident; - cyber-extortion; - damage to reputation.
7	Events that are not considered being insured	The intentional or unlawful actions of the insured, which led to the occurrence of an insured event
8	Additional policy options	Coverage of the costs of investigating a cybercrime, restoring reputation; litigation costs related to cybercrime; legal services; third-party IT services (damaged data recovery, audit, rapid response and cyber incident investigations)

** Source: developed by authors*

The identification of the risks of mining companies and the use of insurance as a management method has a positive impact on the insurance industry development via the improvement of existing insurance products and the development of new ones, which in turn drives the country's innovative development (Fig. 2).

Also, the use of a risk insurance tool by the mining companies provides them with financial protection against the adverse effects of unforeseen events and, consequently, the stability and continuity of their work. The well-established and uninterrupted operation of mining enterprises will contribute to securing domestic needs for extraction and enrichment of minerals and for the development of export activities.

In our opinion, the above mentioned, overall, will contribute to the economic development of the country.

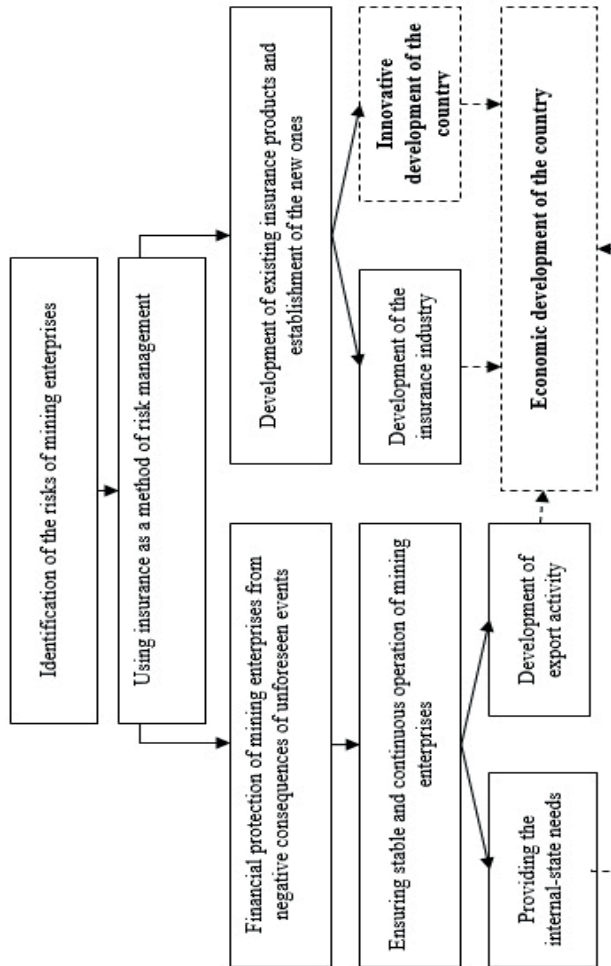


Fig. 2. Influence of introduction of innovative insurance products in risks insurance of mining enterprises on development of the country

* Source: developed by authors

Conclusions and prospects of the future research. The study of theoretical aspects of the risks of mining companies has made it possible to conclude that there is no holistic approach to the definition of types of risks at present, insufficient consideration has been given to the risk insurance of mining enterprises in general, and the insurance of such risks related to the life and health of miners and cyber-risk, in particular. In our view, the risks of mining enterprises should be considered in

terms of general, featuring any enterprise, and specific to these enterprises - related to the peculiarities of their activities.

The general risks of mining enterprises include: economical, political, environmental, marketing, personnel, and innovation risks. In turn, innovation risk includes the following components: innovational-marketing, innovational-technological, innovational-managerial risks, and IT-risks, with particular emphasis on cyber-risk. With regard to specific risks, in this context, it is necessary to distinguish the technological and geological risks and the risk of death and injury to miners.

Particular attention should be paid to IT risks, namely, cyber-risk. Today, most of the domestic mining enterprises are vulnerable to cyber-risk due to: insignificant levels of funding for the information security department; irrational distribution of responsibility for the level of security between different departments; insufficient level of “attention” to information security and lack of qualified professional at the enterprise, capable of developing an effective risk management system and internal control means.

The special need for the cyber-risks insurance by domestic enterprises of the mining industry is determined by introducing an innovative specialized insurance product for the cyber-risk insurance of mining enterprises in the product line of insurance companies, because today the specialized insurance products for insurance of cyber-risk are not offered by leaders of the domestic insurance industry. The features of the insurance product for the cyber-risks insurance of mining enterprises are defined, namely: purpose, object, subjects, features to define the insured amount and insurance payment, risks subject to insurance, additional policy options and events that are not considered to be insured. It has been established that cyber-insurance in the management of cyber-risk, along with information security products, will allow mining companies to build an effective mechanism of protection against cyber-threats and from possible losses due to a break in production due to a cyber-incident; loss of corporate data in a cyber-incident; cyber-extortion or damage to reputation.

The development of new insurance products and their introduction on the market is a guarantee for the insurance industry development as a whole, and the application of insurance as a method of risk management of mining enterprises will provide stability and sustainability in their activities, which will contribute to the country’s economic development.

A promising direction for further research is to find out the features of life and health insurance for miners, as a method for managing the risk of death and injury of miners.

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THREATS FOR FINANCIAL SECURITY OF UKRAINE IN THE BANKING AND NON-BANK FINANCIAL SECTORS: TENDENCIES OF THE TIME OR NEGLIGENCE OF THE NATIONAL REGULATORS WORK?

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The regulation of the state of financial security of the country is now a task of national importance. The domestic financial system, which did not manage to recover after the financial crisis of 2008-2009, received another major blow through the political crisis and the beginning of military actions in the East of Ukraine. Lack of coordination of domestic financial flows, the presence of a shadow financial sector, dependence on foreign investment capital and various types of foreign financial assistance, imbalance in the development of various sectors of the financial market, lower demand for financial products and services, financial nihilism, distrust by the population and business structures to financial intermediaries because of the lack of ability to satisfy their financial interests and the low level of protection of financial rights by the authorities – this is an incomplete a list of the conditions that professional participants in the banking and non-bank segments of the financial market are face to. These circumstances serve as a source for generating a large number of both – traditional and new types of threats to the state of financial security at both micro and macro levels. The lack of a tendency to increase the level of financial security of the country over the past five years makes it possible to assert the need to identify the most significant threats to its state and to establish the possibility of minimizing their quantity and consequences of the negative impact on Ukraine’s financial security through the mechanisms of state regulation of the country’s economic security and its financial subsystem.

The investigation of the threats for the functioning and ensuring the economic security of financial institutions of various forms and types, such as banks, insurance companies, credit unions, investment institutes, etc., is the basis of scientific works of many domestic and foreign scientists. In the context of this study, the attention is paid to the works of such foreign scholars as J. Haller, C. M. Wallen, which offer a resilience-based approach for managing third party risk in financial services organizations [1], V. Svatá, M. Fleischmann, who are exploring technology of risk management in banking industry [2], Hull J. C., who owns a fundamental research work «Risk Management and Financial Institutions» [3], A. A. Rampini, S. Viswanathan, G. Vuilleme, who also devoted attention to the development of basic provisions of risk management in financial institutions [4], D. H. Pyle, which is engaged in perfection of the theory of bank risk management [5]. Among the publications of Ukrainian researchers in recent years, it is worth to note the works of V. M Furman [6], R. S. Vovchenko [7], N. O. Grebenyuk [8], and V. Tyshchenko [9]. However, the volatility of threats accompanying the activities of financial institutions in the current economic conditions and the need for their permanent management in order to ensure the economic security of professional participants in the financial market as an important component of the financial security of the state, actualizes the need for research on the subject chosen for this article.

Negative trends observed in the domestic financial market are the result of the negligent and unprofessional attitude of financial institutions towards the management of their own economic security system, which raises the issue of the need to identify deficiencies in the process of their economic security system building and identifying the disadvantages in the mechanism of its management.

The instability of the financial sector, the steady reduction in the number of different types of its professional participants, low profitability of financial services on which institutions financial specialize - are clearly expressed external threats to the effective economic security system management of financial institutions. The uncompetitive financial system of the state in the conditions of Ukraine's integration into the EU, entering of European financial companies into the domestic financial market, endangers financial security of the state and, as a consequence, its financial independence, the level of which in the beginning of 2019 is low.

An analysis of the trends in the development of domestic banking and non-bank financial sectors made it possible to establish a list of modern threats to the financial security of the state and to determine the possibilities of influencing them on the part of national regulators of the financial market (Table 1).

Certainly, some modern threats to Ukraine's financial security have developed in the financial sector not because of the low capacity of national regulators, but because of the tireless evolution and transformation of the architecture of the financial market.

**Threats to Ukraine's financial security in the banking and non-banking financial sectors and the possibility of regulating their manifestations
[Complied by the authors]**

Threats	Possibilities of regulatory influence to minimize the threat or its negative impact on financial security
Professional financial market participants with minimal financial potential	Increasing the requirements for the minimum amount of capital, checking its availability in bank accounts or in real assets of institutions, termination of activities of institutions that do not meet the requirements to the size and quality of capital
Lower demand for financial services by the population and business entities	The introduction of additional mechanisms for guaranteeing the quality of financial products and services, monitoring their prices, identifying and disclosing the list of institutions that do not fulfill the financial obligations to customers and terminate their work with the provision of compensation to stakeholders
Low level of domestic financial investment	Clearing the market from fictitious and incapable financial institutions, initiating the creation of a state investment guarantee fund
Reducing the level of availability of financial products and services	Establishment of requirements for presence in the financial institution of a network of branches and offices and obligatory distance servicing for certain types of financial services
Increasing the number and variety of financial fraud	Formation and publication of «blacklists» of financial institutions that committed fraudulent actions against clients, imposition of fines, imposing more stringent requirements on personnel of financial institutions and their technical and informational and analytical support
A large number of fictitious financial institutions	Formation of a list of signs of fictitious financial institutions and the development of a method for their detection; carrying out a simultaneous comprehensive review by all regulators of the activities of financial institutions in their market segments and discontinuing the activities of those who will have signs of fictitiousness
Lack of quality assurance of financial services	Conduct a large-scale survey of consumers of financial products and services and develop methodological recommendations for ensuring their quality by financial institutions with obligatory compliance monitoring; the introduction by the regulators of the system for receiving requests from financial service clients regarding complaints about the quality of financial services
Increasing the level of risk appetite in systemic financial institutions	Increase of the level of qualification requirements for TOP management of financial institutions, the decisions of which are related to the risk of loss of financial assets of clients or financial institution or failure to receive their expected income
Lack of development strategies for security of banking and non-bank financial sectors	Development of the National Strategy for the Financial Security of Ukraine until 2025 with the allocation of its sections, which will include a list of specific measures to achieve the safety of the banking and non-bank financial sectors
High level of cash payments	Setting up a maximum commission for non-cash services, establishing a list of financial services, which can be used only on condition of non-cash payment
Low asset quality in banking institutions	Increasing the requirements for the quality and composition of bank assets and continuous monitoring of compliance

In particular, a decrease in the number of financial institutions is provoked by the tendency to clean up the market from incapacitated participants, single-day companies created for financial fraud and withdrawal of funds abroad to the offshore companies. The increase in the number of hacker attacks on financial institutions is due to the development of new technologies, the expansion of cashless circulation, the transition to remote financial services, the availability of the Internet and its capabilities to the general population. The high level of foreign capital in the domestic banking and insurance sectors is the result of Ukraine's choice of convergence with the European Union, which resulted in the total opening of markets for goods and services, including financial, for the entry of foreign companies. The attraction of investment capital from foreign donors is necessary because of the low level of financial inclusion, which hinders the expansion of domestic investment opportunities for national economic needs.

The following is a list of actions to be taken by public authorities to effectively manage the threats to economic security of financial institutions and other financial system participants in order to stabilize the financial security of Ukraine (in its various subsystems).

List of actions to achieve the strategic objectives of ensuring banking security:

- development of models of internal provisions for ensuring the economic security of banks;
- establishment of the standard of economic security of banking activities;
- development of reporting for banks to provide the regulator with information about the state of their economic security;
- reducing the level of bad loans; increase of the capital requirements for banks;
- reducing the number of banks with 100% foreign capital in the financial market (at least to the level of 2007, pre-crisis year - 10% of the total number of banks in the banking system);
- raising the requirements for the security of banking premises and developing recommendations for their placement;
- increase in the number of inspections of bank staff; expansion of the list of banking standards. List of actions to achieve the strategic objectives of securing the non-banking financial sector:
- setting requirements for the size of capital of all kinds of financial institutions and professional financial intermediaries;
- development of the list of economic norms of activity of non-bank financial institutions, obligatory for observance in the process of activity, establishment of their optimal and / or recommended values; the establishment of requirements for senior management of financial institutions (level and direction of education, work experience, etc.);
- development of documentary evidence of economic security;
- establishment of a requirement for the presence of a specialist in institution for economic security management;

- increasing the frequency of inspections of the state and performance of financial institutions by regulators;
- developing a mechanism for protecting the assets of financial institutions clients such as a fund for guaranteeing deposits of individuals in the banking segment.

Table 2

Disadvantages of the work of national regulators of the financial market in terms of ensuring the financial security of the state and the possibility of eliminating them [Compiled by the authors]

Disadvantages	Proposals for troubleshooting
Duplication of regulators functions of each other	The transition to a financial market regulation system the model of the existence of a mega regulator
Lack of an extensive branch network and representative offices	Presence of representative offices in each big city
Complex internal structure, bureaucracy, requiring multiple reconciliation of each decision with a large number of persons	Simplification of organizational structures, the use of the model for the formation of individual groups for the prompt execution of urgent tasks, the transition from hiring certain categories of employees to outsourcing personnel, expanding the use of electronic document circulation
Excessive number of functions and tasks that can not be performed in a timely manner	Automation of a number of procedures for checking and monitoring the activities of financial services markets; clarification of the list of priority and secondary tasks of regulators
A complex model of disclosure by regulators of the results of their activities to participants in the financial system	Simplify the architecture of regulators' sites, increase the level of transparency of their activities through the resources of the Internet

The implementation of the proposed measures can only be successful if the national regulators of the financial market operate effectively. However, in Ukraine, the reform of the approaches to state regulation of the financial sector is continuing, and in 2019 among specialists there is no unity as to which model of regulation should be chosen: the traditional one that is in force today and foresees the existence of three national regulatory structures at the same time for the participants of the financial market - The National Bank of Ukraine, the National Commission on Securities and Stock Market, and the National Commission, which carries out state regulation in the field of financial services markets; a model of the financial regulator that combines the functions and tasks of all three of the listed structures and will become the only structure that will coordinate the rules for conducting financial activities in Ukraine, or apply the so-called SPLIT - to distribute the functions of regulating the activities of financial institutions and, therefore, their financial security, between the two bodies - the National Bank of Ukraine and the National Securities and Stock Market Commission, thus terminating the existence of the National Financial Services Commission. This model of financial market regulation has received the name Twin peaks in the world. At the moment, it is difficult to predict how a new regulatory model will affect the level of Ukraine's financial security, however, to point out the

shortcomings of the existing regulatory approach to regulating the functioning of the financial market and its participants in view of the likelihood of its reforming in the long run, would be appropriate (Table 2).

We believe that the distribution of functions between the two regulators of the financial market, as proposed today, will not solve the problem of securing banking safety and security of the non-banking financial sector. Firstly, at this stage of the development of state regulation of financial security of a country, a single institution or body is required to take care of this issue. Within the framework of this study, we considered the threats to financial security only in the banking and non-banking financial sectors, and the system of financial security of the state includes budgetary, and debt, and currency, and monetary components. So if we assume that a separate institution will be formed to regulate each subsystem of financial security, then the comprehensive mechanism of its regulation, which at the moment is so necessary, will remain unformed. Secondly, the division of the functions of financial market regulation between the two institutions will be a long process, which will require personnel, financial, and information support. However, it is urgent to resolve the issue of stabilizing Ukraine's financial security. The loss of financial sovereignty that now threatens our state will eventually transform Ukraine into a raw material appendix and a cheap labor market for European countries.

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HEALTH CARE AS AN INTEGRAL ELEMENT OF THE NATIONAL SECURITY

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Issues of ensuring international and national security as the basis for functioning and developing the processes of the effective public administration have come to the forefront in the beginning of the 21st century. System of the national security is a complex multi-layered socioeconomic system based in accordance with the objective and subjective processes influenced by multiple external and internal factors.

System of the national security is a set of state institutions and non-governmental organizations, which operate in the field of protection human rights and freedoms, basic societal goals against external and internal security threats and also corresponding sub-system of state legislation and non-governmental organizations' normative documents [3, p. 328].

In accordance with the Law of Ukraine “On fundamentals of national security” [1], national security is protection of state sovereignty, territorial integrity, democratic constitutional order and other national interests of Ukraine from real and potential threats. These measures have to ensure the constant state development.

Existing practice shows, that in regard to the ensuring the national and human security, man-made, natural and socio-political sources of a national security threats are viewed. But the issues of human security are much wider and should include the issues of functioning healthcare sector.

Development of the healthcare system directly impacts on the main indicators of life. Thus, the healthcare sector has to be considered as the strategic one, taking into account state economic potential, priorities of the social politics, ensuring the sustainable development and functioning of the State in the conditions of

globalization and integrative processes.

But the problem is that in Ukraine the crisis of healthcare system and social protection of population, and, as a result insecure deterioration in health of the population, spread of drug addiction, alcoholism and social illnesses are not considered under the main real treats to Ukrainian security, society's stability in the social and humanitarian sphere.

Economic security of the State is considered as the main element of the national security of any country. It consists of the industrial, demographic, energy, external economic, innovative and investment, macroeconomic, food, social and financial securities [2].

Demographic and social securities are particularly important in terms of our research. In accordance with [2]:

- Demographic security is defined as protection of the State, society and labour market from demographic threats, that allows Ukrainian sustainable development considering a set of balanced demographic interests of the State, society and personality in response to the constitutional rights of Ukrainian citizens.

- Social security is defined as protection of the State that allows it to ensure proper quality of life, regardless of age, gender, income level, and to contribute to the development of human capital as the most important part of the state economic potential.

Thus, the State's population is the main element of the demographic and social securities, and their main indicator is public health. In this way, we can make the causal chain: health care is one of the fundamental elements in the structure of economic security (as the important element of national and local social infrastructure), which, in turn, forms the national security's system [4, p. 25-27].

In that case it seems interesting the position of L. Shevchenko, Ukrainian researcher, who attributes the security of human development to the State's economic security. This concept is not directly codified in the law, but is viewed as a derivative of the demographic and social securities. He emphasizes that the main spheres of the security of human development are (a) demographic, including vital security; (b) educational security; (c) employment security, including industrial one; (d) security of material well-being.

Interesting one for us is a concept of vital security. Vital security of the society and the State is guaranteed by the ability of the healthcare sector to ensure the realization of human rights to life and health, medical care and health insurance, to eliminate the dangers, which can treat the human life and health, to function sustainably under any unfavorable conditions, and also by the ability of the State to protect the national interests in healthcare sphere from the potential treats [7, p. 139, 145].

Another Ukrainian researcher, V. Pashkov, in his scientific works has viewed the concept of vital security as an integral element of national security. He defines this concept as a security of citizens' life and health and emphasizes that vital security

as an object of legal economic order can be a recipe for the effective functioning of healthcare system. Moreover, he states, that the issue of vital security as an integral element of the national security grows beyond the bounds of legal and operational frameworks and obtain the constitutional and legal political importance. Thus, the main factors of ensuring vital security are (a) guaranteed provision of health care and high-quality medical services; (b) carrying out the efficient preventive activities; (c) state support for the pharmaceutical sector of health care; (d) state support for scientific and innovative activities of health care; (e) effective import control of the drugs and medical items; (f) control of the environmental soundness of the foodstuffs, potable water, air, which is related to establishment single monitoring body [5, p. 308].

V. Pashkov classifies the threats to vital security. Before outlining these threats, we have to emphasize, that development of economic and legal relations in the healthcare field, which are uncontrolled by the State, is itself an indicator of existence of destructive tendencies in the state. Crisis of Ukrainian healthcare sector considerable complicates the solution of the tasks, related to addressing the treats to vital security.

Structure of security threats in the healthcare sector are the following:

- 1) insufficient level of funding available to the healthcare sector and related to this, threat of losing the scientific, human and intellectual capital of the healthcare sector;
- 2) collapse of industrial innovative production and related to this, increasing dependence on imports of drugs, medical items and knowledge-intensive products;
- 3) growth of shadow economy in healthcare sector and related to this, threats of adulterated medicines' turnover increase;
- 4) low efficiency level of state regulation in healthcare sector.

But the most common security threats are the natural hazards and ecological ones. Nevertheless, we have to emphasize, that a list of threats to vital security is wider. Thus, the Law of Ukraine "On fundamentals of national security" distinguishes security threats, involving a broader range, among which we can highlight the following system of threats, relevant to vital security:

I. Threats of inner political issues:

- a) structural and functional imbalance of political system and inability of its separate elements to respond quickly to security threats.

II. Economic threats:

- a) significant decrease of GDP, investment and innovative activity, scientific, technical and technological potential, research activity in the strategically important directions of State's innovative development;
- b) weakening of the system of state regulation and control in the economic sphere;
- c) critical condition of main productive capacities of enterprises of leading industrial spheres (e.g. agribusiness, life-support system and so on);
- d) critical dependency of the national economy on the external markets'

conjecture and low paces of expanding domestic markets;

e) rapid paces of shadow processes of national economy.

III. Social and humanitarian threats:

a) discrepancy between the state economy's reformation programs and results of their realization and defined social priorities;

b) crisis of national healthcare system and social protection of population, and as a result, dangerous declining health, spread of drug addiction, alcoholism and social illnesses;

c) escalation of demographic crisis.

IV. Scientific and technical threats:

a) increasing scientific and technical gap with developed countries;

b) inefficient state innovative policy and stimulation mechanisms of innovative activity;

c) low competitiveness of the national products;

d) underdevelopment of the domestic market of high-technological products and lack of its efficient protection against the international technological expansion.

V. Ecological treats:

a) insurmountable socioeconomic consequences of the Chernobyl disaster;

b) deteriorating ecological conditions of water basins, growing problem of cross-border pollution and decline of water quality;

c) uncontrolled import into Ukraine of the environmentally detrimental technologies, substances, materials, transgenic plants, animals, species and derivations, which are dangerous for people;

d) increasing harmful genetic impact in the populations of living organisms, such as genetically modified organisms and biotechnologies.

VI. Informational threats:

a) media distribution of the cult of violence, cruelty and pornographer.

Indeed, systematization of the security threats directions forms their separate direction, such as vital security, which obliges healthcare system to meet the requirement of the modern society [6].

Thus, we can state, that health care is a key element of the social sphere and is of a great essence for the national economic security as a determining factor of life quality and quality of human capital.

Our research is directed on the analysis of the modern healthcare system and the logic of this study is argued above. In this regard, we have to research the development level of Ukrainian healthcare sector.

National healthcare sector has been functioning in the crisis conditions since 1990s. Following indicators, presented in Table 1, are confirmation of this.

Data of the above presented table confirms our statement that Ukrainian healthcare sector is in crisis: all the indicators show negative trends. Thus, reasonable and rational investment in the healthcare system arises from the need to ensure society's social needs, but also to ensure national economic security.

Table 1

Main indicators of Ukrainian healthcare sector for the period 1990-2017

Indicator	Year						Ratio of 2017 to 1990, %	Absolute increase of 2017 to 1990
	1990	2013	2014*	2015*	2016*	2017*		
1. Expenditures on health care in accordance to GDP, %	...	4,2	3,6	3,6	3,2	3,4	-	-
2. Total mortality rate	12,1	14,6	14,7	14,9	14,7	14,5	119,8 (+19,83 %)	2,4
3. Total fertility rate	1,85	1,51	1,50	1,51	1,47	1,37	74,05 (-25,95%)	-0,48
4. Natural population growth	0,5	-3,5	-3,9	-4,2	-4,4	-5,1	-	-
5. Number of health facilities, thousand	3,9	2,2	1,8	1,8	1,7	1,7	43,59 (-56,41%)	-2,2
6. Number of out-patient polyclinic establishments, thousand	6,9	10,8	9,8	10,0	10,2	10,4	150,7 (+50,7%)	3,5
7. Number of independent dental clinics	311	252	198	197	197	197	63,34 (-36,66%)	-114
8. Number of medical facilities, which have dental department	4782	2409	1782	1762	1690	1679	35,11 (-64,89%)	-3103
9. Number of physicians of all specialties:	227	217	186	186	187	186	81,93 (-18,07%)	-41,0
- overall, thousand	44,0	48,0	43,5	43,7	44,0	44,1	100,23 (+0,23%)	0,1
- per 10,000 population								
10. Number of nursing staff:								
- overall, thousand	607	441	379	372	367	360	59,31 (-40,69%)	-247
- per 10,000 population	117,5	97,4	88,6	87,3	86,5	85,4	72,68 (-27,32%)	-32,1

* Excluding temporarily occupied territories of the Autonomous Republic of Crimea, Sevastopol, Donetsk and Luhansk regions.

Source: calculated on the basis [8].

Development of financial support system in healthcare sector is an integral part of state socioeconomic policy, directed on further development of national healthcare system and national economics by enhancing the quality of national human capital.

In view of foregoing, there is a need to develop and adopt the national doctrine of

social security as an integral element of the national one in order to ensure national vital security. Thus the government together with Ministry of Health of Ukraine has to develop and implement the national strategy for ensuring social security, including vital security. In this, the depth of the modern crisis of healthcare and a lot of threats reflect the necessity to focus attention on the next priorities:

1) to form the efficient financial mechanism in healthcare system, based on multi-channel funding;

2) to implement market-based mechanism in national healthcare sector;

3) to form the rational management system and efficient state regulation of healthcare sector;

4) to develop adequate motivation mechanism for medical staff, taking into account the current crisis of medical labour market;

5) to develop the rational mechanism of ensuring innovative medical, technical and technological activity focused on the advanced world technologies.

The effective resource allocation in healthcare sector is possible due to implementation of legal contractual arrangements, which could become a trigger for intensification of the series of management strategies, such as decentralization of medical facilities, hence their financial and managerial autonomization; improvement of work efficiency of health service providers; improvement of planning of healthcare sector's development and managing the process of health services provision; and so on.

Over recent years in Ukraine, according to the Ministry of Health of Ukraine, expenditures on health care have increased fourfold, but as we can monitor, without qualitative changes. Thus, today it is necessary to change conceptual approaches to healthcare sector's functioning through implementation of market-based mechanism in order to ensure national economic, social and vital securities.

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STATE REGULATION OF MARINE INSURANCE IN UKRAINE AS A NATIONAL SECURITY FACTOR

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The development of Ukraine as a social and legal state implies proper implementation of the property rights and interests guaranteed by the Constitution of Ukraine, as well as ensuring the country's financial, economic and national security. In modern conditions, the main role among the mechanisms of protection of these rights and interests is played by insurance. In the presence of an efficient organization, this type of activity can ensure the stability and sustainable development of the domestic economy, its protection against various types of risks.

In the conditions of Ukraine's independence, decentralization of the insurance relations system took place, as a result of which the regulation of the main areas of insurance activity is carried out on private legal principles. Under these conditions, the state retains the role of regulator of insurance relations. According to M.V. Golikova the type of insurance, which requires the improvement of the mechanism of organization and regulation is marine insurance [3, p. 124-128].

As noted in the analytical report of the National Institute for Strategic Studies, Ukraine is a maritime state, based on its spatial and geophysical peculiarities, place and role in the global and regional systems of international relations. It gained this status owing to its geographical position with its exit to the ocean, the length of the sea borders and the area of the water area, as well as a significant contribution to the study of the oceans and the development of navigation [9, p. 3].

However, during the years of its state development, Ukraine has practically lost

the initial position of the maritime state to a large extent due to a significant decrease in the level of competitiveness of its maritime complex. The reason for this was the underestimation of the role of the state in democratic transformations, inherent in the transition to market relations, and the role of maritime policy in the process of supporting and developing the economic power of the state, strengthening its international credibility.

In the world today it is impossible to imagine a landlocked country without a priority development of the maritime sector and the introduction of a balanced and effective maritime policy, which includes, as a separate element, a strategy for the development of maritime insurance. Even those countries without maritime borders are trying to engage in the development of the resources of the oceans and the organization of rational and safe transport and logistic networks for the delivery of goods produced within the framework of the international division of labor.

Radical changes in the geopolitical, military-political and economic situation taking place in the world, the victory of democratic forces in Ukraine and the deployment of active political and economic cooperation with the EU, the resumption of the dialogue on joining NATO against the backdrop of Russia's aggression against Ukraine, the annexation by the Russian Federation of the Autonomous Republic of Crimea and the City of Sevastopol, with attempts to redistribute control over the waters of the Azov and Black Seas, require the correct vector of development of Ukraine as a naval state to be taken into account taking into account new circumstances and balance of power on the international arena and within the country.

Considering the scientific and methodological foundations of marine insurance, we could say, that today the scientific discussion on this category is quite wide-ranging and multifaceted.

Thus, S.L. Yefimov offers to consider modern marine insurance as «a system of economic relations associated with the creation and use of insurance funds in order to compensate for damage from marine hazards and provide financial assistance to members of the marine enterprise from various unforeseen incidents, as well as other business entities involved in merchant shipping and the use of natural resources of the continental shelf» [4]. Such a systematic approach to this definition makes it possible to classify marine insurance among economic categories.

At the heart of economic relations with regard to maritime insurance lies the insurance fund in cash, which is created at the expense of regular or one-time contributions by all its participants. The cash contributions of the participants constitute the resource financial base of the insurance fund, at the expense of which the payment of compensation for damage from marine hazards and other unforeseen incidents is paid. Thus, maritime insurance acquires the character of an economic instrument for minimizing and overcoming the natural and man-triggered risk associated with navigation and the development of the natural resources of the continental shelf.

V.D. Bazylevych complements the definition of the feature of an international component [1], which allows marine insurance to be investigated as a financial and economic category and studied in the system of financial and state security.

In foreign sources, in particular the Merriam-Webster dictionary, it is noted that from a legal point of view, marine insurance is a guarantee of loss from damaging or destroying goods, means or tools for its transportation at sea [14]. Practically the same definition of marine insurance is given in the Cambridge Dictionary, which states that marine insurance is an insurance covering losses from the loss or damage of the ship and the goods it carries [15].

The study of scientific discussion allowed the authors to systematize the main approaches to the analysis of the essence and differences in the content of marine insurance, which are, firstly, in the classification of marine insurance or to a separate types (N.I. Machina [7], Liga: Zakon [8]), or to the complex, which includes several types of insurance (S.L. Efimov [4], T.A. Lizunova [6] and R.T. Yuldashov [13]). Besides, some scientists identify marine insurance with marine risk insurance (N.I. Bogomolova, O.I. Panchenko and Kh. I. Shtirhun and with insurance of water transport (NJSIC «Oranta» [2]). Furthermore, a separate group of scientists understands the marine insurance as the system of economic and civil-relations (S.L. Efimov, V.I. Fisun and G.M. Yarova [4]).

The author's definition of marine insurance complements this category with the following thesis: this is an insurance industry that characterizes the system of economic relations associated with the creation and use of funds of an insurance fund, has an international component, provides insurance protection against port risks, other onshore and offshore risks and is an important factor in national security in maintaining the continental shelf.

The economic essence of marine insurance is manifested through the inherent features of this category, which reveal its content. Maritime insurance performs distribution, control and warning functions.

Distributive function of marine insurance is expressed in a clear separation of financial flows formed when creating and using an insurance fund. These flows are directed by clubs of mutual insurance and joint-stock insurance companies.

The control function of marine insurance is expressed in the strictly targeted nature of the use of funds of the insurance fund, intended for insurance indemnity payments. Control is expressed in the verification of the facts and circumstances under which the damage was caused. This eliminates the possibility of intentional damage to the purpose of illegal enrichment. In addition, the control is carried out at the stage of attracting new members of the insurance fund, for the presence of objects in their proper condition, which are accepted for insurance.

The warning function of marine insurance is expressed in the implementation of a wide range of measures aimed at preventing or reducing the negative effects of marine hazards and other unforeseen incidents. The activities of a mutual insurance club or a joint-stock insurance company for preventing and minimizing losses are

considered to be a prevention [4].

The objects of marine insurance include: 1) a ship as a type of transport vehicle with a certain cost; 2) the cargo carrying the vessel; 3) freight - income received by the owner of the vessel from the use of it as a vehicle or lease; 4) the civil liability of the shipowner or the carrier for damage that may be caused to third parties, the environment during the operation of the vessel, and 5) sea platforms.

Consequently, the main task of marine insurance is the reimbursement of the damage caused to the insured objects caused by negative factors in relation to their property interests related to commercial seafaring. At the same time, the property interests of the insured may include: insurance of ships operating and those in construction, cargo insurance, liability insurance of the shipowner, insurance of freight, insurance of wages and other amounts due to the ship's crew members, including the costs of repatriation of crew members, Life and health insurance of crew members in the course of their duties [1,7]

In order to understand better contemporary issues, let's look at the historical origins of this issue. Consideration of the historical features and evolution of marine insurance makes it possible to conclude that marine insurance is one of the oldest types of insurance.

The most widespread use of marine loan as a prototype of classical marine insurance was observed in ancient Greece and Rome [4, p. 37-71]. After the collapse of the Roman Empire, marine insurance in the form of a timely maritime loan fell into decline and began to be actively restored only at the time of the Middle Ages.

Scientists argue that the medieval maritime insurance, revived after the ancient decline, first arose in Portugal for the mandatory mutual insurance of sea vessels, introduced in the fourteenth century. King Ferdinand, and then moved to Spain, and only later, only in the fifteenth century. - in Italy [11, c. 4]. This opinion relies first and foremost on the fact that it was in Spain that the first insurance statute was created. But this circumstance alone proves nothing. After all, practice always preceded by legislative consolidation. Therefore, this fact is confirmed only by Spain's understanding of the need for legislative regulation of insurance relations earlier than other countries, but does not confirm that Spain independently developed and not borrowed this agreement. Meanwhile, in favor of Italy says the fact that the insurance terminology of Italian origin, an indication of researchers of the XIV century. to Italy as the home of the insurance contract, as well as the fact of property development of medieval capitalist production, trade turnover, banking and bill business in the Italian Republic Italy significantly influenced the development of insurance in other countries, especially in Spain, France, the Netherlands and England. Of particular importance, especially since the fifteenth century, Italy was a rival in the field of maritime insurance itself, but in this respect, in spite of its world (maritime and colonial) power, it was only in the second place.

Consequently, during the European Renaissance, marine insurance was revived in the thriving shopping cities of Italy and Spain. It has spread over the great trade

routes to the Northwest coast of Europe. This move was due to two points. On the one hand, in the economic development of Italy is manifested in the fourteenth century. a certain regress. On the other hand, in the sixteenth century. on the southwestern coast of the North Sea began to create a new cell of capitalist development and at the same time an antifeudal, revolutionary and national-religious war.

Due to the economic upswing, the leading position in the insurance field is particularly strengthened by the Netherlands in the seventeenth century, when half of Europe's merchant fleet is concentrated in their hands, and their economic and political role has reached its climax. They keep their insurance championship, albeit in somewhat weakened form and in the first half of the eighteenth century. [13, c. 112-174].

The strongest rival of the Netherlands in the field of insurance was in this era, especially in the seventeenth century France. It also corresponded to its economic situation at that time. If Holland in the seventeenth century. played a dominant role as a trading nation, France became a dominant trading country [1].

The Dutch influence on the development of insurance also affected other countries, especially in the North Germanic and in England, where it also penetrated through the German Hanse, where the idea of maritime insurance was adapted by merchants in the Hanseatic Trade Union already in the XIII-XIV centuries. In the legislation of Hansa, Visbyloven (laws of the wise city), there are provisions on marine insurance.

However, Scandinavia has developed and now has its own model of marine insurance, while in Europe it still builds on the principles laid down by the merchants of Hansa [1, c. 9].

Strengthening the robbery with the development of trade on land routes has forced Northwest Europe's merchants to join their efforts to protect their common interests and trade security. Thus, in the spring of 1241, the merchants of Lübeck and Hamburg sign an agreement on joint liability for damage caused by the robbers to their inhabitants, in which it was stated that in the case of the attack of robbers or other «evil people» on the inhabitants of these cities in the territory where the Gauja River falls into the sea, and up to Hamburg, and from there through the entire Lab to the sea, all the costs associated with the destruction of these robbers, were distributed evenly among the parties to the agreement.

Thus, even in the early stages of social development, there was an objective need to compensate for losses caused by loss or damage to property. It was fear of misfortune that, by accident, prompted the search for remedies, warned against unwanted action, demanded the creation of certain stocks that could be used after unforeseen and unwanted but inevitable circumstances.

Pre-forms of maritime insurance contracts were concluded in the ancient world (maritime loans) in the VIII-VII centuries. until e. By the beginning of the XII century. maritime insurance was a separate type of insurance, in the XIV century. in Italy began its active development. In 1600 in England, the first Marine Insurance

Law was adopted. There also appeared the insurance company «Lloyd», a form of maritime policy was developed, which is used to this day, formulated the most common nowadays rules of maritime insurance [6, c. 45-88].

Thus, the emergence and development of marine insurance are interconnected with the emergence and development of maritime trade. Subsequently, insurance activities were distinguished from spheres of usury and banking capital circulation into an independent connection of the financial system of each state. The basis of marine insurance law is a marine insurance contract, which is recognized as an insurance policy. The economic essence of marine insurance is the redistribution of monetary relations in the creation and use of resources of the insurance fund, designed to compensate for damage from marine hazards and other contingencies. These relationships are related to the risk assessment in the insurance currency, including through a unit of account.

The need to determine the main directions for the further development of Ukraine as a naval state, taking into account the economic interests of Ukraine and the security of the state, is due to the enactment of the Decree of the President of Ukraine Decree of the National Security and Defence Council of Ukraine dated May 26, 2015, No. 287/2015 «On the Strategy of National Security of Ukraine» among other things, the need for the adoption of a new edition of the Marine Doctrine of Ukraine was determined. Within the framework of this work, the study of directions and tools for the organization of insurance activities by types of marine insurance in Ukraine, as well as the search for ways and directions of development of this type of aging in the framework of complex development of the marine complex of Ukraine is relevant.

The basis of domestic legislation in the field of marine insurance is: The Law of Ukraine «On Insurance» [10]; The Civil Code of Ukraine [12]; Code of Merchant Shipping of Ukraine [5] and others.

In Art. 979 of the Civil Code of Ukraine, an insurance contract is defined as a contract, according to which «one party (insurer) undertakes, in case of occurrence of a certain event (insured event), to pay to the other party (the policyholder) or another person specified in the contract, the monetary amount (insurance payment), and the insurer undertakes to pay insurance premiums and to comply with other terms of the contract «[12].

The Law of Ukraine «On Insurance» emphasizes the fact that it is a written agreement, and gives the following definition: «The insurance contract is a written agreement between the insured and the insurer, according to which the insurer undertakes a liability in the event of an insurance the option to make an insurance payment to the insurer or another person specified in the insurance contract with the insurer in whose favor the insurance contract has been concluded (to provide assistance, to perform the service, etc.), and the insurer undertakes to pay insurance payments within the specified time limits and you to reconcile other terms of the contract «[10].

Marine insurance agreement is regulated in Chap. XV The Merchant Shipping Code (hereinafter referred to as «MSC»). According to Art. 239 MSC, under the contract of marine insurance, the insurer undertakes for the pre-determined payment (insurance premium) in the event of the onset of the risks or incidents provided for in the agreement, which is subject to insurance (insured event), to reimburse the insurer or another person, on the benefit of which was concluded under the contract, incurred losses [10].

Scientists proposes to make changes to Art. 239 MSC and put it in the following wording: «In accordance with the law of marine insurance, the insurer undertakes, in case of occurrence of the risks or incidents stipulated in the contract, which is subject to insurance (insurance), to compensate the insured or another person, on the beneficiary of which has entered into an agreement (the beneficiary), the losses incurred, and the insurer undertakes to pay insurance premiums and to fulfil other conditions of the contract «[3, p. 28]. It should be noted that these definitions of marine insurance are of a general nature. At the same time, the peculiarity of the maritime insurance contract is in the object of insurance, since it is precisely it that qualifies it, which allocates it among other insurance contracts.

Concerning certain objects of marine insurance, the law provides for some legal consequences, for example, under Art. 248 MSC, in the case of the alienation of the insured cargo, «the insurance contract remains valid, and all rights and obligations of the insured pass to the purchaser loading. If, prior to the alienation of the cargo, the insurance premium has not been paid, the obligation to pay it is borne both by the insured and the purchaser of the goods. However, the requirement to pay the premium is not valid in relation to the owner of the policy or other insurance document, in which there is no indication that the premium has not been paid « [25]. Other legal consequences occur in the event of the absence of the insured vessel. Art. 249 MSC establishes: «In case of alienation of the insured vessel, the contract of maritime insurance shall be terminated from the moment of alienation. However, in case of alienation of a vessel during a voyage, the contract remains valid until the end of this voyage and the acquirer of this vessel passes the rights and obligations of the insured «[5].

The proper level of organization and state regulation of maritime insurance can be ensured only if its mechanism is effectively functioning.

The subjects of the mechanism of state regulation of maritime insurance are: the Cabinet of Ministers of Ukraine, which provides legal regulation by approving the legislative norms of the functioning of the insurance market in general and maritime insurance in particular; National Commission, which carries out state regulation in the field of financial services markets, which conducts state registration, licensing of insurers and carries out insurance supervision; The Ministry of Infrastructure of Ukraine, which, among other tasks, is developing a policy on the introduction of transport insurance.

Objects of the mechanism of organization and state regulation of marine

insurance insurers (shipowners) and insurance organizations (Fig. 1).

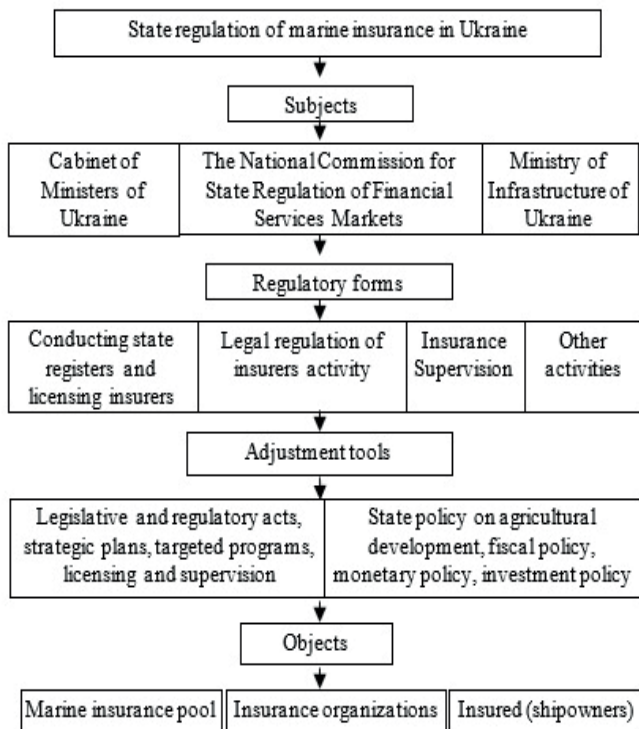


Fig. 1. The mechanism of organization and state regulation of maritime insurance in Ukraine.

Source: compiled by the author on the basis of [1; 5; 10]

It is clear that the main objective of the functioning of the mechanism of state regulation of maritime insurance should be to provide favorable conditions for the development and operation of this insurance industry. A separate goal is to provide supervision over the financial status of insurers and their compliance with insurance legislation, protection of interests of consumers of insurance services.

An important element of the effective operation of the existing organizational structure of state regulation in the field of maritime insurance is to ensure proper cooperation and coordination between the main regulators and identify the long-term long-term goals and benchmarks.

It should be noted that the effectiveness of the mechanism of state regulation of marine insurance in Ukraine can be achieved only if the principles are observed: the protection of the rights and interests of participants from the state, transparency

and availability of information base necessary for decision-making, support for fair competition, the existence of state the regulatory body with clearly defined functions and powers [9, p. 26-34].

Consequently, the financial and legal regulation of marine insurance is an important and compulsory element of the effective development of the marine complex of Ukraine.

The study made it possible to establish that the mechanism of organization and regulation of marine insurance can be presented as a set of forms and tools that ensure the functioning and regulation of insurance activities in the field of protection of interests of shipowners and other stakeholders.

The effectiveness of the organization and operation of this mechanism will depend on the coherence of the regulatory authorities in this area and the well-defined priorities for the development of maritime insurance.

Marine insurance includes a fairly wide range of types of insurance covering all possible losses that may arise both in the transport of goods by water transport and during the operation of vessels, including their construction. Since intercontinental communication between countries in trade relations can be carried out only by two main modes of transport (maritime and aviation), and sea transport is able to deliver loads much larger and in large quantities, insurance in maritime transport (due to increased riskiness, especially in intercontinental transportation) is the only sure way to protect yourself and your business from unforeseen costs.

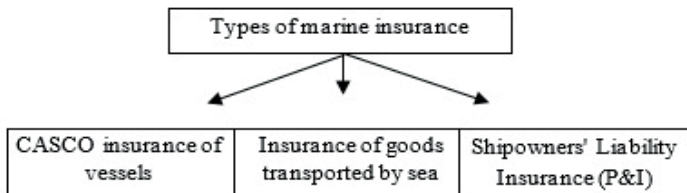


Fig. 2. Types of marine insurance
 Source: compiled by author based on [4]

Insurance of CASCO vessels includes the following types of insurance coverage:

- with responsibility for total loss and damage - losses incurred as a result of actual or constructive loss of the vessel, its parts and mechanisms, as well as expedient expenses of the insured, are covered.
- with liability for damages only - the expenses are spent on elimination of damage to the ship, its parts and mechanisms and expenses aimed at reducing or preventing the amount of damage.
- with full responsibility for death, including salvage costs, the damage caused by the actual or constructive loss of the ship, its disappearance, as well as the cost of saving and expenses, aimed at reducing or preventing damage.

- with liability only for total death - losses incurred as a result of actual or constructive loss of the vessel are covered.

- Insurance of goods transported by sea - includes the following several types of insurance coverage:

- from the responsibility for all risks - the widest version of the insurance coverage, which provides insurance protection on the principle of all that is not excluded, then included. In addition to this category of risks, insurance coverage for the following risks can be added: refrigerated risks, fraud, loading / unloading, temporary storage, terrorist act, military risks, and so on.

- from the responsibility for the risks of a private accident – the coverage includes the risks associated with accidents of various kinds when transporting the insured cargo by all means of transport: road traffic accidents, climbing rails, landing on shoals, and so on. In addition to this group of risks, you can include: the risks of third party misconduct (theft, robbery, robbery, fraud), risks of handling, temporary storage and refrigerated risks.

- with liability for the risks of collapse – this set of risks is more related to maritime traffic and includes the risks of a ship collapse resulted in the death, damage or loss of the insured cargo.

Liability insurance is intended to protect the interests of owners and operators of vessels from claims and lawsuits from third parties who may be harmed. Ship-owner's liability insurance (P & I) includes the following types of insurance coverage:

- insurance of risks related to causing damage to the life and health of the ship's crew, passengers and other persons.

- insurance of risks associated with damage to property of third parties. Third parties include: cargo owners, owners of other ships, owners of other objects that are harmed during the operation of the insured vessel (docks, berths, cranes, etc.).

- insurance of risks related to causing harm to the environment due to pollution caused by the insured vessel.

The organization of marine risk insurance is a rather complicated process that requires special attention both in the part of the set of risks, as well as in the selection of optimal reinsurance protection.

In summary, the following key points should be noted.

The scientific novelty of this work is to analyse the scientific discussion on the definition of the essence of marine insurance and the authors' additions to this category.

It was established that the main sources of law regulating relations in the field of maritime insurance in Ukraine are the Civil Code of Ukraine, the Law of Ukraine «On Insurance», as well as the Merchant Shipping Code of Ukraine, which was adopted and intended to regulate the emerging relations in the field of merchant shipping, including the insurance relations in this area.

The mechanism of organization and regulation of marine insurance is proposed

to be presented as a set of forms and tools that ensure the functioning and regulation of insurance activities in the field of protection of interests of shipowners and other stakeholders.

Consequently, the financial and legal regulation of marine insurance is an important and compulsory element of the effective development of the sea of the economic complex of Ukraine and, in general, its national security.

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EVALUATION SYSTEM WITHIN ECONOMIC SECURITY STUDIES OF THE MICROLEVEL: THE STRUCTURE AND THE CORRELATION BETWEEN ITS ELEMENTS

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Evaluation is required for the economic security studies of the microlevel for getting quantitative estimates of the security objects. These quantitative estimates (or their quantitative description at least) are usually treated as most trustworthy as they are perceived and interpreted in the least subjective way. Quantitative estimates (or quantitative description) also serve as the basis for further analysis and managerial decision-making regarding economic security maintenance or the related strengthening measures at the level of the enterprise.

Evaluation of objects at the microlevel of economic security is always a complex and multifaceted process. The most necessary element in this process is organization of evaluation activities as an integral part of economic security provision at the enterprise level.

Evaluation at the microlevel of economic security is basically the process of revealing the actual state of the objects under evaluation, at a specific point of time. The key aim of this process is detecting the influence of negative changes that took place within the evaluated objects due to implementation of threats. Generally speaking, such influences usually mean obvious lowering of the evaluation ranks.

Objects' evaluation at the microlevel of economic security means judgements about their current state. This judgement is usually formed on the basis of interpretations of the selected quantitative and also quasi-quantitative indicators. Such judgements can be later specified according to the results of the additional calculations, if needed.

Evaluation at the microlevel of economic security is never the final aim, it has zero meaning and role, if taken alone and out of the context. In other words, evaluation of the economic security state for the sake of evaluation does not make

any sense, in the absolute majority of cases it serves as the precondition for:

- making decisions on strengthening the economic security of the enterprise;
- selecting the means and the order of actions while strengthening the economic security of the enterprise;
- making the decision on transformation of the economic security system for the enterprise;
- making decisions concerning the reorganization of activities in one or several structural units of the enterprise due to certain economic security purposes;
- making decision on strengthening/reorganizing the resource provision activities.

This list of decision-making activities can be surely extended much further.

Evaluation at the microlevel of economic security studies may have various functionalities and purposes, same applies to the object of this evaluation. The latter usually predetermines the choice of approaches and means in evaluation, its procedures and also the sphere of further use of the evaluation results. In each specific case the purpose of the evaluation needs to be specified to the maximum since this purpose serves as the starting point in the evaluation process overall. Specification of the functional purpose of the evaluation allows making it better targeted and thus, indirectly, increases the value of the future evaluation results.

Table 1 lists the key specific features of evaluation at the microlevel of economic security.

Table 1

Key specific features of evaluation at the microlevel of economic security

Specific features	Their manifestations
The nature of evaluation in time	Discrete, periodical
The number of objects to be evaluated	A combination of several objects
The subject of evaluation	Varies
The field of evaluation results' use	Wide
The influence of evaluation results on the evaluated object	Decisive, directly related to security management. If the enterprise does not have any security management, the influence will still be quite strong
Dissemination of the evaluation results	Limited

For full integration and well-ordered presentation of all elements in evaluation of economic security we would also need a specific evaluation system.

The basis of the evaluation system at the microlevel of economic security is made of the combination of rules and principles related to organization of evaluation. These rules and principles serve to make all further approaches, methods and algorithms efficient and result-oriented.

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The basis of the evaluation system at the microlevel of economic security is made of the combination of rules and principles related to organization of evaluation. These rules and principles serve to make all further approaches, methods and algorithms efficient and result-oriented.

Evaluation system at the microlevel of economic security can thus be presented as a combination of interrelated objects and subjects of evaluation that are together involved in evaluation operations as applied to various objects potentially requiring protection from threats. All evaluation operations stem from the rules and principles of evaluation and interpretation of the evaluation results.

Table 2 presents the composition of the evaluation system in economic security of the microlevel.

Table 2

Elements of the evaluation system and their contents

Element	Elements' contents
Subject of evaluation	Subject performing the evaluation (specialists in economic security of enterprises, they can be in-house and/or invited)
Object of evaluation	Economic security of the enterprise; the system of enterprise's economic security; results of the actions taken to provide/maintain/strengthen economic security; overall results of the structural unit responsible for economic security of the enterprise
Evaluation	The process of revealing the actual state of the subject under evaluation at a specific point of time so that to determine the influence of negative changes on the enterprise activity in general
Evaluation rank	The degree to which negative changes that have taken place at the enterprise have really influenced this enterprise in the course of threats' implementation
Interpretation of evaluation results	Explanation of quantitative and also quasi-quantitative evaluation results, their "translation" from quantitative measurements into qualitative ones (those of descriptive nature)

Evaluation system at the microlevel of economic security can be considered from several different standpoints – operational, algorithmic and logical (Sutuzhko, n.d.; Sutuzhko, 2014).

When it comes to the operational aspect of the evaluation system we need to:

- select one or several objects for evaluation;
- determine the time frame of the evaluation (which can be retrospective, current or forecast);
- select the key approach to the evaluation process and ground our choice;
- decide on the future role and purpose of the evaluation results in relation to economic security of the enterprise.

When it comes to the algorithmic aspect of the evaluation system we, first of all, need to determine the order of actions in the course of evaluation in full accordance to the selected approach. Also, we need to define how to normalize the indicators,

their convolution if the functional approach is applicable and so on.

The order of actions applicable to the logical aspect of the evaluation system functioning is as follows:

- first, we need to define the comparison base;
- then we develop the rules for identification and interpretation of the obtained evaluation results (as applied to the enterprise overall or to the selected object within it);
- then the axiomatic base for comparison is formed as the set of rules and principles, requirements to evaluation criteria, requirements to conditions under which the evaluation would be carried out. Truly qualitative evaluation results would be obtained only provided all these requirements are strictly followed.

The operational aspect of the evaluation system serves as the structural basis for its algorithmic and logical aspects, it also provides all guidelines and future vectors of the evaluation system functioning.

The central objects of evaluation when it comes to economic security of enterprises are: the state of enterprise's economic security overall; the available system of economic security provision; the actions taken by the enterprise to ensure own economic security; resulting quality and efficiency of the actions taken by the structural unit responsible for economic security of the enterprise.

Economic security of the enterprise is the most common object of such evaluations. At the same time, similar to enterprise competitiveness and managerial efficiency, economic security of an enterprise is always the result of numerous managed and unmanaged processes inside the enterprise and around it. These processes can be permanent, periodical, they may also have random nature, finally, they can be internal and external. Due to such complexity, measuring economic security as a certain resulting state would always require more than just one or several indicators. If we try to limit ourselves to one or just a few indicators only, the result of such measurement would be very much abstract and also partially distorted from the very beginning. Still, managers of enterprises trust mostly qualitative indicators and prefer to pick just a few of them and analyze. At this, we need to keep in mind that quantitative estimates of processes, phenomena and influences would be helpful only when they are really reflecting the objective reality to the full extent.

Quantitative measurements are also much easier, thus, there is always a temptation to measure quantitatively all aspects and all activities within the enterprise, including those directly related to economic security. However, in the case of economic security specifically quantitative measurement assumes special procedures which guarantee that quantitative estimates would be obtained in a correct way and would be later interpreted accordingly.

All evaluation procedures together form the methodology of economic security evaluation.

To the most widely used rules of interpreting the economic security indicators

belong the following:

- comparison with a certain “gold standard” (also known as referencing);
- comparison with the similar indicators obtained in a previous period (provided the conditions, rules and procedures of measurement remained the same).

The system of enterprise economic security becomes the object of evaluation not that frequently.

When the whole system of economic security at an enterprise is being evaluated, this usually means there is a necessity to define the key parameters of this system (for example, its size, complexity, structure, its key properties, core functions and the modes of functioning). In other words, evaluation uses certain visualized imaginations about the system of economic security and its general scheme. As such, the system of enterprise’s economic security is abstract and descriptive in its nature.

Evaluation of the economic security system at an enterprise is usually needed so that to assess the quality and the integrity of the built-in system, its suitability for this particular enterprise and to the external environment around this enterprise. Such evaluation would be especially helpful in the course of decision-making on the transformations of the enterprise system overall and/or economic security system in particular.

Just as any other abstract system, the system of enterprise’s economic security must be objectivised. In other words, it must have a solid applied aspect. Imaginations about the system of economic security must be somehow materialized directly into the system of enterprise management, the key form of this materialization would be economic security provision. The latter must be at all times coordinated by a certain structural unit inside the enterprise, responsible for economic security implementation.

Economic security provision became a separate, independent type of managerial activity relatively recently. Today it goes in parallel with production, marketing, financial and other activities of an enterprise, Ilyashenko (2016) became one of the first studies to demonstrate this.

Just as any other type of activity at an enterprise, security provision is supposed to lead to certain results. Thus, evaluation of economic security provision may have two objects: security provision as an ongoing process (evaluated in dynamics), and also the results of economic security provision – the state of economic security at a particular point of time (static aspect of economic security at an enterprise).

Evaluation of economic security provision at an enterprise must be based on the general principles of evaluation which are equally applicable to any type of activity taking place at an enterprise.

Thus, proper selection of the evaluation objects, in their specific context, allows obtaining the economic security estimates as applied to a particular enterprise.

Evaluating some objects of economic security may have a purely theoretical value, while evaluation of other objects would have a strictly applied value for the

enterprise.

Evaluations of objects may be later used in a variety of ways:

- in the course of follow-up security provision;
- while forecasting the development of threats related directly to the objects in question;
- when summarizing on the activities of the structural unit responsible for economic security of the enterprise overall;
- when evaluating efficiency, productivity and enterprise performance in general;
- in the course of both operational and strategic decision-making.

Evaluation of any object, in simple terms, means forming a certain opinion on it.

Opinions about the objects of economic security at the microlevel are mainly judgements produced by the subjects of evaluation concerning the degree of various influences on the evaluated object due to negative changes in the course of threats' implementation.

Thus, when creating the evaluation system at the microlevel of economic security, the following questions must be asked:

- who is supposed to be (or can be) the subject evaluating objects within the system under evaluation;
- how capable is this particular subject to form judgements concerning the economic security of the enterprise or economic security of other objects.

At first glance, these questions seem to be rather simple. However, as it was already well demonstrated in (Rossoshanskaya, 2013a, 2013b; Rossoshanska, 2015), this first impression is wrong.

The choice of evaluation subjects depends primarily upon the objects under evaluation (see Table 3).

As applied to one and the same object, requirements to qualifications and competences of the evaluation subjects can be very different. But the key minimal requirements is nearly always qualification.

Sufficient qualification level of the evaluation subject usually means at least basic level of knowledge and skills in the related field, some experience in this field and also availability of skills necessary for evaluation of objects (in our case the objects are economic security of the enterprise; the system of economic security at an enterprise; results of the security-provision activities; efficiency and overall performance of the structural unit responsible for economic security of the whole enterprise).

These days “the subject of evaluation” does not necessarily have to be human. Today we already have widely available the most advanced DSS systems, software based on data mining, BIT packages, other automated expert systems the functioning of which is based on the algorithms processing information and raw data. Such sophisticated systems are already quite capable of forming judgements on the basis of the processed information.

The subjects of evaluation system at the microlevel of economic security

Subjects	Objects
Economic security of the enterprise	Specialists of the structural unit responsible for the economic security of the enterprise. If necessary, invited specialists in economic security
The system of economic security of the enterprise	Specialists of the structural unit responsible for the economic security of the enterprise.
Results of the activities taken for economic security provision	Top management of the enterprise. In case of joint stock companies - members of the advisory/ steering board.
Efficiency and overall performance of the structural unit responsible for economic security of the whole enterprise	Top management of the same enterprise

In case such automated solutions are applied, the human is basically “left behind” the evaluation process, thus, the subject of evaluation becomes the software in use. However, this does not mean that people are fully excluded from the evaluation process: all quantitative (or quasi-quantitative) evaluations of the economic security objects would anyway later require a certain interpretation and further development of recommendations concerning the changes to be implemented to improve the level of economic security.

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INFLUENCE OF INNOVATIVE ACTIVITY ON FOREIGN ECONOMIC SECURITY IN THE CONTEXT OF THE MODERN PROCESSES OF GLOBALIZATION

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Functioning of the world system of co-operation and specialized production with the purpose to create global products and services, formation of global information systems, the growing influence of international organizations and multinational corporations in the world market predetermined major globalization trends at the beginning of the 21st century. Transition of the world economy from the industrial to the post-industrial stage of development is a progressive achievement of globalization viewed as a creation of the information society based on novel technologies and knowledge expressed in innovations.

Among main pre-requisites of globalization, such as organizational, economic, political, informative, social and cultural ones, it is scientific, engineering and technological processes that are prime movers for higher competitiveness of countries in the world market.

Vladimirova I.G. [1] considers the following to be production, scientific, engineering and technological pre-requisites:

- sharp growth of production scales;
- transition to a new technological method of production based on high, knowledge-intensive technologies;
- rapid expansion of new technologies that help remove barriers to financial capitals, goods and services;
- qualitatively new generation of means of transport and communication.

However, the above list would be incomplete without the mobility dynamics of high-skilled specialists in innovations, scientific research, information technologies, etc.

The work [2] says that the acceleration and development of globalization are also substantially influenced by:

- increased competition as a result of larger production scales and expansion of domestic markets by producers;
- consolidation of world community into a single integrated system as a result of certain political situations through the 20th century;
- latest advances in science and technology, which contributed to creation of world economic infrastructure, including transport and communication infrastructure, and broad information system.

The pre-requisites of globalization described in works of modern researchers have common determinants of influence on production and economy of society on the whole, this finding expression in consequences of efficient activities of leading scientific and technical gains. This is determined, first and foremost, by the fact that under current globalization the classic factors of production are pushed to the background, yielding to certain combination of intellectual and information resources, knowledge, technologies, etc. integrated into the world economic system. Due to these gains, minimization of economic risks, higher rate of international movement of production factors, lower costs related to movement of goods and services in the world market, etc. become feasible.

In this context, expansion and standardization of world information space, activation of innovative sphere of developing countries, upgrading of administrative culture TNC, intense use of foreign credits and investment resources will come forward as main features of globalization. This will further promote the integration of economic and information development of national economies on the base of development and introduction of high technologies, contribute to alliance of interests of both markets and domestic producers by means of the modern management systems, and encourage investments at intergovernmental level.

In addition, the globalization stimulates competition thus forming a positive dynamics of technology transfers, is instrumental in disseminating the best experience in science and engineering, and induces new managerial decisions, which main principle is minimization of risks and costs.

The essence of basic descriptions of the innovation as a main factor of global competition, given by M. Porter [3], is in improvement of old methods to attain competitiveness or in use of new ones, in particular in new production processes, marketing and managerial decisions based on the system of certain knowledge and skills. The role of information in strengthening the competitive positions is also of certain importance, which guarantees leadership in the world market and at the same time acts as a pre-requisite for search of new innovative ideas. Simultaneously, a growing competition makes enterprises to activate their innovative efforts and forces them to search new foreign partners, which, in its turn, is a sign of globalization.

Advantages of globalization, alongside with cultural, political and social ones, are largely of economic nature and have positive effects on the development of the country's national economy, in particular, effects from production rationalization, based on continuous introduction of innovations and expansion of leading technologies.

However, alongside with these positive manifestations of globalization there exist negative consequences, the lion's share of which is most dangerous for developing countries because of their considerable dependence on both the world market business environment and countries that lead in innovations. Resulted from the misbalance caused by advanced mobility of goods and services, capitals, labor and technologies, is the uneven distribution of profits between states. Considerable

volumes of international trade and investment are the share of countries like the USA, Japan and those of European Union, where multinational corporations set „rules of game” in the world market and give rise to financial instability in the domestic markets of less developed states. Moreover, the large scale of technologies combined with their poorly-controlled application lead to ecological and technological disasters and to reduction of social awareness of monopolists.

Globalization is a mega process, and no separate state has a nostrum from its negative consequences. Structural changes in the system of international economy require the countries that are world market participants to have flexibility and fast adaptability in accordance with changes in the international environment. V.Ya. Goldstein in his work “A global strategic innovative management” [4] stated that a new world infrastructure of information technologies and a management liberalization policy had become the basis for the globalization. Explicitly, the globalization is an absolute outcome of the formation of the modern society, due to a lot of reasons including scientific and technological advance in production, transport, communication and management.

There is also a polar opinion as for the origin of globalization as such. Scientific and technological advance as well as easy access to its results stem from globalization (they are caused by closer links between individuals, societies and whole nations) [5].

Thus, there is no single view on origins of globalization, however most researchers have common vision of its prime movers and consequences for the world community. On the whole it is possible to agree with the list of globalization prime movers, given in [5], which contains:

- upgrading transport technologies, in particular, increase in amount and quality of transport routes and logistic charts;
- upgrading communication technologies, Internet being in the first place;
- lowering the trade barriers (WTO, NAFTA, MFN Principle);
- cutting the barriers to investments (NT Principle);
- integration of financial markets due to their transparency and mobility of transnational capital;
- similarity in tastes of consumers in Europe, North America and Japan, determined by similarity of GDP - per capita.

The list of the above given factors should be added with the necessity of considerable financial resources to conduct Scientific and Research State Budget Design Work (SRSBDW), in the case of financial insolvency of an enterprise or even a country these could be attracted at the expense of investors from other countries. This stimulates co-operation and combination of efforts and capitals at an international level. A case in point is joint intergovernmental programs of Japan’s space exploration, Germany, Canada with the countries – spacecraft owners – Russia and the USA [2]. Besides, the development of communication technologies helped create and activate the operation of non-governmental organizations, agencies,

groups, etc., whose activities are aimed at overcoming social and ecological problems at the international scale. In particular, these subjects of international activities include such organizations as Amnesty International, Greenpeace, and Oxford Committee of the Help Starving [5].

The most wide-spread types of international scientific and technological cooperation within the frames of globalization are:

- joint scientific and research centers, institutes, laboratories to develop novel trends in applied sciences, to design improved models, to evaluate the feasibility of new scientific developments;
- joint research, exploration of mineral deposits and assessment of economic potentialities for other natural resources of oceans, seas, forests and air;
- development of the most efficient forms of industrial engineering and marketing in order to increase economic efficiency of enterprises;
- joint activities in investigation, transferring and implementation of advanced experience in labor organization and industrial engineering;
- joint training and employment of the skilled labor for most efficient international production cooperation, and in order to regulate the employment at various stages of the economic cycle at the international level [2].

Apart from the acceleration of the globalization-based economic development of countries with the use of international division of labor, closer cooperation, increasing information flows and large expanding corporative structures, one should consider the formation of a new philosophy of small innovative businesses, which ensures the efficient functioning of the modern economy. According to some data [6], at the end of the 20th century 70% of the working population was employed in this sphere in the USA, 75% – in Japan and Italy.

In many developing countries the enterprises of this sector produce up to 60% of Gross Domestic Product. Small business is absolutely needed to service scientific and production sectors. At the same time, only international integration and economic globalization with the use of innovative accomplishments are capable of transforming the small business into an efficient sector of national economy based on implementation of world standards and legal guaranties of intellectual property protection.

A perspective trend in the development of small business is rendering services in the sphere of e-commerce, creating and servicing the SRSBDW.

Relatively cheap and efficient communication systems make it possible to control considerable financial and export-import flows with the preservation of geographic dislocation and organizational structure of a company, they minimize expenses for servicing, goods and services turnover, and substitute business contacts in real space by their Internet analogues.

As for participation of small businesses in the SRSBDW, G. Goldstein noted in his work [4], that the future control over them should be focused on:

- systematic formation of flows of technological projects;

- improvement of innovation management;
- diffusion of new technologies into larger markets;
- control over knowledge with the aim of their protection and further use;
- organizational provision of a clear idea of the enterprise;
- technological strategy as an integral aspect of business strategy;
- taking advantage of globalization in economy on scales, business considerable flexibility, and connection of technological knowledge with business strategies.

Thus, the infrastructure of international innovation activities will be expanded in future and transformed into even more international and integral system that will cover the territories of many countries of the world according to the principle of the most efficient realization of their innovative potential and capital attraction.

A specific feature of economic globalization is a deeper cooperation between countries on the world arena, in proportion to the created image, which was shaped, among other things, due to situation in domestic innovative markets. Exactly for this reason, a prerequisite of Ukraine's successful access into world markets is the transition to the innovative model of development of the society.

According to the experts who assessed Ukraine's competitiveness by JAA technique of international ranking, proceeding from the state of economy, export, investments, financial sector, macroeconomic environment, human resources, science and technology, infrastructure and governmental policy, this country shows relatively high indices of quality of labor force and has quite an appropriate infrastructure. However, the economic situation in the country does not meet the "quality" of its population. Ukraine's rating by volumes of foreign investments, the state of governmental regulation and financial sector is assessed as being low. At the same time, taking into account human resources, Ukraine is capable of showing higher indices in science and technology as well as in SRSBDW sector, which is especially important to ensure long-term competitiveness [7].

Foreign economic security of Ukraine features multi-vector tendencies in its development, which can be seen in the paradox of Ukraine's leading positions in scientific potential and the lowest ones in the world's rating by the state of economy, investments and financial sector. This proves the absence of the country's integral innovative policy and, as a result, considerable giving up its competitive positions in the world market. One of the obstacles for increasing Ukraine's foreign economic security is the access barriers to the EU market, which hinder the conditionally free movement of domestic goods, capital, labor force, information and technologies.

Thus, globalization processes and foreign economic security directly relate to innovative activities as a factor of global competition. Accordingly, the necessity appears to further develop and improve theoretical and practical conditions of strategic innovative management, by the way of analysis and synthesis of existing statements of the theory of innovations in the context of reaching competitive positions in the world market. In its turn, globalization of the world economy is an activator of innovative processes, aimed at foreign economic security.

In such a way, a steady chain “globalization – innovative activities – foreign economic security” is created, which predetermines efforts of individual countries in achieving certain strategic innovative goals. Direct and indirect links established in the given case should be taken into account by the Ukrainian government while emphasizing strategic priorities of the country’s development as well as elaborating appropriate governmental and inter- governmental programs.

In the strategic aspect, innovative activities of Ukraine demand weighted integration into the world scientific and technological environment taking account of the advanced experience of the world leaders and specific national features of Ukraine’s social development, in particular, peculiarities of tax legislation, available labor market, social and ecological policy, etc.

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THEORETICAL ASPECT INSTITUTIONAL BASIS OF NATIONAL SECURITY OF UKRAINE

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The effective management of a transformed society needs formation and implementation of a national security policy in Ukraine [1]. The presence of an effectively functioning system of government is a way to the successful implementation of the state's strategic course [2]. Reforming the public administration system (including consultative authorities) should be as close as possible to the needs and needs of people, and the main priority should be to serve the national interests of Ukraine [3]. The practice of Ukrainian politics shows that the technology of the implementation of the doctrines, strategies, concepts and programs of the state policy in the field of national security should objectively integrate all the components of the political activity of the state and be based on the theoretical basis. National security issues are being explored by many leading scientists of Ukraine. In scientific sources there is no single interpretation of the concept of «national security». Since the concept of «national security» has a complex, multicomponent and interdisciplinary character, features (Table 1). By the Law «On National Security of Ukraine» the concept «national security of Ukraine» is the protection of state sovereignty, territorial integrity, democratic constitutional order and other national interests of Ukraine from real and potential threats. The concept «national interests of Ukraine» refer to the vital interests of human, society and the state, the realization of which is ensured by the state sovereignty of Ukraine, its progressive democratic development, as well as safe living conditions and welfare of its citizens. Depending on the nature and scope of the manifestation national interests are divided into strategic and tactical, political and economic, social and environmental ones. Advocacy of the national interests of Ukraine is aimed at eliminating or minimizing territorial, demographic, economic, environmental and other losses in the life of its people and, accordingly, the growth of social development.

The Constitutional principles of national security are defined in the art.18 (Ukraine's foreign policy activities are aimed at ensuring its national interests and security by maintaining peaceful and mutually beneficial cooperation with the members of the international community in accordance with generally accepted principles and norms of international law), the art. 92 defines: the principles of the use of natural resources, the basis of social protection, the legal regime of property; legal principles and guarantees of entrepreneurship etc. The Security and Defense Sector consists four interconnected components (Fig. 1).

The essence of the scientific category «national security»

Authors	The essence of the scientific category		
Experts of the NISF UNESCO	the system of public administration, state and public guarantees of the stable development of the nation, the protection of its basic values and interests, sources of spiritual and material well-being from external and internal threats		
O.Goncharenko, E.Lisitsin, V.Vagapov	degree (level) protection of human interests, rights and freedoms of man, society and the state from external and internal threats or the degree of absence of threats to human rights and freedoms, the basic interests and values of society and the state.		
G.Sitnik	the protection of vital human interests , society and the state, in which their development, detection, prevention and neutralization of threats to specified interests are ensured		
L.Sergeeva	the comprehensive, targeted government actions carried out by government agencies at both the national and international levels to protect the vital interests of a person and citizen, society and the state. Government activities to ensure the sustainable development of society through the timely detection, prevention and neutralization of real and potential threats to national interests.		
O.Vlasyuk, S.PyrozHKov, O.Belov	a way (mechanism) of self-preservation of the Ukrainian people, which has reached the level of the organization in the form of an independent state		
	Subject NSU	National values	National interests
	Ukrainian people as a community of citizens of all nationalities living on its territory	material and spiritual objects, attitude towards which became crucial for self-awareness and existence of the people of Ukraine. This is the basis of the motivation of his self-development activity	needs of the Ukrainian society (in preserving and developing national values) which that are understood by public elite

By sources [4, 5, 6]

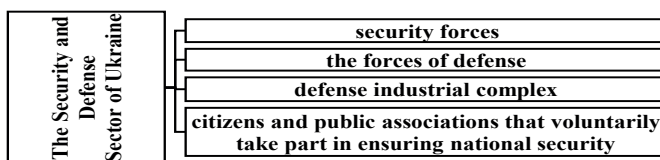


Fig. 1. Components of the security and defense sector

The structure of the security and defense sector includes: the Ministry of Defense of Ukraine, the Armed Forces of Ukraine, the State Special Transportation Service, the Ministry of Internal Affairs of Ukraine, the National Guard of Ukraine, the National Police of Ukraine, the State Border Guard Service of Ukraine, the State Service of Special Communications and Information Protection of Ukraine, the National Security and Defense Council of Ukraine etc. Other public authorities carry out their function of providing national security in conjunction with the

authorities provided to the security and defense sector. For example, the Ministry of Veterans Affairs of Ukraine organizes and co-ordinates works on the issues of: granting, depriving the status of a participant in hostilities and recognizing one-time cash assistance in case of death or disability of a volunteer and some other categories of persons in accordance with the Law of Ukraine «About the status of veterans of war, guarantees of their social protection» establishment of the fact of receipt by the persons of injuries or other health damages received from explosives, ammunition and military equipment on the territory of the antiterrorist operation, implementation of measures to ensure national security and defense, repression and deterrence of armed aggression of the Russian in the Donetsk and Luhansk region.

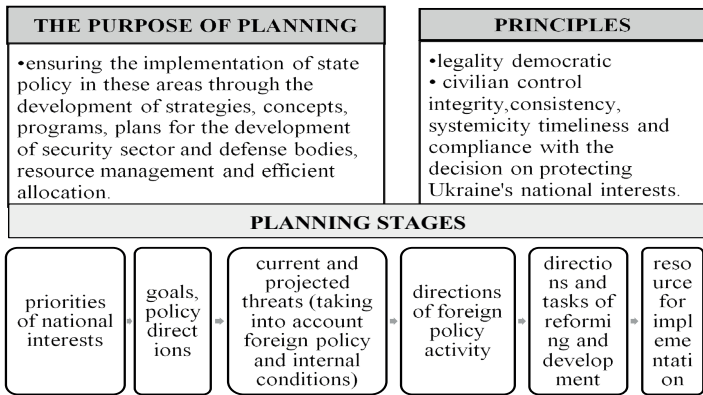


Fig. 2. The purpose, principles, types, stages of planning in the field of national security

The National Security and Defense Council of Ukraine coordinates the areas of national security and defense (the art. 107 of the Constitution and the Law «About the National Security and Defense Council of Ukraine»). The President heads the Council of National Security and Defence of Ukraine. The purpose, principles, types, stages of planning in the field of national security are shown on Fig. 2. The documents of the strategic planning are divided into documents of long-term, medium-term and short-term planning (Table 2).

The national security strategy is the main document of long-term planning, which defines the main directions of state policy in the field of national security. SNS defines: the priorities of the national interests of Ukraine to ensure national security, goals, main directions of state policy in the field of national security; current and projected threats of national security and national interests of Ukraine, taking into account the external environment and internal conditions etc. The main objectives of the SNS are: minimization of threats of state sovereignty and creation of conditions for restoration of Ukraine’s territorial integrity within the

Internationally recognized state border of Ukraine, guarantees of peaceful future of Ukraine as a sovereign and independent, democratic, social and lawful state; ensuring of human and civil rights and freedoms, a new quality of economic, social and humanitarian development, ensuring Ukraine’s integration into EU and creating conditions for joining NATO. It’s needs: strengthening of the Ukrainian state in order to ensure the gradual sociopolitical and socio-economic development of Ukraine; high-quality state policy aimed at effective protection of national interests in the economic, social, humanitarian and other spheres, comprehensive reorganization of the national security system and creation of an effective security sector of Ukraine etc. Current threats of national security of Ukraine are determined by the current legislation and are presented in Fig. 3.

Table 2

The parameters of documents of strategic planning

Type	Period	Documents
long term	> 5 years	National Security Strategy of Ukraine, Strategy of development of Ukraine, Strategy of public safety of Ukraine, Strategy of development of Ukraine, National development of the program.
mid-term	5-3	other strategic documents, programs for improving the security and defense sector, equipping them with modern weapons and military equipment, creating the necessary inventory of material and technical equipment and necessary facilities for the defense-industrial complex, implementing other measures to strengthen the defense status
short term	≤3 years	which are developed by the maintenance and development plans (activities) of the components of the security and defense sectors, the main indicators of the state defense order (for a three-year period) that are relevant to the implementation of the documents that are part of the medium-term planning

In the conditions of digitalization of the world, the threats of cyber security. Ukraine also suffered damage from cyber attacks (December 2016). State financial institutions for three days had complicated the payment of taxes and other payments to the budget, the electronic VAT administration system was blocked and the work of the customs was violated. According to expert estimates, as a result of the attack by NotPetya virus on computer systems of Ukrainian state and commercial institutions of Ukraine, as of July 7, 2017, up to 10% of private, government and corporate computers were disrupted. The national system of cyber security should first of all provide interaction on cybersecurity of state bodies, local self-government bodies, military formations, law enforcement bodies, scientific institutions, educational establishments, public associations, as well as enterprises, institutions and organizations irrespective of the form of ownership , which carry out activities in the field of electronic communications, information security and/ or are the owners (administrators) of critical information infrastructure objects. The Strategy determines that the basis of the national system of cybersecurity will be: the National Security and Defense Council of Ukraine, the Ministry of Defense

of Ukraine, the General Staff of the Armed Forces of Ukraine, the State Service for Special Communications and Information Protection of Ukraine, the Security Service of Ukraine, the National Police of Ukraine, National Bank of Ukraine, intelligence agencies.

ACTUAL THREATS OF THE NATIONAL SECURITY OF UKRAINE	Russia's aggressive actions aimed at exhaustion of the Ukrainian economy and undermining sociopolitical stability in order to destroy the state of Ukraine and seize its territory.
	Inefficiency of the system of ensuring national security and defense of Ukraine
	Corruption and ineffective system of public administration
	Economic crisis, depletion of financial resources of the state, decrease of living standards of the population
	Threats to energy security
	Threats to information security
	Threats to cyber security and security of information resources
	Threats to critical infrastructure security:
	Threats to environmental safety

Fig. 3. Actual threats to the national security of Ukraine

The Law of Ukraine «On the Basic Principles of Cybersecurity of Ukraine», which will come into force in May 2018, significantly expands the list of subjects of providing cyber security. Thus, the Law (Art. 5) stipulates that the President of Ukraine shall ensure coordination in the field of cybersecurity through the head of the National Security and Defense Council of Ukraine; the Cabinet of Ministers of Ukraine is responsible for the formation and implementation of state policy in the field of cybersecurity and control and audit for its implementation, etc. On opinion the ecsperts, the organizational and legal mechanisms for the development of the national system of cyber security are imperfect; first of all, in relation to their compliance with the list of modern threats, European approaches, as well as their incompleteness in composition, lack of clarity and lack of specificity regarding the powers of the subjects of this system. Thats why it's needs expand the range of key actors with clarification of their powers, application of public-private and public-public partnerships [7].

Inclusion of the main subjects of the national cyber security system of the General Prosecutor's Office of Ukraine, the Ministry of Justice and the Ministry of Internal Policy with clarification of their powers in this area. Achieving the economic criteria necessary for Ukraine to become a member of the EU requires the creation of conditions for the approximation of social standards to the level of the states of Central and Eastern Europe - the EU members. The key to a new quality of economic growth is ensuring economic security through: creating a favorable

business climate and conditions for accelerated innovation development. Growth of economies on a post-industrial basis, their digitization are conditioned by the intellectualization of the main factors of production and need a powerful innovative potential. «Innovative Potential» is an integral part of the economic potential, the aggregate of resources, capabilities, reserves, stocks, results of scientific research, which in a favorable institutional environment are able to participate in the process of social production in order to develop a product capable of meeting the social needs of a certain period of time and in a certain place, as well as to promote the growth of a qualitative level of economic development by changing the structure of social production in the direction of increasing the share of high-tech production in the country's GDP.

The main source of innovation potential is a human. The educational institutions play a key role in shaping innovation capital. The state creates an institutional environment for the development of innovation potential, the market institute provides public selection and commercialization of innovations, turning them into a factor of socio-economic development. The institutional environment encompasses all major economic, legal, social and other spheres. Rules, norms, organizations, which, through formal and informal constraints, influence the development of the economic system of society by regulating relations between economic entities. Consequently, the research shows that scientific category «national security» is complex, multicomponent and has an interdisciplinary character. The authors emphasize the protection of the vital interests of man and the community, the society and the state, as well as their implementation, which in turn maintains the state sovereignty of Ukraine, its progressive democratic development, as well as safe living conditions and welfare of its citizens. The legal mechanism is the development and implementation of strategic documents. Established legal institutions for the formation of institutions that develop and implement strategic documents of national security. The National Security Strategy of Ukraine (the main document of long-term planning, which defines the main directions of the state policy in national security) is the basis for the preparation of all other documents regarding planning in the field of national security and defense. Strategy is elaborated on the instructions of the President of Ukraine within six months after his accession to the post and is approved by the decision of the national security and defense of Ukraine, which approved by the President's decree.

The need is to update long-term strategic documents related to the legislation of Ukraine with the involvement of representatives of civil society. The development of e-governance will help create effective and accountable institutions, improve the quality and efficiency of public services, accelerate their provision in time. It is necessary to include in educational programs of national security disciplines, to organize scientific work with students of higher educational institutions on this topic, to conduct seminars and scientific conferences, which will discuss topical issues of national security. It is also necessary to organize lecture courses aimed

at increasing the qualification of civil servants and representatives of local self-government bodies on national security issues.

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COMPETITIVENESS OF THE AGRICULTURAL SECTOR IS THE KEY FACTOR OF PROVIDING FOOD SECURITY OF THE NATIONAL ECONOMY

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Food problem was accompanied humanity from the first days of its existence. Transition to the Market economy in general solved the problem of physical availability of Ukrainians to food products. However, notwithstanding to stably high level of food market saturation with products of main product groups, determines the tendency of falling consumption on the calculation per capita.

Providing necessary level of food security is possible under the condition of effective state regulation of the agrarian sector. It implies: elimination of crisis in the agrarian sector, increasing effectiveness of its functioning, claiming Ukraine as a country with export-oriented agricultural system.

The basis for organizing, planning and implementing the practical actions of the entire food security system is the analysis of threats, assessment of the nature of actual and potential internal and external hazards, crisis situations and other adverse factors [7]. Therefore, an initial stage in determining the level of food security should be the analysis of food security threats, since the existing system of real and potential threats is very volatile [8]. Identification of real or potential threats should be the basis for defining priorities in the country's food security system, which should also not be stable, but should be reviewed and varied depending on a particular situation.

According to many researchers, the main indicators characterizing the internal threats to food security and the deterioration of the food situation in the country are: exhaustion of land resources; underdeveloped sectors of processing and storage of agricultural products; reduction of sown area and livestock; unfavorable in some years combination of natural factors (drought, flood, etc.) that affect the reduction of crop yields or lead to large losses; violation of the conditions of reproduction in the agricultural sector due to the moral and physical depreciation of the main means of production; migration of the economically active part of the population to large cities, the deepening and property stratification of society, which dramatically reduced the incomes of the least protected population [1, 2].

The food market of any country is exposed not only by internal but also external threats. The external threat of food security of the country arises as a result of increased dependence on imports of major types of food in the country as a whole, its individual regions, cities, industrial centers from exporting countries. The external threats of food security, from the standpoint of economists, include the following indicators: the state of world prices for agricultural raw materials (price war); measures of a political nature (embargo, humanitarian aid, etc.); trade discrimination; information warfare; tariff (non-tariff) restrictions; antidumping [2, 3].

In our opinion, besides the macro level, food security threats should also be considered at the level of agricultural enterprises (Fig. 1.). The agrarian sector is a socio-economic basis for the development of rural areas; ensures the development of technologically related branches of the national economy. The agrarian sector of Ukraine's economy has high potential, the strengthening of which is possible through the improvement of mechanisms for the distribution and use of resources in the field and the enhancement of inter-sectoral links, which will enable a breakthrough in the foreign market through the implementation of a unique state strategy of participation in global integration processes.

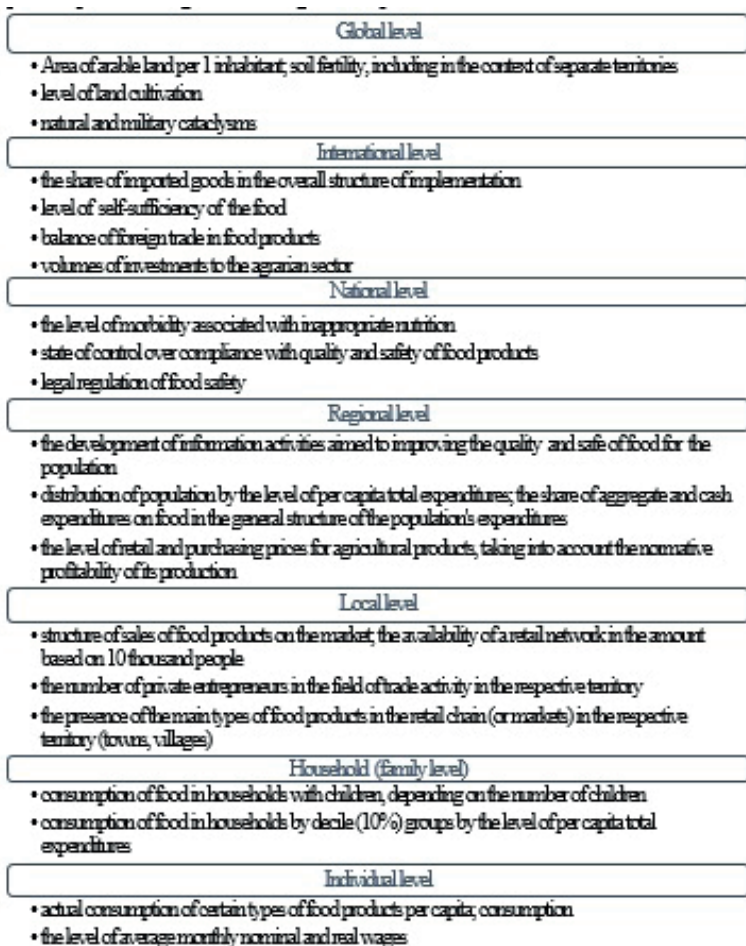


Fig. 1. Food Security Threats

Consideration of this aspect becomes important, as the exacerbation of food and environmental problems in the world will intensify the importance of the concept of multifunctional agrarian sector, which will be the basis of agrarian reforms at the level of national economies and will become the basis for modernizing the system of international trade in agricultural products [4].

Food security of the country, as an integral part of national security, occupies one of the special places among its various types, since food is considered as the basic indicator of human life, in the absence of which inevitably comes hunger and death. The level and quality of food of the population characterize the degree of its socio-economic development and 70% determine the health and life expectancy of

a person. This problem has become particularly important in the last decade [5, p. 43-50].

It should be noted that in today's realities the provision of high-quality food is the main requirement for the food manufacturers. Strengthening and innovative development of enterprises of the agrarian sector should become the main factor in the competitiveness of domestic products. The problem of safety and goodness of food is of particular relevance in connection with the need to increase control over the quality of imported goods. Reducing the amount of produced products, destroying diverse links between enterprises of industrial and agricultural areas, eliminating raw material bases and breaking down farms and production facilities have caused a significant reduction in food production. The capacity of a large number of industrial enterprises is used no more than 30-50%. In the most difficult situation occurred the branches associated with the production and processing of meat, milk, fruits, sugar, and others. However, in addition to reducing the volumes of food production, their quality and nutritional value are getting worse.

The agrarian sector of Ukraine's economy is a system-forming component of the national economy; forms the basis for the preservation of sovereignty and statehood, and national (food) security. The impact of the agrarian sector on the formation of the competitive position of the national economy on the world market is significant, taking into account difficult economic and political situation in Ukraine.

In today's economic conditions of integration Ukraine with external markets increasing the competitiveness of domestic production, which produces food products and other consumer goods is particularly important. An important factor ensuring the food security is the formation of state reserve funds for agricultural raw materials and food, in amounts that allow maintaining stable food supplying at the normative level of special consumers, scarce in terms of food production and guaranteeing the fulfillment of export supplies.

Significantly deteriorating its quality and nutritional value. Fat content of milk and milk products become lower, the quality of meat products deteriorated, their assortment significantly decreased. The most negative consequence of all these problems is that producing of food for children substantially reduced, as well as diet and safe products for citizens who live in regions with difficult environmental conditions and for people which are located in various medical institutions. Ukrainian market sells dozens of names of foreign food products containing components that are prohibited for use in production and sales in developed European countries. On strengthening of the position of foreign representatives in the domestic food market, Ukraine is turning into a region of sale of low-quality products with an overdue shelf-life. Inadequate production carries the appearance of various allergic diseases, irritation, rash, exacerbation of oncological diseases, etc. To date, the formation of the agrarian sector of the economy which should be characterized by stable development and an increasing level of production of goods for food security has not been completed. A major problem in the direction of the

restoration of production in the agricultural sector is, first of all, general economic policy, which is aimed at stopping the financial support of the industry. The impact of crisis manifestations on the agro-industrial sector, along with the escalation of the food problem, intensified against the backdrop of falling competitiveness and economic vulnerability of rural producers in the domestic food market.

Solution of this problem is possible only by increasing the efficiency of functioning of all branches of agricultural production on an innovative basis.

The current position of the Ukrainian economy determines the special urgency of the state's activities in ensuring food security. Also, the purposeful activity of our country in this sphere is necessary. This – according to S.V. Fymyar [12] - due to the fact that Ukraine practically experienced a difficult historical period and entered to that period when the mechanism of financial and economic regulation of commodity flows began to work, a new element of society was formed - owners. The problem of food security for Ukraine is fundamental today.

Formation of a socially oriented economy in Ukraine requires solving strategic task of creating a powerful agrarian sector to meet the needs of the population in food products at the level of economically developed countries, which is an indicator of achieving an adequate level of food security [11].

At present, solving the issue of business competitiveness for the Ukrainian economy is top priority and extremely important. Particular attention is needed to the problem of managing the competitiveness of the business.

The task of increasing the competitiveness of domestic agricultural production is to create conditions for the growth of the general level of productivity of the sector on the basis of sustainability, with the harmonious combination of different branches of agriculture and types of farms (large, medium and small), where each of them occupies the most characteristic market niche [10]. At the same time, it should be stressed that in the strategic perspective, the agrarian sector should be formed as integral system that organically combines different forms of organization and sizes of agricultural producers and functions on the basis of the consistency of interests of business entities [9].

The toolkit for solving the problem of the competitiveness managing depends on a number of factors, so we consider it appropriate to refer to the basic tools: financial and strategic management, reengineering, risk and profitability assessment; monitoring of the competitive environment; consumer diagnostics and others.

Highly intensive and highly effective functioning of mentioned above, determines the level of production of agrarian products and raw materials, and hence the consumption of basic food products, which determines the healthy physical and mental development of the population.

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PECULIARITIES OF THE LAND RELATIONS SYSTEM IN UKRAINE ON THE BASIS OF SUSTAINABLE DEVELOPMENT

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Conducting land reform in Ukraine through the privatization of land and the establishment of private land ownership institute requires a modern analysis and definition of the directions of further development of land relations, especially in the agrarian sector.

Transformation processes in the land sphere have been carried out in Ukraine not by the way of reformation, and therefore they require urgent legal regulation and reformation, especially on agricultural lands.

It is necessary to have civilized attitude to the land as the main wealth, the main spatial, economic and natural resource of Ukraine, which is a guarantee of national food security and able to provide food security for 500 million inhabitants of the planet in general. This determines the study of the development of effective land relations in Ukraine not as a national but a worldwide problem.

According to The Strategy for Land Development and Sustainable Land Use of Ukraine until 2030, to determine the goals and mechanisms of sustainable development of rural areas and land use system of the country it is necessary to develop and implement land legal, organizational and economic mechanisms for the establishment of the land system of Ukraine for the following units: 1) natural and ecological; 2) administrative and territorial; 3) according to forms and economic relations of land ownership; 4) economic (Fig. 1).

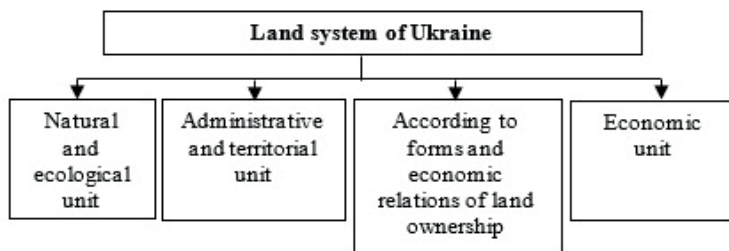


Fig. 1. Land system of Ukraine

Source: [5]

In the works of Ukrainian scholars, there is a conclusion about the “institutional trap” in the development of land relations and land use systems in agriculture in connection with the sharing of agricultural land [10]. In particular, economic and

ecological relations of land ownership and the land use system of agricultural enterprises are developing chaotic, without scientific forecasting and planning.

According to the Agro Invest project research by the USAID, a third of the land shares are owners of 6.9 million who have never seen their land. Almost 9% of agricultural land is not cultivated or used. An assessment of the existing institutional support for implementing land reform measures indicates its unsatisfactory state [11].

A moratorium on the sale of agricultural land and free economic circulation of land plots hinders the development of land relations. At the same time, the complexity and socio-economic significance of the land reform for Ukraine give grounds for determining it as the final stage in the creation of modern market of agricultural land on the basis of clear and transparent state system of registration of rights to land and the provision of state guarantees for the protection of private property [2].

Attempts to launch the mechanism of the land market were made earlier. But the main obstacle to reforming modern land relations was public opinion. First of all, there are people's fears that the most valuable wealth of Ukraine will be bought by speculators, foreigners and powerful commercial structures.

Draft laws on the economic circulation of land, at first glance, protected the population of Ukraine from such problems. The projects noted that foreigners and legal entities, even domestic ones, would not have the right to purchase agricultural land. This right is granted only to individuals – citizens of Ukraine. A similar model exists today in many countries. The greatest value for us is the experience of developing land relations in those of them, where the land market has been working for a long time and developing successfully. But no less interesting is the issue of the formation of the land market and its assessment in countries with a developed and transformational economy [6].

The main task of preservation and restoration of natural resources in the USA for all participants of this process is to provide a much better level of use of soils, water, air and biodiversity. The realization of this task is based on the use of two main approaches: market and partner. The application of the market approach consists of implementation of market principles and mechanisms for the implementation of protection, which includes a well-defined system of property rights and the use of market-oriented instruments, including the provision of state compensation, privileges, payments and loans to land owners to minimize negative externalities in the natural environment. The principle of partnership determines the broad involvement of the main participants in this process in protecting land, namely, farmers, landowners and land users; governmental agencies in the field of environmental protection; special local formations, so-called Soil and Natural Resources Conservation Areas, their associations, as well as colleges, universities, public organizations, land trusts, etc. [1]. In the US, 40% of the land stock belongs to the government, in this part there is no arable land. The bulk of the US Government's land fund is military polygons, parks and free land. In the United

States, foreigners are allowed to own land privately. But from the entire US land fund, 1% of agricultural land belongs to foreigners.

The experience of the European Union states that private land ownership has a protective nature regarding the use of land, since private property is long-term, and private landowners have legal responsibility for its use. The law allows the owner to sell, buy, give or bequeath land to other people.

However, modern private land ownership in developed countries of the world is significantly different from that which was under capitalism, when it was established in absolute form and did not provide state interference with the rights of landowners and land users. Gradually, ownership became the object of more significant state regulation, which limited the rights of owners and users in the interests of society.

In Western Europe, in the United States, and in China, the general trend towards socialization of land relations and land tenure is manifested. Citizens receive the right to use life and inherit land plots. Countries such as Armenia, Georgia, Moldova massively abandoned the creation of large agricultural enterprises and transferred the land to the peasants. There is no private land ownership in Azerbaijan, Kyrgyzstan, Tajikistan, and Uzbekistan. The state transferred the land to permanent possession, and the enterprises lease land for families, groups of workers [4, 5, 8].

Kazakhstan's land masses are state-owned. In this country privately owned land is transferred to private farms, gardening, and cottage industry.

At the nationwide referendum in Belarus, the population opposed private ownership of land. Under the constitution of Belarus, agricultural lands, lakes, rivers, and forests belong to the people. The state provides them for use by citizens, enterprises that are responsible for the conservation and rational use of all natural resources. Agricultural enterprises are tenants or long-term land users. Private property is allowed only on private plots up to 3 hectares [10].

Countries with a strong state influence on the land market (the USA, Japan, Canada, EU countries, etc.) make significant progress in land use development compared to those that weakened the state influence in land relations regulation during the reforms (Bulgaria, Romania, the Transcaucasian republics, Moldova, etc.).

The bulk of the most valuable land (37.6% of the total area) is concentrated in the agricultural land of Ukraine [9]. The main base of agriculture is located on chernozems and soils of chernozem type (60% of the arable land area). In general, Ukraine concentrates more than 8% of the world's chernozem soils [11]. However, excessive cultivation, which is still the highest among the developed countries of the world, as well as the extensive nature of the use led to their degradation, violation of soil formation processes, minimized the regulatory biochemical role in agro landscapes.

It is known that productivity of land use is determined not so much by the level of security of every inhabitant of the land, in particular arable land, but by the efficiency of its use in agriculture. Thus, in the United States, crops grown for food production per inhabitant are occupied by 0.6 hectares, 0.4 hectares of technical

crops, 0.8 hectares for housing and recreation. The area of arable land per capita in Germany and Great Britain is only 0.12 hectares; in the Netherlands and Belgium – 0.14 hectares. However, these countries not only fully provide themselves with food, but also export it in significant volumes [11].

Taking into account foreign experience, it is expedient to develop and implement an integrated approach to the use of land resources, which would ensure acceleration of scientific and technological progress in the agrarian sector in Ukraine. It is necessary to form an effective system of land use, having adopted not only new Land Code, but also Agrarian Code.

An overview of land relations in other states shows that only its land relations are inherent for each of them. They express the system of social and state structure and, accordingly, the political organization of their regulation.

International experience shows that the state's influence on the development of market land relations is growing, which manifests itself in the application of a number of economic instruments that promote concentration of land, the formation of sustainable land tenure and land use. Therefore, the development of land legal relations in the agrarian sphere should determine not only the main element of the institution and the object of legal relations – land, having written out their special rightfulness and ensuring their rational and highly effective use by adopting new institutional norms on land management and land protection, but also taking into account the public interests of peasants and the social consequences of any transformation. After all, the main purpose of the state is to ensure national security, raising the standard of living and welfare of the people.

The formation of a fully-fledged economic circulation of land in Ukraine, especially for agricultural purposes, should be comprehensive and multilateral in both legal and socio-economic and political spectrum. And since Ukraine, as an open country, is integrated strongly into global economic processes, the formation of a mechanism of sustainable world food supply without Ukraine is impossible.

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PART 2. CHALLENGES AND THREATS TO ECONOMIC SECURITY UNDER THE TRANSFORMATION OF NATIONAL AND TRANSNATIONAL RELATIONS

FACTORS OF FORMING THE ECONOMIC SECURITY OF ENTERPRISE

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Statement of the problem in the general aspect and its relation to important scientific and practical tasks. Enterprise as an open social-economic system determines and performs its mission, achieves goals only interacting and mutually depending on the external environment. From the latter it receives necessary resources for proper functioning, gains its reputation, implements its intentions in life, sells products, gains profit for expanded reproduction.

The analysis of the latest publications, in which solving of the problem was initiated. The investigations of theoretical and practical aspects of ensuring the security of economic subjects' development were reflected in the papers by Ye.A. Oleinikov, S.N. Illiashenko, T.B. Kusenko, B.V. Gubskiy, A.V. Kiriienko, M.M. Yeroshenko, Grunin, Yu. Lysenko, S. Mishchenko, Z. Stakhoviak, V.V. Belokurov, R. Datskiy, H.V. Kosachenko, O.M. Liashenko, D. Kovaliov, T. Sukhorukov,, I.L. Pletnikov, O.V. Razdin, and others. Nevertheless, the problems of methodical providing the management of enterprises' economic security, financial-economic activity of enterprises and organizations require scientific research. Such research would create the basis of developing and making managerial decisions aimed at protecting the economic interests of enterprises and timely preventing economic threats.

Aims of the article. The aim of the article is to generalize and deepen theoretical and practical foundations of forming the economic security of enterprise, determine the main factors, influencing it.

The statement of the main research material with complete substantiation of the obtained scientific results. The economic security of enterprise should be considered as an economic category and economic position of this enterprise. The economic security of enterprise as an economic category reflects the general notion, which

characterizes the most significant connections and relations of the real economic activity, the cognition of economic processes and phenomena, and also the place of these connections and relations in the economy [4].

The economic position of enterprise is the position, the economic activity of which under normal conditions ensures the fulfillment of all its obligations before the employees, other organizations, and the state owing to incomes and the conformity of incomes and expenditures [6, p. 60].

The factors, which form the corresponding level of enterprise economic security, are different and have their own specifics in each branch of production. However, there are general, typical factors affecting the level of enterprise economic security irrespective of the forms of property and branch of production, namely:

The first-hand factors of production are the main factors, which directly ensure production activities. They include:

- the direct location of enterprise (the territory);
- available natural resources and the conditions of their distribution on this territory, the accessibility of using and qualitative indicators;
- the availability of labor resources, their educational-qualification level;
- the available production infrastructure and possible volume of its using;
- social-economic infrastructure and the level of the population well-being.

The stable demand on products is a factor, which also plays an important role in the uniform propositional development of production. It comprises :

- concluded long-term contracts with consumers on selling products; укладені довготермінові контракти на реалізацію продукції з її споживачами;
- the level of the manufactured products' competitiveness;
- qualitative-guarantee indices of products;
- substantiated prognostication as to the stability of a certain product market;
- state and regional order on manufactured products.

The reliability of suppliers, first of all, those who ensure the supplies of raw and other materials . To do this, it is necessary to: have long-term agreements for supplying the necessary raw and other materials, taking into account the terms of delivery and their qualitative indices; know the possibilities of suppliers and not enable the monopoly of their supplies; to do this, as a rule, it is necessary to have 3-4 and more suppliers of raw and other materials in order to have the guarantee of stable price policy concerning raw and other materials and components.

External competition on products intended for export. These products have to:

- comply with the international standards;
- be competitive as to qualitative indicators and servicing;
- have substantiated and prognosticated prospect;
- be competitive as to the products, imported to our country with the aim of limiting the import to Ukraine of the products, which can be manufactured by national enterprises.

The state economic regulation of enterprise's activities consists in:

- protecting own producer of goods, irrespective of the form of property on the means of production;
- regulating the state tax policy;
- assisting in production, taking into account economic, territorial, and other aspects;
- assisting in manufacturing products, which is imported as a critical import;
- state order on goods, which are financed by the budget, and decreasing the import of these goods.

The reliable protection of commercial secret. The state has to guarantee the secret of scientific-technical achievements, the development of new technologies, intellectual property, know-how, including commercial secrets.

The competence of the enterprise administration. The most important factors, which can actively influence the level of enterprise economic security, are: high professionalism of the administration and team of managers (highly qualified personnel; the system of its training and forms of training; the creation of the corresponding production and social-economic conditions). The kinds of threats including the separate elements, which can be used practically for any subject of economic activity, are also mentioned.

The external threats and destabilizing factors can include: unfavorable changing of the political system; macroeconomic shocks (crises, inflation, the loss of the markets of raw and other materials, energy supplies or goods); illegal activities of criminal structures, competitors, and firms, engaged in industrial espionage or fraud, and also violations on the part of corrupted officials of controlling and law-enforcement bodies. The internal threats include: actions or inactivity (in particular, intentional or unintentional) of the enterprise's employees, which contradict the interests of its activities, leading to economic losses of the enterprise; violation of the order of using technical means, the established order of storing information, which is a commercial secret, undermining its image in business circles, arising the problems in the relations with real and potential partners, and so on (Figure 1).

The category of security is interconnected with the category of enterprise competitiveness. These both categories are connected with each other in the system of economic theory categories. Moreover, under the conditions of market economy, there is the relation, which is created by “the enterprise – competitors – the market”, and was called “the triangle of competition” in the scientific literature.

Considering the triangle of competition with the participation of a definite enterprise, the answer can be obtained to the question: whether the actions of the definite enterprise are efficient enough. In order to answer this question, marketing evaluation of the market, competitive and financial, technological, staff, and other opportunities of the enterprise must be made [1, p. 227].

Considering the enterprise as the object of management, modern economic science studies it as a peculiar kind of economic activity, directed at creating transforming material objects. Moreover, economic activity is considered as a basic

kind of the society activity. In this connection, it must constantly be the component of the economic system with various kinds of its own possibility manifestations, and the system was called timeless kind of activity [2, p. 7].

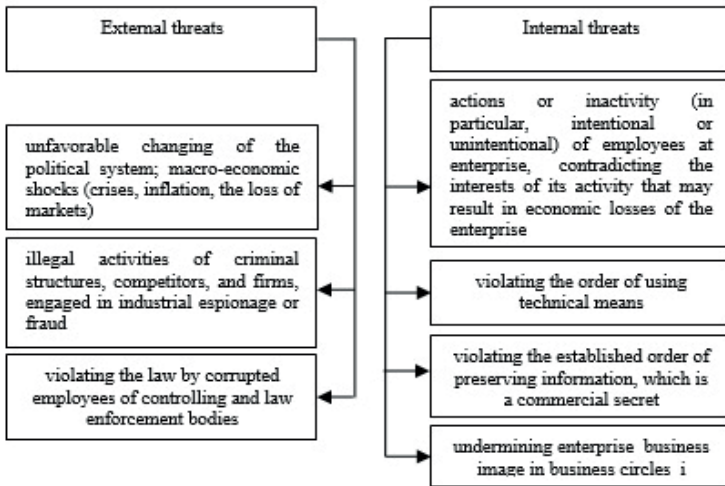


Fig. 1. External and internal threats of enterprise economic security.
The source: made by the author based on: [3]

Ranging targets is determined by the approach to human values, by which the economic science is guided. Moreover, the classical (neoclassical) and institutional approaches are the extreme points of achieving the given targets.

According to the classical view, human values are those that explain the behavior of the individual participant of the market by egoistic (material) interest. The success is the maximal income, received from using the available resources; and this aim is the only one and unchangeable. The unlimited striving to the satisfaction of personal interest makes it be as a center of profit, be guided by only by the expected consequences of own actions. That is why the single aim of the economic mechanism, consisting of such individuals, is maximizing the profit on the invested capital. For institutionalists, the person, influenced by many factors, traditions, customs and standards, in particular, is the center of attention, but not economic aims. The main thing in human behavior is not striving for gain, but rational and systematic improving the functioning of enterprise; not the profit itself, but searching profit [5, p. p. 124-125].

The purposeful behavior of enterprise is determined by changing the positions of agricultural branches in time, the importance of agriculture and the economy functioning on the whole. The material component, bearing energy potential and information, becomes the result of enterprise’s economic activities. However, to

measure the result of production in monetary form is peculiar for industrial and post-industrial societies. Using the indicator of the capital value form enables to estimate the degree of achieving the set goals, formulated by people on the basis of pragmatic and fundamental values.

In this connection, in separate cases, the personnel number serves as a regulating indicator, characterizing the amount of the ensured working places. For agrarian enterprises, as a rule, not the indicators, characterizing the real state of affairs, are important, but economic efficiency, which is determined by comparing the results of functioning agrarian enterprises and their resources that take part in economic and production processes. The profitability of production (sales, assets) and labor productivity are the most widely spread among these processes. The analysis the business activity (security) of agrarian enterprises is conducted on the basis of the results, mentioned above. The economic processes in agriculture include mutually connected components, characterizing technical, economic, and social parts [3, p. 79].

Technical processes are aimed at manufacturing the products of the definite technical, technological, or ecological level of production, and also a definite scientific-technological basis, the prospects of enterprise's development. The economic part of economic processes in agriculture is based on the notions. The social part admits the accounting of social needs, social usefulness of products and their changes; the estimation of social situation, solvency and its changes, and also social evaluation of a particular enterprise [4].

The economic and production processes, taking place at the enterprise, have a number of peculiarities:

- raw materials, objects of labor in general contain the amount of the manufactured product. The output of products can simultaneously be the exit in another system, which is the additional "internal factor" of agriculture functioning;

- transforming the initial material into the finished product, as a rule, requires labor results. The using of mechanized or (and) automatized labor enables to use the energy, which is different from human force;

- after a certain period of time, the main capital in the form of basic production assets requires changing and reproducing on a new technological basis [6, p. p. 82-87].

The technological character of economic processes, taking place in the production, is determined by the resource, which is the main in the given period of enterprise's economic activities. The composition of resources, used at agricultural enterprises, comprise the factors of production (material, financial, and human), and also the factors, determining the efficient using of production factors (organizational and managerial resources) [5].

The importance of each kind of resources, used in agriculture, developed simultaneously with the development of the economy.

The systemic characteristics of the external environment factors' impact determining the security of agrarian enterprise in market economy according to the processes of its activity is presented in Table 1.

At the end of the XXth century (in the 90s) several countries of the world conducted the so called “reverse movement” in their development – from command-administrative (socialist) way of production, exchange, and distribution to the market – associated with capitalist method of production, exchange and distribution. The economy of those countries during this period should be characterized as transition, and the period of development – as transformational stage, or simply, transformation [1].

In that period the following factors had to be transformed:

- the owner, who earlier was represented mainly by the state the common property is changed into private property;
- vertical relations between the state and other economic subjects (agents) of the economy;
- horizontal relations between all the economic subjects, including the state, which is the largest economic agent;
- mutual relations between the categories “plan” and “the market”;
- factors and mechanisms of economic growth [5].

Under market conditions the necessity arises of using principally different from the earlier existing methodology of restructuring production. Such methodology must envisage solving the questions of rationalizing the branch structure and territorial distribution of agriculture, efficient using the factors of reproduction (innovations and investments), and also the forms of production organization (concentration, specialization, cooperation, and combination), which, in connection with solving other aspects of the market economy, related to its orientation on social support of the population, enable to solve the problem of ensuring the security of agrarian enterprises [3, p. 79].

Among the methods of solving the problem the methods, oriented at economic ones and ways, used in the countries with developed market economy, must prevail. The role of command-administrative methods must be considerably reduced and limited to the necessary state regulation of the economy. That is why theoretical and practical experience of Ukraine is valuable for completing the formation of market relations, improvement of branch and territorial structure of agriculture, transformation of other fields and infrastructure of the market economy.

In our opinion, the main element in solving the problems, enumerated above, is stating and solving the problem of state regulation of the market economy. Such approach is realistic, because the role of the state in regulating the production, exchange, and distribution of the national product in developed countries is decisive. For example, in the USA the state distributes the third part of the GDP, in the European countries and Japan – the half. In Ukraine, under market conditions, this problem is becoming especially urgent, as the withdrawal from command-administrative methods of management leads the participants of the market and separate adventurous politicians to think about the freedom of market relations, not limited by the state [4, p. 38].

**The grouping of the factors of enterprise's economic security
according to the impact of the external environment**

Character of the process	Element of the system, affecting the process	The main factors, determining the degree of the external environment influence on enterprise's economic security	The elements of currents' exchange
Organization	Entrepreneurs, suppliers, intermediaries	Resource intensity of business. Number of suppliers	Raw materials, money, information
Production	Employees	Number of employees. The share of compensation package for employed workers of the firm (motivation of labor)	Human capital, goods, money
Sales	Consumers, intermediaries	The amount of income. The degree of sales system's independence	Goods, money, information
Investments, reproductions	Investors, intermediaries	Interest rate for credit. The amount of the firm's own capital	Money, information
Competition	Competitors	The share of the firm on the market. The degree of the market monopolizing. The speed of changing the condition	Information
Processes of interaction with the environment	Territorial-geographical surrounding, state power, crisis phenomena. Technological environment, social-economic factors	Income per capita. Number of active population. The customs regulation. The level of corrupted economy. The level of tax pressing. Climatic conditions. The degree of enterprise's liquidity. Active vital cycle of equipment. Differentiation according the level of life. Unemployment	Goods, money, information

The source: made by the author, based on: [2, 6]

Taking into account all the above mentioned, we suggest to demarcate the economic responsibility and the resulting rights between the central and local authorities. Such demarcation envisages ensuring the distributing and uniting the interests, responsibilities, rights, economic resources in the state, that is, distributing and uniting the mechanism of market regulation (self-governance) and the mechanism of state regulation (the authorities).

In this aspect, the state takes the responsibility for the formation of the system of targets and possible alternatives of the national development, orientation of producers as to the general prospect of the country's development on the whole and also its separate regions and branches of the economy, regulation of cost parameters and financial-credit levers of the national production, export, and import of goods, that is, all those characteristics and parameters of the economy, which form the general directions of the country's development [5, p. 175].

In the connection with a principally another economic correlation between the categories "plan" and "the market", the necessity arises to determine the place and role of each of them in the society. The novelty of the problem treatment consists in:

- appearing mixed economy as a result of the formation of different owners;
- forming the role as to different interests of different social groups and layers of the population;
- the availability of the plan-oriented character of activities of each economic subject of the market relations, resulting from the owners' interests;
- necessity of organizing the mutual connection with the external environment relating to the state (the globalization of the economy); the necessity of efficient using economic resources, rational territorial and branch organizing of the economy.

All this makes the state become the guarantor of the general national interests and the largest economic subject of the market [5, p. 184].

The interests can be different: national, regional, the interests of social groups, branch, professional, collective-group, family-individual. All these different interests can simultaneously be both targets and limitations, and regulators while forming and substantiating the choice of general national, group and individual targets and limitations. It is stipulated by the fact, how the so called "exchange" of natural, financial, labor resources for the acquired technical, economic, and social progress takes place, and also the well-being, connected with it, at the expense of this well-being. Thus, the state must take the function of control over these processes

The regulation of economic development concerning the traditional and new branches, and separate territories must become the sphere of the state attention. The following strategic problems must be included here: the development of separate territories and inter-territorial relations; branch development based on innovations, banning the reproduction of outdated technologies; the development of education, cultural heritage; preserving ecological equilibrium, and other problems, the solving of which becomes possible only with the state participation.

Choosing the scheme of the model of raising enterprises' economic security under market conditions is the most important aspect of the state regulation. Because of the exceptional significance and volume of the problem of raising the enterprise's economic security, the selection and implementation of the model are possible only in case of the active role of the state. Only the state can determine and evaluate its geopolitical aims and interests and precisely enough define three groups of factors:

- physical ability to raise enterprises' economic security, that is the amount and quality of natural and labor resources, the amount of the main capital, and the level of technology quality;
- the aggregate demand or, to be more exact, the possibility to raise the level of overall society expenditures;
- the ability of the enterprise to distribute the resources in such a way, so that obtain the possible maximum of products [5].

The modern model of raising the economic security of enterprises in the USA is oriented at striving to keep the leading position in the world. The state regulates raising the quality of labor resources and conducts tax, money-credit, ecological, and other kinds of general national policy, directed at growing social labor productivity [4].

The Japanese model of raising the economic security of enterprises (in the 70-80s) was oriented at:

- intensive using of production resources by resource saving, developing new materials, and so on;
- intensive using of labor resources;
- considerable changes in the branch structure of production;
- great influence of scientific-technical progress on all the spheres of the national economy;
- control over money stock, achieving the definite demand, banning the decline of production and unemployment growth, stabilizing the rate of the national currency [4].

The Western European model of raising the economic security of enterprises is oriented at: transforming the reproduction, technological, branch, and territorial structures of the capital based on the transformation of the mechanisms of state regulation aimed at raising the physical ability of production development; increasing the volumes of creating new technologies and decreasing the traditional ones; identifying innovation policy with the adopted concept of economic growth with the aim ensuring economic and social growth on this basis.

To raise the economic security of enterprises in Ukraine the strategy of market economy formation (the strategy of reformation) was chosen, and the main directions of this strategy are the following:

1. The liberalization (deregulation) of the economy by taking away the limitations from prices, economic relations, foreign economic activities, the development of wholesale and retail trade.
2. The stabilization of finance and money system, strengthening of the national currency – hryvnia.
3. Privatization of property, the development of business.
4. Structural reconstruction of production, conversion, the adaptation of the economy to the internal market structure.
5. The creation of conditions for the formation of the competitive market of goods, factors of production, and finance.
6. The activation of social policy aimed at adapting the population to the new conditions, the support of the people of lower incomes.

Conclusions. In order to stabilize the agrarian economy, raise the economic security and efficiency of agrarian enterprises, the bodies of the state power must conduct: institutional transformations of market sector, banking and credit-financial system, the sphere of state regulation; stimulate and support national producers of goods; renovate the production apparatus; cut down the inflation potential of the economy and decrease the rates of price growth.

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ENHANCING BUSINESS SAFETY: IMPROVING VALUE-BASED MANAGEMENT

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Business safety is one of the basic indicators, which shows the results of enterprise activities. The attitude and actions of business participants depends on this as well as created value. Traditionally alike task's definition means results and managers actions coordination in order to increase the value for the shareholders. That kind of coordination allows not only evaluate the contribution of concrete

manager, but also gives the opportunity to reveal the weak parts, as well as shows the development perspectives of the enterprise. The meaning of the value-added cost comparing to the basic scenario is used as a main measurement. In this case it is just needed to measure the initial value managing its sensitivity to value factors. For business safety's evaluation is just needed to put the goals correctly and make regular monitoring during the real functioning process. The probability of business loss and caused influence on the enterprise's value in time perspective under the negative factor's pressure is defined during value monitoring process. Although, even this business instrument seems to be perfect, the procedure of managing the value of the enterprise in long time perspective is limited by convention of the established tasks.

For mentioned defect prevention it is offered to include the new instrument – investment attractiveness evaluation - into the value measurement procedure. Mentioned estimation is done for new enterprises, which have no functional history – this is the difference of this evaluation. Estimating the well-founded specifications is the advantage of investment attractiveness estimation. Implementing the new instrument based on the “in an open country” model in context with the scheme of an acting enterprise gives the opportunity to connect the incompatible evaluation platforms and to increase the enterprise's controllability by improving the quality of controlled processes.

The processes' quality improvement, which influences the business safety, is reached during the diagnostics of management. The justice of this conclusion is proved by using the improved value evaluation of the multifunctional operating transport enterprise. Thereby the decision about the offered instrument adapting in set limits is formed by coordinating the planned aims and results.

Effective measures of business's safety. Business safety is defined by the level, which describes how the implemented on the enterprise decision – making system satisfies long-term and short-term aims and is able for the operation [1]. The decision –making system is a part of management system, which is mostly oriented for setting the aims. The goals and results, which directly depend on the existing management system, should be adjusted to ensure the given safety level. In other words, the creation of effective management system causes the increase of business safety. That is why the managers of the enterprise should have the instruments to define the effectiveness of the management system. The means of management diagnostics can play this role. With the help of such means the signs of management system's deviations from established norms are defined on the base of systematical investigations of its character signs. The organizational pathologies are studied during the restoration of signs, and the reproduction of characteristic signs is done taking into consideration the parameters, which do not lose their meaning in established frames interacting with external environment. The management system should have the ability to quickly be adapted for business environment. Having this ability, the management system is supporting the stable

business functioning, which testifies business safety. The losses, which appear in case of system becoming unstable with the absence of stabilization means, show the unreliability of business. The meaning of such losses is calculated with the help of enterprise value calculations. The safety of business is defined as loss probability under the influence of negative factors and changes in enterprise's value caused by these losses in time perspective. It is enough to reveal the factors and calculate the indicators, which describe the definite business instrument's stability in changeable external environment circumstances. As a result the potential of used mechanism adaptability in established frames and coordination of final results and planned targets is evaluated. Such scheme is not causing doubts having the effective diagnostic means of management system. Together these means forms the complex of principles and methods for organization's pathologies defining and well-founded diagnose statement. The management pathology appears as painful deviation from norms and is defined in context with symptoms. Symptomatic decisions of recognizing and radical neutralization decisions are worked out on its base.

Effectiveness of accepted management diagnostic actions, which are the part of management system, is also defined on the enterprise's value basement. Value increase, caused by organization pathology elimination, is testifying the correct decision. Value decrease shows the discrepancy of the result. In the first case business safety is increasing, in the second case – decreasing.

Generally the enterprise's value managing process, even though it seems so complicated, may be presented as a certain program. The program is worked out in accordance with structural reorganization scheme, representing five steps enterprise's value transformation [2]. During the realization the offered mechanism of rate indicator's coordination based on the balanced indicators' complex is used on all stages, connected with forming of the future money flows. This proves not only the complex character of value monitoring, but also demonstrates the opportunities of step-by-step improvement investigation by follow on parameters separating. The parameters are representing the balanced indicators' complex. That kind of isolation influences the management's results evaluation. Besides, it gives the opportunity to define the sensitivity and dependence of value factors. The offered approach consists of six level crossed check of normative indicators' balance. The basements of such check are well-founded dependences between the rates changes of established system's parameters. The conclusions about the enterprise's general development tendencies are made while monitoring the hangings. Thereby on the basis of absolute, relative and structural parameters it is possible not only to support the actual business processes, but there is an opportunity to choose the rational enterprise's management variant for successful functioning. Thus, the objective conditions for effective managing decision making are created and allow the enterprise to choose the optimal way of stable functioning in long-term perspective because of diagnostic's actions.

Management diagnostic's problems systematization. Value monitoring allows

establishing the possible losses and improvements value measure, which is used as business safety indicator. That is why the requirements for high safety often conflict with value criteria. It is not casual that in most cases the enterprise's managers, trying to increase the value, do not even think about increasing the safety of business activities. On the other hand, the organization with low value is functioning with high level of safety. Here comes the problem of finding the compromise between the results, which influence the enterprise's controllability in accordance with established safety level. Taking into consideration these factors the controllability of the organization decreases. The mismatch of actions inside the organization grows because of different rules, connections and structures increase. As consequence of such processes uncertainty appears inside the organization and in external environment. Value monitoring results lead to additivity destroy. Cumulative present value of separate improvements does not exceed the cumulative present value increase, received for the cost of mentioned improvements. Main reason of discrepancy is in convention of established value norms. As a result the improvements are done for such problems neutralization, which show the most sensitivity to value. The situations, connected with low sensitivity, which in perspective could lead for the considerable value increase, are not taking into consideration. Such situations are caused by incorrect choice of an estimation interval. And, at the end, the most serious disadvantage of value monitoring is monitoring stable development on the established value borders. Crossing the borders may cause the conclusion about crisis condition in normal functioning case and the opposite. Mentioned disadvantages are eliminated making the management diagnostics.

The management system diagnostic's organization demands absolutely different approach, directed on improvement of processes at the expense of revealing and elimination of problems. To start such organization is possible after accepting the effective principles of management. In the beginning it is required to systemize the organizational pathologies, and afterwards start to work out the diagnostics actions. The work out problem elimination actions are directed to methodologies, measurements and value managing process's perfection on the expense of finding the latent connections existing between problems. For the increase of the enterprise safety in a difficult and confused interrelations condition it is required to pass from value monitoring technology to technology of value management. The transaction is connected with business safety's measurement accuracy increase. Increase is connected with management system diagnostic process. The meaning of the diagnostic is not in control and monitoring, but in direct managing the enterprise functioning. Such management is implemented when estimating the functions of management, instead of business functions. This technology gives managers a chance to define the organizational failures and defects in due time and operatively react. Management diagnostics is a new area of investigations. Its development goes in the conditions of a considerable quantity of terms and small

number of the approved methods. Within last five years, basically the attention is paid to organizational questions of management diagnostics maintenance. As for technological aspects achievements in this direction are insignificant [3]. Main reasons of such situation are complexity and novelty of a problem, an illegibility of the established requirements, and absence of founded necessary financing volumes and experts of demanded qualification. In process of the theory and practice development of control systems diagnostics the attitude to it varies also. Investigation and disclosing of the given problem are based complicated step by step iterative researches. Thus in the beginning certain conceptual bases which are updated in the course of accumulation of practical experience are put. Such experience is received while estimating the accepted recommendations concerning concrete situations in business. Estimation process assumes revealing of certain laws, carrying out of analogies and accumulation of the information on efficiency of the actions executed in practice and the admitted errors. The revealed errors and size of the losses caused by them force managers to reconsider all process of business anew. As a rule, the basic errors are supposed already at initial stages. And here the preconditions, which lead to the most notable consequences – to property losses, to bankruptcy etc., are based. That is why particular attention to the questions of business safety maintenance should be given even before its opening. Therefore already at the stage of having a complete business picture vision the demands, which are a basis for management diagnostics system, should be established.

Principles' forming actions and actions of organizational pathologies elimination are directed on working out the diagnostic aids of not manipulated character. It is reached by maintaining the qualitative management definition. Creation of new diagnostic actions demands value monitoring replacement by technology of value management. Such replacement is connected with the transition to higher step of business safety measurement spent within the limits of diagnostics of a control system.

The main feature of value management is establishing well-founded specifications and an estimation of a current condition.

Well-founded specifications establishment. In the traditional approach when analyzing the conditions of the operating enterprise any influence on a control system is estimated from an increase in value position. Its estimation allows operating improvements on deviations of the factors influencing controllability of the organization. Improvements are directed to the elimination of the founded reasons, disturbing the process. The decision about improvement is accepted in case if the economy from its implementing exceeds the expenses in time for reason elimination. Decision-making should be confirmed by presence of positive sensitivity. Display of such sensitivity is observed, if enterprise cost raises more than on 1 % at increase in the factor of improvement at 1 %. The accepted improvements bring the contribution to enterprise cost. In aggregate such contributions represent reference points for the conditional specifications setting. The control of specifications is spent on additive

performance. Quite often conditionally set specification of value is in norm, and the subjective opinion of the investor based on intuition, expresses an inefficiency of invested resources use. In the classical value approach the option of such check is absent. That is why, despite set of advantages of the given approach, there are certain problems at its application. The advanced measures, which are carrying out functions of management diagnostics have been developed for their elimination. On Fig. 1 the detailed scheme of value management is presented.

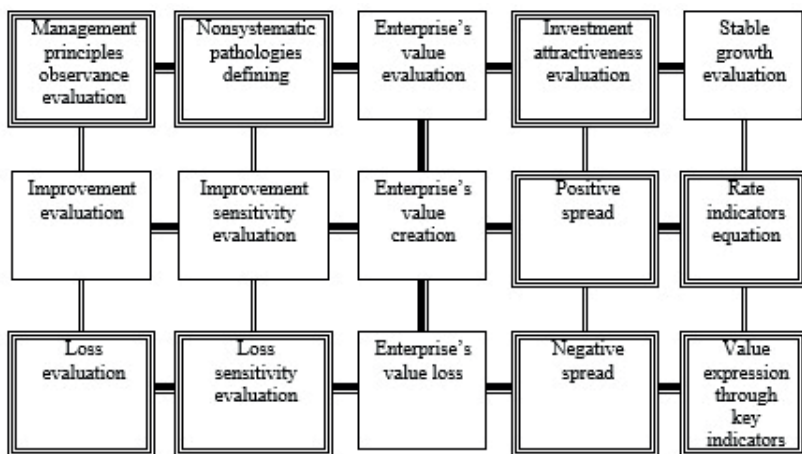


Fig. 1. Detailed value management scheme

The blocks signed by a threefold line, characterize new means of value management. The mainframe of the given scheme is the estimation of the enterprise investment attractiveness.

Usually use of such estimation is effective when analyzing the new projects, which do not have a cost history [4]. For increase of an estimation accuracy of enterprise investment attractiveness it is necessary to consider the general methods of calculations, applying thus consistent ways of their realization. Dissimilarity of various projects, presence of individual characteristics in them in any way does not underestimate the possibility and need of use of the settled principles and criteria of estimation. A main feature in principles realization procedures estimation is the definition of key indicators, such as the rate of discount or a monetary flow. Besides, it is necessary to take into consideration interests of all investment participants and to consider criteria of an estimation of efficiency comprehensible to them. Investment attractiveness estimation instrument's inclusion into value management technology demands the vision of structural integrity of a value problem. Such vision is based on the full financing scheme analyze taking into consideration general idea about the risk degree of the enterprise functioning. Economic inadequacy of no synchronous

measures in time, concerning expenses and results thereby should be considered.

In general view the methodology of investment attractiveness within the limits of a traditional cost estimation of the operating enterprise is done according to offered procedure.

1. Investigated enterprise is represented from the point of goal oriented structure of processes. Such structure forms the united project with concrete participants. Therefore at this stage the forming of potential participants portfolio takes place taking into account their interests. Further terms and duration of the project are defined.

2. The enterprise functioning is estimated in general. Such estimation is done at simplifying assumptions. It is supposed that all investments are supported by «firm generating the project». The volume of total investments is defined as result:

$$CPR_0 = \sum_{i=1}^I CPR'_0$$

where:

CPR_0 - total investments to the enterprise;

I - finance sources quantity;

CPR'_0 - the contribution of i-investment source.

Further comparison of results and the expenses received for all life cycle of the enterprise is made. Cumulative results in the form of total current cost of business ($PV_{project}$) are compared to size of the expenses representing total investments (CPR_0). Thus the estimation of results should be not less then expenses ($PV_{project} > CPR_0$).

For results calculating the next formula is used:

$$PV_{project} = \sum_{t=1}^N \frac{F^p_t}{(1 + d^p_A)^t} + \sum_{i=1}^I \sum_{t=1}^N \frac{t_s \times d_{D_i} \times D_{t-1,i}}{(1 + d_{D_i})^t}$$

where:

F^p_t - cash flow (future value), which defines the income from the main activities for the time period t;

d^p_A - discount rate, describes the demanded income rate from the main activities;

N - number of years, when the main activities are evaluated;

I - quantity of finance sources ;

t_s - income tax indicator;

d_{D_i} - i- finance source percentage rate;

$D_{t-1,i}$ - obligations left for i finance source in t–year.

Using the offered approach the next value indicators are used: net present value of the project (NPV^P), project internal rate of return (IRR^P), project time of recovery (T_d^P).

The indicators of each participant's income rates (d_A, d_{D_i}) illustrate the cost of used capital.

The definitive estimation of activity's effectiveness is characterized by following expression:

$$(IRR^P - d_A) > 0$$

The received difference is called value spread at which the internal rate of return exceeds the confirmed rate of discount.

3. At the third stage of procedure the estimation of efficiency of each potential participant (or activity directions) is done. The similar actions described in the second point of offered procedure are thus carried out.

4. The condition of additivity saving is checked, when the effect on the enterprise should be not less then sums of effects for all its participants (or activity directions).

5. The full estimation of enterprise functioning from the moment of the beginning of its activity to term of the perspective forecast is done. The base of reduction (t_{base}), which corresponds to enterprise purpose change moment, is chosen. All expenses occurring at different times and the results received before tbase, with the help of compounding scheme are led to the established base of reduction. The results, calculated after change of a purpose, by means of the discounting scheme are led to the same time. The sum of the rediscounted monetary inflows is compared to initial expenses. As a result net present value is defined:

$$NPV^P = \sum_{t=1}^{t_{base}} \frac{F^P_t}{(1+d^P_A)^t} - CPR_0$$

The received value is resulted on time tbase. Thereby works the function of compounding and net present income value is calculated ($NPV^P_{t_{base}}$):

$$NPV^P_{t_{base}} = NPV^P \times (1+d^P_A)^{t_{base}}$$

After reduction operation monetary flows are formed. On their basis taking

into account formulas (1) – (5) cost indexes are calculated. Thanks to the received estimations the decision concerning investment attractiveness of the enterprise is made. First of all, the value spread, which becomes subsequently a reference point for well-founded set specification, is estimated.

Thereupon it is necessary to plan and supervise carefully the discount rate, making corresponding calendar changes in reduction schemes. The estimation should be done taking into consideration periodical recalculation of the discount rate. Thus on each monetary flow the individual rate of discount should be defined.

Using this approach, not only an estimation of investment attractiveness real capital forming investments is done, but also well-founded arguments for chosen enterprise management strategy are represented.

Current condition evaluation. In traditional schemes of value monitoring the estimation of the future incomes is done. In the offered approach there is a possibility of enterprise current functioning conditions estimation. It allows managing during direct diagnostics. Obligatory conditions of such management are the acceptance of management principles, elimination of all organizational pathologies of not system origin, an estimation of the financial investments in the enterprise, which were made.

Accepting of principles becomes not only way of reproduction and new consciousness, but also helps the creation of an objective reality. This allows to see existing problems with a new look, to design the innovative structure at the base of revealing the organizational pathologies of not system character and development the measures for pathologies neutralization. Such problems define a changeable condition of the environment having a nonlinear origin. It reflects in its sensitivity to insignificant influences. Presence of pathologies also is caused by the entropy of management caused by conditions of uncertainty. Any uncertainty is connected with choice possibility. Making a choice of the management decision, the accent is done on the integrated characteristics of organizational perfection and valuable preferences. As the proof of chosen decision preference the estimation of possible losses is used. Losses are investigated in a context of mastering by a nonlinear situation.

Elimination of organizational pathologies of non system character should be done after acceptance of management principles, but prior to the beginning of management diagnostics. Revealing of such pathologies is done on cost of losses maximization base. In this case the decision of opposite problem, directed on improvements search, is needed. Organizational pathology existence is defined by performance of the condition, characterizing the presence of a negative spread:

$$(IRR^p - d_A) < 0$$

Further current situation decoding is spent. The indicators influencing the appearing pathology are analyzed. Thereupon value is expressed through indicators, on which basis losses are detailed. The example of representation of current incomes

total cost (PV) dependence from factor of steady growth (SGR_t), and also own capital (E_t), norms of investment (NI_t), amortization ($Dept_t$), a working capital gain ($\Delta WCap_t$) and a gain of investments in the basic means (ΔH_t) looks as follows:

$$F = \sum_{t=1}^N \frac{E_t}{N_t} \times \frac{SGR_t}{(1+d_A)^t} + \sum_{t=1}^N \frac{Dept_t + I_t - \Delta WCap_t - \Delta H_t}{(1+d_A)^t}$$

The factor of steady growth is expressed through other indicators and etc... Then it is necessary to co-ordinate the connected indicators. Equation of the tempo indicators, characterizing the capital (T_c), sales volume (T_r), profit (T_p) and value (T_v), should be checked within the limits of the modified golden rule of economy:

$$100\% < T_c < T_r < T_p < T_v$$

During the complex analysis of the received dependences, the decision leading to the investigated pathology neutralization is defined.

Simultaneously with neutralization of pathologies uncertainty is eliminated too. As a result around the existing problem qualitative knowledge is provided. Trustworthy information presence is an initial material for knowledge base accumulation on organizational diagnostics, and also for the deep analysis and the situation description. On their basis well-founded substantial decisions, instead of recommendations of the general character are developed. Such decisions are accepted on the basis of not manipulated instruments.

During pathologies research the borders of the managing system extend. It allows making process principles closer to system's principles. In other words, the principles of the enterprise, shown in reality, become recognized in more difficult system. Hereby there is a self-regulation of management system in the process of its adaptation to an external environment. As a result objective preconditions for management system diagnostics are created.

The approbation of the concept of value-based management. Efficiency of offered technology of value management is approved on the example of many profile transport company. The enterprise is dealing with passenger transportations on local and international lines and has own repair base.

The authorities changed the management style, having passed to new management principles. During the reorganization a number of organizational pathologies have been revealed. After that the managing diagnostics actions were taken. During all described events the value estimation of the enterprise activities was done.

In Table 1 the estimation of management conditions, characterizing three stages of enterprise development, is resulted.

Transport enterprise's managing conditions evaluation

Indicators	Step 1 (managing style change)	Step 2 (pathology elimination)	Step 3 (improvement implementation)
1. Business value for 5 years period, Euro	472 000	933 000	589 000
2. Residual enterprise's value, Euro	476 000	554 000	1 249 000
3. Market enterprise's value, Euro	948 000	1 487 000	1 838 000
4. Rate indicators border: $T_c < T_r < T_p < T_v$	3.0%<6.3%<6.4 %<7.4%	6.4%<10.6%< 13.6%<15.6%	8.5%<13.1%< 18.1%<21.4%
5. Investment attractiveness: $(IRR^p - d_A) > 0$	0.26%	2.06%	5,04%

Considering the received results, all stages can be characterised as successful.

However the first stage, despite high value of the steady growth factor, comprehensible value and equation of tempo indicators, from investment attractiveness position effect does not bring in management. At the given stage all made investments are commensurable with the resulted incomes.

On Figure 2 results of the basic indicators are compared, characterizing three stages of the executed estimation.

Thus, the use of the investment attractiveness scheme in value evaluating technology of the operating enterprise leads to business safety increase. The increase is reached because of business information quality improvement, a deviation of effective from value position variants, presence of well-founded specifications. After elimination of organizational pathologies, the decision-making process took place in real functioning conditions and got the non manipulated status, what allowed the replacement of value monitoring with value management. Such replacement provides higher level of business management safety.

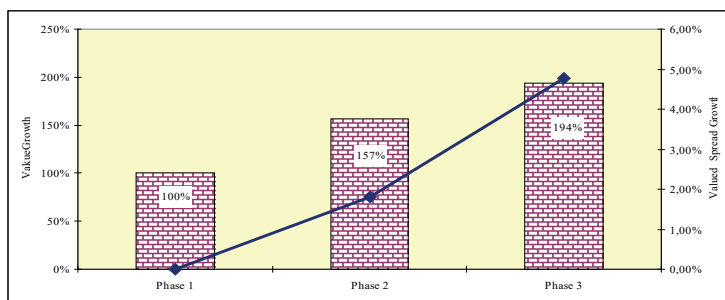


Fig. 2. Steps comparing results

Conclusions. During the approbation of value management technology, focused on the business safety increase, preconditions for working out the management system diagnostics policy were revealed necessary actions.

The diagnostics policy of the management system consists of special environment creation, in which general transformation of management style is happening. Its feature is the compatibility of environment with managers actions, which are clear, rethought and ready for practical use. System realization in practice is expressed in construction of reliable business. It is promoted by a preliminary spirit and preparation for new consciousness, and also a strengthening role of a scientific component in management art. It is a question of the developed policy and decision-making on the basis of trustworthy information, received by means of well-founded technologies. The sense of their validity consists in use of knowledge bases for understanding of techniques, even such, which cannot be described numerically, and also in absence of the means authorizing a data manipulation. In such way the conditions for normal enterprise functioning, allowing it to move in a direction of continuous qualitative improvements at reaction to changing requirements of interested participants, are provided.

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FINANCING OF UKRAINIAN HEALTHCARE SYSTEM WITHIN THE ECONOMIC SECURITY OF A COUNTRY

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Health care is a system of socio-economic and medical activities, directed at the prevention of health loss and its resumption, sanitation of environment, improvement of living and labour conditions, maintenance and improvement of health of a society and its member with a purpose to ensure harmonious development of human physical and spiritual strengths, reaching the high level of work capacity and life expectancy. Main function of health care, particularly, is social one, but upon its operation directly depends the level of labour productiveness and the prospects of socio-economic development of the country. Health care is one of the main factors, which form the economic security of the country.

Medical care belongs to the most important types of social services, directed at addressing the basic needs of society. In accordance with Ukrainian law, each member of a society, regardless of the income level, has an equal access to the health care, and financial policy in healthcare field should provide a warranty of its high quality. And although the health status depends of the way of life, environment and heredity for 90 per cent, and only for 10 per cent on the development level of healthcare system, nevertheless, inadequate financing of this branch is one of the factors of low rates of its development. Thus, search of the new financial resources for health care and new financial mechanisms is not only the calling of our time, but also the issue of the national security.

Ukraine faces a number of challenges in respect to its health care services. The reform of Ukrainian healthcare sectors is taking place and it includes the following:

- a) alterations to the financing system;
- b) the introduction of a minimum guaranteed package of services;
- c) changing the way resources are allocated;
- d) increasing the role of the private sector;
- e) restructuring the primary and secondary care delivery system.

One of the characteristics of the Ukrainian healthcare system is inadequate public sector financing and high levels of informal payments. Health expenditure has therefore become a significant poverty risk factor. In an attempt to address this situation, several new sources of financing have been proposed in the frameworks of the current health care reformation.

The key features of a current reformation of financing in Ukrainian healthcare sector:

1. Government guaranteed healthcare benefit package. Instead of declaring that all health care is provided free of charge, the government clearly undertakes to provide the determined scope of healthcare. People know what exactly they can receive free of charge, and what they need to pay for – how much, in what way, and under what terms (an official, simple, and clear co-payment system). Health services within the guaranteed benefit package are rendered by the healthcare providers of all ownership types that receive a payment from the single national purchaser for the rendered services. The outcome of this step are: (a) limited resources are allocated for the guaranteed health services; (b) out-of-pocket payments shrink; (c) quality of health care and mutual responsibility of patients and doctors enhance; (d) the level of financial protection of individuals in case of a disease increases.

2. The single national healthcare purchaser. A new model of relations without a conflict of interest operates within the system – delineation of the purchaser (a payer) and the healthcare provider (autonomous healthcare facilities). Funds for the guaranteed benefit package are pooled in a unified national fund. A uniform space of healthcare facilities is created. Artificial boundaries between budgets of regions, cities are erased. The government pays for services where they are received by the patient (the exterritoriality). The outcome of this step are: (a) competition arises on the health market; (b) contractual relationship of the purchaser and the healthcare provider is introduced; (c) public spending is more efficient; (d) the patient is free to choose any facility and doctor; (e) transparency and accountability of public spending increase.

3. New mechanisms of payment for health services (the money follows the patient principle). The government refuses to maintain and upkeep the healthcare facilities infrastructure through itemized budget financing. It makes a gradual switch to paying healthcare facilities for the actual services rendered to patients. The outcome of this step are: (a) incentives arise for healthcare facilities to enhance the quality and become efficient; (b) quality enhances and conditions of services delivery get improved; (c) revenues of health professionals rise.

4. A stronger role of communities. New roles of the central government and local authorities. Communities act as founders and owners of efficient competitive healthcare facilities selling services to the government, insurance companies, and individuals on the uniform market of health services. The government – as the purchaser (on a competitive basis) of the scope of services guaranteed for each and every citizen. Community residents have leverage to control quality of health services provided. The outcome of this step are: (a) interrelation between the government, the community, and patients gets healthier; (b) healthcare functions of the government and communities are clearly segregated, overlapping of their functions disappears. Management of healthcare facilities is decentralized.

The Reform aims at solving the key problem of healthcare funding, specifically the inefficiency of public spending and its consequences: the individuals' need to «additionally finance» the system on their own, the unfair allocation of funds and

health services, the lack of individuals' financial protection in case of disease, the low revenues of healthcare professionals, and the lack of necessary resources where the patients needs that.

These reforms include changes in two other components of the financing function, i.e. funds pooling and health services purchase (funds allocation). It is their imperfection that brings about most problems in the healthcare financing.

In Ukraine, funds for healthcare financing that are collected through general taxes, are accumulated in the state budget and divided in two parts. One of them (the lesser) is allocated to financing national programs and national healthcare facilities that are centrally subordinated.

The other (bigger) part is allocated between the region budgets and budgets of cities in the form of a healthcare subvention based on the formula set out by the Cabinet of Ministers of Ukraine. Starting from 2016, it is also allocated between budgets of unified territorial communities.

The system of funds allocation among them as prescribed by the Budget Code adheres to the solidarity principle, as it uses the financial standard of budget provision which is uniform for the whole country.

However, the diffusion of funds among hundreds of local budgets (in 2016 there are 793 of them: region, city budgets, and those of unified territorial communities) along with the imperfection of subsequent allocation of funds between healthcare facilities neutralizes this positive accomplishment.

Funds from local budgets are spent on the infrastructure but not on the actual services for patients. Under such conditions, healthcare facilities, whatever their quality is, transform into monopolies and have no incentives to reduce unnecessary capacities or increase efficiency and quality. Services of facilities with different subordination often overlap, but the system has no incentives to optimize them: if hospital capacities in one place are reduced, this will not result in transfer of funds to the other place – the budget of the former facility will just get reduced.

The solution was offered to create the system of the single national purchaser of health services. Along with granting autonomy to public healthcare facilities, this will let create a single market of health services (the uniform healthcare space) where the government, insurance companies, local budgets, and individuals will be able to purchase services from independent healthcare providers of all the ownership types. Moreover, the government will pay for the clearly specified guaranteed benefit package of health services free of charge for individuals, and the healthcare provider will compete for these funds. Services beyond the guaranteed package can be paid for by individuals directly or by means of the voluntary health insurance.

In all developed countries and in most developing countries the government-funded health services are purchased based on the model of active (strategic) purchase. The purchaser (the state represented by healthcare management authorities or the state insurance fund) spends the taxpayers' money when buying services and drugs from healthcare facilities, doctors, and pharmacies using public contracts.

This model is not used in Ukraine, although it has been formally permitted by the law since 2000.

In Ukraine, healthcare facilities are mainly government-funded: they get money from the respective budget (of the oblast, city, raion, and starting from 2016 – also from budgets of unified territorial communities) based on the itemized budget of their expenditures. In this case, the quality and quantity of services or performance of facilities is not actually important.

Therefore, the main problem is that the taxpayers' money is spent on resources (maintenance and upkeep of hospital buildings, salary for their employees, etc.), but not on health services needed by individuals. Under such conditions, it's expedient for doctors to maintain and upkeep the swollen infrastructure (it is the infrastructure that is a ground for the extent of facility financing), while quality or efficiency is not the priority. As a result, Ukraine ranks second in Europe by the number of hospital beds (8.8 per 1,000 people in 2013) and the length of stay which is 1.5 times higher than in the EU (11.8 days at average, where in the EU it is 8). However, Ukraine has the lowest in Europe index of people's satisfaction with the health system and one of the worst indicators of the population's health in the European area.

The reform in this area insists on allocating public funds from the infrastructure maintenance to the purchase of health services directly needed by the people. The maintenance of facilities' infrastructure becomes the issue for their owners and management: facilities competing for money of the government, local budgets, insurance companies, and individuals cover their expenses and earn funds for their development. Formally, the law stipulates the ability to purchase health services. However, there is no clearly specified scope of government guarantees on delivery of free healthcare. This makes it impossible to formulate the item of such purchase: what exactly we need to purchase out of public funds, and what for people have to pay in full (or partially).

That's why the Concept suggests launching the government-guaranteed healthcare benefit package in Ukraine in the first place. It will be subject to contractual relations between the government (the single national purchaser of health services) and healthcare facilities.

Secondly, the Concept prescribes the introduction of new methods of performance-based payment to providers – which means paying for the services on the «money follows the patient» basis.

The new funding model is based on the following principles:

1. Financial protection. No one should face devastating expenses in case of disease or refuse from required healthcare due to inability to pay for it at the moment of receipt.

2. Fair access to healthcare. The government-guaranteed services are accessible by everyone in need, regardless of health condition and financial solvency.

3. Honesty, openness, and balance in key decision-making on allocation of

budget funds for healthcare: who exactly receives the services, what exactly those services are and for what price.

4. Transparency and accountability. Zero-tolerance for corruption. Understanding commitments of all parties, openness in public funds use.

5. Efficiency that means higher performance for all the system participants per each hryvnia spent. It is about better quality and accessibility of services for patients, better working conditions and income for doctors, efficient public spending for taxpayers.

6. Providers' competition as the tool for efficient and increasing quality of healthcare. Involvement of providers of all the ownership types and their fair competition creates the motivation to render top-quality services, to introduce their scientifically grounded and cost-effective methods of work, to ensure compliance with the clinical protocols and professional standards.

7. Predictability of the amount of funds for health services in the state budget which is possible on a condition of full strategic planning of healthcare and expenditures on it.

Single national healthcare purchaser. To order the government-guaranteed healthcare benefit package on behalf of individuals from healthcare facilities, the system of the single national purchaser will come into being. The single national purchaser is an independent institution acting for the patients' interests and purchasing health services from the single national pool of funds based on uniform basic tariffs and quality requirements. This ensures fair allocation of funds and uniform services throughout the country.

The best option for Ukraine is to create the National Agency for Healthcare Financing (NAHF) within the current model of money collection from general taxes. The NAHF and its regional offices contract healthcare providers of all the ownership levels and types in order to purchase health services within the GGBP. For the sake of efficiency of purchase, new mechanisms are launched for paying healthcare providers for actual performance (see the section below).

Following the principle of segregation of functions of the healthcare purchaser and provider, the NAHF as the purchaser doesn't own or manage healthcare facilities. Therefore, there is elimination of the longstanding conflict of interest, where the facility is funded from the budget of the authority it is subordinated to. The key term here is to grant the financial and management autonomy to the healthcare facilities that the NAHF enters into contracts directly (see the section below).

This one-channel financing through the NAHF naturally solves the problem of excessive fragmentation of the healthcare budgets. In Ukraine, the patient pathway inside the loop of healthcare lies not just between different facilities, but also between different budgets, all of which are the closed «healthcare subsystems» (the one of region, city), isolated from other similar subsystems. The reform prescribed herein eradicates artificial borders between them and creates the single healthcare market (the uniform healthcare space) which involves all the providers to which

patients refer – including private facilities and pharmacies.

New mechanisms of the healthcare payment: money follows the patient. The guaranteed healthcare benefit package and the single national purchaser make the actual sense due to introduction of the third element of the reform – the refusal to fund facilities based on the itemized budget (infrastructure maintenance and upkeep) and the transition to payments to the healthcare provider based on the services actually provided (paying for the result).

This requires the following pre-conditions:

- payment for the pre-approved outcomes (thus, it requires an agreement/contract setting the task for the contractor – the healthcare provider);
- the provider's autonomy (the healthcare provider (the contractor) decides on its own how its work should be arranged to provide the outcomes prescribed by the agreement);
- the independent inspection being the payment trigger (it requires the independent payer agent conducting such inspection).

As international best practices evidence, different payment methods are used for different types of care due to their peculiarities. They are designed to encourage healthcare providers to be as patient-oriented as possible, while securing effectiveness of their costs and care delivery.

For primary care, the mixed payment method is introduced based on the risk-adjusted capitation rate. This standard rate is supplemented with extra charges for service quality and reaching some important parameters (specifically, the vaccination coverage, quitting smoking and other bad habits, blood pressure control, etc.), fees for some services, the increased extents of which are determined by national priorities, etc. At first, the simple formula is used to identify the standard rate per capita, age and gender factors. Then other adjustments are gradually added to this formula to make the payment method as nonbiased and fair as possible. The framework of mixed payments is always adapted to the changing conditions.

For specialized outpatient care, different payment methods are used subject to the service type: capitation, fee for service, or fee for the treated case (for services close to the inpatient care, such as a one-day surgery).

For inpatient care, the method of financing banks on diagnosis-related groups (DRG) based payment for the treated case is used. Initially, this methodology will be launched in a range of pilot hospitals. Following them, new approaches will be used for collecting data on treated cases, coding them into diagnostically related groups and analyzing costs related to each case. As a result of this pilot,¹⁴ the logics of grouping cases of inpatient care using DRGs will be adjusted to the Ukrainian peculiarities. The data array will be also provided that is required to develop the one-fit-all baseline tariffs for paying for treated cases for each DRG.

Subsequently, DRG-based payment for inpatient care will be gradually introduced in all the other hospitals of Ukraine. The launch of this methodology is a complex and long process, its implementation can take several years, as evidenced

by the experience of other countries. Therefore, at the initial stage of the reform, until transition to the payment of inpatient care by means of the GGBP, the hospitals will be funded by means of the global budget specifying the scope of services and relevant performance indicators for these facilities.

Preparation and implementation of financing of primary care and part of specialized outpatient care based on capitation payment and global budget hospitals financing will begin in the near term, no later than the beginning of the next fiscal year.

Autonomy of healthcare facilities (delineation of the purchaser and the provider). The upgrade of the health financing system as suggested herein is based on the model of the balanced «consumer - purchaser - provider» triangle accepted in advanced countries. In Ukraine, this relationship model is malformed: in fact there is no service purchaser, it is combined with the provider (the state owns healthcare facilities and ensures its financial support). This creates the conflict of interest and leads to extremely low performance and significant national healthcare spending. As the reform includes creating the autonomous national healthcare purchaser, this implies occurrence of the autonomous providers selling health services to the former based on contracts.

For this, granting of the financial and management autonomy to all the state-funded facilities (other than rare exceptions) should be secured as soon as possible (during 2016) by their transformation into state-owned and communal non-commercial companies. Right after the autonomy is granted, the facilities should switch to contractual relations with budget spending units (and further – with the NAHF) using the global budget mechanism (until the new methods of health services payment as described above are introduced).

At primary care, the autonomization process may be accelerated through the doctors' wide use of the generally accepted approach of private practice-based work.

Ukraine faces a number of challenges in respect to its health care services. While the intention of the paper was to comment upon some of the matters and options being contemplated and in other instances simply to raise awareness it is apparent that, notwithstanding the imperative to address the issue of the constraining nature of Article 49, certain initiatives could be commenced now which would assist the longer term health reform requirement.

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DEVELOPMENT OF THREATS TO ENTERPRISE ACTIVITY

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The protective approach to security studies emerged to become the first and one of the most widely used in the related field. As early as the 1990s this approach was considered in a rather simplified manner - as protection from various economic crimes (property damages, information breach, fraud, counterfeiting, industrial espionage etc.).

As of today, the protective approach has the leading position in economic security studies overall, as it serves as the starting point for various other approaches to interpretation of enterprise economic security.

Under this approach, the core notions become “protection”, “protectability” and also “threat”, as all three are vital in explaining the phenomenon of enterprise economic security.

When we consider contemporary economic security studies at their microlevel, definition of the notion “threat” tends to be rather blurry as there are no distinctive criteria for it (Vasylytsiv, Pasichnyk, 2008; Gadyshhev, Poskochinova, n.d.; Kuznetsova, Kyune, 2015; Melnyk, 2011; Orlyk, 2014; Fursa, n.d.).

Taking into account the fundamental nature of the notion “threat” in the context of economic security, we would like to emphasize on the necessity to conduct more indepth research of this category; directions in such research have been already outlined in (Kozachenko, Pogorelov, 2018).

Any sort of threat to enterprise activity can ever emerge suddenly and out of nowhere. It forms and develops gradually, thus, its emergence is a process which has the start and the ending of its own. Thus, we talk here not about some sort of one-moment event, but rather about a gradual change of conditions influencing processes, events and phenomena in both external and internal environments of an enterprise. For some reason(s), these processes, events and phenomena are changing from the state of indifference to the state of an actual threat. The key cause for such a change would be presence of such conditions (situations, circumstances) in external/internal environment of an enterprise which predetermine changes of purely negative nature. Consequently, later on this enterprise would need additional resources to remove/fight these negative changes, and in many cases the most

important additional resource in this regard would be Time.

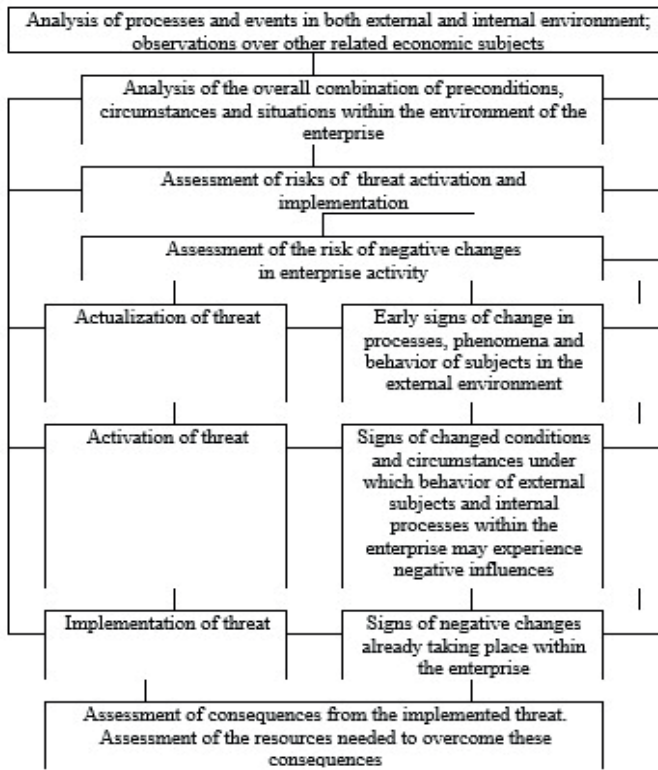


Fig 1. The pattern of threat development analysis for enterprises

Development of threats to enterprise activity often starts when the subjects of external environment demonstrate indifferent behavior in relation to the enterprise and at the same time they have a well-targeted capacity to cause serious changes in the activity of this enterprise.

Development of a threat to enterprise activity is a process which always goes through several rather specific stages: actualization of threat, activation of threat and finally, implementation of threat. In Figure 1 we offer a scheme, following which the process of threat development can be analyzed specifically in the context of enterprise activity.

Actualization, activation and implementation of threat to enterprise activity are stages in the process, which means they have their turn and order: once the stage of actualization is coming to its end, the next stage, that of activation, begins. Then, the end of activation stage means the stage of implementation starts.

In the absolute majority of cases, coming to the stage of threat implementation does not necessarily mean the enterprise would stop functioning (the major exception being the so-called resonance effect, when several significant threats are being implemented at the same time, thus leading together to negative consequences of a much serious level). In all other cases the stage of threat implementation would only mean certain complications to enterprise functioning.

Actualization of threat to enterprise activity means that this activity contains (though this could be not that obvious) the preconditions under which certain processes and/or phenomena in the internal and/or external environment may cause changes of a negative nature.

The stage of threat actualization can be described as follows:

- processes and phenomena that potentially may lead to negative changes are already being formed. There are already early signs of that, but their manifestation is very weak. Detecting these early signs and interpreting them in a right manner is actually one of the most important tasks in security activity of any enterprise. In this regard, availability of free time becomes one of the key advantages since the enterprise needs to have time for: preparation to negative changes; reducing the scale of these changes; or even avoiding negative consequences as such;

- on the other hand, we can also observe the revealing (if already present) or forming preconditions (circumstances, situations) under which certain processes and phenomena in the internal and external environments of the enterprise as well as behavior of the external environment subjects (or changes in it) may cause negative changes in the enterprise performance.

Therefore, the following preconditions are supposed to be present for actualization of threat to enterprise activity:

- specific processes and phenomena must be present in the external/internal environment of the enterprise;

- there supposed to be certain preconditions under which these processes and phenomena would eventually turn into real threats to this enterprise functioning.

Actualization of threat to enterprise activity is not only a stage in threat development but also a process which is taking place only once these two specific preconditions have been met. Since both external and internal environments of an enterprise contain a large variety of processes and phenomena and also since every enterprise interacts with many economic agents at the same time, actualization of threats is a neverending process. Thus, it would extremely hard (if possible as such) to determine when this process of actualization starts and when it finishes (in relation to one particular threat).

Therefore, actualization of threat to enterprise activity is always an ongoing process which has various manifestations and may take different forms.

Actualization of threat to enterprise activity as a stage in threat development process has its own specificity for each enterprise since it is always predetermined by peculiarities of enterprise functioning. Every enterprise reacts to changes and

threats in its own way, moreover, every enterprise has its own capacity to detect and prevent threats to own functioning, to assess the scale of all potential consequences and to take security-related actions accordingly.

Is the stage of threat actualization inevitable? This is the question which we cannot answer with the absolute certainty due to the following reasons.

Too many factors are influencing enterprises and the process of threats' actualization at the same time: the overall state of the external business environment in a country/region, state regulatory policy in relation to business entities; decisions made by top management, enterprise owners or other vitally important stakeholders, their capacity to differentiate properly between own business interests and those of the enterprise itself, the capacity of all involved stakeholders to overcome the potential conflicts of interest and so on.

In some cases actualization of a specific threat may not start, for example, when the negative change from one event/process is overcompensated by the positive influence of other event/process, or when the enterprise has enough capacity to take security-related actions so that to avoid/prevent the formation of negative preconditions.

Actualization of threat may also start but be very slow in its development. Under such scenario, the actualization process can be stopped and the next stage, that of threat activation, can be avoided, thus minimizing the risk of threat implementation.

Therefore, actualization of threat to enterprise activity always has some degree of probability: under certain conditions the threat may develop to the next level, and under other conditions it never will. This probability of threat actualization depends on two preconditions: enterprise's sensitivity to threats and the quality of security provision. If quality of the latter is high enough, then threats can be relatively easily stopped even at the stage of threat implementation. And if the process of threat development through stages is left totally uncontrollable, then transition from one stage to another may become even quicker (provided there would be no objective limitations to the rate of changes).

Activation of threat to enterprise activity usually means that enterprise functioning itself contains certain preconditions under which the probability of negative changes is growing under the influence of other, objective processes and phenomena in the internal and external environments of this enterprise.

Activation of threat can be also seen as a structured subprocess in which we can differentiate between two phases – emergence of threat and its repletion.

During the phase of threat emergence in enterprise activity the threat already has a specific form, while all potential consequences from its implementation become rather obvious. Thus we can state that during this phase in development the threat becomes potentially possible, and its most specific features become noticeable. If during this phase the enterprise takes security-related actions - it will receive an opportunity to prepare properly to future negative changes. However, security-related actions taken at this stage already would require significantly more time

and other enterprise resources, as compared to the stage of threat actualization. This means that security measures to be taken at this stage must be much more active.

Implementation of threat to enterprise activity means that negative changes have already started taking place. Such changes can be isolated, one-time events, however, in most cases negative changes as implemented threats take the form of chain reaction: one negative change in one part of the functioning system of the enterprise is causing several other negative changes in the related subsystems. In their turn, these “secondary” changes are causing further negative changes.

Also noteworthy is the fact that these negative changes are never momentary, they are gradual and take some time. In other words, implementation of a negative change is also a process, with the timing of its own.

If the enterprise, for some reason, does not respond to these negative changes or if its response is not active and targeted enough - then negative changes will lead to qualitative transformation of the enterprise as a whole. Most probably, this will mean complete disintegration of the enterprise: it will gradually lose its functions, one by one, up to absolute degradation of functionality. This means that the enterprise will reach the state of crisis.

Once we can observe negative changes in enterprise activity and the first consequences from these changes, the threat can be considered as implemented. Duration of the process of threat development may vary, it may take years in some cases, and in other cases it will go at lightning speed. This process can be blocked, it can be slowed down or even fully stopped, depending mostly on how efficient are the security actions taken by the enterprise.

Contents of each stage in the development of threats to enterprises are described in Table 1.

If the enterprise turns out to be not ready to react to these changes accordingly or simply does not have enough resources to do so, then negative changes will cause significant damages to it. Fixing the situation later would require even more resources (and again, time in the first place). Moreover, even if the enterprise has enough resources ready and is capable of security provision, this does not automatically mean it will successfully overcome all related negative changes quickly enough. In many cases consequences from negative changes are so quick that all attempts to fix the situation come too late.

To sum up, actualization, activation and implementation of threat are three stages in the process of threat development. Start of each of them has its special early signs. Thus, to be ready to take security actions, the enterprise needs to know all these signs and to be ready to detect and prevent them, or at least to track their emergence and development. In many cases it would be completely sufficient to hinder the development of a threat, thus postponing the stage of threat implementation indefinitely. The enterprise can also reduce the scale of threat implementation to the very minimum, thus making all further negative consequences barely noticeable for the enterprise.

**Stages in the development of threat to enterprise activity,
their contents and results**

Stages in the development of threats to enterprise activity	Contents of the stage	Results at the end of the stage
Actualization of threat	New processes and phenomena emerge and develop in the external and/or internal environments of the enterprise; the already available processes and phenomena tend to have their nature seriously changed; subjects of the external environment may change their behavior, especially those with whom this enterprise has the closest relations. Formation of new/changed conditions, circumstances and situations under which processes and phenomena inside the enterprise or in close proximity to it may change to become a potential or actual threat to this enterprise	The enterprise becomes sensitive to the influence of processes and phenomena in the internal and external environment and also to behavior of the selected external subjects
Activation of threat:	Emergence and formation of a threat to enterprise activity	
the phase of threat emergence	Formation of threat to enterprise activity (the threat takes a specific form, its consequences become rather obvious and overall, it becomes clear that the threat is very much possible)	Specific threat to enterprise activity with its own degree of probability
the phase of threat repletion	The probability of threat implementation goes significantly up till the level when the threat is fully formed (thus, the probability of negative changes becomes nearly certainty).	Specific threat to enterprise activity with high probability/near-certainty of its implementation.
Implementation of threat	Negative changes start to reveal themselves in enterprise activity. In most cases, they come as an avalanche. Moreover, they often cause the domino effect, going one after another.	Counteraction to negative changes, as a rule, does not automatically mean returning to the previous stable condition of the enterprise, no matter how successful this counteraction is. In case the enterprise, for some reason, does not counteract to negative changes as such, its full degradation is quite possible.

All actions by all third parties within the external environment along with numerous other processes, phenomena and trends together shape the business surrounding of the enterprise. In other words, together they become the environment in which, under certain preconditions, various sorts of threat may emerge and start developing. Once a threat reached the stage of implementation in its development,

we can also observe the negative consequences from this implementation: the regular course of business events is violated, haltings are observed in both core and auxiliary processes, the results overall start to be unsatisfactory as compared to previous period etc. Putting it another way, threats to enterprise activity are being not only activated but also implemented in full.

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INTERNATIONAL INVESTMENT BEHAVIOUR OF CORPORATIONS IN THE FORMAT OF INVESTMENT SECURITY

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Statement of the problem. In recent years, global economic processes, including investment, are under constant influence of new and powerful factors. They are not just ambivalent or have a dual character, but often are latent in nature, and accordingly change the usual actions of subjects of international business. As a result, the latter are forced to transform their own investment activities, adapting to such conditions.

So it is necessary to research current tendencies of management techniques of investment behaviour of TNC, to obtain better social and economical results and to provide economic security for host countries.

Many international and domestic scientists, beginning from F. Quesnay, A. Smith, D. Ricardo, K. Marx, J. Schumpeter and to L.J. Gitman, D. Lukianenko, O. Mozghovyi, deal with research and development of investment behaviour of TNCs in modern economic conditions. But because of various changes in the world economic space, the need in further study of modern investment trends remains relevant, hence the demand for a wider synthesis of investment problems in the economic space emerges, taking into account the need to provide national economic security prospects.

The purpose of this paper is substantiate positions of essence of transnational corporations, TNCs' investment activity and their investment behaviour in the context of the latest global challenges and threats in the global investment environment.

The research is carried out using both general scientific and special methods: scientific abstraction, analysis and synthesis, historical-logical method, system approach method, the method of theoretical generalization.

The main scientific results. In spite of numerous discussions on the definition of the concept of investment, in our study investments will be long-term investment of capital and various forms of assets in various sectors of public life, mainly outside the country, as well as property and intellectual valuables, which are invested in objects of various types of activities, as a result of which the profit is obtained or the social effect is achieved by the subjects of investment activity [10].

Considering that the main subject of investment activity is transnational corporations, we will pay attention to the concept of this phenomenon.

In our research, we will adhere to our earlier definition of TNCs as a group of companies of any form of ownership that: a) are located and operate in different countries; b) controlled by headquarters located in one particular country; c) are guided by a general strategy and coordinated policy; d) have a certain scale of international activity; e) implement a unified business ideology with the synthesis of the philosophy of voluntarism, pragmatism and liberalism; f) have a unified corporate accounting and reporting system; g) interfere in international political processes, representing their new and extremely influential subjects [9].

It should be noted that according to UNCTAD experts, the top 100 largest global TNCs represent only 0.1% of all TNCs in the world, but overall sales in 2017 amounted to about 10% of world GDP. The assets and sales of these TNCs increased by 8% due to large merger and acquisition deals, which resulted in five new corporations, namely DowDuPont Inc.; Reckitt Benckiser Group Plc (United Kingdom); Fresenius SE & Co KGaA (Germany); HNA Group Co., Ltd. (PRC). Among the largest companies listed, Schlumberger Ltd., ConocoPhillips, General Motors and Hewlett-Packard (USA) disappeared.

The directions of strategic management of TNCs based on certain types of investment behaviour show how each TNC enter the foreign market. Hence, international investors are driven to certain actions by the motives that are reflected in their behaviour. The term of «behaviour» was the focus of the study of many national and foreign scientists (V. Verhovin [4], Yu. Levada [5], T. Petrushina [3], P. Sorokin [5], E. Suimenko [2], N. Sukhorukova [5], S. Rubinstein [4, p. 125], S. Lindenberg [11]).

Economic behaviour is described as a set of purposeful, rational, optimal human actions in the process of social production, associated with the choice of the most advantageous alternative or as a set of consecutive actions in the field of economics, that is, from the outside, the observed form of activity in economic life.

In our opinion, having the behaviour of the company should be called the aggregate of the response of the subject of management on certain forms, means and directions of the environment, that is, the motivational relationship between the formulation of goals in the organization and actions in response to factors influencing the organization [3].

In general, it should be noted that behaviour is defined as a certain style of interactions in the environment, determined by the ability to change their actions under the influence of internal and external factors. Many factors constantly transform the behaviour of the company. In the study of national and foreign scientific literature, the investment behaviour of TNCs can be characterized as behaviour resulting from economic incentives and the activity of any economic entity [3-5].

In the process of research the nature of investment behaviour, we have found

that investment behaviour can transform its characters from moderately liberal to rapid expansion. In this context, we can create a classification of investment behaviour with their characteristic elements that are concerned to the different types of home countries for TNCs (Table 1).

When investigating the transformation of the investment behaviour of TNCs and the galloping pace of its movement towards the most aggressive expansion, attention should be paid to corporations such as Uber Technologies Inc. (USA); Airbnb (USA) and Alibaba Group (PRC).

Their behaviour is based on the transformation of the psychology of a modern person [13]. A characteristic feature is that they constantly go to the brink of legislation and conflict in order to obtain the result, often violating all the rules without punishment [9].

The research of investment behaviour of Alibaba Group Corporation shows that today the main activities are trading transactions between companies under the scheme B2B, retail online trade. Characteristic signs of the behaviour of the Chinese corporation are that they slip into the foreign markets with the help of development of online trade and investing in the positioning and advertising of their products. In turn, they are displacing competitors. Such investment behaviour damages enough seriously the ground of economic security.

It should be noted that we pay attention on corporations of group FAANG which their total capitalization at the end of the first half of 2018 amounted to 3.8 trillion US dollars, and even Amazon and Apple even launched a kind of competition who first reaches the value of 1 trillion US dollars. FAANG shares at the end of June amounted to 30% of the capitalization of the NASDAQ index [1] According to Macrotrends statistical database, the market capitalization of FAANG companies for the period 2016-2018 really shows an increase in this indicator. In 2018, the market capitalization of Facebook has grown by 41.3%, Google - by 56.6%, and Apple - by 79.5%. The largest corporations are Amazon and Netflix, as their growth is +192% and + 241% respectively (Table 2). These consequences are results of the most expansion of corporations' behaviour, their aggressive type.

According to their expansive behaviour, the FAANG group is still holding up, having absorbed a significant share of the capitalization of the American stock market, but signs of cooling we have already been noticed and some companies gradually began to lose market share. A particular concern of investors in October-November 2018 was caused by a sharp decrease in the capitalization of the transnational corporations of the FAANG group (Fig. 1). The shares of Facebook, Amazon, Apple, Netflix, and Google Alphabet (FAANG) parent holding have declined for several weeks. By November 20, the five largest technology companies lost 1.02 trillion US dollars and went to the "bearish" territory (a decrease of 20% or more compared to the 52-week maximum). Investor confidence in large technology companies has fallen due to a slowdown in the growth of their revenues and scandals related to the security of user data.

Table 1

Typology of investment behaviour of TNCs and their characteristics

Types of TNC IB*	Motives and features of investment behaviour	Types of TNCs' behaviour based on the economic development of the parent company
Rapid expansion	Motives: - to quickly seize the foreign market; - getting the maximum profits Features: - struggle for the object of investing in any way; - high market value; - fundamental confrontation; - innovations	Countries Developed: Uber Technologies Inc. (USA); Airbnb (USA) Developing: Alibaba Group (PRC) CEE countries*: Viber (Belarus together with Israel)
Expansion	Motives: - monopoly; - control at a foreign enterprise - growth of corporation and expansion of its activity Features: - market capitalization; - assets of corporations; - unfair competition; - psychological impact on consumers; - conquest of strategic investment objects	Developed: Apple Inc. (USA); Alphabet Inc; (USA) Amazon Inc. (USA); Facebook (USA); Johnson&Johnson (USA); Exxon Mobil (USA); General Electric (USA); Nestle (Switzerland); Royal Dutch Shell (the Netherlands); Netfix (USA) Developing: Arcelor Mittal (Luxembourg); China Construction Bank (PRC); Xiaomi (PRC); "Arcelor Mittal Krviviy Rig», ASEAN corporations CEE countries*: Lukoil (RF); Hrvatska Elektroprivreda d.d. (Croatia)
Moderate	Motives: - the need to support the corporate image; - diversification of risk; - saving of own resources Features: - weighting of investment decisions; - struggle for sustainable development; - access to the competition's innovation base	Developed: Honda (Japan); BMW (Germany) Developing: Isuzu Motors (Japan); Infosys (India); Sun Pharma Industries (India) CEE countries*: Latvian Shipping Co (Latvia); TVK Ltd. (Lithuania)
Moderately liberal	Motives: - access to the foreign market; - obtaining a certain share in private capital Features: - access to new markets; - stable market capitalization	Developed: Agfa-Gevault (Belgium); IKEA (The Netherlands) Developing: Gorenje Group (Slovenia) CEE countries*: Podravka Group (Croatia)
Liberal	Motives: - development of the corporation; - getting stable profits Features: - maintaining the image and growth of the corporation at a certain level	Developed: Toyota (Japan); Nippon Telegraph & Tel (Japan); Windvision (Belgium) Developing: Tata Group; HCL Technologies CEE countries*: Motokov a.s (Czech Republic)
Mixed	Motives: varies depending on host countries Features: inherent in all of the above features, depending on the situation	Developed: Microsoft (USA); Samsung Electronics (South Korea) Developing: LATAM Airlines Group (Chilei) CEE countries*: Pliva Group (Croatia)

* CEE countries – Central and Eastern Europe countries

Source: compiled by the authors based on [6; 7]

Market capitalization of FAANG at the beginning of the year, billion US dollars

Corporation	Market capitalization of FAANG at the beginning of the year, billion US dollars				
	2016	2017	The growth rate, %	2018	The growth rate, %
Facebook	325,97	343,01	5,23	460,6	34,28
Amazon	243,91	397	62,76	712,12	79,4
Apple	498,34	603,62	21,13	894,28	31,59
Netflix	36,26	62,48	72,31	123,67	97,94
Google	570,42	614,55	7,74	893,15	45,33

Source: compiled by the authors based on [14]

According to analyst Dario Perkins (TS Lombard) in the short term, an unexpected weakness in the technology sector could undermine the rest of the US stock market and greatly affect the global economy, shaking financial security.



Fig. 1. Stock performance of the group FAANG during the latest 5 years

Source: [14]

The excessive expansion of investment behaviour showed its negative consequences in the summer of 2018, starting with Netflix. The initial reaction of investors to the controversial Netflix report was rather negative: Netflix stock prices at the opening of the market collapsed by 13.5%. The main reason for the fall in Netflix shares was the company's previously optimistic forecasts [8].

All of these high-tech companies are American. In October and November, the US stock market lost about 5.4% of capitalization. In October, it fell by 11%, but a strong correction was followed by a rebound, which soon again went into a fall, but with a smaller amplitude. At that time, the value of the S& P 500 index

fell in absolutely by almost 2 trillion US dollars, of which the FAANG group of companies - Facebook, Amazon, Apple, Netflix, and Alphabet (Google) - lost more than 1 trillion US dollars.

In addition to the characteristic behaviour of TNCs, the collapse was associated with the growing risks of a trade war, a slowdown in China's growth, a drop in oil and an excessive increase in rates, which leads to an increase in the value of the US currency and the loans denominated in it. Obviously, these risks will remain in the foreseeable future, and we can see a new wave of correction after the Christmas rally - in 2019 [12].

Thus, using the needs of economically weak countries in powerful volume of investments, corporations carry out the covert grab of strategically important segments, demonstrating the increasing aggressiveness of their behaviour. Thus, the need to strengthen mechanisms of national economic security is being updated.

Conclusions. In the process of international investment, each subject of international economic relations manifests its own investment behaviour. It is the most interesting that we research the investment behaviour in the context of its impact on national economic security of countries.

Investment behaviour arises as well as any behaviour because of motivation that prompts TNCs to invest. The excessive expansiveness of investment behaviour in the group of companies FAANG demonstrated its negative consequences in the summer of 2018. In the short term, an unexpected weakness in the technology sector could undermine the rest of the US stock market and greatly affect the global economy, undermining financial security.

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THE ECONOMIC SECURITY SERVICE OF THE MODERN COMPANY: ANALOG MODEL, CREATION ALGORITHM

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Currently, the national economic reality is the causative point to the need for domestic enterprises economic security. That it will provide a proper state of their vital interests protection from unfair competition, illegal activities of criminal groups and other external and internal threats. A large number of researchers believe that such systems should be focused primarily on ensuring the development of economic security of business entities in accordance with their statutory goals, a specific mission, maintaining the state of legal and economic relations, organizational relationships, material and intellectual resources, which guarantee the stability of activities, commercial success, progressive scientific, technical and

social development of business entities [1].

Based on the analysis of the existing systems of economic security of business entities, we formalize the analog model of the economic security system of a production enterprise. To formalize such a model, one should take into account the fact that the modern is a complex economic system. Such a system operates in a market environment, has a fairly specific result, is correlated with the mission, goals and objectives of the enterprise. Currently, domestic enterprises are building their activities in rather difficult conditions characterized by high levels of fluctuations in market environment and competition in the industry. Such enterprises are mostly influenced by external factors. They lead to the emergence of various threats from existing stakeholders - competitors of the external and internal markets, suppliers, partners, consumers and, in particular, government institutions.

According to scientists [1; 3; 4–10], the need to ensure the proper state of economic security of economic entities requires the creation of their own system of economic security. Therefore, following the publication [1], we will formulate the main provisions according to which such systems should be created:

1. The system of economic security of economic entities is not self-sufficient; It interacts with the system of economic security of the relevant industry. The extent of this integration depends on the characteristics of the partnership relations between the industry enterprises, the degree of trust, the nature of the activity, etc.

2. The system of economic security can not be standardized within the industry. But the subjects of the system of economic security, as a rule, seek to unify its components. The main motive for this approach is to reduce the cost of its operation.

3. The economic security systems of business entities have unique elements. This is primarily due to the uniqueness of the internal environment of each enterprise and its external environment.

4. The system of economic security of economic entities is relatively independent. Individual tasks of economic security are decided collectively or administratively at the level of the industry or association.

5. In a routine competitive environment, the enterprise security service is often involved in an active response to the security service of competitors and their intelligence units. In an integrated business entity, the economic security services of individual entities are partners and jointly oppose competitors by combining their potentials.

6. The system of economic security of business entities is complex - it combines the economic, scientific, technical, personnel, intellectual, environmental, information, physical and other components of economic security. Each of these components is a reflection of the functions implemented by business entities. And for the implementation of these functions, in practice, different organizational structures of management are provided. Organizational structure is a set of bodies and subjects of management and their definite interrelation, which ensure achievement of strategic, tactical and current goals of the subject of economic activity [1, p. 210].

Organizational structure of the subject of economic activity is formed in relation to the requirements of long-term security of economic security.

According to the Economic Code of Ukraine, enterprises are divided into three groups - small, medium and large [2]. At small enterprises, such a service may be absent. And the functions of securing economic security are assigned to its managers and employees. The coordinator of the action on ensuring economic security is the head of a small business.

In the medium sized enterprises, the internal entity of economic security is the head of the department (bureau), which is subordinated to the service of economic security.

At large enterprises, the management body is the Department of Economic Security, whose director is Deputy Director or Vice President of the company, Head of the Economic Security Service. In Ukraine, the best-performing functions and organizational structure of management to ensure the economic security of banking institutions and insurance companies.

In the conditions of the unpredictability of the development of national markets in Ukraine, the strengthening of competition between producers and the increase in economic crimes, it is necessary to create effective services for the economic security of enterprises. The main tasks of such services are:

- interaction with law enforcement and security services of other companies and the exchange of information between them;
- carrying out activities aimed at revealing, preventing and eliminating the most diverse types of abuses and fraud;
- development of methodological materials on issues of financial and economic security and protection of confidential information.

The security service of a modern manufacturing enterprise should work in such basic directions:

- 1) preventing and detecting thefts of the company's finances, partners (brokers, assistants, etc.), «financial» abuse of personnel;
- 2) protection of the legitimate interests of the enterprise from illegal actions of state bodies and unscrupulous competitors;
- 3) ensuring the economic security of the enterprise through professional staff recruitment, selection of partners, assistance in settlement of claims;
- 4) prevention facts of illegal insurance payments.

The main factors for the effectiveness of the functioning of the security service of a modern enterprise are its efficiency, flexibility and mobility.

Taking into account the results of the analysis of the activities of domestic industrial enterprises, the economic security service should consist of the head of the economic security service, his deputies, relevant economic security specialists and the enterprise security unit. Consequently, the service of managing the economic security of a modern production enterprise can be formalized by the analogue analog model, which is shown in Fig. 1.

According to the above model, at the enterprises the economic security service should be headed by the head of the economic security service (ESS). He submits to the head of the enterprise and executes only his orders and orders. The functions of the ESS head of the enterprise include: personnel recruitment, periodic inspection and control of personnel, development of the strategy of economic protection of the enterprise, participation in the development of corporate plans, and organization of enterprise protection against threats coming from both internal and external environments.

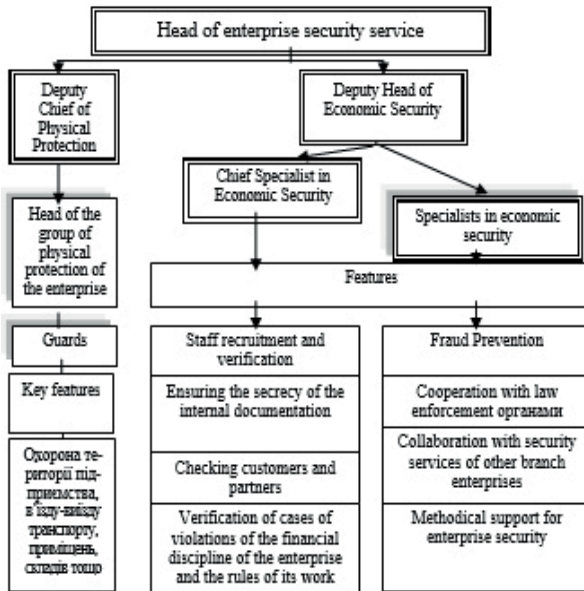


Fig. 1. The analog model of the organizational structure of the service of economic safety of the manufacturing enterprise

As practice shows, there should be two deputy head of the service for the organization of the proper SEB in the enterprises - the deputy head of the physical (force) security company and the deputy head of economic security. The head of the security group with a certain number of security guards will be subordinate to the deputy head of the physical security guard of the enterprise (their number is set depending on the enterprise's territory, the number of internal security objects and the entrance gate). In turn, the chief economic security specialist and specialists will be directly responsible for economic security (their number is determined mainly depending on the scale and activities of the enterprise).

The main functions that will be implemented by the enterprise's economic security service should be indicated on the following:

- participation in recruiting and checking staff;
- ensuring the secrecy of internal documentation;
- verification of clients and partners;
- verification of violations of the financial discipline of the enterprise and the rules of its work;
- prevention of fraud as a side of employees of the company, and clients, partners;
- cooperation with law enforcement agencies and security services of other sectoral enterprises;
- methodological support for the security of the enterprise, which is essential for the organization of effective economic security, its planning and control.

The latter function is based on the methods and guidelines used by the enterprise to establish an acceptable level of economic security. Such methods and recommendations are the basis for monitoring the state of economic security, carried out for the purpose of operational intervention to ensure its proper level.

Considering all the above, it can be stated that the construction of a clear system for managing the economic security of modern industrial enterprises should be carried out by creating appropriate specialized services. In addition, it is important that the formation of a system for managing economic security of enterprises requires management to develop an appropriate plan. On this topic Boyko V.V. notes that «this process is gradual and consists of several main stages» [3]. From our point of view, the stages of the process of building an effective economic security management system (ESMS) of modern industrial enterprises should be: preparation, diagnostics, organization and formation of the system of the specified type.

The stage of preparation for the creation of a system for managing economic security will include the following types of work: gathering information about threats coming from the external environment and internal environment of the enterprise, and the potential risks; monitoring of external, intermediate and internal environment;

The diagnostic step in itself combines the following types of work: analysis of collected information about threats and risks, establishment of the main threats and risks for the enterprise generating the external environment, assessment of economic security on a fixed set of indicators.

The organizational stage is aimed at choosing the areas for strengthening the economic security of the enterprise and identifying the respective authorities and centers of responsibility. The last stage has the task of directly creating a system for managing the economic security of the enterprise.

For greater clarity, we present a schematic representation of the algorithm for the formation of a ESMS modern production plant (Fig. 2).

Significant properties of the management system of economic security of the enterprise are its flexibility, adaptability, and efficiency. ESMS is designed to provide

an operational response to changes in the economic environment and the ability to quickly adapt to its new conditions. This is possible only with the establishment of an appropriate economic security service with an appropriate organizational structure.

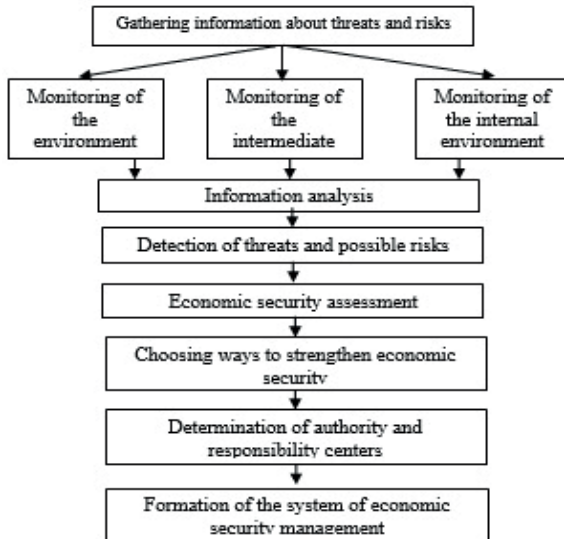


Fig. 2. Algorithm of forming a management system of economic security of a modern production enterprise

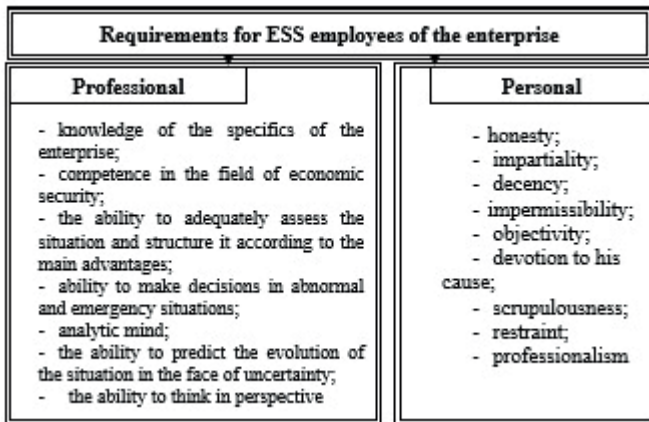


Fig. 3. Requirements for ESS employees

The service (department) of the enterprise’s economic security is a specialized

unit that is part of its organizational structure. The activity of such a service is aimed at forming an appropriate level of economic security and neutralizing the main threats and risks, which can be expected at the enterprise in the process of carrying out its economic activity within a certain period of time [3, c. 78].

An important aspect of the issue under consideration is that the effective operation of the company's economic security service requires proper staffing. The specialists of this service must have sufficient level of qualification in the defined area of activity and meet specific professional and personal requirements (Fig. 3).

In conclusion, it should be noted that when creating an economic security service, domestic enterprises will face difficulties due to the lack of: 1) specialists in economic security with knowledge of industry specifics; 2) methodical recommendations, the choice of optimal number of specialists, which can vary depending on the size of enterprises and the scale of their activities.

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MARKETING SYSTEM OF COMPETITIVENESS AS A KEY TO ECONOMIC SECURITY

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The deepening of market relations in Ukraine, the formation of an innovation-oriented system of national or regional economic development, and the strengthening of the interaction of market mechanisms with the socio-economic levers of preemptive development takes place in conditions of intensification of the competitive struggle between countries and their regions, mainly for resources of a strategic nature, the priority of which is financial, intellectual, informational and innovative. The question of effective provision of marketing competitiveness of agricultural enterprises, the peculiarities of their market organization, the practical application of balanced marketing tools, taking into account the specifics of the industry, need to be adapted to the current stage of economic development and further scientific substantiation. This is explained by the fact that increasing the complexity of the market as a whole and the behavior of each entity in particular leads to the need to revise the effectiveness of existing and develop new, more effective in a dynamic environment of marketing activities and programs within the marketing concept of the organization. The urgency of these problematic issues, the need for a systematic study of the theoretical, methodological and applied aspects of marketing support for the competitiveness of agricultural enterprises led to the choice of the topic of the article.

Defining your place in a competitive environment is the first and one of the most important steps in managing the competitiveness of an enterprise. The decision of this task requires the enterprise to search for scientifically sound and reliable methodological tools for conducting an assessment of its own competitiveness in relation to its competitors. Mistakes in choosing such a technique can lead to an incorrect assessment of the company's own competitive capabilities and capabilities of competitors and, consequently, the adoption of incorrect management decisions. Effective enterprise management in a competitive environment is impossible without continuous monitoring of the situation in the target segment of the market, forecasting of possible actions of competitors, assessment of its own competitive position of the enterprise.

Competitiveness is a complex economic category that characterizes the ability of an object to withstand competition in comparison with similar objects in a given market [1].

In relation to a particular enterprise competitiveness can be considered as the

ability of the company to achieve the established development goals in the face of countering competitors, to lead them with a successful struggle for markets for the sale of goods and services.

Accordingly, its assessment can be made by comparing the individual characteristics of the enterprise with similar characteristics of its main competitors, the results of which must be expressed by a specific indicator or system of relevant indicators. In such a situation it is expedient to define the concept of the level of competitiveness, which is an indicator that gives a relative indication of the company's ability to succeed in competition.

Thus, competitiveness is a characteristic of the state of the enterprise, and the level of competitiveness is an indicator of this state, which reflects the degree of advantage of the aggregate of the evaluation characteristics of the enterprise's activities with respect to its main competitors.

Unlike other economic categories, competitiveness is characterized by a number of specific properties that should be taken into account when determining the level of competitiveness of an individual enterprise. First of all, the main properties of competitiveness are its relativity, dynamism, complexity and prognostic nature.

The relative competitiveness is manifested in the fact that it can be determined only with respect to a particular object of market relations and in the context of a specific market or its separate segment. The consideration of this property in the process of assessing the competitiveness of an enterprise involves the concentration of attention on such fundamental points.

Firstly, competitiveness is not an absolute characteristic of the enterprise's potential, but manifested only if its market is evaluated. Therefore, in order to ensure competitiveness, the company does not necessarily have to be absolutely the best in the market. His efforts should be aimed at achieving superiority over their main competitors.

In this regard, it is rather controversial to determine the competitiveness of the enterprise as the ability to offer the market goods and services that are in high demand [2] or as a measure of the effectiveness of the enterprise [3]. A low-performing enterprise may also be competitive if its competitors prove to be less effective.

Secondly, one and the same enterprise can be competitive in the context of a specific market or its segment and not competitive in another market characterized by another competitive structure.

Third, an important point in assessing the competitiveness of an enterprise is the identification of the territorial boundaries of the market, on which it operates and the allocation of a range of priority competitors, which constitute the greatest threat to the enterprise. Mistakes in the realization of this task can lead to artificial expansion of the scale of competition and incorrectly adopted strategy of competition.

The dynamism of competitiveness is due to the fact that it is not an inherent characteristic of the enterprise, but it determines its state only at a particular time

point or a separate time period for which the research is conducted. Thus, with constant characteristics of the enterprise activity, even for a short period of time, the level of its competitiveness can vary significantly, as a result of changes taking place in an external competitive environment. Therefore, ensuring the validity of the results of the assessment of competitiveness implies its orientation for a period of time during which the market situation, the main capabilities of the company and its priority competitors remain relatively stable.

In fact, the assessment of competitiveness involves fixing the results of the competitive struggle of the enterprise in the form of competitive advantages and disadvantages compared with competitors. On the other hand, one more specific feature of competitiveness is its prognostic nature. As already noted, competitiveness is a relative characteristic of the company's ability to withstand competition in comparison with similar enterprises in this market. In other words, it describes the potential ability of an enterprise to successfully compete. Accordingly, the assessment of competitiveness - is, first of all, the forecast of the results of the enterprise's participation in economic competition.

In this regard, the conduct of an assessment of the competitiveness of the enterprise on the basis of the results achieved by it, or on the basis of the indicators themselves, characterizing the actual results of competition from the methodological point of view, is not entirely correct. The conclusion that a company is more competitive, based on the fact that it is already competitive, is not very meaningful and is nothing more than a simple extrapolation of the current result for the future period [4].

Competitiveness is, first of all, a product of market competition, the result of which is the actual manifestation of the potential of the enterprise. These opportunities can be either realized or not realized by the enterprise, due to the influence of the factors of the external competitive environment. Consequently, competitiveness characterizes the actual level of enterprise implementation of its overall competitive potential to fight competitors and achieve competitive advantages [5].

Therefore, an assessment of the competitiveness of the enterprise should take into account not only the calculated competitiveness indicator, which accumulates the value of the actual results of the competitive struggle of the enterprise, as well as the assessment of its competitive potential, which characterizes the ability of the enterprise to provide competitiveness at the expense of existing competitive opportunities which, with some managerial influence and favorable competitive situation can be transformed into factors of stable competitive advantage.

An important feature of competitiveness is its complex nature. Competitiveness systematizes the various aspects of the enterprise. Therefore, its estimation is reduced to the solution of the multi criterion problem, which is characterized by a certain number and structure of the criteria. In general terms, an assessment of competitiveness involves identifying the factors of competitiveness that provide the fullest coverage of the main properties of the research object, the choice of

indicators that characterize them and the methodical tools for processing these indicators.

As already noted, competitiveness as a complex multidimensional phenomenon can be described by a large number of indicators, which, depending on the assessment conditions, can range from several dozens to hundreds. Therefore, the validity of the results of its assessment to a large extent depends on a well-established system of indicators.

One can distinguish the following basic requirements for the formation of a system of indicators for assessing the company's competitiveness: reliability, completeness, accessibility, relevancy, balance, comparability, objectivity, quantitative expression, the existence of a general definition.

The requirement of reliability implies ensuring the validity of the results of the evaluation for each of the indicators. Only integral indicators that have a direct impact on the level of competitiveness of an enterprise should be included in the method of calculating integrated competitiveness. All other indicators should be excluded from consideration.

Completeness envisages ensuring the most comprehensive coverage of the object being investigated.

The main criterion for forming the nomenclature of indicators for assessing competitiveness should be the attempt to achieve the fullest possible characteristics of the competitiveness of the enterprise.

Of course, an increase in the number of indicators leads to an increase in the reliability of the evaluation results. However, it is important to understand the fact that, with the existence of a slight difference in the calculated values of the competitiveness indicators of enterprises, the analysis of the choice of different numbers of them can lead to different evaluation results.

In this situation deserves attention made by Professor H. Faskhiev study of the influence of the number of indicators on the result of assessing the quality and competitiveness of objects [6]. According to the author, an increase in the number of accepted indicators for evaluation can lead to a change in the location of comparable objects. In this case, the ranking of objects by the results of evaluation of 20-and less indicators is not recommended, because it can lead to false decisions. For reliable evaluation of objects the author recommends to accept not less than 40 individual indicators.

But here one should take into account another important point. Excessive detailing of the nomenclature of indicators can lead to an increase in the cost of conducting the assessment procedure itself, which may exceed the magnitude of the economic effect of the assessment.

The calculation of individual indicators of competitiveness requires the availability of a large amount of information, a large part of which is confidential. In such a situation, the availability of information for all factors of competitiveness is important. The system of indicators of competitiveness assessment formed at

the enterprise should cover only those indicators, the information on which can be obtained by the results of the analysis of official statistical reporting and marketing research conducted.

The requirement of relevance implies ensuring that the indicators used to assess the competitiveness of the enterprise are fully consistent with those factors of competitiveness that they assess.

The imbalance of the system of indicators of competitiveness assessment established in the enterprise implies their optimal combination, in order to avoid duplication of indicators and exclude the effect of sub optimization; that is a situation where the provision of a competitive preference for one indicator leads to deterioration of others.

Objectivity involves the orientation of the process of choosing indicators for assessing the competitiveness of the enterprise only for objective information, with a maximum exclusion from the assessment of the subjective factor.

Importance for the assessment of competitiveness is to fulfill the requirement of comparability of the indicators included in the system. This, above all, involves taking into account the possibility of existence at enterprises disagreements in methodological approaches to the definition of individual performance indicators, which negatively affects the competitiveness indicator of the enterprise.

All indicators included in the assessment of the competitiveness of an enterprise should be quantitatively measurable. However, it should be noted that in practice most of the indicators proposed for an integrated assessment of competitiveness can only be obtained in a verbal form, requiring the use of additional tools for translating verbal information digitally or, in general, eliminating individual indicators from the process of assessment, which negatively affects on its results and the reasonableness of managerial decisions.

In addition, since the system of indicators for assessing competitiveness is intended for the general assessment of various functions of the enterprise, all the indicators included in it should have a clear fixed value, which allows determining the contribution of individual of them to overall success, that is, ensuring competitiveness.

An important stage in constructing an integral indicator of enterprise competitiveness is the choice of a model for summing up the values of the indicators of the research object, that is, converting them into a specifically formulated one-dimensional indicator, reflecting multidimensional information.

Thus, according to the results of the conducted research, competitiveness as an economic category is characterized by such specific properties as relativity, dynamism, complexity and prognostic nature. The necessity of their inclusion in the process of assessing the level of competitiveness of an individual enterprise is substantiated.

It is proved that the assessment of competitiveness should take into account not only the calculated level of its level, which accumulates the value of the actual

results of the competition in the form of competitive advantages and disadvantages of the enterprise, as well as the assessment of its competitive potential, which characterizes the ability to provide competitiveness at the expense of the existing competitive ability of the enterprise.

The necessity of using a multi-criteria approach to assessing the competitiveness of the enterprise is substantiated. The list of the main requirements for the formation of a system of indicators of competitiveness assessment and the choice of a model for the summing up of these indicators in a one-dimensional integral indicator of competitiveness is given.

The prospect of further research in this problem is the development of a system of indicators for assessing the competitiveness of the enterprise, which would meet the basic requirements of the system and integrated approaches to solving a complex economic problem, which is the assessment of competitiveness.

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MANAGEMENT OF SANATION INNOVATIONS AS A PART OF ECONOMIC SECURITY INDUSTRIAL AND FINANCIAL GROUP

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Shaping theoretical and methodological foundations of good governance of sanitation innovations to provide economic security of industrial and financial groups (IFG) is directly related both to the problem of interpreting the term “sanitation innovations of the IFG”, defining stages of implementation in the IFG of innovations in the context of the reorganization management, and the problem of conducting of sanitation research on the innovation development of IFG in the system of economic security.

The economic security of enterprise consisting IFG has a link with the implementation of the sanitation management in the association of enterprises, which determines the relevance of developing both the relevant theoretical and methodological support, as well as the implementation of practical measures.

Problems of regulation, innovation development and management of sanitation process at enterprises were directly or indirectly investigated by domestic and foreign scientists, among them [2; 3; 5-7; 10]: Altman E.I., Blank I.A., Beaver U., Balabanov I.T., Vasilenko V.O., Zabrodsky V.A., Kizim M.O., Korotkov E.M., Kuzmin O.Ye., Pererva P.G., Pushkar A.I., Sukhareva L.O., Smith R.I. (methods and dominants of sanitation management), Barton L., Porter M., Raevnev O.V., Tishchenko O.M., Tridid O.M., Shershnyova Z.E. (strategies for the development of enterprises in a crisis), Alekseev I.V., Moroz A.M., Zveriyakov M.I., Karlin M.I., Zayats T.A., Omelyanovich L.O., Poddierogin A.M., Peresada A.A., Tereshchenko O., Cherep A.V. (financial and credit support of activity of enterprises in case of violation of their financial equilibrium), etc.

The work of the listed researchers directly or indirectly confirmed the effectiveness of the entrepreneurial innovation activity in providing information, planning and forecasting, analysis and control, internal-focused auditing and consulting for anti-crisis programs of enterprise development. However, a number of issues, among which the development of methods and directions for the implementation of sanitation management of innovation in the context of the economic security of IFG, remain unresolved and require further research.

The purpose of the study is to ensure the economic safety of the IFG by

improving the mechanism of management of sanaton innovation.

To solve the problems of the economic security of IFG, due to the effective management of innovation in the conditions of sanation of IFG, it is necessary to develop both theoretical and methodical principles for financial and credit regulation of innovative transformations of IFG, management of innovative risks in IFG, diagnostics of emerging crisis phenomena under the innovative development of IFG, and to propose ways of implementation of these measures at the level of enterprise associations.

It is important to clarify the conceptual apparatus, among which the key concept is the content of the category “sanation innovations”. According to the Encyclopedic Dictionary of Economics [10], innovations are significant capital-intensive and high-tech novations in human development (the main productive force), engineering, technology, science, computer science, and subjects of labor. Innovations are interdisciplinary in nature, requiring significant risky investments, infrastructure development, and comprehensive support from the state.

Analyzing scientific sources [1; 3-9] it was established the need to introduce into the scientific terminology the new concept of «sanation innovations in the IFG», under which we propose to understand not only technical and technological developments, but also new products, new services of financial and credit, insurance, investment, trust, leasing character, as well as new favorable conditions for both clients and the IFG, which allow to improve the activity of IFG to ensure the efficiency of sanation.

It should be noted that the IFG provides more favorable conditions for the development and implementation of various innovations than in the case of an individual participant of the investigated association, since it is easier to finance IFG, provide material support for researches and accelerate the implementation of new developments.

In this regard, in IFG, innovations serve as the basis for strategic planning, that is, one of the functions of controlling, which is used in anti-crisis (sanation) management. Strategic planning of IFG activities is carried out using special techniques, appropriate methods, certain mathematical models, etc. In the strategic directions of sanitary activities of the IFG, firstly, active actions are envisaged in relation to the modernization of equipment, the introduction of new technologies, effective marketing, price adjustment, the search for new product markets, and secondly, the financial problems of a separate entity of the IFG are delegated to third parties, owners, creditors, the state, while the participant may receive additional financial resources by increasing the authorized capital, obtaining of government guarantees and so on.

We propose to the stages (directions) of the implementation of innovative changes in the IFG in the conditions of carrying out the sanation (see Figure 1):

1. Formation of an innovative idea and research of possibilities of its practical realization in conditions of sanation (formation of innovative ideas is possible in the

industrial, trading, financial and credit departments of the IFG, in particular, and in the integrated association, in general).

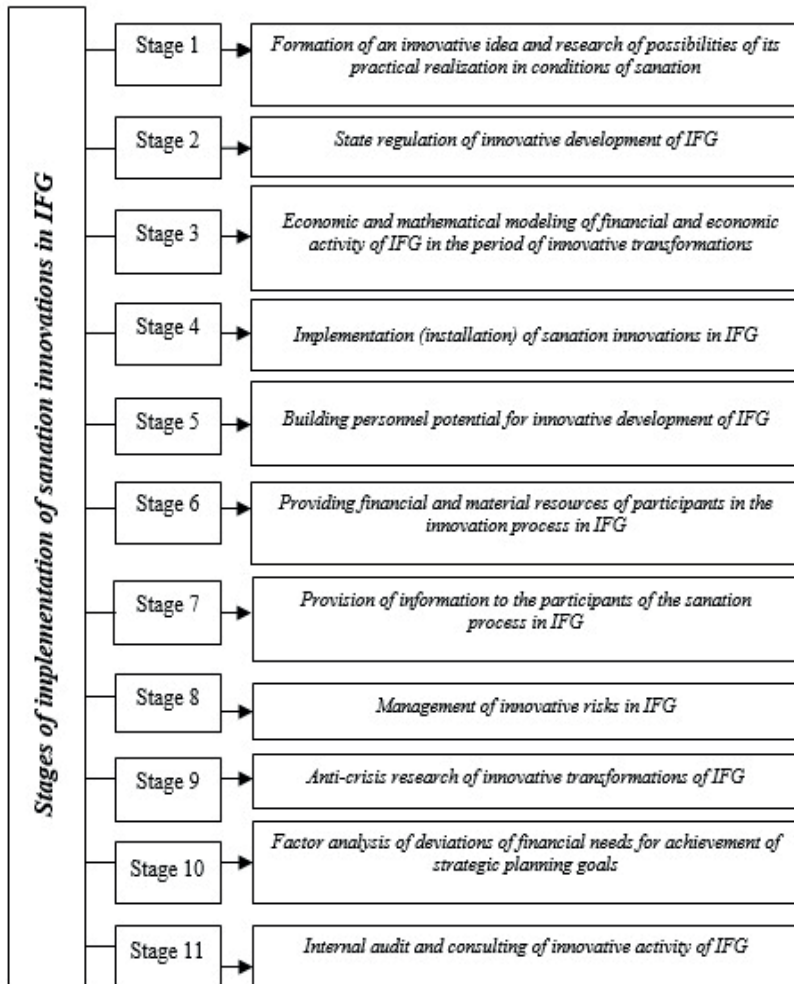


Fig. 1. Stages of implementation of sanitation innovation in IFG

Note: proposed by authors

2. State regulation of innovative development of IFG (coordination of strategic plans of innovation transformations in IFG with legislative and regulatory acts and programs of state and regional innovation development; conducting state expertise of scientific, technical and innovation programs and projects for ensuring qualitative and independent evaluation and selection of proposed for consideration objects).

3. Economic and mathematical modeling of financial and economic activity of IFG in the period of innovative transformations (use of methods of economic statistics, predictive-analytical, mathematical-statistical and others for the estimation of financial and economic activity of IFG during the period of innovation transformations).

4. Implementation (installation) of sanitation innovations in IFG (ensuring the realization on the domestic and foreign markets for newly created types of services and products; implementation of sanitation innovations, which includes marketing, exhibition and advertising activities, patent and licensing work and protection of intellectual property, etc.).

5. Building personnel potential for innovative development of IFG (creation of the institute of innovations IFG, interaction of IFG on a contractual basis with institutions of higher education or institutes of the National Academy of Sciences, training and retraining of personnel for innovation activities, including the training of individual scientists, specialists and managers).

6. Providing financial and material resources of participants in the innovation process in IFG (financial and banking services for innovation processes in the IFG on the basis of the established financial strategy that takes into account the peculiarities of the production, personnel, technological, marketing, social, environmental components of the overall strategy for the development of IFG or the plan of sanitation).

IFG is an association of non-financial corporations with credit and financial institutions, within which it is possible to redistribute financial resources in favor of enterprises that are at the stage of innovation transformation. That is, temporarily free funds in one company, subject associations in IFG, can be used to cover the deficit in cash other members of the association, because the movement of their capital and turnover rate are different.

It saves money because it does not involve outside debt capital. In addition, temporarily free funds of enterprises already in the role of financial and credit capital can be used for the issue of securities, currency transactions, loans, etc. It should also be noted that the redistribution of cash through securities transactions is provided by such active participants of the IFG and the stock market as: investment companies, banks, insurance and trust companies, etc. Their main functions are: efficient management of stock values, reduction of financial risks during investing, issue securities, etc.

7. Provision of information to the participants of the sanitation process in the IFG (creation of the best sources of information in the IFG).

The sanitation process of the companies involves the use of various types of economic information based on mathematical information theory and uses methods for determining and estimating the amount of information.

On the basis of mathematical information theory, the processing and use of scheduled, normative, statistical, accounting, operational sources of information is

carried out. The creation of rational information sources for IFG is based on the following principles:

1) the identification of information needs and the determination of ways how effective their satisfaction;

2) the objectivity of the processes reflection of production, circulation, distribution and consumption, the use of natural, labor, material and financial resources;

3) the unity of information from various reporting sources (accounting, financial, tax, statistical and operational reporting) and planned data;

4) the elimination of duplication of primary information;

5) accelerating the provision of information through the use of new means of communication, etc.

8. Management of innovative risks in IFG (calculation of risk and determination of the relationship between size and efficiency using specific strategies, which is one of the criteria for making a decision in favor of a particular strategy of innovative development of IFG).

Innovative risk is a risk arising from decline in the quality control of the processes of creating and introducing new products, services and limiting sources of funding scientific research. The likelihood theory is used to estimate the risk level.

9. Anti-crisis research of innovative transformations of IFG (the development of theoretical principles and methodological support for the diagnosis of crisis and their emergence in the innovative development of IFG, as well as the implementation of these measures at the level of associations of enterprises of financial and industrial capital).

The need for anti-crisis management of IFG occurs not only in the sustainable economic development of integrated groups, but also in the implementation of innovative transformations.

10. Factor analysis of deviations of financial needs to achieve of strategic planning goals (the assessment and analysis of financial needs for the achievement of the strategic planning goals of innovative activities of the IFG, the identification and evaluation of the factors leading to deviations, and proposals for overcoming negative factors and weaknesses).

11. Internal audit and consulting of innovative activity of IFG (establishment of inadequate costs arising from the innovative activities of the IFG).

The main task of internal audit is to oversee costs of IFG and establish the limits of their adequacy. Internal audit is an independent expert activity of the IFG Controlling Service for verifying and assessing the adequacy and quality of the staff duties. The Controlling Service provides consulting services during the developing methodological support for the innovative development of individual units of the IFG, preparing ordered by leadership conclusions and recommendations for solving IFG problems, etc.

Comprehensive rehabilitation of the industrial and financial system of Ukraine

can be realized through the creation of a IFG, to which should involve the various economic entities that are in temporary crisis. IFGs are able to accumulate a significant capital to carry out their own activities. This will provide sanation measures necessary resources on the insolvent company.

Thus, to create economic security IFG through effective management of innovation transformations in terms of sanation IFG it was developed the theoretical and methodical principles of regulation of innovative transformations of IFG, management of innovative risks in IFG, diagnosing the crisis and their occurrence in the innovative development of IFG. It was also proposed to introduce these measures at the level of associations of financial and industrial capital companies.

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MARKETING INNOVATIONS AS A PARTICULAR COMPOSITION OF THE PROCESS OF MANAGEMENT OF INNOVATIVE ACTIVITIES AND COMPETITIVENESS OF ENTERPRISES: SAFE ASPECTS

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Modern business conditions dictate the need for quality and speed of innovation implementation in order to maximize customer satisfaction. Innovation in modern conditions is a factor that allows an enterprise to maintain market positions in a harsh competitive environment. According to the research data [1], the domestic industry according to the level of technology is three times less than the European Union countries, the level of high-tech exports is lowered by 4-8 times, and the level of energy efficiency of exported products - 10 times. Accordingly, in European countries, the GDP growth rate is 60-90%, while in Ukraine it is only 0.7%. An important fact that influenced such a picture is that over the period 1991 - 2017 the number of domestic researchers decreased by 35%, the development of new types of equipment and technologies - by 14 times, and the number of innovative industrial enterprises - by 5 times. What is stunning under these conditions is that Ukraine is the leader among the European countries in the number of graduates of engineering specialties (Fig.1).

Despite such indicators, they receive the lowest wages in Europe. The level of salary in the IT sphere is shown in Fig. 2

A similar situation is observed for all professions in the manufacturing sector (Fig. 3).

Analyzing the situation shown above, it can be argued that in the world leaders-leaders, the leadership realized the need to promote the development of technology and technology, while in Ukraine - this area is given too little attention. For the

period of 1998-2013, research expenditures in Western countries increased by 100%, in South Asia - by 350%. It is important to note that the vast majority of these money is invested not by the state, but by business. That is, companies in the world every year are increasingly spending on innovation.

As noted in the paper [3], the process of enterprise innovation is an integrated combination of science, technology, economics, management and entrepreneurship.

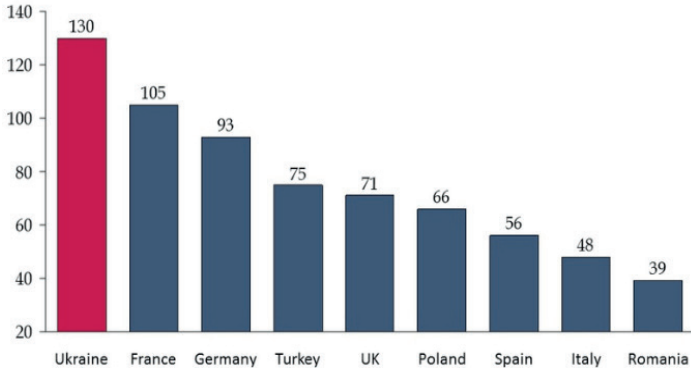


Fig. 1. The position of Ukraine in the number of graduates of engineering specialties among European countries (as of 2014), thousand students Source: [2]

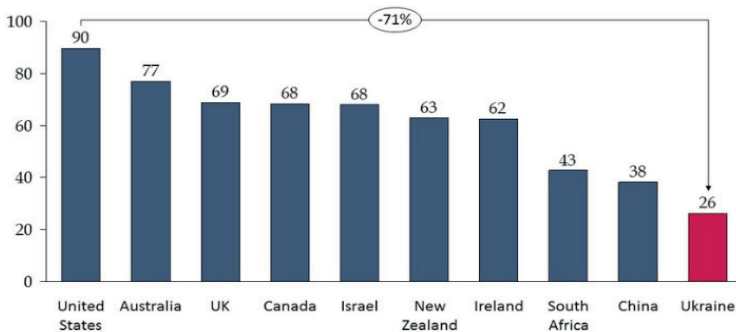


Fig. 2. The level of wages of IT professionals in Ukraine in comparison with world leaders (as of 2014), thousand dollars / year Source: [2]

The essence of innovation is to get an innovation that will enable the company to gain new competitive advantages. In order to ensure the effectiveness of the innovation received, it is necessary to implement a series of measures aimed at its commercialization. Achieving success in this activity is possible provided the company has a high level of adaptability and flexibility to the rapidly changing

environment. Countering the negative impact of the environment will help stabilize the level of economic security of the enterprise and create the basis for a stable functioning with the prospect of developing effective measures to neutralize the threats. Marketing activity has a dominant influence in promoting the innovations of an enterprise in a specific market.

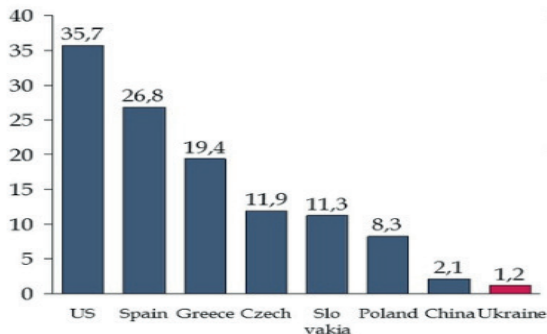


Fig. 3. Wage level in the world (as of 2014),
hourly labor costs in industry (dollars) Source: [2]

The main reason for the activation of innovation activity to receive new or improved products by enterprises is the constant change in market and consumer needs. Analyzing the research [4], we can establish the fact that 72% of the rapidly implemented innovations in the market were stimulated by demand, that is, their appearance was facilitated by government orders, production needs of the manufacturer directly, as well as market needs. It is logical that in the world practice of 100 successful innovations: $\frac{3}{4}$ is the producer's reaction to the needs of consumers, only $\frac{1}{4}$ is the result of the introduction of new developments in the market for R & D. Domestic practice of innovation activity testifies that only $\frac{1}{5}$ of innovative developments are positively perceived by consumers and get their place in the market. Instead, the global trend is quite different, so in Japan this figure is 68%, in the US - 52%, in Poland - 30%.

An analysis of the reasons for the failure of the promotion of innovative products by domestic innovators to the market indicates that 32% is related to incorrect or incomplete assessment of market requirements.

Achieving the desired level of competitiveness and level of economic security is possible provided that the company develops and implements innovations, as well as realizes a marketing mix that will promote the most effective promotion of innovative products (services) on the market (Figure 4).

The peculiarity of promoting innovative products to the market is that this process requires the development of specific techniques, since traditional marketing tools do not provide the expected results. This is due to the following reasons:

- specifics of market analysis for new and improved goods, in particular, if they are aimed at satisfying hidden (latent) needs or in general forming new needs (radical innovations);
- the complexity of the orientation of production to meet consumer needs, which has a probabilistic (fuzzy) assessment;
- complexity of choice of optimal methods of formation of primary demand and its further stimulation, development of pricing strategies for innovative products (services), formation of the system of sales of innovative products [6; 7, p. 183].

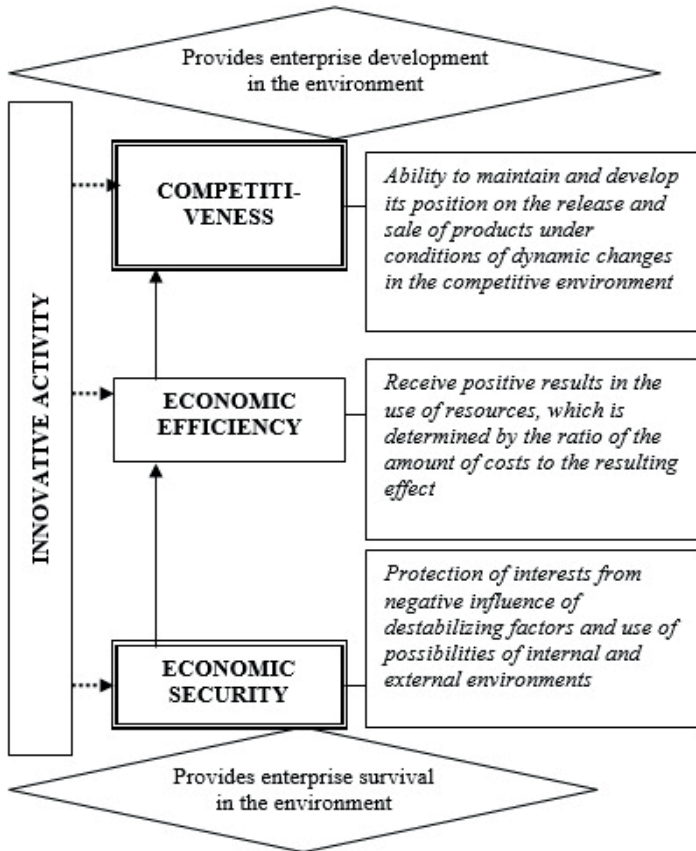


Fig. 4. Influence of innovation activity on economic safety, economic efficiency and competitiveness of enterprises
 Source: author's development on the basis of [5]

Marketing of innovations is a multicomponent concept and should be interpreted as:

1) the concept of market activity of the enterprise, a kind of philosophy of business, according to which the possibility of obtaining income directly proportional to the activity of using innovations;

2) analytical process, which provides for the possibility of identifying market opportunities for innovation development;

3) a means of active influence on potential consumers and the target market in general, which involves the output and promotion of innovations on the market;

4) the function of innovation management, aimed at determining the direction of innovation activity and methods of commercialization of innovative products (services). It is worth pointing out that innovation management is defined as a function of marketing of innovations, which is aimed at realizing the achievements of science and technology in new products (services) that can satisfy the needs of consumers and at the same time ensure the profit of the producer (seller);

5) the means of orientation of the individual economic entity, and the national economy as a whole for innovation development [8].

To effectively implement the commercialization of innovations it is necessary to structure the process for a sequence of stages (Table 1).

Table 1

The process of commercialization of innovations

Stages	Characteristic
Analytical and strategic	market research, analysis and evaluation of marketing opportunities of the enterprise, market segmentation and selection of target segments, development of marketing strategies
Development of a marketing complex	solutions are being developed regarding further commodity policies, price levels, distribution channels and levels of service, system of product promotion
Organization and management of marketing	creation of a marketing service, functioning of a marketing innovation system, management of marketing activities

Source: [6]

On the basis of the research conducted, and taking into account the recommendations [9], it is possible to identify a number of features that are inherent in the market for innovative products, in particular:

- the market is different that the supply is far ahead of the demand for innovation. In essence, it is a seller's market that must convince the buyer of the expediency of acquiring his product.

- the market is characterized by high psychological barriers to the perception of innovative products by consumers.

- the capacity of the market depends on the state of the economy on the «macro» and «micro» levels and its activity with respect to innovations.

- the market of innovations is inherent in a global character.

- unlike ordinary platforms, innovative products do not have a definite place and

channels of sales.

- innovative products are purchased exclusively by professionals (excluding mass consumer goods), and in dialogue with them important competence and special terminology.

- this market is diverse in the variety of goods whose purchase / sale is specific, for example, the use of final results by a co-seller and buyer.

- functioning of this market is carried out in a coordinated interaction of financial, informational and organizational components.

- the subjects of this market (technoparks, research institutes, enterprises and others) are forced to perform their unusual functions, due to the lack of development of the market of innovations and the complexity of communications.

- efficiency and attractiveness, as well as the degree of risk of innovative products is difficult to establish, as they are difficult to predict until the moment they are put into operation. The same reason is compounded by the uniqueness of the product.

- the presence of authorship on innovative products (industrial property or intellectual property) determines their exclusive personification, which depends on subjects of innovation activity (their talent, knowledge and experience).

In some cases, these objects have the ability to multiply, that is, unlimited exchange, for example, licenses.

Taking into account the above mentioned peculiarities in the marketing of innovative products will help to select the most optimal methods for its promotion, which will allow innovative enterprises to achieve the desired profitability indicators and thereby ensure a high level of their own economic security.

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STATE LEVEL FINANCIAL SUPPORT FOR DEVELOPMENT OF SMALL ENTERPRISES IN THE CONTEXT OF ECONOMIC SECURITY: FOREIGN EXPERIENCE AND NATIONAL REALITIES

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Small business is an integral part of a modern economic system, without which the economy and society are not able to exist and develop normally. In the conditions of the economic downturn and crisis phenomena, the importance of a number of functions of small business units is intensifying. In particular, the importance of social function increases, which manifests itself through the employment of a significant part of the population of the country. Also, the functions of increasing the mobility and effectiveness of the national economy are realized through a system of powerful motivational incentives, smoothing of conjectural fluctuations and realization of innovative potential for small business.

Despite its flexibility and the ability to rapidly transform itself into a changing economic environment, small business remains extremely vulnerable to financial crisis. This, first of all, relates to the system of financial support for the activities of small businesses, which in comparison with medium and large ones have rather limited opportunities to attract financial resources. In today's operating conditions, a situation where the only source of financing for a business is a profit of a small enterprise, which is also influenced by many negative factors. Fundamental foundations for studying the peculiarities of the activity and development of small

businesses in Ukraine are laid down in the works by Baranovsky A., Varnaliya S., Grineva V., Danilenko A., Drygi S., Yekhanurov Yu., Lomachinskaya I., Mocherny S., Pavlov V., Prokopenko N., Reverchuk S., Sabluk G., Slavyuk G., et al. The research on the organization of the system and mechanisms for financing small business from various sources is devoted to scientific by Apostolyuk A., Bannery N., Botsyori L., Buryak L., Dolbneva D., Kalmykova O., Kutsyk A., Oleynik K., Petrik I., Skoryk M., Chopko N., Chui I., Yaremchenko L. and others.

Highly appreciating the contribution of scientists to the formation of the scientific base of the organization and improvement of the small businesses financial support, we note that there are a number of issues requiring further scientific substantiation, in particular, there is a need to determine the role of the state in solving the issue of financial support for the small entrepreneurship development in Ukraine.

All the above mentioned influenced the wording of the purpose and objectives of the article: the definition of financial support of small enterprises at the state level.

In modern conditions, the state and local self-government bodies allocate insignificant volumes of resources for financial support of small business entities. Among the main reasons for this situation, scientists call the lack of legislative regulation of relations between the state and local self-government, on the one hand, and small enterprises, on the other (Burlutkin, 2012). In our opinion, the main reason is reduced to a lack of financial resources in budgets of different levels, and then - to the imperfection of the institutional environment.

Regardless of what is the main reason and what is of secondary importance, the issues of state and regional financial support do not lose their significance. During the establishment of the system of economy state adjustment in Ukraine, the system of state financial support was formed as a certain integral structured set of functions, principles, methods and mechanisms (Fig. 1).

At the same time, the existence of a number of problems concern to the effective implementation of state and regional financial support for small businesses, explains an urgent need to improve it. In this context, it becomes necessary to take into account foreign experience about a system of state financial support development: access of small business to cheap financing; the ability of the state and financial institutions to finance and co-finance loans; provision of state guarantees for loans.

Cheaper loans to small businesses are usually provided due to the use of:

- target funding mechanisms of commercial banks by the regulator in order to reduce the cost of loans (UK);

- direct lending to small enterprises (Austria, Belgium, Canada, Chile, Czech Republic, Estonia, Finland, France, Greece, Hungary, Ireland, Israel, Japan, Korea, Norway, Portugal, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Turkey, United Kingdom);

- subsidized interest rate on loans for small enterprises (Hungary, Portugal, Russia, Spain, Turkey, United Kingdom).

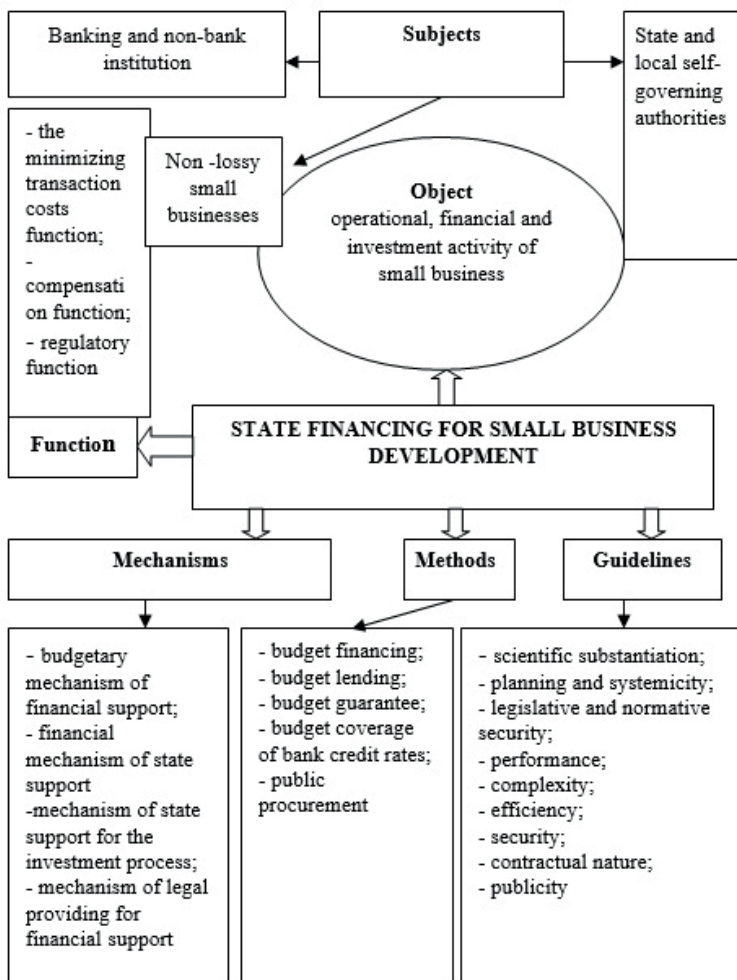


Fig. 1 Conceptual model for state financing for small business development in Ukraine
 Source: compiled by the author on the basis (Dzhioyeva, A. K. 2015).

Analysis based on data (Lozinska, ZH. 2017, Ribun, L., Lekh, H., Vaskovych, I. 2016, Oreshko, K.S. 2007) showed that the practice of granting state credit guarantees is fairly common in most countries. Government measures to promote bank lending in many countries are the most popular, with the exception of Australia, Japan, Greece, New Zealand. The growth of state guarantees for small business loans is due to the reaction of the governments of many countries to the financial crisis and its impact on the volume of financing of small businesses.

The largest increase in 2015 was observed in Slovakia, but that was due to

a significant drop in the amount of loan guarantees in 2013–2014 and due to an attempt to restore collateral to the 2012 level. Also the most significant is the growth of government loan guarantees in Belgium, and here the situation is similar to Slovak: in 2014, the figure have been decreased by almost half, whereas in 2015 it grew by 68%.

The Czech Republic is characterized by the most stable growth in the volume of government loan guarantees, in which this indicator has increased at an extremely high rate over the past four years. Note that the most critical in this country was 2011, when the volume of credit guarantees amounted to about 7% of the level of the previous 2010.

As for direct budget loans, it should be noted a certain stability of this indicator in most countries. Significantly reduced the volume of budget lending to small businesses in Italy, and the increase in direct funding occurred in Finland.

Summing up, among the countries studied, the most consistent in improving the system of state financial support for small enterprises, in our opinion, is the Czech Republic, which gradually reduces the amount of direct financing, channeling more financial resources under credit guarantees.

On the basis of the analysis conducted in (Bykanova, N. I. 2012), two most effective mechanisms for financial support of small business can be identified, the implementation experience of which can be used in Ukraine: 1) The program of applying schemes of direct target financing of banks for lending to small business using the retail and portfolio guarantee mechanism (operating in the UK since 2012); 2). The program of using the potential of movable and immovable property of small business entities as collateral (an example is the reform of the collateral mechanism in China, as a result of which lending on the security of receivables is activated as an alternative to real estate, which the company does not have enough).

At the same time, when considering the possibilities of adapting foreign experience to Ukrainian realities, it is necessary to take into account the obvious fact that there is no universal system of effective support for small business, therefore we should always rely on the peculiarities of the national economy and certain social attitudes. Hence, based on the existing problems of state financing of small business in Ukraine, and also taking into account certain aspects of foreign experience, we have summarized proposals for enhancing the financial and credit support for the development of small business at the state level.

Macro-level measures, while in modern conditions of decentralization and ensuring the financial independence of local communities, issues of regional financial support for small businesses are of particular importance, since it is the efficiency of the latter that is a significant factor in the formation of a high level of socio-economic development of the region.

The specific features of the implementation of regional financial support for small business in Ukraine are the lack of consistency, the limited autonomy of decision making on financing certain business development programs, the spontaneous

nature of funding, and the lack of control over the regional programs effectiveness. Therefore, it becomes obvious the need to develop models of financial support for the development of small enterprises at the local level.

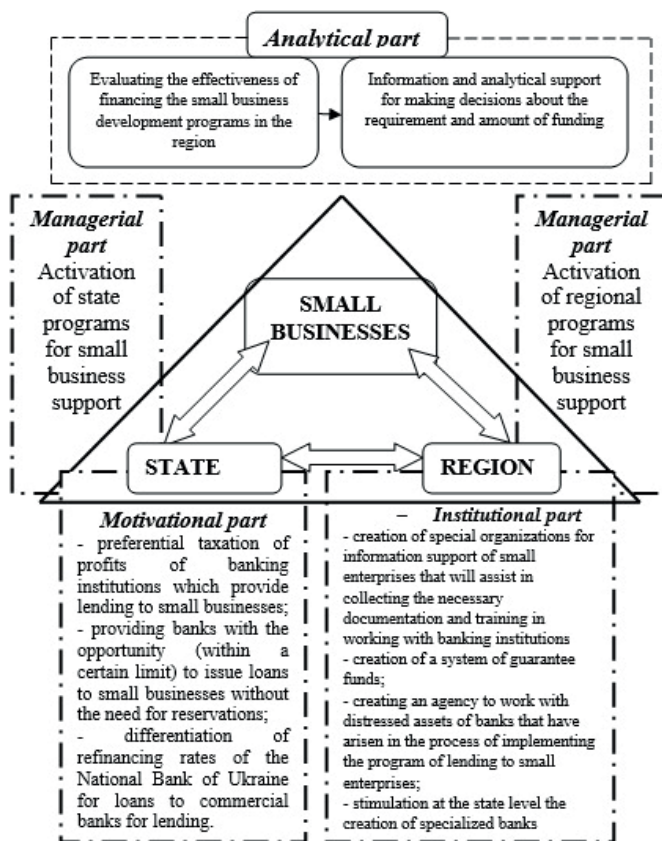


Fig 2. Model of improvement of financial support for the small business development at the regional level

The basis of the proposed model of financial support for the development of small business at the regional level (Fig. 2) is the thesis about the need to harmonize the interests of three subjects: the state, the region and small business. At the same time, in the plane of state-region interaction, the motivational and institutional components of the mechanism of regional financial support for small businesses should become the main ones.

In other words, the result of state-region interaction should be the introduction of measures at the state and regional levels that contribute to creating a favorable

environment for attracting financial resources to the small business sector both on the terms of direct financing and indirect participation with the involvement of a third party (banking and non-bank financial institutions, international financial organizations, etc.).

Local governments have a special place in the business system: on the one hand, having the appropriate authority, they perform the functions of regulating economic relations in their territory, on the other hand, they play the role of full-fledged business entities. This leads to their special form of participation in the financial support of the development of small enterprises, not like the state. An important, if not key, in shaping the concept of regional financial support for small business, in our opinion, should be an analytical unit containing, on the one hand, information and analytical support for making decisions about the need and amount of funding for a particular program. And on the other hand, a methodological tool for evaluating the effectiveness of financing small business development programs from regional and state budgets.

Conclusions. On the basis of the theoretical generalization of the issues related to the formation and improvement of the system of financial support for the development of small business at the state level, the following conclusions and practical recommendations were formulated:

- reasonably a special form of participation of local governments in the financial support of the development of small enterprises, which differs from the state.

Taking this into account, a model of financial support for the development of small enterprises at the regional level was proposed, based on coordinating the interests of the state, the region and small business, and contains four main blocks: analytical, motivational, institutional and organizational, which allowed to formulate priorities for regional policies to support small businesses and create prerequisites for increasing its effectiveness.

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THEORETICAL AND METHODOLOGICAL ASPECTS OF THE RESULTS OF ECONOMIC ENTITIES' ACTIVITY

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From the scientific and practical point of view in the modern economics the problem of the economic essence of the results of the economic entities' activity is one of the most complex and debatable. Taking into account the economic nature, on the one hand, the result is the difference between cash receipts and cash payments of economic entities, on the other hand it is the difference between the property status of economic entities at the end and at the beginning of the reporting period.

The results of the economic entities' activity are a quantitative and qualitative determination of the totals of these activities on the basis of an adapted system of indicators under the influence of factors of the external and internal environment in the process of using available resources provided that they achieve strategic goals in the economic, social and environmental fields, taking into account the economic and geographic segment. Analytical support of the system of evaluation

and management of the results of the economic entities is a system of indicators for the accounting and analytical process of the transfer of information about the results of the subject's activity to concerned users for the adoption of effective management decisions taking into account the segment component. To achieve the goal and obtain the target indicators of the result of economic entities, the use and interaction of relevant resources, represented by economic resources, which are understood as all types of resources utilized in the production of goods, products and services, are carried out. Here are labor resources, natural resources, capital (in the form of money capital, or means of production), economic and professional properties of subjects.

In practical activity of modern economic entities, sound management decisions are based not only on ensuring the effective use of internal capabilities (resources and potential), but also taking into account the influence of external and internal factors on the results of the economic entities.

The model of the interconnection of components that shape and influence the results of the activities of economic entities is presented in Fig. 1. Therefore, in determining the results of activities, only the costs or resources that ensure the receipt of this result is impossible, as it emphasizes the systematic and complete presentation of the effectiveness and efficiency of the production economic entities.

In modern conditions, an important aspect in determining the result (effect) of an entity is taking into account the significant influence of external (general economic) factors with consideration of the economic and geographical segment.

The geographical segment is a separable part of the economic entities' activity for the production and / or sale of a certain type (or group) of products (goods, work, services) in a particular economic environment different from the other ones: the economic and political conditions of the geographical region; the relationship between activities in different geographic regions; territorial location of production of products (work, services) or buyers of products (goods, work, services); specific risks for the geographical region; rules of currency control and currency risks in such regions [1].

In turn, an economic segment is a separable part of the economic entities' activity in the production and / or sale of a certain type (or group of) products (goods, work, services), which differs from others: by the type of products (goods, work, services); by the way to generate income (way of distributing products, goods, work, services); by the nature of the production process; by risks inherent to this activity; by category of buyers [1].

Depending on the nature of the impact on the target result of the economic entities, the reporting segments are divided into prioritized and auxiliary ones, considering the type of organizational structure of the economic entities. Activities of an economic entity that are carried out either in a separate state, including one or more foreign ones, or in some regions of Ukraine, are taken into account for separating the geographical segment. At the same time, the level of segmentation,

considering the need to display and reveal the relevant information, is determined personally by the entity.

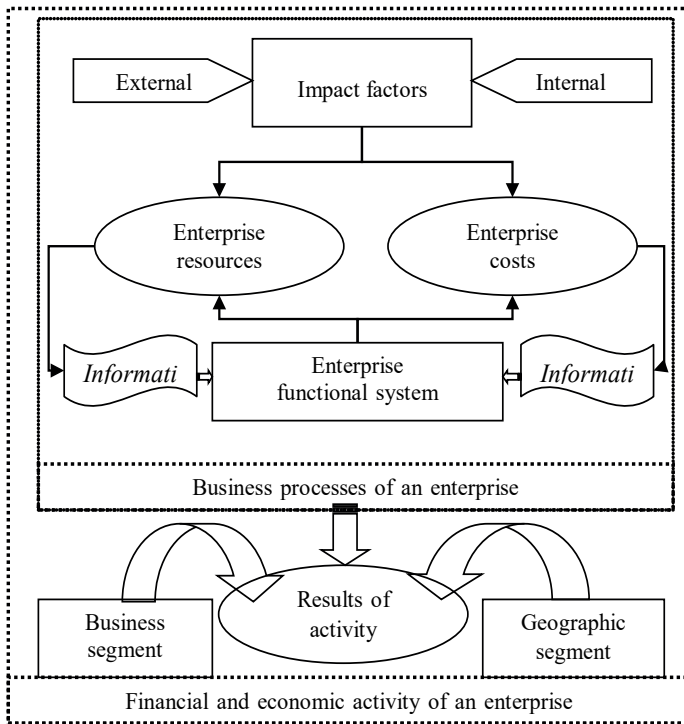


Fig. 1. Model of interconnection of components that shape and influence the results of economic entities' activities

By identifying this segmentation and taking into account specific conditions, an entity may focus on the relevant segment –economic or geographical one, recognizing it as a priority. In order to comply with the relevant conditions, it is necessary to focus on their essence:

- the priority of the economic segment is based on the formation of organizational structuring of individual subdivisions of the economic entity, including production, based on the types of products, work and services that are produced by economic entities;

- in turn, the recognition of a geographical segment as a prioritized one requires the consideration of organizational structuring according to a regional principle.

Thus, when one of the above mentioned conditions is fulfilled, one segment of economic entities is recognized as a prioritized one, the other – as an auxiliary one.

Real interconnection of costs and results based on a priority segment should

be quantitatively determined at the level of economic entities, taking into account aspects of added value distribution and at the state level, in terms of GDP and national income generation, which necessitates not only the determination of the costs of economic entities, but also the results of its activities.

To make effective management decisions on performance results, analytical assessment information is needed, which reflects the results of the comparison of resources expended with economic benefits. Taking into account the importance of economic entities expenses, as the amount of consumed resources in the management system, it is necessary to separate the concept of “productive resources of economic entities” as a combination of funds of a legal entity that ensure the implementation of its activities, considering the trend of costs growth as well as the segment component.

As a rule in modern economic conditions the implementation of costs is purposeful and aimed at obtaining a certain result of activity.

Taking into account the modern economic theory and practice, the author’s classification of the activity results of economic entities is proposed with consideration of relevant features of the modern economy (Table 1).

From the point of view of the activity types, the results are divided into the results from the operating, financial and investment activities, and this corresponds to the regulatory support. Results from operating activities are the results of operations related to the production or sale of products (goods, work, services), which provides a significant part of the income of economic entities and are the main purpose of its creation and operation.

The result from financial activities is the result of activities that leads to changes in the capital segment of the production economic entities.

In turn, the result of investment activity is the result of operations related to the irreversible assets of the production entities, as well as those financial investments that are not a segment of cash equivalents of the entity.

The second qualification group is formed depending on the degree of achievement of the corresponding result. At the same time, the targeted, namely, the final result of the activities of production entities, as well as intermediate or, in other words, partial results, which can be obtained and calculated for each structural segment of economic entities, are distinguished. Information on intermediate results is used without fail when calculating the final target result of activity of economic entities.

Depending on the place of occurrence, the results of activities of economic entities are divided into exogenous - the results obtained under the significant influence of external factors, and endogenous results, which are formed by improving the efficiency of resource use and the potential of economic entities.

In addition, each group of the results of the economic entities’ activities is characterized by appropriate qualitative and quantitative indicators or indicators that are designed to objectively establish the effectiveness and efficiency of the activities of production economic entities. In this connection, they share the qualitative and

quantitative results of the activities of economic entities.

Table 1

Classification of results of economic entities' activity

№	Qualification criteria	Types of results
1	Kind of activity	- Result in operational activities; - Result in financial activities; - Result in investment activities
2	Degree of achievement	- The targeted outcome; - Intermediate outcome
3	Belonging to the place of production	- Exogenous results; - Endogenous results
4	Results sphere	- Economic results; - Financial results; - Social results; - Environmental results
5	By properties of phenomena and processes	- Quantitative results; - Qualitative results
6	Depending on the selected segment	- Result from a priority segment; - Result from an auxiliary segment
7	Specific sphere of activity	- Innovative results; - Intellectual results

The modern system focuses on individual economic segments, namely, economic and geographic, which is reflected in determining the performance of economic entities as a result of the priority segment and the result of the auxiliary segment, taking into account the current regulatory framework.

Innovative activity of economic entities today has become an integral part of the successful functioning of an economically developed enterprise and is an activity that is associated with the creation and practical use of advanced or completely new types of products (work, services) or management decisions that provide economic, social, environmental, scientific and technological and other effects of economic entities. As a result of innovation activities of economic entities, there may be a new product that is introduced on the market, an improved or new technological process, as well as new approaches to the organization of production and management, which strengthens the competitive position of the enterprise and maximizes positive results of management.

Analysis of scientific research shows that the results of intellectual activity of economic entities in relation to which legal protection is carried out are objects of intellectual property and are presented in the form of intellectual products, without which the process of economic development of a modern enterprise is complicated.

The classification of the company's results in different spheres is relevant for economic entities. Allocation of economic, financial, social and environmental results of economic entities helps to focus on solving the main tasks and achieving

their strategic goal in economic, financial, social and environmental spheres.

The financial result is one of the most important indicators, which summarizes all the activities results and characterizes the efficiency of an enterprise. The financial results directly reflect all aspects of economic entities' activities, such as: the level of production assets use, labor, material and financial resources; features of technology and organization of production; cost of goods sold, their quality; sales volume, selling prices; labor productivity; government regulation of industry development. The financial result of economic entities may be profit, loss or zero financial result.

In accordance with the types of activities, there are: financial results of operating activities of economic entities; financial results of investment activities of economic entities; financial results of financial activities of economic entities.

Depending on the content, financial results are classified into:

- accounting result that is the amount of profit before tax, determined and reflected in the statement of financial performance (total income) of economic entities;
- tax result that is the amount of profit, determined on the basis of the Tax Code of Ukraine for economic entities;
- economic result that is the part of the total income after deducting the economic costs of economic entities.

The study analyzed the issues that determine the significant role of profit as one of the most important results of the activities of economic entities. The need to inspect various aspects of the economic nature of profit determines the debatability of this category.

Taking into account the needs of modern society and considering the result of economic entities as a result of a certain activity, we assume it's obligatory to single out the social results of an enterprise's activities into a separate group.

In the national environment, it is rather difficult to separate the social aspect from the economic one in the activities of economic entities, but modern management standards require the definition of the social result of the enterprise.

In this connection, the social result of economic entities is a complex, decompound consequence of the operation of an enterprise, is essential for an individual, a group of people and society as a whole and directly affects economic relations both in economic entities and in the state.

The basic aspect is the composition of the social results of the activities of economic entities; it consists in distinguishing two elements: social results for employees and social results for owners of economic entities. The first group includes the results of economic entities related to the main spheres of implementation of the enterprise's social policy: selling marketable products at reduced prices, making expenses on maintaining social and cultural facilities, costs of delivering goods to distant cities or territorial communities, fighting poverty through employment, the provision of paid services and free of charge to employees, charitable activities

in the form of free delivery of products to the public sector entities, orphanages, sponsored camps for children and gardens.

Among the social results of economic entities, an important element is salary, which is the main source of income for employees of economic entities and a means of increasing their wellbeing. In addition, salary has a stimulating role in the process of improving the efficiency and effectiveness of labor, thereby ensuring the growth of income of economic entities.

Social results of enterprises are extremely diverse and are determined by the nature of the values declared by society and the economic system. They can be divided into the results of activities that satisfy the material interests of the individual and the results related to personal and spiritual needs, in particular, access to information, participation in management, recreation, sports competitions, intellectual services, etc.

Evaluation and management of results requires a comprehensive approach to maximizing the positive results of the activities of economic units and the study of the results of activities of economic entities in all spheres [3].

The stated positions give reason to assert that in today's conditions, along with the profit indicator of economic entities, which is most often used at enterprises, it is necessary to single out a number of indicators of efficiency and effectiveness of economic entities on the relevant qualification criteria and direction.

The formation of the results of activity of economic entities is carried out under the influence of many factors and at the expense of many sources, different in their financial and economic content, and quantitative and qualitative features.

Thus, the results of economic entities' activities represent the definitions of the outcome of the economic entities' activities, taking into account the segment components and directions of formation. In turn, the result of the economic entities' activities is determined by the characteristics of their activities, in general, describes the consequences in the operating, integration, financial, environmental, social, innovation and other spheres of economic entities.

For the study of the results of the activities of economic entities, methodological approaches to assessment are no less important than the results.

Effective management of economic entities is provided through basic management functions, among which a special role is played by the analysis of financial and economic activities and related analytical assessment systems.

It should be kept in mind that in modern economic conditions, the activities of economic entities increasingly depend on the ability to adapt to the conditions of its operation, in connection with which it is necessary to take into account the change in the system of management decision-making at the enterprises.

Evaluation of the results of economic entities' activities is associated with the development of methodological support for the identification, measurement, production, analysis and presentation of analytical information relating to all activities of economic entities, including innovation and investment development,

as well as the identification of patterns determining the state of the enterprise.

The basis for evaluating the performance of any enterprise is an economic analysis. The method of economic analysis is the target method (approach) of studying the processes of an enterprise's activity in statics and dynamics. The method of economic analysis provides a systematic integrated identification, measurement, registration, accumulation and study of the influence of factors on the performance of an industrial enterprise, by processing the analytical tools of a system of indicators to improve the efficiency of an enterprise [1].

Application of the method of economic analysis is carried out using appropriate methods of analytical research of economic entities: methods of research of specific spheres of operating, investment, financial activities of economic entities or methods of comprehensive analysis of an enterprise. It should be noted that each type of analysis has its own method and analytical tools.

The method of economic analysis is divided into two components: quantitative and qualitative. The quantitative components are aimed at assessing the degree of influence of factors on the effective performance of an enterprise, calculating regression equations in order to be used in management analysis, and revealing reserves for the growth of positive results of an enterprise's activity. Quantitative methods are divided into accounting (balance method, calculation method, double-entry method and statistical (absolute, relative, average), comparison, grouping, index method, method of chain substitutions, integral method, economic and mathematical methods.

Qualitative methods allow, on the basis of an appropriate study, to form certain conclusions about the state of the results of economic entities' activities in all spheres of activity, level of profitability, operational and resource potential, degree of implementation of the socio-economic and environmental component.

The technique is a set of methods, principles for the purposeful implementation of any economic activity in the enterprise. The basic task of the functioning of economic entities is to meet the needs of representatives of society and financial and economic benefits. Financial and economic benefit is determined through profit, is the result, to the extent necessary to meet the socio-economic needs of employees and the social program of the enterprise.

We propose to use a systematic approach in the study of a comprehensive assessment of the results of economic entities' activities by all types of activities, processes and spheres.

The system of comprehensive assessment of financial and economic performance of economic entities includes the following steps:

- investigation of a system of analytical support for economic entities;
- assessment of the actual financial and economic results of the company from operating, innovation, investment and other activities;
- carrying out a segmental assessment of financial and economic results;
- general assessment of factors influencing the financial and economic results

of economic entities;

- formation of strategic decisions of economic entities on forecasting financial and economic results.

In order to assess the performance of economic entities in all spheres – operational, financial, innovation and investment it is necessary to classify the information system of economic entities for the needs of researchers in order to create a single information space that provides truthful and impartial information about the financial and economic results of the enterprise. Information of economic entities includes indicators that are the object of detection, measurement, processing, justification, synthesis, processing, storage and transmission of data. A number of accounting and analytical categories are used in the study of the performance of economic entities.

The method of assessing the financial results of economic entities has the following directions:

- horizontal analysis and evaluation of the cash flow statement of economic entities by the direct method;

- horizontal analysis and evaluation of the cash flow statement of economic entities by an indirect method;

- vertical analysis and evaluation of the cash flow statement of economic entities by the direct method;

- vertical analysis and evaluation of the cash flow statement of economic entities by an indirect method;

- study of the structure and assessment of the dynamics of the financial result before taxation of economic entities;

- assessment of the distribution and use of the net financial result of economic entities;

- assessment of the structure and dynamics of the total income of economic entities.

Evaluation of financial and economic results of economic entities involves the study of its target orientation and justification of financial and economic indicators in the relevant spheres of operating, financial and innovation and investment activities.

The following stage of a comprehensive assessment of the performance of economic entities is the development and formation of an enterprise strategy, their enhancement with a view to prioritizing the rationale for a conceptual model of managing an economic unit. Determining the strategy of economic entities is carried out by identifying growth reserves and testing modern methods for assessing the financial and economic performance of economic entities.

Models of evaluating the results of an enterprise sometimes do not take into account the sectoral features of the objects of analysis, ignore the factors of various weight assessments of the influence of individual indicators on the overall results of the analysis, and therefore often do not determine the objective reasons for an increase (decrease) in the results of an enterprise.

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ENTERPRISE ECONOMIC BEHAVIOR: ESSENCE, CLASSIFICATION, PRINCIPLES

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The challenge of determining economic behavior essence in the world economic science is not new. The evolutionary development of this category began with the formation of so called market relations and transformed with their development.

The category of economic behavior is a significant key element for understanding the principles of economic systems functioning that have various levels of complexity. The economic behavior of an enterprise in a market environment determines the forms and features of its economic relations with other economic entities, consumers, governmental institutions, employees, owners. On the other hand, economic behavior is formed under the influence of environmental factors of the enterprise and is an element of the economic system functioning (operation).

During a long time, the activity of enterprises in the market environment has been studied from the point of view that the economic entity acts rationally, striving to achieve the main goal of its activity - profit maximization. However, practice demonstrated that management decisions were not always rational, and the external and internal operation environments became more and more complicated; the number of factors, that needed to be taken into account while making decisions,

increased, which further led to increasing complexity of rational decision-making process. All this caused the need for new approaches for enterprise operation management, and behavioral economics became such an approach.

It should be mentioned that for a long time, economic theory postulates were based on the fact that the main motive of economic activity is satisfaction of needs on the basis of rational behavior. In practice, however, theoretical models did not coincide with the real behavior of enterprises at the market.

Representatives of behaviorism, unlike neo-classic and institutionalism representatives, deviate from the rational economic behavior principle and introduce the concept of limited and variable rationality.

For example, studies of G.Simon prove that the managers of an enterprise are not capable of quickly processing a large amount of information that needs to be analyzed in order to make a rational decision in accordance with the changes external operation environment. Therefore in real life, unlike theoretical models, firms choose an acceptable version of economic behavior, which may not be absolutely rational, but requires significantly less information, and the ability for its analysis does not require accurate calculations, also it takes much less time for decision-making. This principle of choosing alternative of economic behavior was called bounded rationality principle [1].

G.Simon, instead of the classical «economic man» model, offers the model of «administrative man», which makes decisions based on simplifying the situation for as many factors as it can cover. Moreover, decisions are made collectively at the enterprise, which, firstly, excludes the anticipation of the consequences of all decisions made for making a rational choice; and secondly, decisions by individuals are made in accordance with their individual goals and social perspectives [2].

H. Leibenstein concluded that the behavior of both individuals and companies can be more or less rational, depending on the circumstances; the scientist associates with the physiological characteristics of a person, saves his mental energy and spends it only when there is a need. This explains the variable rationality of economic behavior of business entities [3,4].

Analysis of theoretical approaches to the interpretation of the concept of «economic behavior» indicates that the majority of authors see economic profit as the goal of economic behavior. However, under real conditions of enterprises' functioning, sometimes the maximum profit may not be a priority goal, yielding, for example, the goal of increasing market share, strengthening one's own competitive positions, innovation breakthrough, and similar. Therefore, in our opinion, economic behavior should be understood as a set of consistent systematic actions aimed at achieving the goals of enterprise development, ensuring the profitability of its activities and a favorable competitive position on the market.

Economic activity is characterized by a wide variety of factors, impacts and their consequences, as a result an enterprise can carry out various reactions. Therefore it is necessary to classify the types of economic behavior of an enterprise according

to separate characteristics.

Existing definitions of economic behavior characterize it as a complex of rational, purposeful actions. But the current developments in the field of behavioral economics show that both the behavior of an individual and the behavior of an enterprise in a market environment may have irrational character. Depending on how relevant the behavior is to changes in the external environment, requirements of the current situation or expectations can be characterized as adequate or inadequate. The level of adequacy of economic behavior of an enterprise can be influenced both by internal and external factors. For instance, inadequate behavior may occur due to an extremely rapid change in the environment and limited initial information about such changes, or due to lack of competence level of decision makers. In the conflict resolution several types of behavior are distinguished depending on the type of response to the change of external circumstances: adaptive, maladaptive, and counter-adaptive. The economic behavior of an enterprise can also have adaptive, maladaptive or counter-adaptive characteristics.

Adaptive economic behavior of an enterprise provides for the adaptation to new conditions of functioning, certain internal changes due to external ones. In this case, adaptive behavior can be of the following types:

- Proactive adaptive behavior;
- Compulsive adaptive behavior.

Proactive adaptive economic behavior of an enterprise is a set of targeted active actions to meet growing needs and achieve progressive goals using the identified new opportunities.

Compulsive adaptive economic behavior of an enterprise is focused on maintaining the existing or reduced competitive position using unusual means, methods and tools under the pressure of changes in the external functioning environment.

The maladaptive type of economic behavior manifests itself through a refusal to adapt to coercive circumstances, postponing decision-making due to incomplete information, or in hopes of returning pre-conditions for functioning, due to the lack of clear goals and motives for action [5].

Counter-adaptive or antagonistic economic behavior of an enterprise is expressed in its readiness to protect its own corporate interests, values and traditions in the most adverse circumstances, even by means of intensifying conflicts and waging an uncompromising struggle.

Depending on the type of adaptation to the environment, the economic behavior of the enterprise can be either conformal or deviant.

Conformal behavior is a set of behavior and actions aimed at achieving success, measured according to generally accepted criteria, with help of means, consistent with existing norms, rules, and traditions.

If the individual is being supportive of the goals adopted by society, but does not have the necessary conditions for achieving them, he resorts to various innovations.

The generally accepted goal of any commercial enterprise is, as noted above, profit maximization. If it is not possible for the economic subject to maximize profits by traditional means, then it is forced to introduce innovations.

However, the more innovative the activity of an enterprise is, the more susceptible it is to changes and internal transformation, the more deviant will be its behavior, the more unconventional management decisions will be made.

Deviant economic behavior is characterized by departing from long-established stereotypes when making management decisions, also from generally accepted norms, traditional algorithms and proven scenarios.

Deviant behavior in turn can be constructive or destructive. The result of constructive deviant economic behavior is an increase in competitive status by obtaining certain competitive advantages through innovative management approaches, innovative products or other results of creative, non-standard solutions.

As a result of destructive deviant economic behavior, an enterprise can receive both direct economic losses and also for example, reputational or image losses.

Deviant economic behavior, despite its constructive or destructive nature, is not illegal and does not go against current legislation. However, still there are varieties of deviant behavior, not only delinquent, but also criminal behavior.

Delinquent behavior is a set of actions that are not approved by law, but are not punished, because they do not violate clearly defined rules and regulations. For example, tax minimization by legal means is not a reason for administrative or criminal prosecution, but cannot be approved from the view of compliance with the principles of business social responsibility.

Ritualism is not a full-fledged deviation and contains certain features of conformism. Ritualism in the economic behavior of an enterprise is characterized either by a rejection of the goals of economic (commercial) success, or by a significant decrease in economic expectations, although at the same time by observing accepted behavior norms and standards. For such business entities, there are two alternatives: either continue to adhere to standard scenarios and traditional actions and refuse to achieve the goal of economic success, or decide on innovations in order to achieve these goals.

Retreatism is characterized not only as a rejection of socially approved goals, but also accepted norms of behavior. An example of manifestation of retreatism, regarding the economic behavior of an enterprise, could be a rejection of economic goals and traditional methods of achieving them in order to achieve, for instance, political goals. Also in this case it is impossible to speak about economic behavior of a business entity as a result of leveling one of its main features - the goal of economic result maximization.

This form of adaptation to change, like insurgency (revolutionism), is characterized by the rejection of goals and norms, approved by the society, and the proposal of new goals and norms and the struggle for their approval.

Depending on the sphere of economic activity, we can distinguish commercial,

distributive (distribution), production and consumer behavior [6].

Commercial behavior is a set of behavior and actions to ensure the movement of economic goods through market channels, taking into account their valuable relationship with each other.

Distributive (distributional) behavior is a set of actions, mechanisms and methods of redistributing economic resources among consumers. Distributive behavior includes a variety of options for access to economic resources, the right to control them and receive benefits from their treatment.

Production behavior combines a wide range of different actions in certain organizational forms related to the combinations variability and the transformation of economic resources into certain benefits for the purpose of making a profit. V. Verkhovina considers the main production form of behavior – the labor behavior connected to the professional capabilities, interests and content of the work activities of individuals and their associations.

Consumer behavior of an enterprise is a set of actions whose purpose is to obtain economic benefits from commodity circulation and to use their beneficial properties to satisfy their own economic needs in the process of economic activity [6].

Classification types of economic behavior for the business entities, which were characterized above, are systematized in fig. 1.

The clarification of the essence of the concept “economic behavior of an enterprise” and the classification of its types contribute to a more conscious approach to the mechanism development for managing the enterprise economic behavior in conditions of a high degree of variability in the external and internal environment ,if the enterprise is considered as an open economic system.

The economic conditions of domestic enterprises are characterized by a high level of complexity, turbulence and uncertainty. They significantly complicate and diversify the task of the management of business entities to ensure successful and efficient operation, competitiveness and sustainability in a strategic perspective.

The enterprise is essentially an open socio-economic system, which is constantly in interaction with the elements of the functioning (operating) environment. The type of interaction with the external environment results in the type of enterprise economic behavior as a reaction to changes in the operating conditions (table 1).

Features of the enterprise’s interaction with environmental factors are not limited to direct interrelations, but are characterized by a significantly higher level of complexity, interdependence and subordination, which greatly complicates the algorithm of economic behavior management.

Identification, characterization, analysis and consideration of environmental factors in the process of managing the economic behavior of an enterprise take on particular importance, actualizing issues related to ensuring an adequate response of the enterprise to changes in the functioning environment.

The implementation of an adequate economic behavior requires the formation of an appropriate mechanism that will allow systematizing and ensuring the

introduction into practice of its individual components and adaptive behavior as a paradigm of enterprise management under the existing economic conditions in general.

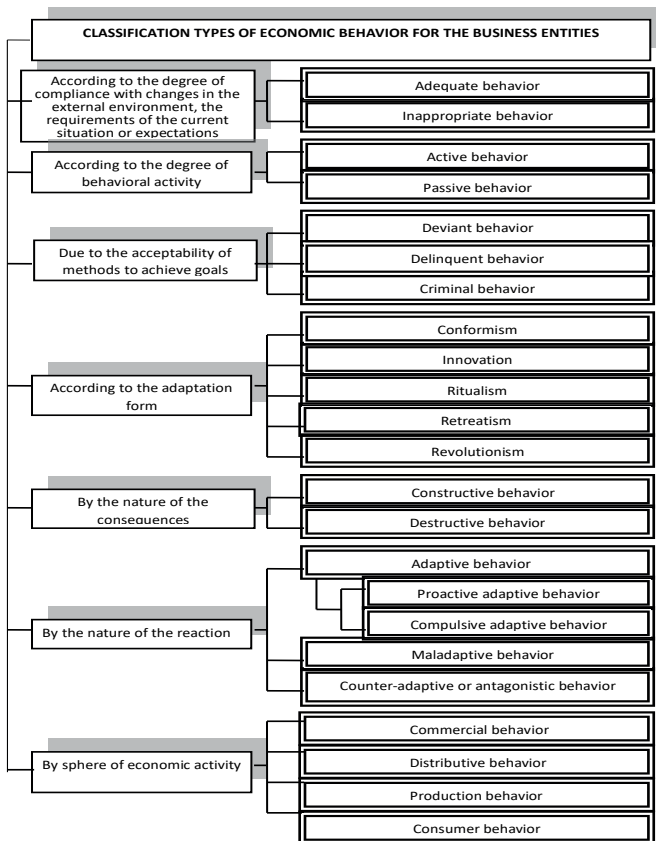


Fig. 1 Classification of types of economic behavior of business entities [authorized]

The mechanism for managing the economic behavior of an enterprise includes three interconnected blocks:

- 1) the rationale for economic behavior;
- 2) economic behavior implementation;
- 3) evaluation of the results and consequences of economic behavior.

In each block, respectively, there are different processes aimed at the formation of the desired (optimal) state of the management object and the achievement of the objectives of economic impacts.

Types of economic behavior of the enterprise depending on the types of interaction with the external environment (developed on the basis of [7])

Type of interaction of the enterprise with the external environment	External environment	Economic entity (enterprise)	Characteristics of the economic behavior of the enterprise
Inactive	Changing	Does not change	An enterprise takes a passive position of an "observer" for external changes without adapting to new conditions, and the activity of such an enterprise is under great threat - MALADAPTIVE BEHAVIOR
Reactive	Changing first	Changes with a delay	The company does not respond to changes in the external environment immediately, but begins to adapt to them after some time - ADAPTIVE REACTIVE BEHAVIOR
Proactive	Changes under the influence of the subject	Initiates changes	An enterprise initiates changes in the external environment at its own peril and risk in order to create more acceptable conditions for its functioning - PREVENTIVE CONTRADAPTIVE BEHAVIOR
Interactive	Interconnected changes	Interconnected changes	The enterprise and elements of the external environment act as interrelated components of one system, influencing each other and constantly changing - ADAPTIVE BEHAVIOR

The block-block diagram of the mechanism for controlling the economic behavior of an enterprise (Fig. 2) clearly indicates the complexity of the components of the economic behavior system.

The main models of economic behavior are active, mixed and conservative. The model of active economic behavior suggests that the enterprise is ready for an economic response; its rate of passage is quite high. Economic behavior is systematic, so that it covers all subsystems of the enterprise.

The model of conservative economic behavior characterizes the passivity of a business entity with inertial behavior. The company does not carry out active steps arising in the activity; they are decided on the basis of existing traditions or are ignored.

The economic response rate is low. Response has a local character, which is, carried out at the level of individual units. Such maladaptive behavior is realized in the form of ignoring environmental changes; it is possible only under the condition of insignificant influence of environmental perturbation factors on the activity of

the enterprise.

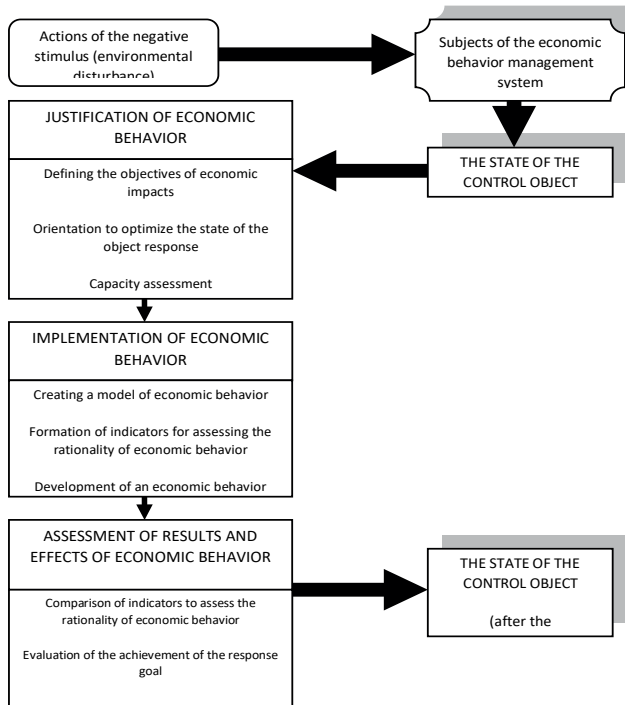


Fig. 2 Block-structure diagram of the mechanism of management of the economic behavior of the enterprise [authorized]

The model of mixed economic behavior is the choice of the economic response type depending on the intensity and nature of the environmental factor influence. The rate of response is lower than with active behavior; the economic behavior is more localized [8].

Depending on the type of negative impacts identified in the activities of the enterprise, management should determine the types of response that must be applied during the implementation of the economic behavior of the enterprise. It is necessary to take into account: the degree of damage to areas of activity by adverse conditions, the extent of their distribution, and the duration of the negative impact manifestation. The choice of measures of economic behavior depends on the type of interaction among the enterprise and the environment, the object of response and the type of threats.

Measures of economic behavior is a set of tools that are used to transform the object of management influence in the target state, in order to ensure the normal

functioning of the enterprise in adverse conditions.

Measures of economic behavior in enterprises are determined individually, depending on the type of threat, the scope of the crisis, the object of the reactionary influence and the goal of the economic response.

For the successful implementation of the economic behavior of an enterprise, on the one hand, a clear, and on the other hand, a flexible algorithm of actions is necessary, the formation of which must take into account the regional and sectorial specifics of the enterprise.

The economic behavior of an enterprise directly depends on the size of its economic potential. The behavior of large, medium and small enterprises will be different due to the fact that they have different prerequisites for this. However, at the same time the economic potential of the enterprise itself is the result of its economic behavior in previous periods [1].

If the economic behavior of an enterprise is rational and effective, then its economic potential will grow, affecting future economic behavior, and not only the ability to adapt to changes in the environment, but also the ability to predict its further development becomes significant, so that we can take advantage of the potential that the company has in a more effective way.

In the process of realization of economic behavior, target installations may undergo changes depending on external condition modifications, the quality of solving certain problems in the process of implementing the algorithm of economic behavior. Any management model is established for a long period, during which the organization can temporarily change the tactics of its economic behavior, which means to begin to act on the basis of such a behavior mechanism, which is not combined with the previously formulated strategic principles, but is based on the definition of new key success factors. With a positive change in economic conditions, the enterprise returns to the initially developed economic behavior, and it may undergo some modifications.

One of the most significant issues is the problem for the enterprise to adapt its activities to environmental conditions, the dynamism of which is high and not always predictable. At the enterprise level, this issue is transformed into a problem of rational economic behavior. At the same time, it is necessary to understand that the indicators characterizing the result of economic behavior and, therefore, reflect the effectiveness of the mechanism for economic behavior management can be different. This means that there is no need to establish in advance any particular indicator or their established set. In practice, the choice of an indicator depends on the task or the problem being solved, and also reflects the specifics of the enterprise itself, the specifics of its activity, allows abstracting the theory from specific indicators of managing economic behavior and directly considering and calculating them in practice.

An important element in the management of the economic behavior of enterprises is the evaluation of the effectiveness and management decisions quality

in the process of varying changes in the model of economic behavior under the external or internal factor influence. Such an assessment is, on the one hand, a tool for identifying the existing state of an enterprise, on the other - the basis for making reasonable management decisions based on the economic behavior of an enterprise in the future [9, 10, 11].

As indicators of the rationality of the enterprise economic behavior, it is advisable to use indicators of their economic activity results, which is a consequence of their economic behavior.

The criteria for rationality of economic behavior are individual in the specific conditions of a particular enterprise, reflecting its individual preferences, its potential capacity, as well as previous experience of the enterprise, especially its interaction with the environment.

Thus, management of economic behavior should be carried out as a set of actions, mechanisms and means within a certain model of economic behavior, which will be the most appropriate for the conditions of activity of a particular industrial enterprise.

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MODEL OF INTERDEPENDENT SYSTEM «COMPETITIVENESS – ECONOMIC SECURITY»

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In the context of globalization changes, an important strategic direction of development in the field of public administration is the solution of theoretical and methodological problems of increasing the competitiveness of the national economy. This is associated with a combination of achieving two major goals: on the one hand, improving the functioning of the entire economic system of the country, on the other – ensuring its national security [3]. In particular, Gelvanovskiy M. I., Rozhkov K. L., N. I Scriabin define security as a basic condition for the development of competitiveness and note that where there is competition, the problem of economic security will certainly arise [3. pp. 21-23].

The security system performs two main functions - interfering from the loss of competitive advantages and blocking the transition of these advantages to a competitor.

It is especially important to take into account the safety factor when assessing competitiveness at the macro level, since there is practically no single legal space between countries.

Senchagova V.K. defined competitiveness as a mechanism for ensuring economic security: "... competitiveness is the most important factor in national economic security strategy; economic security and competitiveness are characteristics of the national economic complex and its components that are in constant interaction ...». However, if competitiveness is both a goal and an indicator of the degree of development of the national economic complex and its components, then economic security is a condition for its existence and development [7].

Recently, in the scientific literature there have been separate publications devoted to the analysis of the relationship between the concepts of «competitiveness - security». So, Mingaleva J. A., Gershanok G. A. in her work reveal the complex of interrelations «innovation - competitiveness - economic security - sustainable development». They come to the conclusion: «... the logic of the socio-economic development of the world economic system of recent years requires greater attention to the entire chain of interconnection, including all links and areas of interaction, as well as the possible negative effects of each of them on the entire system of interrelations and sustainability of development as a whole» [5. p. 72].

Economic security is a dynamic institution that, using its economic and political properties in the market economic system, performs the functions of ensuring effective economic activities of all departments and subsystems, the functions of forming and maintaining appropriate competitiveness and the functions of protecting economic interests [6, p. 45].

Thus, there is recognition of the relationship between security and competitiveness of the economy, but there is no holistic view of it, which can be realized through the formation of interdependent systems «competitiveness - economic security» based on the factor approach, since factors are the causes, driving forces economic process and the result of this process. The more developed the factors determining national competitiveness, the more stable and viable the country's economy is in the face of emerging external and internal threats.

Numerous indicators characterizing competitiveness at the macro level are at the same time indicators of economic security [2].

At different levels of economic organization, market entities provide competitiveness and security in different ways. The higher the level of economic organization, the more difficult it is to improve competitiveness and ensure security. The most difficult task is to ensure economic security at the macro level, that is, at the level of the national economy.

Taking into account the close relationship between competitiveness and economic security, it should be noted that the ratio discussed above affects the factors of, respectively, competitiveness and economic security, therefore, when identifying the main factors of economic security, we can take the factors of competitiveness as a basis. All factors of economic security can be grouped according to various classification criteria. In the most general form, the factors affecting economic security can be divided into external and internal.

The most acceptable situation, when the micro and meso-level factors are at the same time the criteria of competitiveness and economic security, creates a high competitiveness of the national economic complex and its constituent elements, which forms a sufficient level of economic security.

Achievements of the positive dynamics of the economic system as a whole (macroeconomic system) and its individual lower-order subsystems (meso- and microeconomic subsystems) are possible with an economic development model

based on the interaction of the key parameters «competitiveness – economic security» at various hierarchical levels of the economic system (micro-level, meso-level, macro-level) taking into account the influence of factors (Fig. 1).

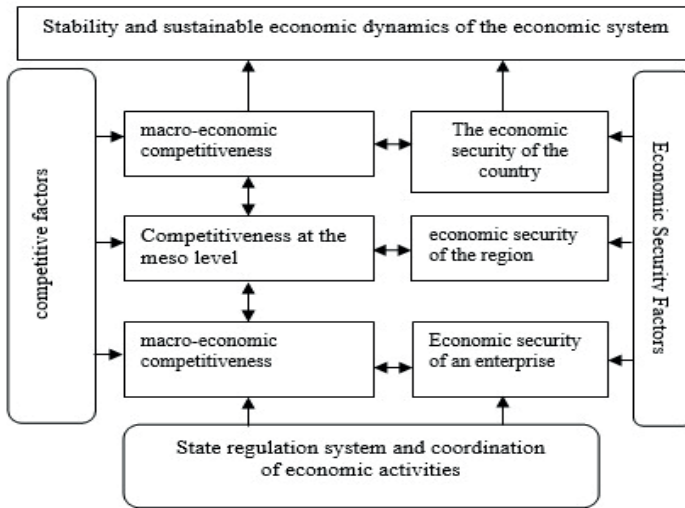


Fig. 1. Model of interdependent system «competitiveness - economic security» [developed on the basis of 2, 4, 9]

In the context of the globalization of the world economy, the country’s accession to the international integration associations forms a high level of the state economic security management system, including at the regional level. Within the framework of the world economic system, the protection of economic interests is determined by the level of development of the national economy, the contribution of each region to its competitiveness on the world market. Considering economic security as a multi-level system, we note that each higher level of the system should form favorable prerequisites for ensuring the security of components and functional components of a low-level economic security object.

Summarizing the characteristics of various levels of economic management, an approach to the formation of a hierarchy of a multi-level economic security management system based on individual levels with the functional components of competitiveness is proposed (Fig. 2).

As institutional units, economic security and competitiveness of the economic complex simultaneously reflect the material and material (sufficiently high level of development of productive forces, which is able to provide an important share of the natural and cost elements of the expanded reproduction of the domestic national product) and the socio-political basis (sufficiently high level of social consensus on long-term national goals that make it possible to develop and adopt state’s strategy for

social and economic development) to socioeconomic development of the state [43].

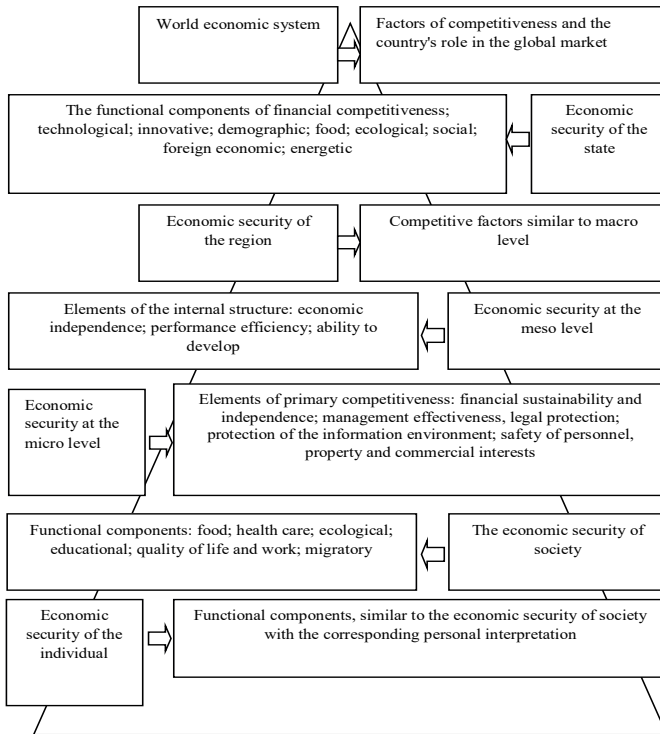


Fig. 2. The hierarchy of a multi-level economic security management system based on separate levels with functional components of competitiveness [formed by the author on the basis of 1]

As already noted, the economic security and competitiveness of a region's phenomena and categories are closely related. The state of economic security is influenced by many different competitive factors that either impede or contribute to security. In case of incorrect or untimely regulation of the influence of a factor, its transition from a relatively controlled state to a new one, destabilizing and often unpredictable, is considered as a threat to economic security.

Also, any timely or unresolved factor or factor that is not manageable, and at the same time affects the state of economic security, may become a threat. Timely intervention in the development of factors of economic security leads to the prevention of crisis situations, is the most favorable development of events.

Consequently, their essence is most fully revealed through the definition of the main blocks of problems, among which are those related to: (1) the preservation and support of the economic system; (2) the transformation of property relations;

(3) support the functioning of the economy in emergency situations; (4) economic problems of interaction with the outside world (Fig. 3).

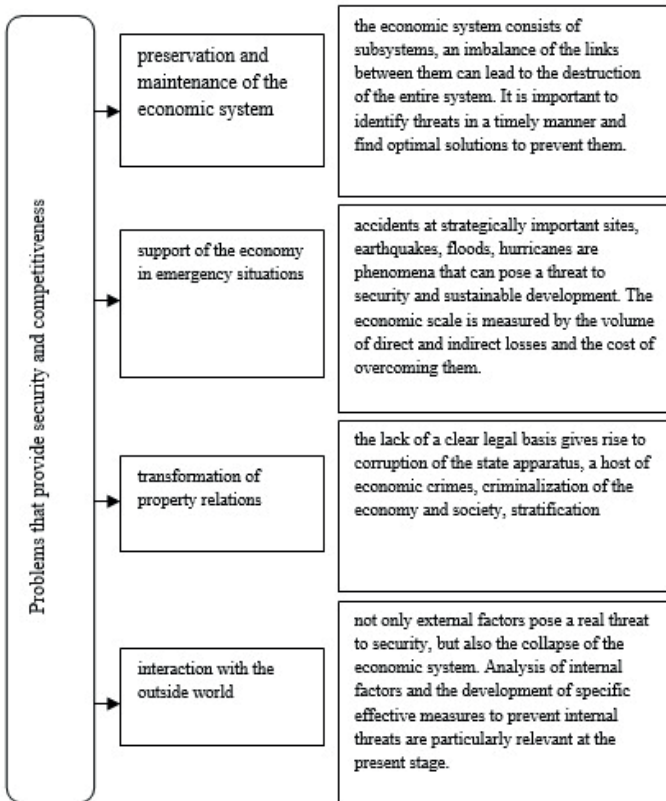


Fig. 3. Key objectives of the policy of ensuring economic security and competitiveness [formed by the author on the basis of 8, 9]

In accordance with the specified priority areas for strengthening competitiveness, taking into account the need to ensure economic security at the present stage, should be:

1. Stabilization of the economy and social sphere:

- promotion of modernization and reconstruction of capacities, the introduction of innovative, scientific and technical developments and energy saving measures;
- increasing the competitiveness of production by increasing the volume of capital investments, further spreading forms of public-private partnership in the agricultural sector;
- the formation of competitive food markets through the development of food processing enterprises;

- further work on creating a coherent and efficient system for supporting small and medium-sized businesses through the implementation of small business development programs, which will contribute to solving key business problems and improving the resource, information and financial and credit support for entrepreneurs;

- expanding interregional cooperation and strengthening the investment component of cooperation.

2. Development and diversification of production:

- support the practice of social partnership with business to attract extra-budgetary funds in the implementation of programs for the development of cultural and educational services, the development of engineering networks for energy and gas supply, transportation and information communications, and the like;

- creating a base of investment projects to attract new production technologies in order to increase the productivity of organizations;

- simplification of access of commodity producers to state support programs;

- establishing close cooperation between manufacturers of products, representatives of research institutions, machine-building complex, and the like;

3. Development of infrastructure and approximation of its quality to EU standards

- promoting the development of transport and transit traffic;

- stimulating the use of local alternative energy sources;

- the introduction of modern energy-saving technologies in the production and utilities;

- promotion of contacts between the residents of the border areas.

4. Dissemination of ideas of public-private partnership on the European model:

- creation of coordination bodies from representatives of the state, business and civil society to monitor the success of the implementation of public-private partnership projects and assist in this direction;

- development of a set of organizational, institutional and economic mechanisms to stimulate the development of public-private partnerships;

- involvement in the development of public-private partnership projects of civil society organizations, media representatives and active residents;

- development of measures to improve the skills and motivation of employees of local executive authorities and local governments engaged in the implementation of projects of public-private partnerships;

- conducting an information campaign among business representatives to inform about the benefits of public-private partnerships and create a positive image of the state as a reliable partner.

5. Enhancing cooperation in the framework of Euroregions as a factor of competitiveness growth:

- development of transport infrastructure in the direction of enhancing transit opportunities both within the framework of the Euroregions and in expanding

international communication;

- arrangement of border customs checkpoints in order to simplify border crossing procedures for residents of border areas and improve product sales within Euroregions;

- deepening interregional cooperation, simplifying product sales through the creation of a single common market for participants of Euroregions, strengthening cooperation and thereby uniting efforts in the competitive struggle for international product sales markets;

- ensuring food security through the establishment of agrarian cooperation in the framework of Euroregions;

- improving the ecological condition of the territories of Euroregions by attracting to the projects of ecological «green» investments [9].

Thus, economic security and competitiveness are in constant interaction. They are characteristics of the national economic complex and its components: competitiveness is the goal and indicator of the degree of development of the national economic complex, and economic security is the most important condition for its existence. The more developed the factors determining competitiveness, the more stable and viable the country's economy is in the face of emerging external and internal threats.

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THE ENTERPRISE ECONOMIC SECURITY: METHODOLOGICAL ASPECTS OF THE MANAGEMENT MECHANISM FORMATION

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Ensuring economic security under the conditions of the market mechanisms development in the economy and the growth of private entrepreneurship is an extremely important task of the theory of economic science and the practice of an enterprise's economic activity. At present, the most acute problem/obstacle to the sustainable functioning of enterprises is the criminalization of the society, which afflicts even the successful companies in many areas of production and services. Among other serious obstacles are the corruption of the state officials and law enforcement agencies which are liable for the fight against organized crime in the economic sphere and lack of the sufficient qualified assistance to the enterprises in creating an effective system of economic security.

The problem of ensuring economic security has always been actual both on a national scale and in a separate enterprise. This problem becomes extremely important with the transition to a market economy.

In modern conditions, the process of sustainable functioning, development, optimization and rationalization of production of nearly all national enterprises largely depends on improving the mechanisms of their economic security management.

Currently, not all managers of enterprises are ready to assess and recognize the real need for a reliable system of economic security. The difficulty lies in the peculiarities of determining the specific measures necessary to protect those or other resources. Therefore, most managers' activity is limited to the creation of security units at the enterprise and almost completely neglect organizational, technical and legal methods and means of information protection, etc.

The study of the issue provides grounding to state that the economic security of an enterprise means the assurance of such a state of functioning of an enterprise,

which involves achieving a positive socio-economic effect, obtaining high profits and meeting the needs of both consumers and employees of the enterprise [8].

The mechanism of its implementation involves certain proceeding which implies gradual, in a certain sequence or simultaneous measures. It is their totality that forms the mechanism for managing the economic security of the enterprise.

The analysis of the scientific works of various scholars-economists testifies the lack of certainty concerning the interpretation of the concept of mechanism of providing economic security of the enterprise.

Thus, L.I. Donets and N.V. Vashchenko state that this concept can be interpreted as a set of tools, the organization of their use and control to achieve a high level of economic security of the enterprise [3].

N.P. Levkovets argues that the mechanism of ensuring the economic security of the enterprise represents a set of normative legal acts, methods and measures via which the Subject interacts with the Object to create the economic security and counteract the threats [5].

I.L. Shevchenko in his studies defines the mechanism of providing the economic security of the enterprise as a set of means and methods, which in the interaction with a system of management and control ensure a high level of the security [11].

L.P. Honcharenko and Ye.S. Kutsenko arrive at the conclusion that mechanism of ensuring economic security should be considered as an effective use of the corporate resources of the enterprise to provide its economic security. The authors refer to such resources capital, personnel, information safety, technology, equipment and human resources [2].

S.P. Mishchenko examines the formation mechanism of the enterprise economic security as an interconnected totality of structures, tools, methods and proceedings, which determine the security of business [7].

The most complete and optimal way of defining the concept of «mechanism for ensuring economic security» is the interpretation of it as a set of administrative, economic, organizational, legal, and motivational ways of harmonizing the interests of the enterprise with the interests of environmental entities, which provide the amount of profits necessary for staying in the state of economic security. Taking into account the specific features of an enterprise is also very important [1].

The purpose of forming the management mechanism of an enterprise economic safety is to provide and maintain an appropriate level of economic security, which will enable the enterprise to achieve a positive socio-economic development, obtaining a financial advantage or benefits (profit) and meeting the needs of both consumers and employees of the enterprise.

Accordingly, the purpose of management of the enterprise economic security is to ensure reliable protection of the enterprise vital interests and the very foundations of its existence from internal and external threats, the security, in which the management of the enterprise has the opportunity to determine independently the trends and forms of activity necessary to ensure the production of goods and

services in the volumes that contribute to the effective functioning of the entity.

The most significant structural element of the economic security management mechanism is the systemic support of its implementation at the enterprise, which includes regulatory, informational, organizational, methodological and resource support.

The objects of management of the enterprise economic security, which represent one of the elements of the investigated mechanism, are:

- different types of activity;
- property and resources of the enterprise (financial, logistical, informational, intellectual);
- the company's personnel, shareholders, various structural divisions, services, etc.

Accordingly, the subjects of management of the enterprise economic security are those persons, units and services, which directly deal with the security.

Having considered the above mentioned definitions, we draw the conclusion that the mechanism of economic security of an enterprise should fulfill the following functions:

- analysis of the threats to the economic security of the internal and external origin;
- formation and classification of the economic interests of an enterprise;
- formation of the resource potential needed to ensure economic security;
- envisaging the perspectives and planning (tactical and strategic) of economic security;
- tactical and strategic planning of the production potency and economic development of the enterprise;
- functional analysis of the enterprise economic security level;
- evaluation of the current level of economic security and diagnosing the ways of its improvement, etc.

In accordance with the suggested classification of the functions of the mechanism of economic security of an enterprise the mechanism management functions can be substantiated. Thus, the functions of the management of the economic security of an enterprise are as follows: planning (working out a strategic plan for ensuring the economic safety of the enterprise), organization (use of economic instruments for purposeful influence on the object), motivation (stimulating the ambitions to achieve the goals), control and regulation (comparison of the real state of things with the specified goals and evaluation of the comparison results aimed at the development of corrective measures necessary for elimination of all the shortcomings, deviations and failures detected in the process of control).

For the most part, at any enterprise, regardless of its size or sphere of activity, there are always threats for development coming from the outside or occurring within the enterprise. It is the system of economic security that protects the company from external and internal threats, reliably preserves and effectively utilizes its material

and financial potential [9].

Threats to the economic security of the enterprise may be the potential or real events, related either to the objective natural and technogenic factors or illegal actions of the individuals or legal entities. These actions violate the state of the business entity security and may result in the termination of the enterprise activities or cause serious economic and other losses [4].

The shortcomings revealed in the management system of the economic security necessitate clarification of certain principles of the concept, the compliance with which will provide a solid basis for the improvement of the economic security management functioning in general.

The management of the company's economic security is based on certain principles (general and specific), which are the initial theoretical provisions and rules of market activity [9].

The general principles of the economic security management of an enterprise include the principles of validity, timeliness, coordination, systemicity and comprehensiveness, flexibility and adaptation, legality, economic feasibility, purposefulness and comparability.

The specific principles of economic security management include the following ones: differentiation, variability, specialization, adequacy, continuity, resource saving, full accountability, convergence, acceptable risk, competence, efficiency and progressivity.

The main tasks of managing economic security of any economic entity are:

- protection of legitimate rights and interests of the enterprise and its employees;
- collection, analysis and processing of data and forecasting the developmental activities;
- careful study of partners, clients, competitors, applicants for work;
- anticipatory detection of possible threats to the enterprise and its employees from the external environment;
- preventing penetration of the economic intelligence structures of the competitors into the enterprise economic activities, including organized crime and individuals with unlawful intentions;
- detection, prevention and cessation of the possible illegal and other harmful activities of the enterprise employees threatening its security;
- counteracting technical penetration with criminal purposes;
- protection of the employees of the enterprise from violent encroachments;
- ensuring the preservation of the material values and information constituting the commercial secret of the enterprise;
- obtaining the necessary information to make the most appropriate management decisions;
- formation of a positive image of the company among the population and business partners, which contributes to the implementation of the plans of economic activity and facilitates the achievement of the goals;

- physical and technical protection of buildings, structures, territories and vehicles of the enterprise;
- compensation for the material and moral damage caused by the illegal actions of the enterprise administration and individuals;
- control over the efficiency of the company's security system operation in general and the improvement of its elements.

The main functional elements of the mechanism ensuring the economic security of the enterprise and its stable, sustainable development are labor, material, financial, intellectual and information resources. The result of the dependable economic security of an enterprise is the effectiveness of its functioning, profitability of the financial and economic activity meeting the needs of the consumers [9].

In view of this, the main functional components (directions) of the company's economic security are the financial, intellectual, personnel, technological, legal, informational, environmental, power, market and interface components.

Yu.A. Loktionova highlights the following elements of the mechanism of ensuring economic security as the most important ones [6]:

- detection of the real and prediction of the potential dangers and threats;
- finding ways to prevent, mitigate or eliminate the consequences of their impact;
- finding the forces and means necessary to ensure the security of the enterprise;
- organization of the interaction with law enforcement and controlling bodies for the purpose of prevention and termination of the offenses against the interests of the enterprise;
- creating the enterprise economic security service.

Thus, only under the condition of integration and proper organization of all the described above components of the economic security system the management mechanism of the enterprise economic security starts working. The main goal of this management mechanism is the effective functioning of the enterprise in general.

Appropriately, effective functioning of the management mechanism of the enterprise economic security will ensure a well-established process of resources preservation, access to the market information, minimization of costs and production of high quality products, increase in the level of the workers mastery and the production profits in general. The utilization of the advanced security systems and security facilities increases the enterprise economic security [10].

Thereby, the process of ensuring the economic security of the enterprise is considered as a process of implementing its functional components (the comprehensive use of all means of protecting the structural elements of the management system at every stage of activity). The aim of this process is preventing possible losses and achieving the maximum level of economic security. The greatest effect is achieved when all the resources, methods and measures function together in one single system, protecting the economic interests for the sake of achieving the economic and social goals of the enterprise.

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SUSTAINABLE AGRICULTURE DEVELOPMENT OF UKRAINE IN THE CONTEXT OF ECONOMIC, ENVIRONMENTAL AND FOOD SECURITY

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One of the global challenges of human society at the beginning of the 21st century was the elimination of the threat of famine caused by a significant increase in the population of the planet. On this basis, agriculture of any country has become a strategically important branch of the national economy. Agricultural products are always liquid goods, as they form the basis of the food security of the state [24].

Effective agricultural development is possible only if the provisions of the concept of sustainable development are observed. This concept is becoming widespread as one of the significant global problems of humanity, which has interdisciplinary nature and is considered in many aspects and perspectives. First of all, it deals with solving of economic, social and environmental problems.

The problem of sustainable development of agriculture and food production is particularly urgent for Ukraine. To solve the food problem, it is necessary to increase the efficiency of agricultural production, which is achieved through the introduction of modern agrotechnics, high-yielding crops, but first of all – the improvement of the management system.

The essence of the notions “development” and “sustainable development” was and is studied by many scholars and researchers such as J. Schumpeter [26], L.H. Melnyk [10], V.M. Trehobchuk [20], V.A. Baranovskyi [2], A. V. Lisovyi [9], O. Neveliev [11], V.P. Kukhar [8] and many others. However, despite a significant number of scientific works on a given problem, there are a plenty of problems that should be studied.

The main approaches to the interpretation of the notion “development” are given in the Table 1.

Until now, in the academic community, there has been a discussion concerning exactly what kind of development should be considered as sustainable one. Most scholars think that development can be considered as sustainable only if there is an equilibrium between the various factors that determine the general standard of living. In addition, the cornerstone of sustainability of development is that the current generation has the responsibility to coming generations to leave sufficient supplies of social, natural and economic resources so that they can provide for themselves

such a level of well-being that is not lower than the one we have now. Thus, the conception of sustainable development has the fundamental task of combining dynamic economic development with the provision of the same opportunities for each member of society through increased resource efficiency and the elimination of the dependence between economic growth and environmental pollution [9].

Table 1

Interpretations of the notion “development”

Interpretation	Authors, source
Development is an irreversible, directed, natural change of material and ideal objects.	Philosophical Encyclopedia Dictionary [22]
Development is an irreversible, directed, natural change of the system on the basis of the implementation of internally inherent mechanisms of self-organization.	L.H. Melnyk [10]
Development is only the changes in the economic cycle that the economy generates itself, that is, only the casual changes of the “left to its own devices” national economy, the movement of which is not driven by external impulses.	J. Schumpeter [26]
Development is a process in which the possibilities and desires of individuals to meet their desires and needs of other people increase. It is more about how much a person or organization can do than what they already own, what economic status or level has been reached by them till a certain period of their existence.	Organization, development of production at the enterprise [12]

In scientific literature, in addition to the term “sustainable development”, the terms “balanced development”, “coordinated development”, “harmonious development” and others are used [4]. The main approaches to the interpretation of the notion “sustainable development” are given in table 2.

Sustainable development of rural areas should be considered as a process of harmonious development of rural residents through the creation of appropriate social conditions, ensuring the possibility of economic growth without damage to the environment. Such development determines the priority of ecology over economy, satisfaction of human material and spiritual needs. Ensuring sustainable agricultural development implies a coherent and balanced coexistence of environmental, economic and social spheres [4].

We think it is reasonable, first of all, to pay attention to the factors hampering the sustainable development of agriculture in Ukraine at this stage, in particular:

- the measures of state support and agricultural production in Ukraine are not financed properly;
- the creation of formally identical but not equal terms of activity for agricultural enterprises of different size has led to uneven development of various forms of economy management;
- the insufficient state support of small forms of economy management in rural areas;

- a low level of application of technical and technological achievements, wear of material and technical tools, insufficiently deep understanding of the meaning of quality as an integral system of production and sales of products;
- low salaries of employees in the business;
- the lack of proper motivation for workers in the agrarian sector;
- the lack of proper conditions for the life and work of rural residents;
- the imperfect credit and insurance system;
- the disparity in prices for agricultural and industrial products;
- significant losses of agricultural products due to the imperfection of the logistic component and storage conditions, as well as the infrastructure of the agricultural sector of the economy;
- low paying capacity of the population, which causes a slowdown in the development of the domestic consumption market;
- the noncompletion of the land reform;
- an insufficient level of self-organization and self-regulation of agricultural producers in formulating a common policy of protecting their interests;
- an insufficient level of investment attractiveness of the agrarian sector of the economy;
- low competitiveness of a significant part of agricultural products in foreign markets due to the slow adaptation to world food quality and safety requirements;
- military actions in the East of Ukraine, terrorist threats that have a very negative impact on the political, legal, social and economic situation in the country, pose additional risks and uncertainty to domestic producers, deter potential investors;
- the rapid deterioration in the economy of our state in general and the agroindustrial complex in particular;
- significant depreciation of the national currency and growing prices of means of production, as well as raw materials and materials, in particular agricultural machinery, spare parts, sowing material, fertilizers, plant protection products, etc.
- significant raise in prices for fuels and lubricants that are extremely necessary for agricultural producers.

A pressing problem of agriculture in Ukraine now is that, on the one hand, dynamically developing economic entities are largely lacking in skilled personnel; on the other hand, the underdeveloped infrastructure, poor living conditions create prerequisites for the growth of migration potential of rural residents and unsustainable rural development.

Sustainable development of agriculture has recently become more urgent in the policy of the countries of the European Union and the United States. The advanced European experience shows that the state policy of sustainable development requires coordination of the efforts of executive authorities, a wide range of public organizations, the “green economy” and the media. The study of sustainable development of agrarian production at the present stage is important for overcoming its crisis situation, further growth of productivity and efficiency, ensuring protection

of natural ecosystems [21].

Table 2

Definitions of the notion “sustainable development”

Interpretation	Authors, source
Sustainable development is economic growth, which effectively solves the most important problems of society's survival without depletion, degradation and pollution of the environment.	Trehobchuk V.M. [20]
Sustainable development is the development that provides a certain type of equilibrium between socio-economic and natural components of it.	Baranovskiy V.A. [2]
Sustainable development is such a direction of world economic growth in which the quality of life of citizens is ensured, which, on the one hand, is based on the modern achievements of scientific and technological progress that satisfy its current needs, but on the basis of its impact on the environment do not threaten future generations, on the other hand, quality growth is ensured on the levels of material, housing, social security, health care, environmental and personal safety.	Lisovyi A.V. [9]
Sustainable development is self-sustained development, an ideology of a reasonable and well-founded activity of a person who lives in harmony with nature and creates conditions for his/her better life and for future generations.	Kukhar V.P. [8]
Sustainable development is economically, socially and ecologically balanced development of certain territories, and urban and rural settlements (populated areas) located on them, aimed at coordinated formation and functioning of economic, social and environmental components of this development on the basis of rational use of all types of resources (natural, labour, industrial, scientific, technical, informational, etc.)	Neveliev O. [11]
Sustainable development is a system of mutually agreed managerial, economic, social, environmental measures aimed at developing a system of social relations on the basis of trust, partnership, solidarity, consensus, ethical values, safe environment, national sources of spirituality.	Strategy of sustainable development of Ukraine [18]
Sustainable development is the development that satisfies the needs of the present time without compromising the ability of future generations to satisfy their own needs.	Popova O.L. [16].

The model of sustainable development chosen by Ukraine provides a harmonious combination of an ever-growing economy with a minimal impact on the environment. However, a great number of both socio-economic and environmental issues still remain unresolved.

We are considering several groups of factors influencing the sustainable development of agriculture in Ukraine. Within environmental factors there will be the provision of the environmental protection and environmental security as a result of maintaining ecological balance in agrarian regions and throughout the country; the improvement of the environmental protection system in the regions; the introduction of ecologically harmonious agriculture.

Within quality factors it is planned to accelerate the process of implementation of European and international standards of safety and quality of products, as well

as to provide the state support to producers in obtaining quality certificates for entrance to foreign markets.

The signing of the Association Agreement between Ukraine and the European Union (the political part of March 21, 2014, the economic part of June 27, 2014) reveals new horizons to domestic producers, and at the same time, it has new challenges. On the one hand, Ukraine is opening the prospects of gradual development of the EU market by domestic companies, raising the level of quality, safety, environmental characteristics of Ukrainian agricultural products, improving the condition of the food security of the country. On the other hand, the requirements for the quality of domestic agricultural products are raising. The activities of enterprises of the agrarian sector of the economy should increasingly meet the European and global requirements. Potential entrance to new markets necessitates to increase the competitiveness of domestic producers.

Within regional factors there will be functional compatibility of various activities in a certain territory; the improvement of resource factors, factors of location, the improvement of conditions of development, consideration of the climatic conditions.

Such a group of factors as organizational and management ones consists of a subgroup of factors of lower order. Thus, the subgroup “development of rural areas” provides the development of local self-government for the formation of socially organized and responsible civil society in rural areas, increasing the attractiveness of living of the population in rural areas, improving the competitiveness of rural areas, improving information support for rural residents, a flexible response of territorial authorities regarding identification of local opportunities, satisfaction of needs, interests and expectations of inhabitants.

The subgroup of macroeconomic factors involves ensuring macroeconomic stability, increasing the gross domestic product, ensuring economic growth in agriculture.

And, of course, the influence of the state is always essential. The state should ensure transition to sustainable agriculture and sustainable development of rural areas, as well as accelerate the process of implementation of land reform.

As O. O. Hutorova points out, for Ukraine, where the level of urbanization is one of the lowest in Europe, and the share of agricultural production in the structure of the GDP of the state is the highest among the European countries, the policy of rural development should be one of the priorities of the state regional policy [6].

The situation has made progress, as at present, the administrative-territorial reform is being implemented in Ukraine, the result of which is the creation of new united territorial communities and the formation of local self-government bodies. This reform is an integral part of the decentralization of power in Ukraine and aims at ensuring the effective enjoyment of citizens' rights, the provision of adequate public services, and the expansion of rights and power of local communities. The main idea of the administrative-territorial reform is the strengthening of local self-government. The most important advantage for rural development is the transition

to a bottom-up development policy and not vice versa. Enhancing the very potential of rural residents will facilitate their inclusion in development processes that can be initiated from above. That is, the overall strategy will be outlined from above, however, a lot will depend on the grass-roots level. It is expected that as a result of the reform, full-fledged local self-government will emerge in Ukraine, which, as the experience of neighbouring European states shows, is a prerequisite for the successful development of the state as a whole [5].

The first priority task in the formation of the current state policy for the development of rural areas should be to develop a well-grounded and adequate (in accordance with the current conditions and challenges) real rural development program and its adoption at the highest state level. The main issues of such a program should be defined: legislative and legal consolidation of the status of rural areas (as an object of regulation); determination of the economic base of their development; formation of active state support of agriculture on the basis of reduction of tax pressure on subjects of this activity; creation of an effective system of lending and insurance of their activities; an administrative and territorial reform; organization and formation of the land market; development of social and institutional infrastructure of the village, etc. [6]. To achieve the sustainable development of Ukrainian agriculture, it is necessary to improve rather than destroy the interconnections between ecosystems. The result of such actions will be an increase in quantitative and qualitative service flows from the resource base of agriculture, that is, the mutually beneficial use of resources by nature and man. In addition, the conservation and restoration of a resource can be achieved through the introduction and monitoring of the efficient use (consumption) of renewable and non-renewable resources, the promotion of biodiversity development, the optimal use of land resources and the extension of closed-loop production systems [15].

Thus, to minimize the impact of negative factors on the sustainable development of Ukrainian agriculture, efforts should be made to increase the living standards of the rural population, improve the efficiency of agricultural production, and, at the same time, its ecologization, and enhance the role of the state in solving problems.

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ECONOMIC SECURITY OF ENTERPRISES: THE ESSENCE, FACTORS OF INFLUENCE, AND METHODS OF PROTECTION

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Under modern crisis conditions of the state economy, the economic subjects have to adapt to the factors of political and social-economic instability and look for adequate decisions of the most complicated problems and ways to decrease the threats of their functioning. At present, the questions of ensuring economic security are the most important for Ukrainian enterprises; the problem of creating and implementing the systems of economic security arises, the security, which is capable to create the conditions for lowering the level of threats for enterprises'

activities.

The problems of analyzing and evaluating the state of economic security at different levels of the economy have lately become especially important and they have been considered in the papers of many scholars, Blank I., Varnalii Z., Goracheva K., Datskiv R., Dykan V., Illiashenko S., Kyrychenko O., Kosachenko A., Nasarenko I., Prygunov P., Sosnin V., and others are among them. The main problems, which are investigated in the papers of these scholars are: complex developing of theoretical, methodological and applied questions of ensuring the economic security of enterprises based on theoretical substantiation of the mechanism of economic security and recommendations as to its implementation.

The aim of the research is generalizing the notion of economic security of economic subjects, determining the main properties of economic security and the factors, influencing the economic security inside and outside the enterprise.

The economic security of enterprise is a complex notion, including the totality of factors connected not only with the internal condition of the enterprise itself, but also with the influence of the external environment, with its subjects, with which the enterprise interacts [8]. Several approaches as to determining the essence of the notion “the economic security of enterprise” are distinguished. We are going to consider and evaluate some of them (Table 1).

In our opinion, under market conditions, ensuring the economic security of enterprise consists in timely revealing and neutralizing the threats to economic stability. It enables to state, that the economic security of enterprise is the system of protecting vitally important and legal interests of enterprise from external and internal threats in different forms, which ensures its stable development in the conditions of competition and economic risk.

In order to understand and estimate the level of enterprise’s economic security, it is necessary to reveal its determining factors in time. Volkova M.N. maintains that the factors of enterprise’s economic security are a complex of external conditions, affecting the parameters of security [2].

As a complex system, the system of economic security of the economic subject has individual peculiarities and it develops under the influence of external and internal factors.

As the research has shown, there are many factors of threats and other destructive circumstances which may affect the financial-economic results of enterprises’ activities.

The importance of different factors of influence can change with the time. Each enterprise, coming from the concrete situation must determine (forecast) the most meaningful (dangerous) factors of the external and internal impact and work out the system of measures as to their timely revealing, preventing, or weakening.

**The approaches to determining the notion of
“the economic security of enterprise”**

The author and source	The definition of the notion
Manokhina N. [4]	it is the system, which ensures the mobilization and the most optimal management of enterprise's resources aimed at ensuring its sustainable functioning, active counteraction to various negative impacts of the external environment
The aim is the efficient using of enterprise's resources, which ensures the prevention of threats, arising from the external environment, and ensuring the stable functioning of the enterprise both at the present time and in future	
The evaluation – it does not take into account internal threats	
Zubyk V., Zubyk R., Sedegov R., Abdula A. [5]	the protection of vitally important enterprise's interests from internal and external threats. This protection is organized by the administration and personnel of the enterprise by implementing several measures of legal, economic, organizational, engineer-technical, and social-psychological direction
The aim is the protection of enterprises' and personnel's property from the sources of the external and internal threats to security, prevention of breaking the law, and also the reasons and conditions causing them, and also the prevention of emergencies	
The evaluation – the vision of enterprise development prospects is lost; economic security is limited to enterprise adaptation	
Kosachenko A., Ponomariov V., Liashenko A. [7]	it is the measure of harmonizing in time and space of enterprise's economic interests with the interests of connected external environment subjects acting outside the enterprise
The aim is to harmonize economic interests with the interests of the external environment subjects: consumers, suppliers, competitors, the state and society on the whole	
The evaluation – it does not take into account the impact of internal threats, does not reflect the prospect of enterprise's development	
Sosnin V. [11]	it is the degree of security of vitally important and legal interests of the enterprise from internal and external enemies, which is manifested in different illegal forms
The aim is preventing losses in the activities of the organization as a result of elucidating or losing the information, unauthorized access to the sources of confidential information; plundering financial and material-technical means; destroying property and values; upsetting the operation of technical means in production activity, including the means of information, and also preventing the personnel incomes' decrease.	
The evaluation – it has a declarative character, as the protection of economic interests is limited to protecting the information containing commercial secret	
Yarochkin V. [12]	the organized totality of special bodies, services, means, methods, and measures, which ensure the protection of vitally important interests of personality, enterprise, the state from internal and external threats
The aim is not to allow losses in enterprise's activities by disclosing confidential information; plundering financial and material-technical means; destroying property and values; upsetting the operation of technical means of production activity, including the means of information, and also preventing the personnel incomes' decrease.	
The evaluation – the problems of enterprise's economic security are limited only to the protection of commercial secret, which testifies to the simplified approach to considering the essence of the problem. In case of such a narrow understanding economic security all the spectrum of influencing the enterprise by the external environment as a main source of security for its activities is not taken into account	

The following factors of economic security can be considered as external:

- the saturation of production factor markets (means of production, labor resources, finance): it influences pricing and changes the cost of resources;
 - the intensity of competitiveness in the branch and region: it affects the profitability of production;
 - ecology in the region: it determines the possibilities of definite production in the definite region;
 - economic policy of the state: it influences the import of raw materials and export of products, the conditions of enterprise's existence;
 - fiscal policy of the state: it directly affects the accounting policy of enterprise;
 - the position of banking system: it directly influences the activities of enterprise.
- Bankruptcy of servicing banks and hanging of money on their accounts negatively affect the financial position of enterprise;
- the level of inflation: it causes the fluctuation of wages, prices on raw materials and manufactured products, the profitability of production, and so on.

The totality of internal factors of economic security can be divided into the following levels [7]:

- the level of protecting information: it ensures the protection of the data having commercial secret;
- the level of internal management: it determines the quality of long-term, medium-term, and operative planning and affects all the production-economic activity of enterprise and its efficiency;
- product quality management: it enables to preserve the competitive advantages on the market of supply, ensuring the stable level of sales volumes and positive dynamics of financial indices;
- the strategic planning of activities and economic policy of enterprise: this factor influences the financial independence and stability. It is implemented by the strategic and current planning, determining the directions of development, economy of production, selecting resources, prognosticating optimistic and pessimistic scenarios of enterprise development, estimating changes in the external environment;
- the level of the used production technology; it ensures the competitiveness of products, the situation on the sales market, the level of production competitiveness. Outdated production technologies do not enable the enterprise to achieve the indicated parameters;
- the level of the personnel qualification: this factor is ensured by employees' diligence, the quality of selecting personnel by enterprise, quite precise assessing of the personnel's qualification, the availability of the personnel's motivation system, and educational level of executives. All the above mentioned factors enable to prevent specialists-spies from competitive firms, disclosing of commercial secret owing to a high level of discipline and self-consciousness;
- marketing: the studying of sales markets and conducting correct marketing

tactics and strategy enables to raise the volume of profit from production activity and, hence, raise the profitability and financial stability;

- innovation activities: this factor enables to use the latest developments in production technology, raising the competitiveness of products and lowering the expenses on their manufacturing;

- force-majeure circumstances: accidents, fires, explosions, interruptions in energy, water, and heat supplies, putting computers out of operation, and so on.

The level of enterprise economic security depends on the fact, how efficiently its executives can prevent internal and external threats and liquidate harmful consequences of separate negative impacts of the external and internal environment. While changing one of the corrected factors for minimizing the risk in the system of ensuring economic security, chain reaction is observed, applying to all the factors and creating new mechanisms of the factors' interaction [1, p.p. 29-30].

Logutova T.G. notes, that external and internal factors may harm the economy of enterprise in four cases: the system of enterprise economic security is made in such a way, that it cannot predict the threat of its arising; the threat appeared, but the executives, who are responsible for enterprise economic security, are not able to prevent its negative consequences; the administration of enterprise tries to solve the problem, but its actions do not lead to the positive result [9, p. 205].

General and special security measures are distinguished. The main aim of general security measures is the prevention of arising possible threats, developing and following security regulations, regulating and motivating the behavior of employees in the organization.

The main aim of special measures is ceasing the threat at any of its stages by confidential methods of work methods of actions in extraordinary situations. The employees, for whom it is their main activity, implement special security measures.

The methods of protection against threats and neutralization of their negative consequences can be presented by several directions [2, p.p. 144-145; 10, p.p. 193-199]:

- the methods of evading threats: refusing unreliable partners, suppliers; refusing to make risky decisions; lowering the share of loans in the economic turnover; declining bank credits, if the state of the financial market is unfavorable for enterprise; refusing any investment policy with the aim to support a high level of enterprise solvency, and so on;

- the methods of threat localization: distinguishing “economically dangerous” sections; consistent breaking-up of enterprise;

- the methods of transferring risks form threats: insurance; search of grants; hedging; financial guarantees, warrants; entering special terms to the texts of agreements as to decreasing personal responsibility of enterprise in case of unforeseen circumstances or those that transfer the risk to the counterparty;

- the methods of compensation: self-insurance by creating the system of reserves; developing and introducing the system of fine sanctions for enterprise

counterparties; strategic planning of activities; prognosticating foreign economic activities; monitoring social-economic and regulatory-legal base; active and purposeful marketing; fighting industrial espionage;

– the methods of diversification: diversifying the kinds of activity and economic zones; diversifying the assortment of manufactured products; diversifying the suppliers of the main groups of products, and so on;

– the methods of limitation: establishing the corresponding economic and financial standards; fixing the maximal amount of the total stock of goods at enterprise (the stock of current replenishing, seasonal storing, target predestination); establishing the maximum amount of using borrowed money in turnover (or its share in the total sum of the used capital); fixing the maximal amount of deposit payment, allocated in one commercial bank and so on [2, p.p. 144-145; 10, p.p. 193-199].

Each of the methods has its limitations when used. However, their correct uniting assists in lowering the level of the probability of appearing the threat and the level of its impact on the object of economic security. Under modern conditions minimizing the threats, insurance (external and internal), and diversification are the most effective methods of protecting from the threats and their neutralizing.

Thus, the level of enterprise economic security depends on the fact, how effectively its administration and specialists will be able to evade possible threats and liquidate harmful consequences of separate negative components of the external and internal environment. That is, it is necessary to reveal in time the kinds of threats, determine the sources of their arising; to take care beforehand about the selection of measures and methods, ensuring the detecting a risky situation and the liquidation of its reason at the very beginning. While choosing the methods and ways of neutralizing the negative impact of threats and dangers' factors, it is necessary to take into account the versatility of the components of enterprise economic security and the specifics of work in the branch in which the enterprise functions.

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ECONOMIC SECURITY OF AGRARIAN ENTERPRISE: ESSENCE, CONSTITUENTS AND FACTORS OF PROVIDING

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The level of safety is an important criterion for the effective operation of an enterprise; it is a combination of techniques and methods for neutralizing potential hazards and threats as well as creating opportunity for ensuring effective operation and economic growth in accordance with the developed strategy of the enterprise.

The conception of economic security actually arose with the advent of statehood and is part of the national interests of each country. In order to ensure the economic security of the country and determine its main constituents, first of all, it is necessary to perfectly study and analyze the concept of “economic security.”

The term “economic security” relatively recently appeared in Ukraine, although in the practice of Western economies has been widely used for a long time. As early as the 1930s, in the United States the federal committee on economic security was established and laws on economic security (The Economic Security Act of 1935) were adopted during the T. Roosevelt presidency. Since 1970s, the concept of “economic security” began to be understood as a constituent of national security, after which this concept come into common use in economically developed capitalist countries. In the USSR, the problems of economic security were mainly interpreted from the point of view of foreign economic activity or economic crime, and the strengthening of the defence system. In Ukraine the beginning of research on

“economic security” is considered the 1990s, due to the publication of the textbook “Ekonomichna bezpeka derzhavy” (Economic security of the state), authored by the academic economist N.A. Pasternak-Taranushenko [6].

The enterprise economic security is the economic condition of the enterprise that is stable to internal and external changes in its financial and economic activities and is not related to force-majeure circumstances [2].

A considerable amount of approaches to definition and interpretation of the essence of the category “enterprise economic security” allows defining alternative aspects of its application in the practical activity of the enterprise.

Lviv scientists S.I. Urba and I.O. Ivonchak, in the context of considering the genesis of the category “security” and generalizing the main theoretical approaches to the definition of the concept “economic security”, consider that the strategic approach is the most common (Fig. 1).

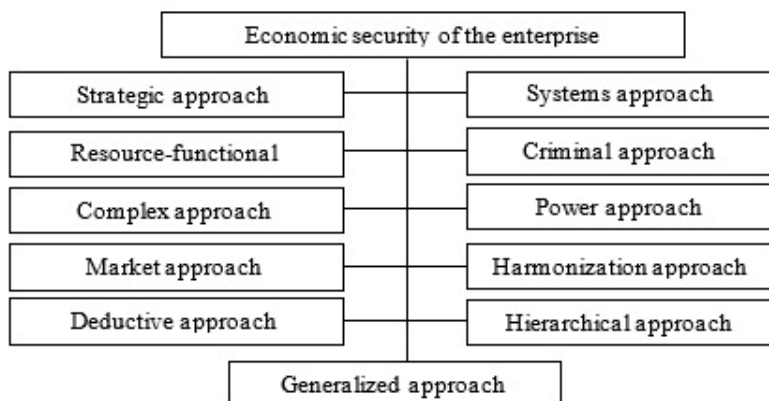


Fig.1. The main approaches to the definition of the category “economic security of entrepreneurship” [9, p. 81].

It provides for ensuring the decent level of the enterprise economic security due to the preservation and accumulation of its intellectual and human potential, the protection of information resources, technologies, capital, etc. [9, p. 81]. This approach is achieved due to combination of systems of special legal, economic, informational and technological, organizational and social measures [5, p. 275].

To summing up the above-mentioned approaches, the enterprise economic security should be viewed as the condition of the most efficient use of corporate resources, preventing the weakening of protection from existing threats or hazards and achievement of business goals in the conditions increasingly competitive and economic risk.

**Systematization of factors influencing the formation
of the enterprise economic security**

Factors	Method of influence
Factors of production	To carry out a direct impact on the activities of the enterprise; these include the territorial location of the enterprise; natural resources at its disposal; existing production infrastructure, etc.
Change in market	It is caused by scientific and technological progress, state intervention, the influence of inflation, seasonality, etc.
Supplier reliability	Pricing policy of the enterprise is based on the cost of raw materials, supplies and semi-finished products; insufficiently properly executed long-term contracts for the supply of raw materials and supplies
Competence of the enterprise management	Degree of professionalism of top management in making certain management decisions
State regulation of the enterprise activity	Creation of conditions by the state to promote production growth, protect the rights of national producers, develop and implement sound fiscal measures, etc.
Reliable protection of commercial secrets	The state's ability to guarantee the secrecy of scientific and technological developments, support of intellectual property, etc.

Source: constructed by the author on the materials [8, p. 50]

The causal relationship causes the influence of several factors on the formation of the enterprise economic security. In particular, these include the following (Tab. 1).

The enterprise economic security is provided simultaneously on several levels (Fig. 2). In particular, solution of current economic problems associated with the optimization process of using the available resources of the enterprise occurs at the operational and tactical level [8].

More ambitious decisions aimed at the formation of goals for the future enterprise activities, the choice of a strategy to achieve the goals, the development of strategy for using the main competitive advantages of the enterprise are made at a strategic level [3, p. 276].

Agriculture is one of the important sectors of the economy, the development of which contributes to strengthening the economic and state food security and increasing the material well-being of the population. This is one of the leading sectors of the economy for Ukraine. For a long time, the development of the agricultural sector of Ukraine characterized by instability. This is due to the fact that agricultural production is at the top of the economic risk. The agricultural enterprise faces a huge number of risks and threats during each production cycle (Tab. 2).

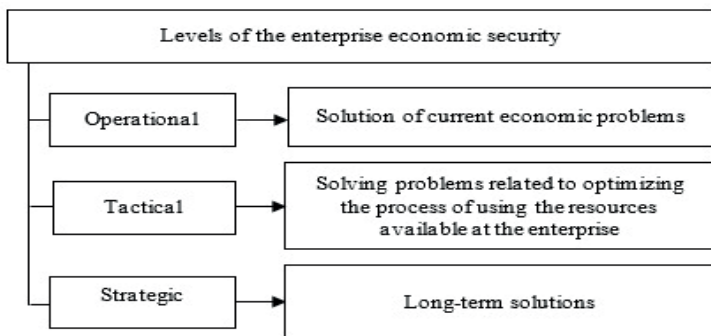


Fig. 2. Levels of the enterprise economic security [constructed by the author on the materials [8, p. 50]

Table 2

Systematization of risks of the subjects activity of agrarian business

Types of risks	Form of manifestation
Natural and climatic	Freezing, ice crust, asphyxiation, rotting, hail, hurricanes, rainfall and droughts, pests, diseases, fires, lightning, dewatering in the fields, flooding, etc.
Production	Technological, lack of equipment, plant protection products, mineral fertilizers, qualified personnel
Soil fertility decline	Violation of crop production technology
Marketing	Lack of the necessary market and transport infrastructure, a significant increase in cost due to high marketing costs, packaging
Price	Price disparity, seasonality of product sales
Financial	Unavailability of financial and credit resources, currency risk, high loan rates, operational, debt security
Legal	Property, contract and personnel management risks
Institutional	Laws and orders of the government, local authorities, the situation on the global market for agricultural products, regulatory policy, inconsistency and contradiction of state policy in the agricultural sector
Informational	Availability of information regarding the market situation, the state of the information infrastructure, lack of information about the business environment
Personnel risks	Qualification and motivation of specialists, their adaptability to the market environment conditions, level of personnel management at the enterprise

Source: constructed by the author on the materials [4]

The economic security of an agrarian enterprise is its adaptability, in which the production cycle is change protected from the external and internal environment at all production stages, the threat of the risks impact on the economic performance of the enterprise is minimized, and the requirement to disclose the potential of the

enterprise is observed [6, p. 207].

The main functional constituents of the economic security of an agricultural enterprise are: supplies and raw materials, ecological, personnel, intellectual, technical and technological, informational, institutional and legal (Fig. 3).

Agriculture is a debt capacity sector which does not normally develop without attracting additional financial resources, primarily in the form of short-term loans for the purchase of inventories to ensure an uninterrupted production process [1]. In addition, land is the main mean of production in agriculture and requires its reproduction, causes the need for investments aimed at preserving and improving soil fertility [1].

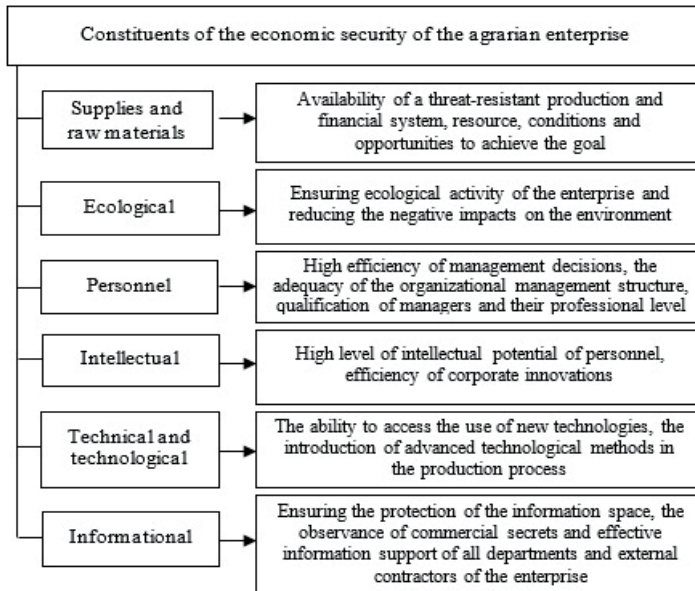


Fig. 3. Constituents of the economic security of the agrarian enterprise

Recently, humanity is getting on to the fact that all the achievements of scientific and technological progress, high production efficiency is nothing in case, when the natural and ecological efficiency, the health of the nation, the product quality decrease. Nowadays, production of high-quality environmentally friendly agricultural products should be accompanied by investments in the development of organic agriculture, which reduces the use of artificial fertilizers and increase the amount of organic matter.

In the Ukrainian agribusiness, despite a generation not just an owner or a farmer, but a “landlord”, there is still low labour capacity due to the use of labour-intensive technologies and the unmotivated ordinary employee. The remuneration rate is the

primary motivational factor in rural regions, which directly depends on the volume of investments aimed at developing the personnel potential developing of the agricultural enterprise.

The institute of family farming is still in early stage, interested in the results of its labour and the reproduction of land fertility. There is a low level of innovation in rural regions, due to unwillingness to cooperate with advisory or services.

The technical and technological constituent of the economic security of modern agrarian enterprises is characterized by the following post-crisis elements: weakness of fixed assets and infrastructure, outdated technologies, high energy intensity of the economy, etc.

The average age of material production funds is 21.7 years. The requirements for its renovation are satisfied only by 37.3 % [7]. It requires substantial investment and financial support for the development of the agricultural business, will help provide agricultural enterprises with machines for tillage, fuel, fertilizers, building materials, etc.

The domestic commodity producers are not adequately represented in international information networks, which prevents them from creating and maintaining positive image abroad, demonstrating their potential and competitive advantages [2].

The low level of political and legal stability, regulatory obstacles to the creation of a new business, the lack of subsidies and any forms of state support, bureaucracy and corruption – all of these components do not contribute to the effective development of the institutional and legal security of agricultural enterprises.

Therefore, the transition from a factor to a strategic investment model with a subsequent expansion of innovative development factors is still relevant. Also, the production and technological modernization of agricultural production is important [7].

It should be noted that various components of economic security are important for various types of business activities, therefore it is worth a balanced approach to the definition process, taking into account the type of activity of a particular enterprise.

As a conclusion, it should be noted that the enterprise economic security is a complex and multifaceted concept, as evidenced by the diversity of scientific views on interpretation of its essence, the definition of its main constituents and influence factors. In addition, economic security includes a number of measures that can ensure the sustainability and competitiveness of the enterprise. The priority tasks of ensuring a sufficient level of the enterprise economic security should include developing directions for warning and preventing threats and minimizing their negative consequences, increasing the quality and accuracy of the analytical assessment of the production consumables, focusing on the technical and technological and intellectual constituent of the enterprise economic security.

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PART 3. THE MECHANISMS OF ENSURING ECOLOGICAL, FOOD, TECHNOLOGICAL, AND ENERGY SECURITY IN THE DYNAMIC ENVIRONMENT

ORGANIC FARMING: TECHNOLOGY, MARKETING

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The world community is concerned that degradation processes of nature are increasing, the conditions of human life are deteriorating. This is due to the fact that the content of harmful substances in the air, water, soil, food often reaches critical rates [12]. Therefore the time has come when society begins to realize that environmental protection needs to be put at one level with the economy, the material conditions of life and human health. It is no coincidence that the UN stresses that in the 21st century the main tasks of humanity must be focused on the study and use of environmental and biotechnology laws [6].

In connection with this it becomes increasingly urgent to implement a wide introduction of nature protection manage, the basis of which is organic farming which ensures the preservation and enhancement of soil fertility, the production of ecologically safe food, and the conservation of the planet's biosphere [7].

As defined in the EU Council Regulation 834/2007, «organic production is an integral system of food production and management that combines the best experience, taking into account environmental preservation, biodiversity level, maintenance of natural resources, application of high standards of the proper animals keeping and the method of production, that meets certain requirements to the products got with application of substances and processes of natural origin «.

Thus, organic farming is the most modern trend in agriculture which is based on a harmonious combination of environmental protection and management, the conservation and reproduction of soil fertility, the production of environmentally safe products and raw materials that are an important factor of human health and longevity.

In essence it is a balanced farming system that resembles a natural ecosystem and is based on the maximum use of biological factors, soil fertility enhancement and agrotechnical methods of plant protection that provide ecologically, socially and economically expedient production of agricultural products.

Ukraine has almost forty years of experience in producing environmentally safe crop and livestock products and reproduction of soil fertility. This is PE «Agroecology» in Poltava region in Shishaky district. Based on the ideas, experience and research of Vasylyl Dokuchaev, Volodymyr Vernadsky, prominent agrarian Terenty Maltsev, the founder of the economy Semen Sviridonovich Antonets, Hero of Socialist Labor, Hero of Ukraine, Honorary Academician of NAAS, for the first time in the newest agrarian history of Ukraine created a unique model of the system of organic farming, a philosophical basis of which is the conceptual framework for the development of the biosphere [6].

It is based on preserving and increasing the soil fertility, obtaining environmentally safe products and preserving the biosphere.

Thus the basis of organic farming philosophy of Semen Antonets is based on the creation of agroecosystems as close as possible to natural formations. The system takes into account the basic principle of the development of the planet, since the emergence of life on Earth was ensured by two global processes, which now and in the future will support the development of the biosphere. They include photosynthesis and nitrogen fixation in all its manifestations [7]. Organic farming is submitted to the regulation of these processes to a large extent.

The leitmotif of the organic farming system is the understanding that global environmental problems are solved locally by developing technological techniques that are conducive to the existence of the biosphere.

Scientifically grounded structure of sown areas on the basis of polyculture provides biodiversity in the system of agrobiocenosis. Agronomists define such an approach as the effect of agrophytocenology. The basis of this idea and practice is the desire and the possibility of including in the crop rotation the most expedient amount of crops that form optimal conditions of plant nutrition regime and optimization of the phytosanitary state of crops [3].

Almost throughout the growing season there are flowering plants on the farm's fields that improve the conditions of the existence of local beneficial organisms (entomophages) which contributes to reducing the amount of pests and inhibits the development of pathogens of plant diseases.

Our research confirmed the decrease in the number of pests due to natural regulation of the influence of beneficial organisms. Thus, the infestation of the cereal aphids with afididae in the crops of barley with the sowings of the espresso was 46.8 - 54.2%, whereas in the crops of the same crop for intensive farming, where for the most part 3-4 crops were grown, did not exceed 18.3%.

The absence of pesticide use, the introduction of shallow soil cultivation and the botanical diversity of plants for organic farming stimulate an increase in the species composition and number of predatory turunias. We found that their number in the fields of investigated enterprises was 20% higher than in sowings of cereal grain-crops at intensive technologies. The dynamic density of predatory carbides during the years of research (2013-2015) depending on the species composition

and weather conditions for organic farming exceeded this indicator in fields with intensive technology by 32.6 - 51.2%. In this regard it becomes clear why the number of wireworms larvae and unreal wireworms before sowing corn and sunflower, the main predators of which are predatory turunias as a rule did not exceed the economic thresholds of harm which make up 3 to 5 individuals per 1 m².

According to our research the materials of studies confirm the positive impact of organic farming on determining the intensity of development of powdery mildew on winter wheat and spring barley plants when in the earing phase actual indexes did not exceed the threshold intensity of the disease, 15-20% of the affected plant tissue.

Thus the optimization of the phytosanitary state of crops for organic farming is based on the natural regulation of the influence of beneficial organisms.

According to our data the use of sederal crops and manure provides optimization of plant nutrition and the formation of a positive balance of humus due to perennial legumes, siderates, humus and unproductive fraction of the harvest. The total volume of organic matter entering the agrobiocenosis reaches 24-26 t / ha in terms of crop rotation, and 100-120 t / ha per fertilized area. As siderates sainfoin, spring vetch, vetch - cereal mixture, buckwheat, radish oil, white mustard are used (Table 1).

The materials in Table 1 indicate that the use of sederal crops (as organic fertilizers) provides the accumulation of a significant amount of nutrients that are subsequently used by crops. A large number of organic fertilizers in agriculture are provided by the livestock sector which produces more than 72,000 tons of manure per year, revealing the prospect of genuine harmonization of the «relationship» between livestock and plant production.

Table 1

Agrochemical characteristics of plants - siderates, carried out by the calculation-equivalent method

Siderate	Productivity of green mass, c / ha	Accumulated in total biomass of nutrients, kg / ha			Total kg / ha	In bales, kg / ha 1*
		N	P2O5	K2O		
Sainfoin	275	145	25	75	245	510,4
Spring vetch	250	160	75	200	435	906,3
Vetch-cereal mixture	275	120	35	80	235	489,6
White mustard	250	60	40	90	190	395,8
Oil radish	450	85	65	245	395	822,9

*. The calculation of the active substance amount in the bales was carried out on the base of their content in the complex mineral fertilizers – ammonium nitrate phosphate fertilizer.

Source: author's development.

The main requirement of shallow soil cultivation is the cutting of the root system at a depth of 4-5 cm without removing it from the soil. In this case the

microchannels created by worms and decomposing roots do not break down, the vertical orientation of the aeration pores is formed, the density decreases and the water-physical properties of the soil are improved and in combination with perennial bean grasses the plow sole is eliminated and the natural soil loosening takes place.

In the organic farming system techniques have been developed for maximizing the use of solar energy due to soil coverings with plants during almost the entire growing season. The plants of the main crops, siderates, young growth of the windfall vetch-cereal mixture, cereal crops constantly cover the soil which increases the rate of use of the falling energy of solar radiation due to the maximum activity of their photosynthetic apparatus [2].

Thus the practical significance of this thesis in the organic farming system contributes to maximizing the use of solar energy for the formation of grain and green mass yield and increasing soil fertility. This conclusion is confirmed by the statement of K.A. Timiryazev [13], that every sun ray which is not captured by the green surface of fields, meadows and forests is a lost wealth forever.

In our opinion another statement of the classics of physiology is also important for us: «From the priceless sunlight and air through green leaf plants produce energy of value.» Using the methods of bioenergetic estimation of agricultural production [1] and available experimental materials we have determined that when cultivating the spring vetch as siderate, at a yield of its green mass of 250 centners / ha, after mineralization of organic matter in the soil remains: nitrogen (N) - 160 kg, phosphorus (P) - 75 kg, potassium (K) - 200 kg. Such amount of macroelements due to photosynthesis and nitrogen fixation is formed by 1395 MJ of solar radiation energy. For the production of the same amount of macroelements active substance an industrial method requires 16493 MJ of energy.

Consequently for the cultivation of the following crops in the crop rotation the income of the macroelements due to the energy of solar radiation into the soil is less energy-consuming than the use of energy received industrially (16 493 MJ: 1395 MJ), 11,8 times.

An important link of the system is also the use of environmentally safe agrotechnical measures that restrain the development of harmful organisms through compliance with the regulations of technological measures and the principles of agrophytocenology and allelopathy, contribute to optimizing the phytosanitary state of crops. At first glance these are the known truths of agriculture but in the organic system each of these areas is filled with new measures aimed at creating an ecological situation that inhibits the development of harmful organisms and contributes to the potential productivity of cultivated plants without the use of agrochemicals.

The application of the organic farming system increases the level of soil protection against erosion which is based on two basic principles - the shallow cultivation of soil and the permanent covering of the soil with plants and their residues.

Along with the well-known methods of soil conservation [5,10] the enterprise

uses a number of new measures that are harmoniously included in the technology of field crops growing. These are the widespread use of perennial grasses, shallow soil cultivation, the presence of vegetative cover of the soil during the growing season, sowing across the slopes, leaving behind the stubble in the field after harvesting technical crops and rolls of winter wheat on the stubble across the slope to winter, bucking erosion-hazardous areas.

During the years of organic agriculture application, under the influence of system factors the content of humus, the main indicator of soil fertility and the efficiency of technologies, increased in the fields of the enterprise by 0,53-1,57%. Especially tangible process of earth creation on eroded lands, yields of which during this period almost reached the indicators in the plain fields.

At the same time, it is impossible to overestimate the role of the earthworm in increasing the soil fertility. It should be considered as a great creator of soil wealth. It is the creator of easily digestible nutrients from organic matter. Laying multi-kilometer walks in the ground worms hoe it and enrich with their secretions - coprolites (up to 100 and more t / ha). In an ecologically holistic ground its tracks are not destroyed for three years; his digged tracks and microchannels provide circulation of moisture and air in the zone of the root system creating optimal conditions for the life of cultural plants [4].

«So let's take off the hat in front of the usual worm.» These prophetic words by Charles Darwin as never before are relevant to organic farming. It sounds paradoxically but our well-being on the Earth depends heavily on worms.

In this regard our records of the number of rainworms are given in Table 2.

Table 2

**Population density of the arable layer of soil with rainworms
at different agricultural systems, pc / m.2.**

Inspection Options	Years			
	2014	2015	2016	2014-201640
Technologies of organic farming	40	28	44	37,3
Intensive technologies	5	6	5	5,3

Source: author's development

The data in table 2 indicate that at organic farming the number of rainworms is much higher which may indicate in favour of them to increase the soil fertility at this system.

Confirmation of the system efficiency are economic indicators of the enterprise. At more than 7 thousand hectares of healed land without the use of agrochemicals PE «Agroecology» annually produces 13 thousand tons of high-quality milk, 1.2 thousand tons of meat. The average yield of early grain crops in recent years was 54 c / ha. In many areas the enterprise received harvests of intensive farming level: winter wheat exceeds 70 c / ha, corn for silage - 500 c / ha, for grain -78 c / ha,

spring barley - 51 c / ha, oats - 60 c / ha, sunflower - 35 c / ha. Profitability of the field of plant growing - 42%.

An important condition for farming by the organic farming system is the presence of highly developed livestock breeding. The PE «Agroecology» is a modern branch that allows processing of grain and fodder crops growing on their own fields for valuable end products - milk and meat which increases the economic efficiency of farming. In general, the company has more than six thousand cattle heads of Ukrainian red-coloured and meat Aberdeen-Angus breeds.

Since cows are fed with eco-friendly feeds milk has high levels of quality certified as raw material for the production of dairy products for infant food.

The profitability of milk production in recent years was about 51%, beef - 48.3%.

Thus PE «Agroecology» is an enterprise with a special system of agricultural production where the implementation of the organic farming system contributes to solving agronomic, livestock, economic, social and other problems and provides sustainable development of the enterprise.

At PE «Agroecology» Ukraine has a unique successful long-term organic production experience which proves that the organic farming system in the context of improving soil fertility allows cultivating yields at the level of intensive technologies but the most important thing is to obtain products that are environmentally safe for human health, proves that everyone can solve the global environmental problem of preserving the planet locally at the own farm.

According to the monitoring of marketing research materials the business climate in the agro-industrial complex of Ukraine is stably improving. This is due to the fact that the production and sale of organic products is gaining momentum.

This trend is becoming of particular importance in connection with global climate change, an increase in the role of moisture as a limiting factor in harvesting. In this regard specialization in organic production is the optimal reaction of the agro-industrial complex to drying the soil because this system allows more efficient accumulation and use of moisture due to the shallow tillage of soil and the higher content of organic matter which makes the soil more puffy which increases its ability to hold moisture.

Consequently it is necessary to expand the area of organic farming as one of the important factors in confronting the growing shortage of water supply in agriculture.

In this regard the stereotypes of the assessment of the effectiveness of technologies are changing. And what does economic efficiency of technologies mean? It is an opportunity to produce more products, to get more profit per hectare on the same moisture without increasing its consumption. Organic farming allows you to do this.

If a priori due to lack of moisture it can not be obtained a high yield then the use of mineral fertilizers, herbicides, trace elements or growth substances does not increase the yield. But when the products are certified as organic there is an opportunity to receive an additional 30-50% of the funds from its implementation.

Thus for organic farming there is an opportunity to increase the profitability of production at least 1.5 times due to the higher cost of organic products in conditions of acute deficiency of moisture without increasing its consumption.

In addition, due to drought organic farming brings to Ukraine forgotten or virtually unknown highly profitable, export drought-tolerant crops; Chickpeas, Lentils, Mung, Lathyrus, Spelt, Safflower, Sorghum, Millet, Beans, cultivation of which enhances the marketing potential of the agro-industrial complex.

«Put the Human on the first place - then we will have organic farming and a prosperous healthy state» – is a credo and the essence of the philosophy of organic farming. «The road of the future, the agriculture of the XXI century» is called organic production by scientists who work in this direction therefore the model of organic agriculture created on the farm is a bright page in the latest history of Ukraine and the world and is a higher level of modernization of society aimed at prosperity and sustainable development of civilization.

To solve the problem of widespread introduction of organic farming into the production is by hand for the present-day generation of Ukrainians. There is a unique experience, there are scientific developments, you need a strong desire and the decisive actions of the leaders of the nation. This problem should be placed in the rank of the state program and then all will win: the state, the nation, present and future generations of Ukrainians.

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REALIZATION OF THE CLUSTER MODEL FOR PHARMACEUTICAL DEVELOPMENT IN UKRAINE

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With strengthening of the world economies' innovative component, actualized due to influence of the Industrial Revolution 4.0, cluster formation, as a tool for ensuring their competitiveness and national security, is becoming extremely important. Cluster formations effectively facilitate economic development of any territory, region or country as a whole.

Today, the cluster economy model is implemented in almost all countries of the world; clusters operate in many (and often in innovative) economy sectors. The positive impact of clusters on the socio-economic development of countries and regions of the world has determined the relevance of their activities. Therefore, the study of the cluster model of pharmaceutical industry development in Ukraine is of great scientific and practical significance.

Survey of the of cluster formations functioning is reflected in the works of such foreign scientists as M. Porter [1-3], O. Solvel [4; 5], S. Rosenfeld [6], M. Williams [4], T. Roelandt [7], Den Gertog, G. Svan [8], M. Preveser [8], G. Kergel [9] etc.,

who examined the theoretical and methodological approaches to cluster formation, factors of their occurrence, life cycle and influence on the competitiveness of the economy of the territory within which such innovative-integrated structures arise. Among Ukrainian scientists, examining various cluster aspects, one should note M. Voynarenko [10], N. Komar [11], V. Leshchuk [12],

V. Tolkovanov [13], M. Yaroshchuk [14] etc. Z. Mnushko and O. Posylkina examined the functioning of clusters in domestic pharmacy. However, the state of functioning and prospects of the development of pharmaceutical cluster entities in Ukraine at the present stage are required, firstly, given the effectiveness of the given instrument of sustainable territory development and, secondly, as a factor for ensuring the national state security.

The urgency to create pharmaceutical regional clusters in Ukraine is due to the need for timely provision of high-quality drugs in the required volumes at an affordable price, technological lagging behind domestic pharmaceutical companies in comparison with the activities of enterprises in developed countries, the deterioration of the economic situation in the country as a whole, the creation of new workplaces, the receipt of budget funds in the region, reduction of barriers to access the market of original medicines, increase of the regions' socio-economic development effectiveness, etc.

The purpose of this study is to formulate and implement a cluster model for the pharmaceutical industry in Ukraine under the prism of the actualization of the clustering aspect in foreign countries.

Today, clustering has become widespread in developed countries. The most well-known clusters in the world operate in America, Denmark, India, Italy, Canada, China, Germany, Finland and other countries, and countries such as Hungary, France, Japan, the United Kingdom, Austria, Sweden, etc. and have considerable experience in clusters formation.

The analysis of the EU pharmaceutical sector clusterization has demonstrated that the stable economic growth of the pharmaceutical industry is ensured by creation of clusters in order to combine efforts in the development, production and market introduction of original medicines, the introduction of advanced pharmaceutical production technologies, modern organization methods, their promotion, approaches to managing stream processes, etc. In addition, the cluster should become the point of Ukrainian domestic pharmaceutical market growth, as well as increase the competitiveness of the pharmaceutical industry as a whole and its integration into the world market. The main problems hindering the creation of clusters in Ukraine are the distrust of entrepreneurs to each other, their reluctance to cooperate, imperfect state, regional and local cluster support policies and the legal framework for their functioning, financial barriers, etc.

On the basis of literary sources analysis, the definition of the regional pharmaceutical cluster (hereinafter - RFC) is formulated: RFC is an accumulation of production subjects, distribution and sale of medicines, science and education,

which provide and carry out targeted activities on the development, production and promotion of the domestic and foreign markets of competitive medicines funds on the basis of private-public partnership mechanisms. Taking into account the above, it can be stated that the national economic system is a set of branch clusters with clearly distinct spatial characteristics.

The created RFC are real opportunities for combining the competence and experience of leading pharmaceutical manufacturers, drug distributors, research institutes for the creation of original medicines, manufacturers of medical and pharmaceutical equipment, sectoral higher education institutions, as well as authorities as the coordinator of RFC development.

The economic interaction of the RFC participants is a division and redistribution of resources in the process of cooperation in order to implement its strategy and provide participants with the necessary resources; organizational - creation of an organizational structure that ensures effective interaction of participants; management - the use of RFC resources and potential to achieve synergistic effect; social - creation of the mechanism for timely provision of population with accessible medicines and the development of the region, social responsibility of the subjects of pharmaceutical activities, raising the level of population employment, increasing tax revenues to local and state budgets; legal - improvement of the regulatory and legislative framework, which is the basis for the cluster participants interaction; technological - the possibility to use modern methods and the latest technologies of production, logistics, marketing, information technology; innovative - the possibility to introduce innovations and production of original medicines; informational - timely provision of all participants with the necessary information; ecological - the impact of the subjects of pharmaceutical activities on environment and the provision of environmental and hygienic safety of the region.

State participation implies the compensation of interest on loans for the purchase of foreign high-tech equipment, exemption from value added tax and duties of a certain list of equipment, creation of favorable conditions for lending to participants of the RFC, granting tax privileges, consistent increase of investment attractiveness of the subjects of pharmaceutical activities (innovative pharmaceutical products have a significant export potential and long-term prospects for realization to ensure guaranteed return of investments), direct financial support of RFC, providing administrative procedures, providing facilities or other infrastructure components, organizing public events (fairs, trade missions, etc.), ensuring information transmission, transport links with other clusters or geographic areas.

Thus, the efforts of the government should not be aimed at improving the work of individual subjects of pharmaceutical activities, but on the development of interconnections within the cluster (between suppliers and consumers of objects and means of labor, end users and manufacturers of medicinal products, manufacturers of medicines and authorities). In addition, the state is obliged to maintain a cluster on the part of the technical regulatory bodies (creation of new information

products in the field of technical regulation, collection and analysis of data on available technical barriers, advising on quality and environmental management, facilitating the transition of the subjects of pharmaceutical activities to GkP rules); bodies of state supervision over industrial safety and labor protection (provision of certain informational materials, carrying out preventive works, passing offers on labor protection), since there is an accumulation of sub-objects with different forms of ownership without a legal entity establishment. At the first stage of RFC development, it is advisable for the government to focus its efforts on improving infrastructure and eliminating unfavorable conditions for competition, and then on eliminating obstacles to innovation and promoting foreign investment.

The algorithm of the RFC formation is as follows. At the first stage industrial, innovational and investment, educational, scientific, logistical, regulatory and financial components of the region's pharmaceutical industry potential are analyzed. On the basis of the above, at the next stage the features of clusters, the structure of the RFC and the nature of connections between its participants are determined, and the Council of the cluster is formed. At the third stage, the principles and norms of the RFC participants interaction, as well as its corporate strategy and culture are developed. The following stages define the forms of RFC financing and evaluate the efficiency of the cluster's functioning.

An important element of the scientific and methodological basis of the RFC formation is the definition of their optimal number. To do this, one need to group the RFC according to a number of indicators: the number of pharmaceutical companies, pharmacies, pharmaceutical complexes, sectoral higher education institutions or pharmacies, health facilities, landfills, waste recycling plants, industry research institutes.

Under the taxonomy method, an integrated indicator of the regions' potential pharmaceutical clustering was calculated, what in its turn characterizes the level of readiness of Ukrainian the regions to create pharmaceutical clusters (Table 1).

Under cluster analysis, the regions are combined into three zones:

I zone – regions with high potential of pharmaceutical clustering, i.e. regions that have all the conditions for clusterization;

II zone – regions with an average potential of pharmaceutical clusterization, i.e. those which have clustering conditions, but need to improve certain components (transport infrastructure, modernization of the subjects of pharmaceutical activities, etc.);

III zone – regions with a low potential for pharmaceutical clustering, i.e. those that are not ready for clusterization and require significant development of the pharmaceutical sector or other components, which will be a part of the cluster.

The maximum permissible values of the integral index of Ukrainian regions potential pharmaceutical clusterization (I_{clust}), determined for each zone by survey are:

I zone $0,651448 \leq I_{clust} < 1$;

II zone $0,327925 \leq I_{clust} < 0,651448$;
 III zone $0 \leq I_{clust} < 0,327925$.

Table 1

Integral indicator of potential pharmaceutical clusterization regions of Ukraine

Region	The value of the integral indicator of the regions' potential pharmaceutical clustering
Vinnitsia	0,298235
Volyn	0,182287
Dnipropetrovsk	0,583849
Donetsk	0,281676
Zhytomyr	0,301013
Zakarpathia	0,279394
Zaporizhzhia	0,279661
Ivano-Frankivsk	0,27476
Kyiv	0,959033
Kirovograd	0,206526
Lugansk	0,442403
Lviv	0,433704
Mykolayiv	0,20149
Odesa	0,531082
Poltava	0,350311
Rivne	0,170861
Summy	0,327925
Temopil	0,225387
Kharkiv	0,651448
Kherson	0,233453
Khmelnysk	0,217533
Cherkasy	0,23676
Chernivtsi	0,315052
Chernihiv	0,242106

The diagram of the average values of local indicators by the specified zones is demonstrated in Fig.1.

The results of the survey held suggest that the most promising regions for the implementation of pilot projects on the creation of pharmaceutical clusters in Ukraine are Kyiv and Kharkiv regions. The second place for the creation of the RFC are Dnipropetrovsk, Lviv, Odesa, Poltava and Chernivtsi regions, which is

grounded by the location of the subjects of pharmaceutical activities and other components of potential clusters.

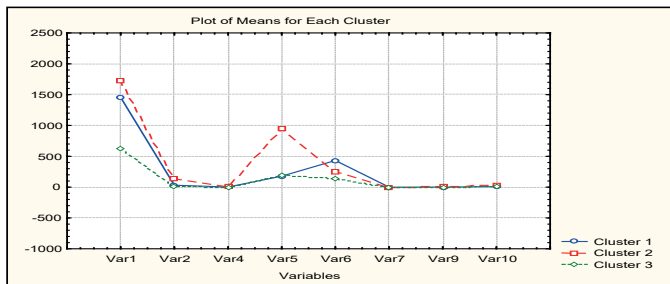


Fig.1. Schedule of average values of local indicators by the specified zones

The advantages of clustering at the regional level are the dissemination of new technologies, knowledge, pharmaceutical products, additional competitive advantages of the RFC participants due to internal specialization and standardization, minimization of costs for innovation, provision of environmental stability, reduction of the regional environmental pollution, harmonization of interests of the RFC participants, consistency of goals with partners (suppliers, consumers, intermediaries, etc.), control and coordination of flow processes, timely consumers' provision with necessary medicines at affordable price.

Thus, the development of clustering processes points to positive effects for the country's economy. This also applies to the situation on pharmaceutical market. The survey held allows to conclude that the implementation of the cluster approach contributes to optimizing the provision of medicinal products to the population at affordable price, enhancing the competitiveness of the subjects of pharmaceutical activities and transparency of relations between the cluster participants, and thus to increasing the social and economic security of the state.

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LOGISTIC MANAGEMENT OF AGRICULTURAL ENTERPRISES OF CHINA IN THE SYSTEM OF FOOD SAFETY

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After more than 40 years of development since the reform and opening up, China is now in a critical period of transformation from traditional agriculture to modern agriculture. In this process of development, the contradiction between the small production of farmers and the large market has become more and more prominent, and the problems of agriculture, rural areas and farmers have become important issues affecting the development of national economy [1].

Agricultural enterprise logistics based on agricultural output content object, and through agricultural postpartum processing, packaging, storage, transportation and distribution logistics links such as, do the maintenance and appreciation

of the agricultural development of agricultural logistics, is to reduce material consumption, improve labor productivity outside of the profit source, agricultural logistics research is on the rise, has received the attention from all sides. Due to the complexity of the research on the logistics of agricultural enterprises, the theoretical and practical research on the logistics of agricultural enterprises is relatively poor, which needs to be further systematized.

This paper will study the development status of agricultural products logistics in China through the theory of agricultural products logistics and the development of agricultural products logistics at home and abroad, analyze the future space for the development of agricultural products logistics in China, and study agricultural products logistics in China from the perspective of enterprises on this basis.

On the system theory, commodity circulation theory, transaction cost theory, and the theory of sustainable development as the backing, from the Angle of modern agricultural logistics general theory, in the advanced experience of foreign developed countries for reference and absorb their own research results, on the basis of in-depth investigation in our country agricultural logistics development evolution and present situation from the perspective of modern agricultural logistics factors breakthrough, discusses the development of modern agricultural logistics mode, system building and organization innovation [2].

This paper proposes to strengthen the innovation of agricultural products logistics in our country, promote the industrialization of agriculture leading enterprises and supermarket chain of agricultural products logistics development, accelerate the development of third party logistics, and to cultivate the market intermediary organization, finally puts forward the related law laws, actively foster the subject of agricultural products logistics, improve the agricultural product logistics infrastructure such as policy recommendations.

Developing modern agricultural products logistics is conducive to establishing a modern agricultural products circulation system and realizing the circulation value of agricultural products. Modern logistics has become the «third source of profit» besides reducing material consumption and improving labor productivity. The logistics of agricultural products can reduce the logistics cost and increase the added value of agricultural products through the post-production processing, packaging, transportation and distribution of agricultural products, so as to improve the profit of agricultural products, increase farmers' income and promote agricultural development.

China is an agricultural country, agricultural enterprise logistics plays an important role in the development of national economy. By studying the agricultural enterprise logistics, therefore, gradually establish a modern circulation system of agricultural products, will effectively solve the contradiction between regional blockades and analyze in circulation of agricultural products, agricultural products structure and the market demand, the contradiction of the velocity of circulation and benefit to promote China's agricultural products, thus greatly improving the

international competitiveness of China's agricultural products, to fundamentally solve the problem of «agriculture, rural areas and farmers» to lay a solid foundation.

At present, China's logistics industry has gradually entered a stage of rapid development. However, as China's agricultural development is relatively backward, the development of agricultural products logistics seriously lags behind, which not only greatly weakens the competitiveness of China's agricultural products market, but also has become the bottleneck of China's entire circulation system. According to statistics, the loss rate of China's agricultural and side lines products such as fruits and vegetables in the picking, transportation, storage and other logistics links is about 26%-30%, more than a quarter of agricultural products are consumed in the logistics links, while the loss rate of fruits and vegetables in developed countries is controlled under 6%, and the loss rate of American fruits and vegetables in the logistics links is only 1-2%. Agricultural product enterprise modern agricultural product logistics consciousness is poor, many only care about production and do not care about logistics, logistics management level is poor, backward logistics technology, logistics efficiency is low. The development of agricultural products third-party logistics is slow, many of which are just the renaming of the original fleet and the lack of special assets, which have greatly affected the development of agricultural products logistics. Facing the competition of foreign high-quality agricultural products and the competition of developed agricultural products logistics, China's agricultural products market is facing great challenges.

Li Yining, a famous economist, put forward that «today we must develop advantageous agriculture, increase farmers' income, establish the concept of logistics and develop the logistics industry of agricultural products». Standing vice President of China federation of logistics and purchasing Jun Fading think developing agricultural products logistics can not only make farmers produce any product to achieve its value and use value, also can make value-added agricultural products in the process of logistics, also can reduce the cost of agricultural production and circulation, improve the overall efficiency of agricultural production. He also thinks the Chinese agricultural products logistics has a large number of agricultural products logistics, many varieties, agricultural product logistics is difficult, the characteristics of agricultural products logistics demanding full attention to agricultural products processing value-added logistics, full attention to foster the subject of logistics in the farmers, the rural and urban construction logistics carrier to full attention in farmers, foster the subject of logistics, logistics carrier in rural and urban construction. Therefore, it is of great significance to strengthen the research on logistics of agricultural enterprises.

At present, the research on agricultural products logistics in China has just started, and many experts have carried out the research on agricultural products logistics from various angles. But overall, the research is still poor, need further research. How to start from the theory of modern logistics and supply chain, draw lessons from the experience of developed countries, combine the characteristics

of China's agricultural economic development to explore the development of China's agricultural enterprise logistics, research on China's agricultural enterprise logistics development countermeasures, improve the logistics efficiency of China's agricultural enterprises, such research in the current has important theoretical and practical significance.

Logistics is of great significance in economic development. Peter Drucker, a leading American business scientist, likens logistics to «a virgin land». Douglas Lambert pointed out that the warehouse cost is the largest part of the total cost of logistics activities. The book circulation cost written by Waseda university professor Xizeshu calls improving the logistics system as the «third source of profit» that still needs to be excavated. In the book logistics war of major societies, he elaborated that the current logistics cost is like an iceberg, most of the potential seabed, so it can be seen that the cost is only a small part of the surface [3].

Yan Duanwu, Huang Chunjuan, He Yunfeng et al studied the foreign logistics mode, especially the American logistics mode. Wang Ling and Cao Hongrui analyzed the impact of economic globalization on China's logistics industry organization from the perspectives of China's entry into China's logistics market and transnational logistics companies' entry into China's logistics market from three aspects: the market structure, enterprise behavior and market performance of China's logistics industry [4].

In recent years, many scholars have begun to pay attention to the logistics of agricultural products. Arlo Biere believes that agricultural trade logistics is a separate course in agricultural trade courses. The importance of logistics and supply chain management makes it very important. He has designed the teaching syllabus for this purpose. Li Xuegong and Liu Weifang believe that the marketing of agricultural products needs to introduce modern logistics thoughts. The marketing of agricultural products is not a simple summary of production, preliminary processing, storage, warehousing and transportation, but needs to be solved with the help of modern logistics and its supply chain thoughts. Wang Xinli studied the relationship between agricultural logistics and agricultural industrialization and believed that one of the important reasons for the slow development of agricultural industrialization in China was that he neglected the role of agricultural logistics in the process of agricultural industrialization and the backwardness of China's agricultural logistics system [5].

The particularity of agricultural products production and circulation determines that agricultural products need modern logistics.

From the perspective of specific research, Yu Jusheng introduced the logistics and wholesale market of agricultural products in Japan. Taking Cheng Du as an example, Liu Xuexue in the Qin dynasty analyzed the current problems of agricultural products logistics, and put forward countermeasures to accelerate the development of agricultural products logistics industry and improve agricultural competitiveness. Wang Ya believes that China's WTO accession requires further

liberalization of the domestic grain market and its integration into the international grain market with trade liberalization as soon as possible. Accordingly, it is necessary to adjust the current grain industry policy and accelerate the scientific construction of grain logistics [6].

The key to realizing scientific grain logistics is to optimize and adjust the grain economic structure, rationalize the grain flow direction and improve the regional production and marketing balance mechanism by means of macro-control and market mechanism. Xia Wenhui studied the operation mode of agricultural products logistics under the e-commerce platform. Alan McKinnon analyzed the transportation efficiency of the British food supply chain, etc. [7].

Oleksandr Velychko from the Angle of the agricultural industry logistics management at the same time, put forward agricultural industry logistics management should through the agricultural materials chain management and distribution management, agricultural industrialization management and to develop agricultural products logistics management, and puts forward the class in our country agricultural logistics operation mode of agricultural materials enterprise chain operation mode, order pattern, the industrialization of agricultural production, agricultural products wholesale [8].

From the enterprise point of view, Xie Peixiu proposed speeds up the agricultural logistics need to transform state-owned grain enterprises with modern enterprise system, cultivate a variety of ownership agricultural logistics enterprise, cultivate construction of modern logistics enterprises, improve and cooperate with the regional distributor of organization and distribution pattern of agricultural products, and on the basis of modern logistics and marketing operation system of food security [9].

Taking the first batch of leading agricultural product processing enterprises in China as the object, He Feng made a preliminary study on the basic situation and development trend of agribusiness supply chain practice in China, and emphatically analyzed five important driving forces and general mechanism of promoting agribusiness supply chain practice [10].

Zhang Zongcheng proposed that the grain circulation industry should restructure its assets, expand its functions and develop itself into a modern logistics center and distribution center [11].

The research of Alan McKinnon shows that logistics capability has a positive effect on the performance of agricultural product supply chain, and the external integration and internal integration of enterprises are highly correlated [12].

The research results also show that internal integration and external integration have a positive impact on the logistics capability and performance of enterprises. On the influence of supermarkets on the circulation of agricultural products in China.

Taraniuk L. proposed the methods and rules of economic reengineering of enterprise operation [13].

Hu Dinghuan et al. proposed that leading supermarket enterprises could adopt the mode of agricultural product supplier farmers in China to guide thousands of

small-scale farmers into the supermarket supply chain and accelerate the pace of popularization of safe and high-quality agricultural products [14].

From the above analysis, China's logistics research is developing to the depth, the research of agricultural logistics is emerging. Due to the complexity of agricultural logistics research, the theoretical and practical research on agricultural logistics is relatively poor, which needs to be further systematized. Research on agricultural products logistics is a hot topic at present, but the current research is scattered. From the perspective of enterprise research, comprehensive research on agricultural products logistics is weak in both theoretical and empirical analysis, which requires in-depth research.

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FOOD SECURITY AS A FUNDAMENTAL FACTOR OF NATIONAL SECURITY

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Almost the problem of food for a person has always existed. The hunger that is observed in Ethiopia, the Sudan and other areas south of the Sahara is the most well-known form of food insecurity. The causes of hunger are multifaceted: natural, political cataclysms, civil war, reduced consumption and uneven distribution of food. Consider the level of food security in Ukraine.

Food security is a constant problem for both low-income countries and developed countries that are constantly improving food security mechanisms. The country's food security at the macroeconomic level is a guaranteed public support, regardless of the circumstances that may arise, with the full set of complete foodstuffs.

At the microeconomic level it is the individual's confidence in the ability to satisfy, from available sources, his physiological needs and his family in food. And this is possible only on condition of production in the farms and enterprises of the agrarian-industrial complex of the country of competitive products [1].

In accordance with the draft Law of Ukraine «On food safety of Ukraine» food safety socio-economic and ecological state in the state at which all its citizens are stable and guaranteed provided with food in the required quantity; assortment and quality [2].

First of all, let's determine what food security is and what it is about.

To assess the level of food security in the country, refer to the Global Food Security Index, which is being prepared by the research department of The Economist. The index takes into account such indicators as physical and financial affordability of food, its quality and safety [3].

The Global Food Security Index, developed by the Economist Intelligence Unit and sponsored by Corteva Agriscience, the Agriculture Division of DowDuPont, considers three core pillars of food security - Affordability, Availability, and Quality & Safety-across 113 countries.

The index is a dynamic quantitative and qualitative benchmarking model, constructed from 28 unique indicators, that provides an objective framework for evaluating food security across a wide range of countries worldwide.

Ranking Global Food Security Index, 2018

OVERALL			1) AFFORDABILITY			2) AVAILABILITY			3) QUALITY AND SAFETY			4) NATURAL RESOURCES & RESILIENCE		
Rank	Score	Δ	Rank	Score	Δ	Rank	Score	Δ	Rank	Score	Δ	Rank	Score	
1	85,9	+0,9	1	94,3	+0,6	1	88,8	+1,6	1	87,3	-2,3	1	81,7	
2	85,5	-1,2	2	92,9	-0,3	2	86,1	+3,8	2	86,5	-2,2	2	81,5	
3	85,0	+0,6	3	87,8	+0,6	2	86,1	+1,4	3	86,0	0,0	3	80,9	
4	85,0	+0,1	4	87,0	+0,2	4	84,4	+1,8	4	85,4	-1,0	4	80,2	
5	84,7	+1,6	5	86,8	+0,1	5	84,3	+1,3	5	85,4	-1,3	5	79,2	
6	83,7	+0,2	6	84,3	-0,1	6	84,2	+4,2	6	85,1	-1,0	6	78,5	
7	83,5	+0,6	7	84,0	-0,1	7	83,8	+1,9	7	84,8	-1,2	7	77,7	
8	83,3	+2,0	8	83,5	0,0	8	83,6	+0,5	8	84,5	-0,6	8	77,3	
9	83,2	+0,7	9	82,9	-0,1	8	83,6	-2,9	9	83,9	-1,5	9	76,0	
10	82,9	+0,4	10	82,8	0,0	10	83,2	+0,5	10	83,7	-2,6	10	75,7	
63	55,7	+1,8	66	54,1	-0,9	73	53,8	+3,6	46	65,2	+4,0	76	57,5	
106	33,0	+0,5	106	22,5	-0,3	106	40,4	+1,0	106	29,2	-0,6	106	48,2	
107	32,4	+1,6	107	22,3	-0,1	107	39,6	+2,8	107	29,0	-0,5	107	46,9	
108	31,5	+2,2	108	21,8	-3,6	108	39,5	+1,9	108	28,3	-0,7	107	46,9	
109	29,2	0,0	109	19,9	-0,1	109	38,6	+5,6	109	27,5	-0,5	109	46,6	
110	28,5	+1,4	110	18,0	+2,9	110	36,1	+2,9	110	27,0	+0,1	110	45,0	
111	27,0	+0,2	111	14,7	0,0	111	35,9	+3,4	111	22,5	+1,2	111	43,9	
112	26,1	+1,1	112	14,3	-0,1	112	31,0	+3,3	112	20,3	-0,1	112	42,6	
113	23,9	-1,4	113	12,4	-1,2	113	30,0	-2,7	113	16,6	-0,1	113	40,7	

The model, in addition to assessing food affordability, availability and quality, includes a category on natural resources and resilience. The Natural Resources & Resilience category measures a country’s exposure to the impacts of a changing climate; its susceptibility to natural resource risks; and how a country is adapting to these risks. When applied, it acts as an adjustment factor on countries’ food security scores [7].

Ranking Global Food Security Index, 2018: This module displays the overall results from the index. It provides the overall and category rankings across all 113 countries. This module provides the most in-depth view of the individual metrics (called “indicators”) across the Affordability, Availability and Quality & Safety categories and their definitions.

Users can explore the Top and Bottom ten performers in each category and across each indicator. They can also see the ten most improved and the ten most declined countries between the 2017 and 2018 indices. In the Data & Scores sub-tab, the overall results, category results and indicator results are presented for all countries, as are year-on-year score changes and the raw data (where applicable).

Ukraine has set 63 mincetarated by the Global Index of Food Safety. Susidami of Ukraine in the rating of opinilis Vietnam (62-g misce) and Morocco (64-te mistea).

I will find the position of the rating index on Seinpur Singapur, I will leave - Burundi (113-th of the month). Country EU, above all, be at the top of the list.

At that, I am ready to talk, just a general demonstrator of Ukraine has grown by 1.8 points. The water show is a demonstration of security and safety of food products that were 4 bali before the 46th season. Indicator of accessibility was 3.6 ball to 73rd match.

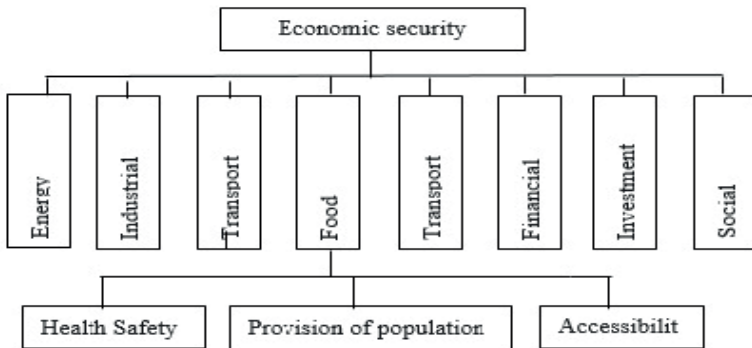


Fig. 1. Food security in the structure of economic security of the state

Fodding without security power state important warehouse part of economic security (Fig. 1), a in his charge with a part of suspended security without power. Food security state – tse stupny software population of the country is ecologically clean and healthy for health products with food products for the purposes of scientific

standards and affordable pricing at the same time as well as our students. Food and food for people living in people play a special role. Experts believe, just for the life of an important generation food problem can outgrow Global international crisis [6].

According to estimates by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO), the average nutrition rate per person should be between 2300 and 2400 kcal per day.

The central element of food security is the supply of food, and in its structure, it is necessary to allocate four components.

The availability of food is manifested in three forms. Physical accessibility involves the simple availability of vital products on the consumer market, economic availability includes a financial opportunity to get them, and social - the minimum differentiation in consumption of main product groups among different segments of the population. If we assess the state of food security of Ukraine in the next time on the above criteria, then it can be assessed as catastrophic. The level of consumption of meat and dairy, fish food by the population of Ukraine is at a rather low level (Table 1).

The country's population is supplied by 50% of domestic food. Large administrative and industrial centers are 70-80% dependent on external supply. In this case, the products supplied from the West are far from environmentally friendly.

They have preservatives and additives that are prohibited for use in the producing countries. It must be remembered that with full food dependence on food supplies from abroad, under the threat of artificially initiating hunger by external forces.

Table 2

Household food consumption (as a primary product) per year per person per year (excluding the temporarily occupied territories the Autonomous Republic of Crimea and the city of Sevastopol)[4]

Foodstuffs consumed by households	Norm	2013	20141	20151	20161	20171
meat and meat products, kg	83,0	61,2	58,8	55,2	56,4	56,4
milk and dairy products, kg	380,0	243,6	243,6	237,6	235,2	231,6
eggs, pcs.	290	240	240	228	228	240
fish and fish products, kg	20,0	21,6	1,6	1,2	1,2	1,3
sugar, kg	38,0	36,0	36,0	33,6	32,4	33,6
oil and other vegetable fats, kg	13,0	20,4	20,4	19,2	18,0	18,0
potatoes, kg	124,0	85,2	82,8	79,2	80,4	76,8
vegetables and melons, kg	161,0	112,8	108,0	105,6	110,4	102,0
fruits, berries, nuts, grapes, kg	90,0	49,2	44,4	37,2	39,6	44,4
bread and cereal products, kg	101,0	108,0	108,0	102,0	99,6	100,8

Excluding a part of temporarily occupied territory of the Donetsk and Luhansk regions.

The importance of food security in the national security system lies in the fact that it is closely linked to environmental safety. Agricultural activities have a decisive impact on the environmental situation in the world, which, on the one hand, impedes the growth of agricultural production as raw materials for food, on the other - leads to the production of products contaminated with various toxic substances. In the XX century. With the development of intergovernmental trade food began to be used as a weapon of political pressure from some countries to others.

The degree of food security of the country depends primarily on the basic potential of agricultural production, which, in turn, is formed, supported and regulated by the state with the help of the corresponding agrarian policy, in particular measures aimed at supporting the domestic producer of agricultural products [5].

In addition, this is a direct impact on other types of economic security, and as a consequence of the threat of national security. Well, food security is a fundamental factor in national security.

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CREATE ENERGY SECURITY STRATEGY BASED ON SPACE-ANALYSIS

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Energy security is one of the key factors in ensuring the country's economic growth. However, low levels of economic security show energy dependence on neighboring countries, high energy production and social instability in the country and low environmental economics. The positive trend in the world's energy instability, depletion of conventional sources of energy, global warming and related regulations in the field of environmental protection, diversification of energy supply in the European energy market against the backdrop of violation of territorial integrity are the relevance of this issue for Ukraine. The economic literature is a common formula for energy security [1]: energy saving and energy efficiency + availability of own energy resources (natural gas, coal, oil, renewable energy sources) + diversification of energy imports + strategic reserves formation + integration into the energy area (in the case of Ukraine – synchronization with the ENTSO-G and ENTSO-E energy networks). The problems of energy security evaluation involved scientists such as A. Zaverbnyi, A. and dry Diyak I., M. Zemlenyy M. Kovalko, A. Shydlovskyy A. Corinne J. Sapir, A. earrings, Vorontsov A Sidorenko, as well as international institutions: UN, World Bank, International Energy Agency, International Atomic Energy Agency, European Union and others. Topical issue guidance most methods of evaluation of energy security for the technical component of energy security by establishing indicators crisis level or threshold of a security aspects and drawing up a list of administrative decisions under the condition specified object. At the same time, the lack of consideration by these methods of the uncertainty factor, the so-called VUCA-characteristics of the management environment, makes it impossible to form qualitative scenarios of the state of the country's energy security. In the area of evaluation of economic security are three approaches: indicative, and taxonomic expertise [2; 3; 4], each of which consists of groups of methods with indicators in accordance with the functional purpose.

The authors proposed to use Dynamic SPACE-analysis to create a list of possible strategic initiatives for specific recommendations to enhance energy security [5, 6] that efficiently complement along with indicative figures expert component or

managerial factor in the formation of energy security strategy (Fig. 1).

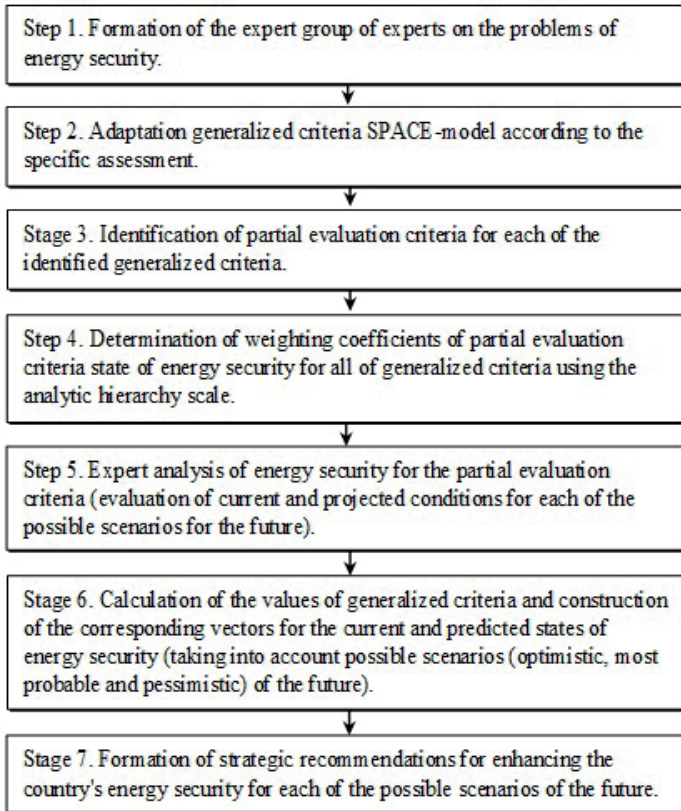


Fig. 1. Scheme of formation of strategies for strengthening the energy security of the country based on the SPACE-model

According to the general criteria for assessing the level of energy security for the formation of strategies, energy security indicators have been selected on the functional aspect of the formation of Ukrainian scientists M. Zemlianyan, A. Doroshkevych, V. Barannikom [7] and the short-term energy security assessment model (MOSES) [7] (Table 1).

At the first stage, the selection of experts and analysts who are experts in the country's energy security issues is being carried out.

The second stage requires a certain transformation of the SPACE model in accordance with the specificity of the problem and the evaluation, namely the modification of the generalized criteria in order to reach as exhaustively as possible the exogenous and endogenous aspects of the analysis of the state of energy safety.

At step 3 according to the methodology SPACE-analysis is necessary to determine the proportion of evaluation criteria for each of the identified generalized criteria. This requires the participation of experts and analysts, since the decomposition of generalized criteria requires a thorough knowledge of the specifics and characteristics of the energy market.

The fourth stage involves determining the weighting factors of partial criteria. To do this, you must use the scale proposed by T. Saati [8] As a result, it is possible to obtain the corresponding matrices of pair comparisons of these criteria: ,

$\| a_{ij}^p \|_{n_p \times n_p}$ here the index p – is the designation of a generalized criterion, and n_p – respectively the number of partial evaluation criteria for a p generalized criterion.

The weights of the partial criteria for each of the criteria can be generalized to calculate the approximate formula:

$$w_i^p = \frac{n_p \sqrt[n_p]{a_{i1}^p \times a_{i2}^p \times \dots \times a_{in_p}^p}}{\sum_{k=1}^{n_p} n_p \sqrt[n_p]{a_{k1}^p \times a_{k2}^p \times \dots \times a_{kn_p}^p}}, \quad i = 1; 2; \dots; n_p$$

Because of the considerable amount of numerical information from the paired comparison of partial criteria for each of the generalized criteria in Table. 1 shows the values of the already calculated weighting factors of all partial criteria.

At the 5th stage, the expert assessment of the 6-point scale assesses (for the current state and possible scenarios of the future) the energy security of the country for each of the selected partial criteria (on a scale from 0 – the worst value to 6 – the best value), Table 1. Note that this table shows the average values for each of the partial criteria, calculated on the basis of estimates by several experts.

Stage 6. «Weighing» of expert assessments within each group of partial criteria for each business unit for the current status is carried out using the formulas:

B – base (initial) period, F – Forecast period, O – Optimistic, Mp – Most probable, P – Pessimistic) scenario.

$$EC_i^B = \sum_j w_j^{EC} \times EC_{ij}^B; \quad IS_i^B = \sum_k w_k^{IS} \times IS_{ik}^B$$

$$ED_i^B = \sum_s w_s^{ED} \times ED_{is}^B - 6; \quad SS_i^B = \sum_p w_p^{SS} \times SS_{ip}^B - 6$$

Table 1

**Results of expert evaluation of the level of energy security
of the country by the method of SPACE-analysis**

Partial criteria			B	Forecast			Weigh-ing cuffs
				O	Mp	P	
Energy Consumers (EC)	1.	Availability of supplies	4,2	4	4,1	4,5	0,11
	2.	Explored reserves	4,0	3,8	3,9	4,2	0,22
	3.	Depreciation of fixed assets	3,9	3,7	3,8	4,1	0,11
	4.	Energy efficiency	4,3	3,9	4,0	4,5	0,22
	5.	Investing in energy saving	4,1	3,9	4,0	4,3	0,11
	6.	Investments in fixed assets	4,5	4,2	4,1	4,6	0,11
	7.	Power reserves	4,2	4	4,1	4,4	0,11
Energy Dependence (ED)	1.	Import share in power supply	1,6	1,5	1,7	1,9	0,1
	2.	The share of monopoly imports in the supply of energy	1,7	1,6	1,8	1,9	0,2
	3.	Interdependence	1,8	1,6	1,9	2,1	0,2
	4.	State regulation of markets	1,6	1,5	1,8	1,9	0,2
	5.	Level of supply monopoly	1,5	1,4	1,7	1,8	0,1
	6.	Balance of ownership in the fuel and energy complex	1,6	1,5	1,7	2,1	0,1
	7.	Level of monopoly type of fuel	1,5	1,4	1,6	1,8	0,1
Stability of the industry: the environmental impact (IS)	1.	Relative ecological damage	2,3	2,2	2,4	2,6	0,21
	2.	Environmental cleanliness of energy production	2,6	2,4	2,7	2,8	0,11
	3.	The level of investment in the environment	2,1	2	2,4	2,5	0,21
	4.	Efficiency of investments in modernization	2,4	2,2	2,5	2,8	0,15
	5.	The share of renewable sources (biofuels, «clean» electricity) in the total consumption of thermal energy	2,3	2,1	2,5	2,7	0,11
	6.	GHG emissions from the fuel and energy sector and transport sector in the region	2,5	2,3	2,6	2,8	0,11
	7.	Emissions of pollutants by the energy system of the region	2,6	2,4	2,7	2,8	0,11
Social stability of industry (SS)	1.	Sufficiency and reliability of supply	3,5	3,3	3,4	3,7	0,12
	2.	Cost of energy and heat	3,4	3,3	3,4	3,7	0,2
	3.	The growth rate of service cost	3,4	3,2	3,3	3,6	0,10
	4.	Energy component in the value of goods and services	3,6	3,4	3,5	3,9	0,28
	5.	Environmental impact on the population	3,9	3,7	3,8	4,0	0,10
	6.	Salary arrears	3,7	3,5	3,6	4,0	0,10
	7.	Strike movement in the fuel and energy complex	3,3	3,1	3,2	3,6	0,10

B – base (initial) period, F – Forecast period, O – Optimistic, Mp – Most probable, P – Pessimistic) scenario.

$$EC_i^B = \sum_j w_j^{EC} \times EC_{ij}^B; IS_i^B = \sum_k w_k^{IS} \times IS_{ik}^B$$

$$ED_i^B = \sum_s w_s^{ED} \times ED_{is}^B - 6; SS_i^B = \sum_p w_p^{SS} \times SS_{ip}^B - 6$$

At the 7th stage using analysis of possible «trajectories» (Fig. 2) will form strategic recommendations to enhance energy security for each of the possible future scenarios.

Overall, as a result of the analysis identified that energy security is a conservative state that needs to take measures to stimulate the development of energy infrastructure with the aim of transition to a competitive position.

It is also necessary to review policies to encourage the generation of renewable sources in order to reduce import dependence. Diversification of supply of energy resources will make it possible to increase the competitive level of the Ukrainian economy and reduce the energy intensity of GDP. Reducing the share in generic fossil energy generation will make it possible to reduce CO2 and contribute to raising its rating positions within the framework of the Framework Climate and Energy Policy for the period from 2020 to 2030.

Strategic recommendations for enhancing the country's energy security in conservative state [9;10]:

1. Optimistic scenario (conservative state):

- minimization of imports due to the intensive growth of hydrocarbon production;
- improvement of the critical infrastructure protection system based on the best practices of the NATO and the EU, the creation of a crisis management system in the energy sector;
- the application of best practices in the protection of the environment.
- transparent and non-discriminatory mechanism of tariff formation and distribution of capacity for cross-border trade, simplification of procedures for organizing transit on the principle of freedom of access to transit capacities;
- implementation of requirements of the EU acquis in the legislation regulating activities and promoting the development of the energy sector;
- conducting a stable and predictable investment attraction policy;
- implementing communication policies to encourage international strategic and financial investors to enter the market.
- creation of conditions for the formation of technological innovation parks using modern, science-based solutions, technologies and equipment in the energy sector;
- improvement of the energy management system in accordance with the

requirements of the standards and international agreements.

- support of a healthy competitive environment, unimpeded access to markets and existing infrastructure;
- formation and regular monitoring of the energy balance of Ukraine, its evaluation according to efficiency criteria.

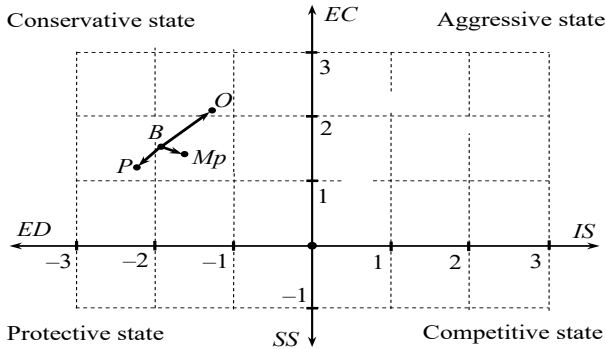


Fig. 2. Matrix of dynamic SPACE analysis taking into account possible scenarios of the future

2. Most possible scenario (conservative state):

- ensuring the reliable functioning of the energy infrastructure, carrying out the necessary modernization measures, reducing the accident rate, prolonging operation in the regular mode;
- Integration of the Ukrainian Energy System to the Continental Europe Synchronous Energy System ENTSO-E.
- processing the question of refusing to formulate price and tariff policy on the principle of cost plus, in particular by moving to stimulating tariff regulation with the subsequent transition to market mechanisms.
- introduction of strategic management system, including based on scenario modeling of markets;
- transparent formation of tactical decisions that are projected to correspond to the determined long-term goals.
- improvement of the corporate governance system at the fuel and energy complex enterprises, the share of the state in which exceeds 50%, in particular taking into account the Principles of corporate governance of the OECD;
- introduction of a system of public-private partnership in reserving energy resources and a system of strategic stocks of energy resources.

3. Pessimistic scenario (conservative state):

- provision of guaranteed conformity of generating capacities to volumes and modes of electricity consumption in the UES of Ukraine, in particular with regard to the availability of regulatory capacities;

- reduction of dependence on coal supply of anthracite groups;
- from one source Ukraine should receive no more than 30% of primary energy resources.
- promoting the development of local energy initiatives, in particular small and medium enterprises in the energy sector and energy co-operatives, generating and supplying electricity and heat taking into account regional features and development of distributed generation;
- ensuring the independence of the NCCREC and the Antimonopoly Committee from any influence, their financial independence and independence in decision-making.
- Implementation of the principles of resource management in the management of the extractive industry;
- Elimination of excessive restrictions for the efficient and flexible functioning of the energy infrastructure for the supply and transit of hydrocarbons;
- formation of the basic principles of the state sector policy on the basis of interaction of the state with society, based on the principles of effective management, delegation of authority and division of responsibilities.
- stimulation of energy saving at the level of consumers, formation of energy-efficient consciousness among citizens.
- increase of energy efficiency at the stage of generation of electricity and heat energy, reduction of energy losses in the future with its transmission and distribution;
- ensuring the completeness and transparency of accounting for all forms of energy and fuel and energy resources (electricity and heat energy, natural gas).

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ENERGY SECURITY MANAGEMENT AT REGIONAL LEVEL: ECONOMIC AND ENVIRONMENTAL ASPECTS

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Ukraine has a great potential of alternative and renewable energy, but in order to use and implement it, it is necessary to involve both state and foreign investments on the basis of developed national and regional programs and regulatory acts.

Along with the modernization of the existing energy sectors of industry (coal, atomic, oil and gas, etc.), the introduction of alternative energy sources will increase the economic well-being of the state.

The most important tools for implementing state policy in the area of energy efficiency and energy efficiency in developed countries are the regulatory framework and the system of standards, as well as price and tax policies aimed at economic stimulation of energy efficiency and energy efficiency improvement. International cooperation on standardization in the field of efficient use of energy resources is widely developing. In the world energy sector, based on current national standards, the practice of developing and improving international energy

standards is implemented, while unification of international standards of the ISO series is carried out. International standards include European standard EN 16001: 2009 Energy management system - Requirements for use guidance; ISO 9001 - international quality standard; ISO 14001 - international standard of ecology; ISO / IEC 27001 - International Standard for Information Security; ISO / IEC 20000 - International Standard for Information Services; ISO 28000 is an international safety standard for supply chains and, finally, an international standard ISO 50001: 2018 Energy Management Systems (Energy Management). The standard addresses issues related to the organization and management of energy efficiency, energy efficiency and energy management.

Among the main measures of energy saving is the promotion of investment in thermo-modernization of residential buildings and the construction of buildings with close to zero energy consumption; adaptation of fuel standards and technologies of its use to European ones; introduction of certification of energy efficiency of buildings, energy audit and energy management, as well as ensuring 100% commercial accounting for gas, electricity, heat and water consumption.

Ukraine has national standards that regulate activities in the field of energy management, energy audit, energy saving and energy efficient lighting. These include the National Standards of Ukraine regulating activities in the field of energy management, energy audit, energy saving and energy efficient lighting DSTU 4065-2001 (ANSI / IEEE 739-1995, NEQ) State Standard of Ukraine. Energy Saving. Energy audit. General technical requirements. DSTU 4472: 2005 National Standard of Ukraine. Energy Saving. Energy management systems. General requirements. DSTU 4715: 2007 National Standard of Ukraine. Energy Saving. Systems of energy management of industrial enterprises. The composition and content of works at the stages of development and implementation. DSTU 5077: 2008 National Standard of Ukraine. Energy Saving. Systems of energy management of industrial enterprises. Checking and controlling the effectiveness of the operation. DSTU 4713: 2007 National Standard of Ukraine. Energy Saving. Energy audit of industrial enterprises. Procedure and requirements for the organization of work. DSTU 4714: 2007 National Standard of Ukraine. Energy Saving. Fuel and energy balance of industrial enterprises[1].

The European Union pays great attention to improving the prevention of natural hazards in the energy sector. In particular, Early Warning Systems (PMU/WAMS) is a project in which new algorithms are developed to foresee and select control actions to prevent power system instability and security risks. The project builds up early warning system awareness and real time operation using PMU-WAMS technologies. SAFEWIND is the project in EU developing progressive tools for wind power forecasting, with a focus on difficult weather situations and extremes that can have a crucial effect on power system reliability. The deliverables of the project are innovative solutions to assist in large-scale integration of wind energy, tools for predicting loss of power, alarm systems for large forecast models, and applications

that use distributed measurements to improve wind power prognosis [2].

The European Union climate/energy policies today mark a tipping point with the Energy Union Communication, placing the EU citizens at the centre.

The power system must be secure and safe through better controllability, which requires more observability. On the other hand, the customer will be involved in demand response. This will require innovative solutions such as automation of the system operation, substation digitalisation, and the use of optical or nanotechnologies etc. Some of other functional objectives are knowledge sharing to maximise synergies, standardisation.

SWOT-analysis of the development of the energy industry in the Mykolaiv region. Mykolayiv oblast belongs to energy-intensive regions. On its territory, electricity production is carried out by a nuclear power plant, five hydroelectric power plants, four cogeneration units, a heat and power plant, three wind power plants, two solar power plants. The actual power of the three operating power units of the Yuzhno-Ukrainskaya NPP is 3000 MW, Oleksandrivska HPS - 2 hydropower units at 11.5 MW, Tashlyk PSPP - 2 hydroelectric units of 320 MW. Energy companies of the oblast produce over 14 billion kWh / year of electricity, which exceeds its consumption by 5.6 times (consuming almost 2.5 billion kWh / year) [3, 4].

On the basis of socio-economic and environmental analysis, as well as the study of sources [5, 6, 7, 8], we have identified such strong and weak factors (sides) and possible external influences (opportunities and threats) for the further development of the energy sector of the Mykolaiv region.

In a project of the “New energy strategy of Ukraine until 2035”, developed by the Cabinet of Ministers of Ukraine, the scenario of a significant reduction in the transit of Russian gas through the territory of Ukraine is considered [8]. This will reduce the state’s revenues from paying for transit, but building several gas pipelines around Ukraine will expand the opportunities for gas purchases from third countries. Nevertheless, the overall vector of Ukraine’s energy development is changing, especially given the need to move to European standards in the energy sector and reduce emissions of CO₂, SO₂, NO_x and dust. In this regard, it is proposed to provide civil protection facilities for energy from renewable sources (bio-pellets, household rubbish, etc.) and to replace carbon fuels with other types where it is economically justified and technically feasible.

Nuclear power is considered as the most favorable in these circumstances type of alternative energy. At the same time, Ukraine has the potential to develop most types of alternative energy: bioenergy, solar, wind, small hydropower and thermal (including discharges of technogenic origin) energy. It should be noted that those energy sources can be considered strategic, which over time (with technology development, optimization of localization) will generate net profit even if the green tariff is abolished. It is also advisable, where necessary, to develop alternative energy sources that will not be considered as a source of revenue, but will provide

backup energy supplies in case of emergencies with the least economic losses. At the same time, careful selection of the location of power plants should be conducted in order to avoid the withdrawal of the use of suitable agricultural land.

Given the rapid development of renewable energy sources and the need to adapt the electricity infrastructure for decentralized generation and maximally efficient use of energy resources, it is necessary to create new effective shunting capacities, first of all, gas turbine power plants, combined heat and power (CHP) plants, block stations according to the best modern technologies. Projects of utilization of the associated combustible gases in industry (metallurgical and chemical) should be the most priority, since they provide the opportunity to reduce harmful emissions and reduce energy intensity of production at the enterprises of these industries [9].

Additionally we offer the promotion of small-scale solar and hybrid solar-wind power plants in the private sector in relevant places [11], considering them as an additional and backup energy source, not a complete replacement of other types of sources. In general, the sustainable development of the energy market in the near future is possible only with the gradual introduction of new types of energy supply, the use of all available sources and routes of energy supply, but without sharp reforms of the energy complex and without abandoning the verified sources.

Since in these conditions nuclear power is considered as the most favorable type of alternative energy in Ukraine, special attention should be paid to emergency management in this area. Having many advantages, nuclear energy can cause significant losses to the health of the population and the economy of the country in the event of disasters, which requires a minimum reduction of time for early response to an emergency. The experience of the Chernobyl accident has been used for improving the emergency response system, which should include clear procedures, necessary devices and equipment, pre-defined criteria and decision-making mechanisms.

Today, the South-Ukrainian NPP uses an automated radiation control system. Radiation control is carried out on the territory of the industrial site of the NPP, in the sanitary protection zone (radius of 2.5 km) and in the observation zone (radius of 30 km). When monitoring the natural environment, the radiation (gamma) level is monitored at 44 stations in the 30-kilometer observation zone and at the control station in the village Ryabokonevo (33.5 km from the South-Ukrainian NPP). In the framework of the reconstruction of the radiation control system of the nuclear power plant a new system of automated control of individual doses of personnel was put into experimental operation [12].

As with monitoring of meteorological parameters, in the future, it would be useful to organize a radiation monitoring system or network in which the population of the region would be involved and which could supplement the measurements organized by the enterprise.

Main directions of strategic development of energy of Nikolayev blast taking into account environmental consequences

Strengths	Weak sides
<ol style="list-style-type: none"> 1. The city of Nikolaev has a unique geographic location at the intersection of waterways and within one of the European automobile transport corridors, has a number of potentially attractive businesses. 2. Local support authorities to develop investment activities and improve the investment climate. 3. Presence of objects investment infrastructure («Mykolayiv Regional Center for Investments and Development», business centers through which the educational advisory activity of entrepreneurs is carried out, work with potential investors is carried out). 4. Availability of investment passports of cities and rayons of the region as investment plans for the development of territories. 5. Freedom of conduct entrepreneurial activity, activity of the private sector, desire to engage in private affairs, development of new mechanisms for supporting small business. 6. Multidisciplinary economy. 7. Opportunities are revealed to build a competitive economy; 8. Achievement of level energy self-sufficiency; 9. Improvement without Peck measuring the economy, energy and the environment; 10. Promotion of internal reforms in the context of integration of EU networks; 11. Creation of an energy-efficient society; 12. Development of scientific potential; 13. Creation of jobs; 14. Creation of the possibility of re-equipping both the energy industry and industry in the region as a whole; 15. Development of renewable energy sources. 16. Highly skilled labor resources, including in the field of IT, and high scientific potential. 17. Availability of skilled managerial staff at enterprises and institutions. 18. Lack of flood, including storm floods. 19. Ecology of available alternative energy sources for the region (zero carbon dioxide balance) 20. Ability not to use; 21. Decentralization of energy production; 22. Economic stimulation of rural regions; 23. Simplicity in servicing many renewable energy sources (RES) 24. The separation and possibility of accumulation of energy produced by RES; 25. The possibility of using solar energy on an industrial scale through its conversion into chemical energy 	<ol style="list-style-type: none"> 1. Political instability; 2. Hard implementation of EU standards in the energy sector; 3. An outdated energy complex; 4. Increase in the cost of energy resources; 5. Weak use of natural resources; 6. Lack of investments, in particular from the private sector; 7. The complexity of economic transformations; 8. Complexity of achievement of strategic goals in the field of energy in Ukraine; 9. Technological backwardness; 10. Wear of power supply systems; 11. Non-transparency and high level of corruption; 12. De-professionalization of the energy industry; 13. The frivolity of a number of legal acts; 14. Lack of information on the real situation in the fuel and energy complex in the bodies of state power. 15. High level of energy intensity of production. 16. Low level of introduction of innovations in production. 17. The unsatisfactory condition of roads. 18. Low employment in rural areas, lack of jobs in small towns and villages. 19. Inter-regional disproportions in socio-economic development. 20. Possibility of emergencies as a result of natural cataclysms and the presence of potentially dangerous objects. 21. The problem of utilization of wastes (including radioactive ones). 22. Lack of natural population growth and depopulation of the rural population. 23. A significant distance from the European powers. 24. Underdeveloped land irrigation system, which inhibits the attraction of investments in the agricultural sector in the climatic conditions of southern Ukraine. 25. Insufficient development of small business infrastructure, insufficient investments, cheap credit resources. 26. Inappropriate use of natural resources, including subsoil. 27. Low provision of land management documentation. 28. Insufficiently favorable state policy, lack of state support 29. Lack of information for potential consumers 30. The constant nature of the current produced by some RES, which necessitates its transformation into a variable for production needs 31. High cost of electricity received from RES 32. The need for large areas for the placement of photovoltaic panels, wind farms; 33. Inappropriate use of solar power stations in small farms 34. Low efficiency of many RES

Opportunities	Threats
<ol style="list-style-type: none"> 1. Integration with the energy sector of the EU; 2. Innovative update according to world standards; 3. Reformation of the power system; 4. Strengthening global communication; 5. Attraction of foreign investments; 6. Increasing energy saving and energy efficiency; 7. Proper use of own resources; 8. Diversification of import of energy resources; 9. Creation of strategic reserves of fuel and energy resources. 10. Creating a favorable investment climate. 11. Reducing energy consumption through the active introduction of energy-efficient technologies. 12. Improving the efficiency of scientific capacity. 13. Increase of international technical assistance. 14. Formation of a positive international image of the oblast through systematic information activities with the use of various means of communication and appropriate measures. 15. Creation of favorable conditions for attraction of foreign investments in the region's economy aimed at modernization of industrial production, development of promising sectors of the economy capable of giving a powerful impetus to economic growth, the creation of new competitive products and technologies; promotion of long-term (strategic) foreign investments. 16. Implementation of innovative technologies that provide for a significant reduction of the use of material and energy resources. 17. Coherent support of entrepreneurship by local authorities, which will enhance the viability of this region and increase the number of entrepreneurs who are economically capable of reforming the energy sector at their own level. 18. Technical re-equipment of housing and communal services, reduction of specific indicators of the use of energy and material resources necessary for the production of housing and communal services, including the creation of an efficient and transparent mechanism for the promotion of the use of alternative sources of energy and fuels. 19. Favorable natural conditions for most of the territory of the region 20. Availability of waste technologies with RES 21. Shifts in the Ukrainian legislation 	<ol style="list-style-type: none"> 1. External aggression of the supplier of energy resources; 2. It is difficult to ensure the stability of transportation of energy resources; 3. Dependence on foreign energy resources; 4. Offshore the economy; 5. neglect of the «decarbonising» rule; 6. Possible loss of transit status; 7. Self-isolation after non-compliance with EU rules or their inadequate implementation. 8. Aggravation or spread to the Mykolayiv region of the military conflict in the east. 9. The volatility of the exchange rate of the national currency. 10. Monopolization of markets, lack of competition. 11. Increase in energy prices. 12. Outflow of labor outside the oblast. 13. Pollution of territories by waste. 14. Withdrawal of the moratorium on the sale of agricultural land. 15. Strengthening centralization in the adoption of key management decisions in the field of regional policy. 16. Lack of reasonable forecasts of market development in the region. 17. The need to pay VAT and duties when importing new equipment. The transit potential of the region may not develop, because the increase in prices for goods and equipment will significantly reduce demand for them. 18. Insufficient solvency of the population to pay for studies in order to achieve the appropriate scientific and educational level for the development of the region. 19. Significant deterioration of heat generating equipment and heating networks of communal heat power engineering, high dependence on consumption of imported natural gas. 20. The beginning of a new wave of the economic crisis in the face of increasing tax pressure on entrepreneurial structures can lead to a reduction in the number of small enterprises in the region by closing them, merging them, and creating medium and large entrepreneurial structures. This process should not be considered absolutely negative for the impact on the economy. In the agrarian sector, for example, it can ensure the emergence of more effective agriculture and livestock (which will require the introduction of energy efficiency measures). 21. Increased competition in the energy products market 22. Necessity of removing from agricultural land agricultural land for the needs of solar and wind power plants

Also, the obvious component of iodine prophylaxis in the areas of the NPP is the regular consumption of iodine-containing products (sea kale, etc.), since the accident may occur unexpectedly, and the most affected by radioactive iodine are those who currently have a deficiency of this element in the thyroid gland.

Conclusions. 1. Sustainable development of energy in Ukraine and in the

world in the near future can be ensured by the gradual introduction of new types of energy supply, the use of all available sources and routes of energy supply, without abandoning the tested «traditional» hydrocarbon fuels. When placing new energy objects it is necessary to take into account the strategic consequences of their construction, all risks for the population of the region and indirect losses of other industries (removal from the use of tourist routes, agricultural land, etc.). In particular, wind and solar power can be recommended for territories, unsuitable for agriculture and other needs.

2. It is necessary to deepen cooperation within the framework of European and international standardization bodies in the field of energy, certification and standardization, as well as on technological and commercial development of renewable energy. As a result of the adaptation of national legislation to EU standards, households in all regions can access new technologies and energy efficiency programs that will reduce household energy consumption.

3. Creating a competitive environment in the energy market will help to attract new investment both in the introduction of alternative energy sources and in more modern ways of using, transit, and selling traditional sources. In order to further improve the efficiency of Ukraine's economy, it is necessary to create and develop energy management systems in all enterprises, institutions and organizations. The scientific approach to strategic energy management in the regions will promote intensive (instead of extensive) development of both the energy sector and the science itself, of the universities involved in these processes.

4. At the level of work with the population it is necessary to use wider educational methods. They are important because they envisage the impact directly on the consumer and form a new consumer culture, based on the conscious choice of energy-saving technologies, a careful attitude to the environment. It is appropriate to begin with preschool age and systematically apply to representatives of all generations. Regular surveys among the public on the relationship to changes in energy infrastructure, state and local energy policies will help ensure rapid response to any undesirable changes and dangers, as well as the support of the local population for public policy.

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CLASSIFICATION OF RISKS AND THREATS TO THE ECONOMIC SECURITY OF THE SMALL BUSINESS SECTOR

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Economic threats and risks emerge from the occurrence of conflicts between business entities in general and small business in particular, as well as under action of external and internal environmental factors.

The higher the level of economic development of an enterprise is, the higher the level of threats and risks in the process of the realization of its own economic interests, which lead to destabilization of economic security and violation of laws and norms of competitive struggle.

In order to avoid economic threats and risks, small business representatives should identify them by features and content. In particular, by [1, p. 272]:

- the place of occurrence of threats against the enterprise (endogenous, exogenous);
- time range (real, potential);
- the frequency of existence (random, permanent);
- degree of evidence (evident, latent);
- fact of existence (preposterous, real);
- degree of influence (active, passive);
- degree of influence on threats (those that can be neutralized, those that cannot be neutralized);
- the sphere of origin (political, economic, legal, social, manmade, environmental, competitive, counterparty, etc.);
- the structure of economic security (threats from personnel, from me-too products, due to loss of information, pressure on personnel, impact on customers);
- predictability (predictable, unpredictable);
- origin (objective, subjective);
- the possibility of prevention (foreseeable, force majeure);
- level of losses (insignificant, significant, substantial, catastrophic);
- degree of probability (improbable, low-probable, rather probable, probable, inevitable);
- the period of execution (direct execution, in the short term, after a long period);
- spatial attribute (micro-, macro-, internal environment);
- the method of execution (theft, industrial espionage, information gathering,

bribery) [1, p. 272].

The listed features of economic threats and risks are peculiar to small business, among which the most significant influence is represented by threats by their place of occurrence and are considered classic [2-4].

It should be noted that the enterprise cannot predict exogenous (external) threats and risks, and also cannot predict the level of losses and the degree of their damage. The exogenous threats include: unreasonable decisions by state authorities on entrepreneurial activities; political instability; the presence of the Operation of the Joint Forces (OJF) in the country; monopolization of resources, including political; orientation of public authorities to large industrial and financial groups; inflation; decrease in the level of business activity; decrease in the purchase power of the population; high dependence on energy resources, etc.

On the other hand, endogenous (internal) factors are related to the financial and economic activities of an enterprise and, accordingly, the level of occurrence of such risks is high due to a simplified procedure of an access to the available information (for example, by bribing the staff by competitors) [5]. Endogenous threats include: insufficient staff skills; limited financial resources; dependence on borrowed capital; increase in production costs; lack of information and its late delivery, etc.

According to Professor Vasylytsiv T.G., the problems of economic security support for small business are of utmost importance and require the implementation of a specific plan of actions by the state: the creation of an environment for the development of small business – maintaining an adequate level of «viability» of the enterprise's primary level – creating an adequate level of economic security of the existing enterprise – preservation of national security and its components [7]. In our opinion, this algorithm is based on the exclusive role of the state and narrows at the same time the possibilities of the representatives of the small business.

We suggest that the algorithm for countering exogenous and endogenous threats and risks should be as follows: monitoring the external and internal environment – identifying existing threats and ways to eliminate them – predicting the development scenarios of existing threats and the period of their existence – developing an economic security management strategy for an enterprise – determining the necessary level of financial resources to eliminate existing threats and possible losses – the improvement of existing security tools – processing the necessary amount of information in order to prevent other threats and risks – control over the activities and elimination of the threats in case of their occurrence.

It should be noted that the typing of threats depends on the type of enterprise, its organizational and legal form, activities and so on. It is the ability to identify threats and risks that underlies management decisions to eliminate them [8].

In turn, it is appropriate to classify system risks of economic security, that pose a threat to small business, by:

- the implementation of corrupt practices (for example, lobbying);
- the illegitimacy of the acquiring property process (for example, «non-

transparent» privatization);

- conflict of the institutional interests (for example, excessive politicization of the economy);

- obstruction of business activities (for example, an increase in the payment of taxes in case of legalization of its own activities);

- the level of economic transformational changes on the part of state (for example, a decrease in effective demand);

- the level of unfair competition (for example, imperfect tax policy).

The existence of systemic risks for the economic security of small business leads to the strengthening of institutions of both private and state corporatism and clientelism, followed by obtaining exceptional competitive advantages and, as a result, such actions lead to an increase in tax pressure on other enterprises (including small business) which stay out of this system [9].

At the same time, there are small enterprises that have registered business activities, but given the inadequate level of control a desire appears to carry on the activities that refer to unfair competition against competitors or consumers and thus create new threats to economic security and are considered as the systemic risks, that are endowed with factors such as: «off-side game»; «transparent» relations with government representatives; infringement of guarantees; limited access to loans; imperfect financial and credit policy of the state, etc. [10].

The lack of effective reforms that would motivate for qualitative changes in tax, investment, credit policies; complex system of benefits, preferences, subsidies; change of authorities with the «cancellation» of the decisions of their predecessors; modification of ineffective solutions contribute to the decrease in the competitive level of the business environment and the attitude of the ordinary citizen to their activities encourage the use of closed competition, the establishment of corrupt ties, etc. [11].

No less threatening for small business representatives are actions of a discriminatory nature, raider and criminal one on the part of competitors, that is a result of not only the lack of a quality market for buying / selling a business, but also existing subjective burdens and restrictions (including of economic and political nature), which drastically reduces the level of investment activity, leads to the closure of small enterprises, freeze of resources and creates a «ballast» of inefficient enterprises [12].

With correct identification of threats, it is possible to apply effective methods for forecasting and eliminating them upon condition of establishing a common economic security system at an enterprise using its functional components (financial, political-legal, personnel, intellectual, technical and technological, environmental and power ones).

All of the above mentioned determines the systemic nature of the threats and risks of the functioning of small enterprises and requires an understanding that measures to support the development of small business cannot be a tool for unfair

competition (including lobbying interests) and violate their rights.

In general, it should be mentioned that the implementation of economic activities by small business entities is accompanied by risks and threats to economic security.

At the same time, objective risks and threats may become the insurmountable problems in the development of small business (increasing energy intensity of the economy, reducing level of solvency of the population, reducing production capacity, the emergence of similar products, etc.) and lead to destabilization of its activities, loss of ties and market outlets. Such a situation is most likely at the post-transformational stage of economic development and it is the classification of systemic risks that is especially necessary.

The classification and typology of risks and threats to the economic security of the small business sector promote to their identification; detailed elaboration contributes to the establishment of a systematic approach to their further forecast and prediction; elimination of possible adverse effects; provides for the possibility of the formation of systemic risks of entrepreneurship.

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MAIN ASPECTS OF TECHNOLOGICAL & INNOVATION DEVELOPMENT STRATEGIES (SECURITY BASED APPROACH)

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One of the most important ways of national security research deals system approach which is successfully used in studying processes in society, and therefore is of particular importance for theory of national security.

The main idea of system approach is that the activities of the individual, society and state to ensure national security are considered as an open dynamic system in the totality of its most important internal and external relationships in order to obtain the ways to optimize this system.

Therefore the system approach allows to establish the state of national security through the study of its specific types (external and internal), spheres of manifestation (economic, political, social, informational, defense, environmental, etc.).

In this research the application of system approach we consider based on innovation component of national security.

In modern conditions of technical & economic paradigm change the search for new development strategies is of particular importance. That's why along with the traditional policy of infrastructure creation for innovation business supporting, the implementation of modern strategies of innovation development ensures the formation of different, especially network, structures for interaction of innovation enterprises with government authorities, scientific and educational institutions, civil society institutions and other stakeholders. The interdependence and interconnectedness of modern innovation development processes, as well as increasing the efficiency of innovations generation and commercialization processes, represents a new economic pattern, which allows national economic

systems to remain competitive in the global markets.

The focus area «Boosting the effectiveness of the Security Union» [7] deals with the fact that researches and innovations are needed to develop new technologies and ways of working that can make practitioners more effective: those who are directly called upon to respond to security challenges, as well as those working on prevention. Study [8] points out the factors dynamics of technological innovation related to security issues and considers the non-defence firms (technologically based start-ups) and their approaches to security sector.

This part deals with global experience in analyzing the priorities based on their importance for country development and on national and international criteria using algorithm for the selection process. The main aspects of the process of development and implementation of international technology strategies are considered. We believe that through the analysis of innovation systems at macro level decision about the priorities in optimization with the aim to improve regulations in science, technology and innovation is provided. The main techniques and decisions were considered based on foresight-studies.

Today the competitiveness of state in global space is provided by innovation technological imperative, which demands modernization of production system according to the requirements of scientific and technological progress and postindustrial Industry 4.0 development. Thus, it is necessary to highlight the priority sectors that are material basis for the functioning of most important areas of human life and ensure the development and implementation of advanced technologies.

In some cases such strategic initiatives have even further importance. World experience illustrates that the greater the lag in the development of a country, the greater is the role of government in infrastructure development, resource mobilization, identifying priorities, reaching proportions and relationships in national economy and national innovation system. Given the fact that the economy is a selection of best possible, there is a need for effective prioritization of socio-economic, scientific-technical and innovation development.

In several countries despite the existence of national regulatory selection process of priorities, resources for its implementation do not meet the real needs. Also unlike the technologies of choice of priorities in other countries, international criterion of development is not considered, which requires an appropriate organizational and economic security.

Today the main policy issue of countries is integration to the global innovation system for using of its potential and achieving long-term economic growth through innovations. Also the creation of education, research and development system components for the foreign investment through the public-private partnerships is in priority areas. Already in the report of World Economic Forum “Global Competitiveness 2000” embeddedness in world economic relations system is one of the three main factors that determine the competitiveness of the economy.

The study is based on the idea, that innovation system development requires

an interrelated definition of performance indicators and priorities, strengthening of intersectoral coordination, changing of operation principles of development institutions, formation of domestic demand for innovation.

To achieve the aim of the research it was necessary to consider the existing experience of foreign states in innovation development policy, especially identifying the opportunities in international cooperation and international economic activities, based on the selection of innovation priorities and the development of appropriate system support mechanisms.

All these problems have to be solved within the framework of interaction of national and global innovation systems and as a science and industry compound, which is oriented on providing faster and more efficient management in «science – production» cycle in the priority sectors of scientific and technical progress, acceleration of new idea development and its most effective application in practice (transfer).

The development of each priority is based on system approach of social and economic conditions as a result of integration and cooperation of different agents of innovation system (enterprises, research institutions, industry, society). In this context the effectiveness of coordination at cross-sectoral level and innovation interaction are proposed to be determined based on competitiveness of production and economic development based on innovations at meso- and micro level.

According to EU and US approach [7; 9] research and innovation is also needed to better understand societal developments and individual life styles that lead to insecurity. The results of such research can help us design better policies at all levels of government. In [10] these issues are considered within the coordinated process for prioritising national security science and innovation activities, resources and the development of capabilities, building on our strong base of dedicated expertise.

Therefore the area of the main factors (determinants) of innovation policy, which are considered in the analysis of national innovation priorities, includes the follows:

- market and resource factors, including consumer preferences;
- relationship between consumers and producers which is often intense within the national system;
- research system that generates scientific and technological innovations;
- technological interdependence in the country which is most significant in the early stages of innovation processes and within the system policy;
- communication and public policy in different areas (for example, scientific and technological policy and defense researches), as well as the conditions for technological and economic activity (as defined within the framework of the policy) such as legislation and regulation;
- education and training system, developing skills, abilities and competencies required for innovation;
- national institutions, that support innovations, such as industry and engineering associations.

In Fig. 1 the main components of technological & innovation development strategies related to security issues are shown.

We can note the importance of improving the methodological foundations for effective management of the resource potential and processes of economic systems innovation development. In these conditions there is an objective demand for new theory of institutional advantages, which will aggregate the national institutional matrix and will support the development strategy.

We investigated that when estimating technology strategy efficiency of following groups of the development indicators (institutional based components) need be considered:

1. National priorities, that reflect orientation of actions to achieve technological competitiveness in some sector (sectors).
2. Social and economic infrastructure (institutions, which support resources, necessary for modern economy, based on high technologies).
3. Technology infrastructure (technology support system) – institutions and resources, influencing ability of the country to investigate, produce and introduce new technologies.
4. Producing capacity – quantitative criterion (physical and human resources, used in goods producing) and their application effectiveness criteria.

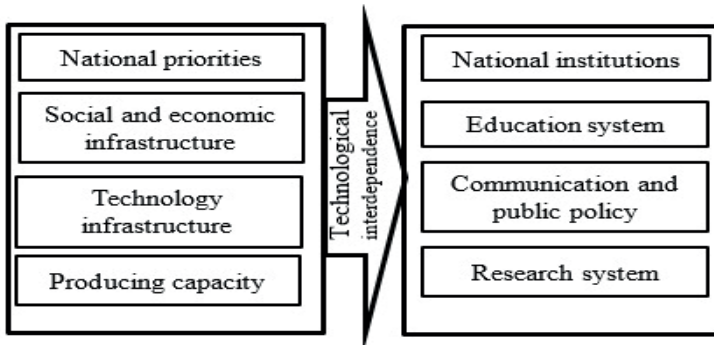


Fig. 1. Technological & innovation development strategies

In this context, the institutionalization of processes we can determine the situation when the management practices (which have become successful) of innovation processes become sufficient and long-term, so that they can be represented in the form of economic institutions. So we came to necessity of obtaining efficient management practices at various levels and innovation processes, which will provide the necessary level of competitive advantages to protect the national security through the new quality of development.

So in order to create an institutional environment as an favorable environment for different innovation processes and their combinations, we propose to use institutional designing methodology. It is based on the idea of technological specifics

of individual technological areas analytics application. Also when implementing the methodology of institutional designing of innovation system we propose to use the specialization & evolution concept, which can help to combine the technological areas analytics application with the strategically analysis of economic development trajectories.

The basics of can be found in research [6], which underlines the role of institutions for innovation development. In order for market agents to take risks, associated with the commercialization of innovations, specialized institutions should be present in the economy, and information about them should be objective and accessible, enabling to use the potential of these institutions. At the same time, market agents, commercializing innovations, ultimately themselves form institutions. From this it follows, that the institutionalization of innovation processes is two-sided dynamic process of the formation, development and improvement of institutes for the innovations development, which simultaneously acts both as a stimulus and an incentive to institutionalization, as well as existing institutions are the result of commercialization and incentive to it.

Another approach is given in study [2]. The institutionalization of the development of innovation entrepreneurship is carried out on the basis of working out the procedures for the coordination of economic interests and socially significant goals of the community, the authorities and entrepreneurs, the adoption of organizational and legal and political norms that harmonize the interests of participants in these relations while clearly identifying them with the need for social partnership to achieve them.

Within the all certain trends we see an expansion of innovation communications range and therefore the wide range of different factors. Under these conditions institutions (formal and informal) form an institutional environment that provides a certain level (quality) of interactions (innovation communications) between innovation-oriented economic agents and their various partners. This in turn results in transaction costs of new product development, intellectual property rights protection, costs of scientific and technical information searching, negotiating and contracting costs, product and process innovations market monitoring costs, etc.

In order to understand the whole point of institutionalization process, let us turn to the study [3], in which the necessity of creation an effective institutional environment for the interactions of participants in integrated models is underlined. The general task of this environment is connected with the creation of appropriate prerequisites for resolving the contradictions between the relations of cooperation and competition, between the relations of the intra-firm hierarchy and horizontal market interrelations, between the processes of territorial (regional) and cluster development, between the interests of agents and principals within the framework of agency relations.

In the development of sectors, which provide national security, we can consider the institutional capacity to generate radical innovations. This aspect we propose

to realize through the system & evolutionary approach. It has developed from the intersection of various sciences scientific methodology and considers economy as an open, evolving self-organizing system.

The methodological significance of the system approach for the purposes of studying socio-economic phenomena of innovation development is difficult to overestimate, since it involves the consideration of processes in interaction and reciprocity, that reproduce the integrity of the national economic system and allows considering the role of innovations.

Within the framework of these sciences, general principles and mechanisms for the emergence, organization, disorganization, management and improvement of the system are determined, which makes it possible to analyze the evolution of its elements from the point of view of influence on the state of the system as a whole. Thus the importance of the theoretical description of the interaction of institutions is based on the fact that the functioning of the national economic system is determined by a set of formal and informal rules and mechanisms, which fix them. For the purposes of the evolutionary campaign, the dynamics of the institutions of the national economy are monitored to identify their interaction and mutual adaptation with the rest of the elements (individual and other endogenous factors) of the national economic system. As a result of the synthesis of institutional and evolutionary approaches, a highly informative methodological basis of state economic policy can be formed, designed to ensure the maximum possible sustainable and synchronous development of all elements of the national economic system.

These points can be realized in the institutional design through the next steps, which allows identifying a special instructional & innovation trajectories (instructional projects) for each sector development:

1) analysis of technological patterns and technological dynamics of sectors providing national security;

2) development of theoretical approaches for the application of technological trajectory methodology for forecasting the state of national security using the technological evolution analytics;

3) selection of tools for implementing the principle of system optimization through the integration of functions of innovation networks in high-tech sectors.

The publication was publicly funded by Ministry of Education and Science of Ukraine for developing of research project № 0117U003855 «Institutional and technological design of innovation networks for Ukraine national security systemic providing» and research project «Development of scientific and methodological foundations and practical tools for evaluating of the product innovations commercial (market) prospects».

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METHODOLOGICAL BASIS FOR ENSURING THE ENVIRONMENTAL SECURITY OF THE TERRITORY

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One of the components of the national security of the country is environmental security. This category can be considered in global, regional and local contexts. Ensuring environmental security consists in providing environmental balance and protecting the environment where the population of Ukraine lives. Therefore, there is a need to maintain a balance between human existence and potential risks of environmental hazards.[1].

An essential element of studies on environmental security is defining the concept of environmental risk, which until now has been interpreted ambiguously. In a broad sense, risk (R) is the value defined in monetary units and is calculated as the product of the probability of the risk situation (P) and the value of the possible environmental and economic damage from it (Y)[2,3,4,5,6].

Many authors consider that not only the public health risks, but also a number of other types of risk refer to the environmental risk issues. In particular, S.I. PyrozHKov [7] distinguishes the following types of environmental risk: 1) the risk of natural systems destruction; 2) public health risk; 3) the risk of man-made systems for a particular industrial enterprise; 4) risk of natural resources management; 5) the risk of natural disasters; 6) the risk of regional military conflicts; 7) the risk of environmental terrorism.

Environmental security is achieved by a system of measures (forecasting, planning, advance preparation and implementation of a set of prevention measures) providing the minimum level of adverse effects of nature and the technological processes of its resource development on the human health and activities while maintaining sufficient rates of development of industry, communications and agriculture.

According to Schmal A.G. [8], the environmental security system includes three main components, namely:

- integrated environmental assessment of the territory (identification and assessment of a complex of environmental hazards factors that occur in a given territory; zoning of a territory according to the degree of resistance to environmental hazards, compiling and maintaining the cadastre of environmental impact objects, determining the level of anthropogenic pressure, compiling and maintaining the

cadastre of “polluted” areas);

- environmental monitoring (standardization of environmental impacts, control of sources of environmental impact, quality control of environmental components);
- managerial decision-making (the formation of environmental policies; the prevention of manifestations of anthropogenic factors of environmental hazard; minimization of the consequences of natural factors manifestations of environmental hazard; the development and improvement of environmental legislation and methods for the formation of environmental outlook).

Figure 1 shows the algorithm of determining the environmental security level of the territory.

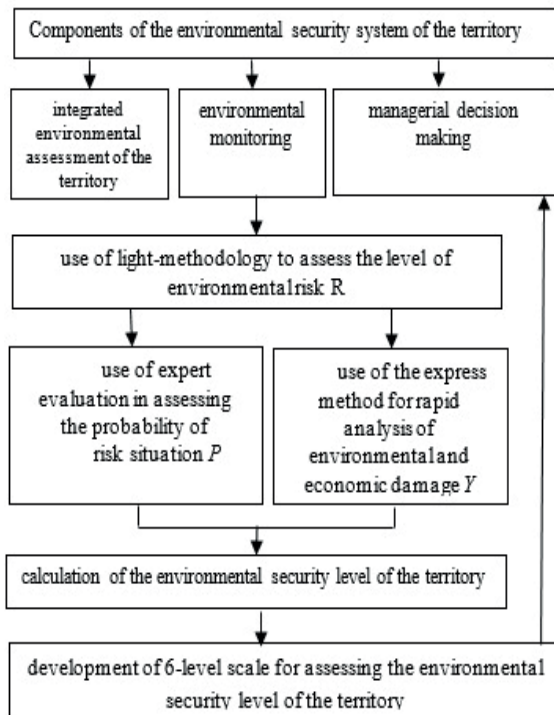


Fig. 1. Algorithm of determining the environmental security level of the territory

We suggest using the “light”- methodology of environmental risk assessment to monitor current values of environmental risk levels. This methodology provides analysis and assessment of environmental risks for quick respond and managerial decision-making in critical situations. For this, first of all, a high rate of risk assessment and pre-prepared options for action in various situations are needed. We suggest the use of expert evaluation in assessing the probability of a risk situation P.

Experts are suggested to assess (by point scale) the impact of environmental risk factors on a limited number of main recipients by the following parameters: frequency of manifestation; intensity of impact; losses for the last 5 reporting periods. In addition, experts consider 2 groups of recipients: objects of the business environment and objects of social infrastructure. In more detail the methodology is presented in [9].

Let us look closely on the determining the value of the environmental and economic damage Y. It is especially relevant in case of unpredictable emergencies. Environmental and economic damage from natural hazards at the global level is characterized by the following major trends:

- there is no a single region in the world, wherever the largest natural disasters occur;
- the total number of victims of the main types of natural disasters for 35 years amounted to 4,4 billion people, that is, 50% of the population of the planet;
- there is a relation between the level of socio-economic development of countries and the tendency for natural disasters.

In recent years, natural and man-made emergencies are characterized by an increase in environmental and economic damage. In addition, disasters not only pose a danger to the population, but can also create a long-term cumulative impact on the state of the environment of the region, the country and the planet as a whole.

The dynamics of occurrence of natural, man-made and social disasters on the territory of Ukraine over the past 10 years is shown in Figure 2. There is the dynamics of decrease in number of disasters from 2008 to 2013. A further increase in their number is caused by the unstable situation in the east of Ukraine [10]. Unfortunately, there is a steady tendency for an increase in damage from disasters, both natural and man-made, even against the background of a decrease in their number [11].

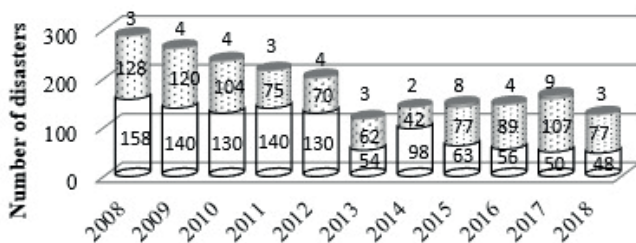


Fig. 2 . The number of natural, man-made and social disasters for the period 2008-2018 in Ukraine

It is suggested to use the express method for the rapid analysis of the environmental and economic damage from disasters with a minimum amount of

initial information. The assessment is carried out by the following stages: selection of the industry; determining the type of disaster; identification of the region where the incident occurred; determination of climatic conditions; determining the generalized characteristics of the active impact zone; defining the area of pollution; identification of the zone of active pollution; identification of recipients in the zone of active impact; determination of environmental and economic damage caused by an incident.

Environmental and economic damage from man-made disasters can be determined with the use of the concepts of damage per unit and the zone of active impact. The principle of calculation on determining the environmental and economic damage by the express method is reduced to the formula:

$$Y = \sum_{i=1}^n y_i \cdot Q_{reci} \cdot M_{cond} \cdot K_{regi},$$

where y_i – damage per unit caused to the i -th recipient (UAH/cond.ton*No. recip.); Q_{reci} – number of the i -th recipient in the zone of active impact [12].

$$Q_{reci} = \rho_{iZAI} \cdot SZAI,$$

$SZAI$ – area of zone of active impact (km²); ρ_{iZAI} – density of the i -th recipient in the zone of active impact (units/km²); M_{cond} – number of conditional emissions that affects the i -th recipient, (tonnes).

$$M_{cond} = \sum_{j=1}^m M_j \cdot A_j,$$

M_j – mass of the j -th emission (tonnes); A_j – indicator of the relative aggressiveness of the j -th substance in relation to the i -th recipient; K_{reg} – regional correction factor for the i -th recipient, that characterizes the deviation of territorial damage forming indicators from their average in Ukraine; n – number of types of recipients in zone of active impact; m – number of types of hazardous substances generated as a result of disaster.

$$K_{regi} = \frac{\rho_{iz}}{\rho_{iy}}$$

where ρ_e – density of i-th recipient in z-th region; ρ_{i0} – density of i-th recipient in Ukraine; i – recipient; z – region.

The matrix of indicators of damage per unit y can be developed by the results of their detailed calculation for each recipient by several hazardous objects located in these economic regions. The calculation of damage per unit was carried out on the basis of the “Methodology for assessing the damage from the consequences of man-made and natural emergencies” [13] that is approved at the state level. The level of detail of the damage per unit depends on the condition of the recipients, averaged over the regions of Ukraine. The algorithm for the implementation of the express method and the main calculation indicators are presented in the study [14].

Based on the suggested methods for calculating the probability of occurrence of risk situations (P) and the value of environmental and economic damage (V), we calculate the level of environmental security of the territory (country, region, city). We assess the level of environmental security of the territory by comparing the obtained value of environmental risk R and the value of weighted average risk for the studied territory Rt.

We suggest 6-level scale for assessing the environmental security level of the territory for managerial decision-making:

- A – (maximum level) more than 90%
- B – (high level) from 71 to 90%;
- C – (average level) from 51 to 70%;
- D – (acceptable level) from 31 to 50%;
- E – (insignificant level) from 11 to 30%;
- F – (neglected level) less than 10%.

Using an alphabetical scale for the assessment of the environmental security level of the territory has several advantages: simplicity of perception of the results; simplicity of relations of assessment results with specific management decisions and the necessary actions due to the results of assessment. An early warning system should be established for risks of A and B categories.

Thus, expert assessment methods and express methods are widely used while developing the programs for managing environmental security. The suggested methods can be used for quick and approximate assessment of damage due to risky situations, which will allow:

1. to study the most important environmental risk factors that may affect the vital activities of the global community;
2. to establish permissible risk thresholds, the violation of which leads to a decrease in the environmental security of the territory;
3. to develop the approaches for early recognition that will allow to quickly make adequate decisions in accordance with a certain level of environmental security of the territory;
4. to expand the international cooperation in searching ways for more effective

use of existing agreements, programs and institutions to solve the challenges of global environmental security.

For that reason, the prevention measures are necessary precondition for ensuring the environmental security of the territory. International experience shows that the costs of forecasting and readiness for natural disaster are almost 15 times less than the costs of eliminating the consequences.

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FEATURES OF THE INSTITUTIONAL AND ECONOMIC MECHANISM FOR ENSURING COMPETITIVENESS OF THE AGRICULTURAL ENTERPRISES AS PRINCIPLES OF ECONOMIC SECURITY

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The enterprise managers' ability to form the motivational mechanisms in the company and to offer the personnel incentives to encourage them to work better are important qualitative characteristics of the enterprise progress potential and greatly influence the development of the mechanism of its competitiveness. The effective functioning of competitiveness mechanism requires the coherence of the interests of the interacting parties. It is achieved through the selection of priority methods and resources in accordance with the nature of the control factors that are influenced by them. In the case of discrepancy of interests, it is impossible to influence effectively on the internal and external factors and to achieve the strategic goals. As a result, the inconsistency of interests violates the economic security of the enterprise.

In recent years researchers have become increasingly interested in the issues of the institutional and economic mechanisms for provision of the enterprise competitiveness. Namely, V.Boyko in his studies paid attention to the government regulation of the economic mechanisms to reduce the risks [1]. L. Sytnyk conducted this study in the direction of crisis management [2]. In their works, Y. Lysenko [3], G. Kozachenko [4] and O. Trydid [5] considered this trend as an opportunity to implement strategic plans for enterprise development. V. Kozlovsky [6] and I. Tsyhylyk [7] considered these issues as a local phenomenon, that is, as an internal mechanism of the enterprise. In general, the researchers highlight the institutional mechanisms and economic mechanisms separately.

Scientists O. Ivanytsky and V. Kosenko assume that the economic mechanism is a mechanism of the objective economic laws acting in practice according to the specifics of this or that stage of the society development. It manifests itself through a system of socio-economic production relations. The totality of all basic relations, which depend on the level of development of the productive forces in society largely determine the second integral part of the economic mechanism – the institutional mechanism. The scientists define institutional mechanism as a complex of bodies

and organizations, legislative and regulatory acts, methods of management and regulation of the economy. Depending on the nature of functioning of the economic relations, the institutional mechanism can stimulate or hinder the development of the economy, leveling its level of protection [8]. The synergistic interaction of institutional and economic subsystem components transforms into the formalization of the institutional and economic mechanisms for regulating economic relations that arise in the process of socio-economic interactions. The institutional and economic mechanism of ensuring the competitiveness of an agricultural enterprise (AGE) with a focus on the rational use of its natural resources potential in the context of interaction with the factors of the external market environment, all together form the preconditions for strengthening the competitive advantages of the enterprise.

The institutional component of this mechanism includes a set of formal and informal restrictions on the parameters determining the development of domestic production and commercial business processes of AGE, basic rules for its market environment functioning and its relationships with contractors. The formal restrictions include the current legal acts, technical regulations, standards, norms and requirements, institutional infrastructure of the internal and external environment of the enterprise, which determine the mandatory rules of competitive struggle in a market situation and the violation of which inevitably leads to the imposition of clearly defined sanctions. Informal constraints are represented by the rules and norms of behavior in society, customs and traditions and generally accepted approaches to resolving disputes.

At the same time, violation of informal restrictions does not entail imposing obligatory sanctions and fines but can be condemned only from the standpoint of human morality and the norms of corporate ethics, which differentiate depending on the specifics of the personnel of a particular enterprise.

The institutional component of the mechanism providing the AGEs competitiveness is intended to help minimize their transaction costs in the following interdependence: the higher the level of adequacy of the institutional component to the requirements and needs of the market and economic relations - the stronger is the proximation of the transaction costs to zero - and vice versa. Therefore, it is expedient to ensure a continuous process of qualitative changes improvement and updating of the institutional parameters for the formation of competitiveness of the AGEs in accordance with the challenges of their market environment.

In its turn, the economic component of the mechanism of ensuring the competitiveness of the AGE is interpreted as a resource-management unit for coordinating the interests of subjects of social-market exchange. An economic mechanism is a combination of forms and methods of economic activity, the use of which ensures the implementation of the fundamental economic laws under the conditions of constant resource limits, scientific and technological progress, and strengthening the competitive environment of the functioning of the AGE. The economic component of the investigated mechanism, as well as the institutional

one, includes the internal and external over-structures. The internal over-structure is aimed at optimal use of the available resource potential of the AGE and is formalized on the basis of such components as a financial subsystem, production and technological block, technical component, personnel support, logistic subsystem, environmental block. The external superstructure is formalized via the marketing policy of the enterprise, establishing beneficial business relations, searching the opportunities for additional available channels of the products distribution.

The effectiveness of the institutional and economic mechanism for ensuring the competitiveness of the AGE is, on the one hand, the result of the purposeful management influence, and, on the other hand, it is a result of the synergetic interaction of the political-legal, financial-economic, socio-psychological, technical- technological, natural-ecological and other factors.

The resource-functional ability of the institutional and economic mechanism is characterized by certain features, the fundamental among which are as follows: 1) stability (characterizes the ability of the institutional and economic mechanism to withstand the destabilizing effects of the risks and threats in the face of aggravation of competition on the agrarian market); 2) reliability (the ability of the mechanism to ensure uninterrupted effective functioning a long time); 3) evolution capability (the ability of the mechanism to adapt and implement structural changes in accordance with the changing conditions of the market and economic environment of the enterprise); 4) efficiency (the property of the mechanism in an appropriate manner to analyze, process and systematize information data for the design of alternative scenarios for the development of events); 5) hierarchy (horizontal-vertical distribution of functional duties and powers and differentiates the levels of responsibility between the components of the institutional and economic mechanism); 6) balance (availability of a rational distribution of managerial influence between the institutional and economic components of the competitiveness mechanism); 7) coherence (the property of the institutional and economic mechanism to minimize the risks of failures, dissimilarities and conflicts).

The study of the content-based characteristics of the institutional and economic mechanism of ensuring the competitiveness of AGE contributes to better understanding of the notion and provides the theoretical framework for the specification of the definition of this concept. This concept should be understood as a combination of forms, methods, tools and means of managerial influence, aimed at streamlining the internal and external business processes of the enterprise in order to increase the efficiency of using its natural resources potential, optimizing costs, improving the quality and safety of food staff, supplying ecologically safe agrarian production, strengthening the market position of the AGE, which ultimately transforms into an increase of its competitiveness.

The effective functioning of the institutional and economic mechanism for ensuring the competitiveness of the AGE depends on the interaction of its functions, the most significant among which are: system-forming, regulatory, generating,

commercial-promotional, simulating, socially-oriented, anti-crisis and rational natural resources management.

There are three main strategic approaches to the organization of the institutional and economic mechanism for ensuring the competitiveness of the AGE. The emphasis is laid on them since they are the most essential for this study. The first - process-oriented approach- involves a focus on situational management components of the production and economic cycle. The second - resource management approach- is strategically aimed at increasing the efficiency of utilizing the natural resource potential of the AGE under the conditions of their low financial liquidity, the abandonment of the material and technical base and the limited resources supply. The third - inter-functional approach- focuses on the systemic development of horizontal-vertical inter-branch connections of the enterprise, activation of which will ensure the effective utilization of the functions of the institutional and economic mechanism of ensuring competitiveness at all structural links of the production and distribution chain.

It is obvious that the appropriateness of this or that approach to the formation of the institutional and economic mechanism for ensuring competitiveness depends on the specificity of the AGE production, its tactical and operational goals and objectives, and the trends on the agricultural market.

The study has revealed that the most reasonable is the application of the inter-functional approach, as the basic one, with the simultaneous possibility of tactical re-orientation on the principles of process-oriented and resource-management approaches, depending on the challenges of the market environment. This will provide the basis not only to promote the integrated structure of the institutional and economic mechanism but also to improve the controllability of the enterprise production-economic processes in the context of the strategic course for increasing its competitiveness.

The mechanism of ensuring the competitiveness of the enterprise comprises technical, economic, social, psychological, legal, commercial, organizational and other aspects. Although they are the elements of a single system of ensuring the competitiveness of the enterprise, they function in a certain succession, depending on their importance and priority for a specific period of time [9, p. 64, 66].

Obviously, the effectiveness of the resource-functional approach to the institutional-economic mechanism for ensuring competitiveness formation depends on the level of its structure relevance to the objective requirements and needs of the market environment of the AGE (Fig. 1).

An important structural feature of the investigated mechanism of ensuring the competitiveness of the AGE is its over-structure component, which reflects the interaction of institutional and economic blocks. Its functioning is aimed at transforming the existing resource potential of enterprises taking into account the influence of the factors of their internal and external environment into strengthening the competitive advantages of enterprises, conquering new segments of the agrarian

market, forming a positive enterprise image, which in totality determine the growth of the level of competitiveness of the AGE.

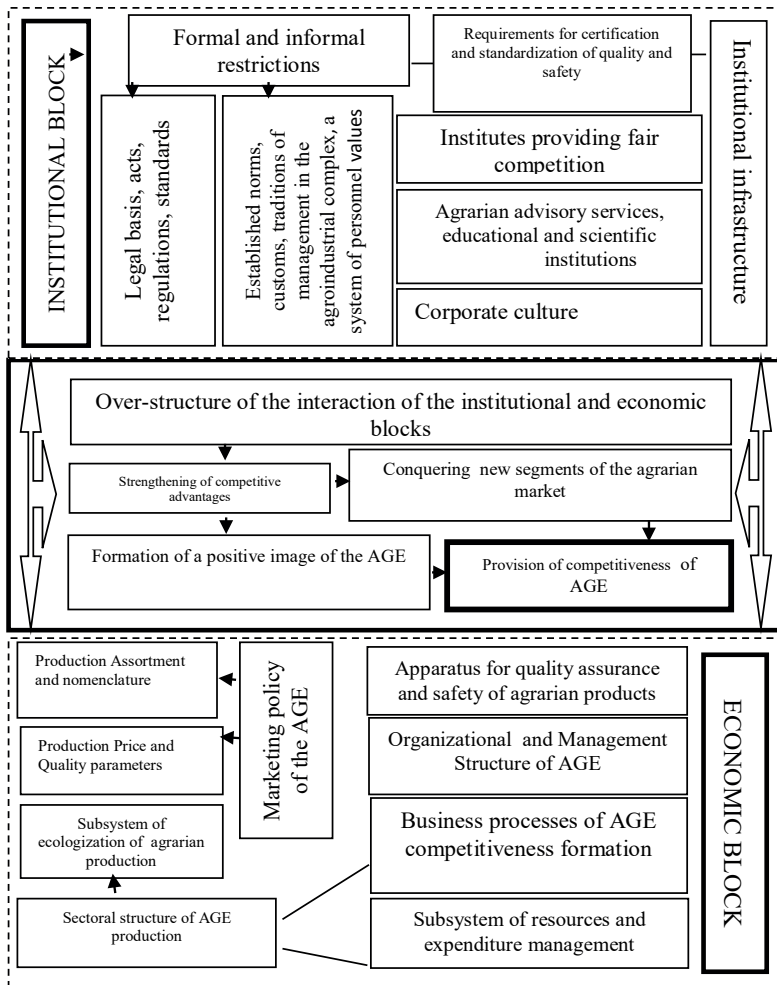


Fig. 1. The structural scheme of the institutional and economic mechanism for ensuring the competitiveness of the AGE (Author's design)

In this regard, it seems expedient to design the over-structure of the interaction of institutional and economic blocks of the investigated mechanism taking into account the following three components interaction: 1) the input apparatus (ensures the organization of the systemic coherent interaction of resources and determinants of institutional and economic nature, helps to avoid conflicts of interest in the

market and economic exchange and minimizes the probable transaction costs of the enterprise); 2) analytical and project subsystem (focuses on assessing the real prospects and opportunities of positioning the company in the market, diagnostics of the competitive environment and its forecasting, which is the basis for developing the strategy of competitiveness of the company and tactical and operational measures to support its achievement); 3) organizational and decision-making unit (provides financing and management support for the phased implementation of priority measures aimed at increasing the competitiveness of the AGE in the food market).

Functioning of the mechanism of ensuring the competitiveness of the enterprise requires the availability of regulatory, methodological, resource and scientific means of support.

They interact on the basis of balancing the economic and managerial relations in order to achieve the pre-defined market, financial, economic, production and social goals [10, p. 203, 204]. The management element of the mechanism of ensuring competitiveness is responsible for working out the strategies of creating favorable prerequisites for the effective realization of the company's goals in the market under the conditions of limited resources. In this regard, the mechanism of ensuring the competitiveness of the enterprise uses such components of management as price policy management; logistics management; marketing management; management of technical and technological support; quality management; assortment management [11, p. 97].

Expansion of the enterprise products competitiveness is achieved via the utilization of the economic, techno-technological, socio-labor, organizational, marketing and adaptive methods of the managerial influence [12, p. 35, 36]. The study of the content-structural characteristics of the mechanism for ensuring the competitiveness of the AGE brings us to the conclusion that the institutional and economic mechanism in the system of competitiveness performs the role of: 1) the regulator of the internal and external business processes of the enterprise aimed at their improvement to strengthen the competitive advantages of the products in the market and provide support for expanded reproduction; 2) managerial over-structure of the use of resource support of the enterprise, optimization of its costs and the conquest of new segments of the agrarian market; 3) socio-ecological component of balancing interests of subjects of social and market exchange, ecologization of agrarian production and formation of the principles of rational utilization of natural resources. The key findings of this research state, that the institutional and economic mechanism for ensuring the competitiveness of the AGE is a complex concept, the interpretation of which requires further substantiation of the theoretical-methodological and applied principles, especially in the context of transformation of this notion in the conditions of the agrarian market liberalization and strengthening of the European integration processes.

The study of the institutional and economic mechanism for ensuring the

competitiveness of the AGE from the standpoint of a managerial approach is of great importance. There exists an objective need for controllability of the processes related to the formation of competitive advantages and the functioning of enterprises in the agrarian market. At the same time, the managerial influences of the institutional and economic mechanism for ensuring competitiveness must be directed not only at the subsystem of resource support and organization of economic activity of the AGE, but also to the sphere of internal and external social-psychological relations that arise in the process of competitive struggle and determine the rating of the enterprise economic security. The institutional and economic mechanism is designed to transform the existing competitive advantages of the AGE into increasing the competitiveness of agrarian products, which will eventually form the preconditions for ensuring dynamic secure competitiveness of the company in the market.

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ENVIRONMENTAL SECURITY MANAGEMENT AS FUNCTION OF STATE INSTITUTIONS

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A prerequisite for a system security deviation is dissatisfaction with its subsystems requests. This dissatisfaction consists in imbalance between the actual level of needs fulfilling and the expectations. Actually, the forms of such dissatisfaction may significantly vary for different economic agents. From the point of view of economic security violation, the problem of inconsistency of actual and official social factors deserves special attention.

Social and demographic deformations that take place in the country are important factors in the aggregate demand's change. As a consequence, there are threats to a state's macroeconomic security, that are especially dangerous through the production decline in a problem regions and individual industries decline, as well as threats to mega economic security, connected to the country's place in the world economic relations. Dissatisfaction with social needs leads to the growth of a shadow economy, unregistered entrepreneurial structures, illegal employment, capital outflow (including human resources), illegal exports of capital and products, corruption.

Socio-environmental factors have indirectly impacted the worsening of the demographic situation in the most country regions, provoking an unprecedented wave of migration. The consequence of this trend is an average life expectancy reduction, the population aging of all the regions in the state without exception. The manifestation of this threat is strategically dangerous, which is due to the growing role of high-tech technologies in modern post-industrial society and the unceasing need of the world market in numerous innovative developments. The low quality of domestic intellectual capital is an essential prerequisite for the national security depravation not only at the meso- but also at the macro- and mega- levels.

System analysis of ecological and economic problems of regional development should be based on a system of indicators. The main disadvantage of a wide range of indicators is their focus on measuring only the one life sphere, and at this very time social processes are mostly ignored. This leads to regular violation of a systematicity principle. The category of economic efficiency in terms of the regional aspect quantitatively depends on a number of specific purely regional factors, where the use of resources is the main one.

The importance of the «security concept» defines the real situation and protection degree of any subject, its ability to stand against changes in functioning conditions.

State policy in the areas of national security and defense is aimed at ensuring military, foreign policy, state, economic, informational, ecological safety, cybersecurity of Ukraine etc. National security is a complex concept and a system that encompasses economic, military, environmental, political, information and other types of security as some subsystems, which are subsystems in turn [1].

Types of security for which the functional components system can be exuded can be represented as shown in Figure 1.

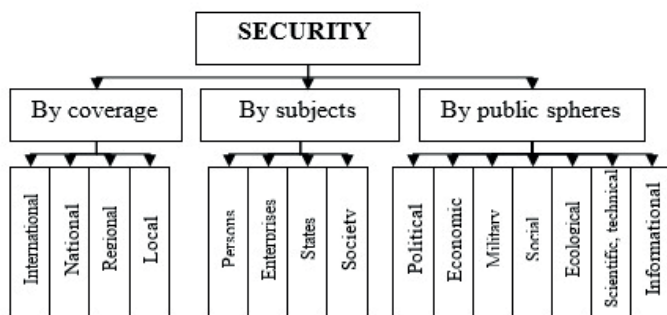


Fig.1. Types of security for which the functional components are exuded [2]

Subjects of state institutions (antitrust institutions, law enforcement, bodies of justice, environmental control, currency expert operations, tax and customs control) and security services of private organizations (banking institutions, security companies, auditors, insurance, leasing companies) provide economic security in different forms. These forms are the components of the state security (Fig. 1).

Functional components of corporate security are a set of core areas, which are quite different in their components significance: financial, intellectual and human resources, technical and technological, political and legal, informational, power and environmental components [3, 4].

A market component of a corporate security is protection against inefficiently chosen behavior patterns in the market, mistakes in marketing policy, pricing policies and non-competitive products manufacturing. This component reflects the level of correspondence of an enterprise internal production capabilities with

external, which are formed in a market. It reveals how much research, production, and marketing activities of an enterprise are relevant to market demands and specific needs of consumers. The significance of this economic security component lies in the fact that it is responsible for bringing the manufactured products to a specific consumer. It is known that all production efforts will be nullified if the product is not sold.

Each of the functional components is characterized by its own content, a set of functional criteria and ways of activity providing. To ensure economic security, an enterprise uses a set of its corporate resources.

Environmental safety is the protection from the devastating effects of natural, man-made factors and the consequences of enterprises economic activity. Floods, earthquakes, tornadoes, landslides, avalanches can cause huge damage to an enterprise property and workers' health [5].

In practice, it is almost impossible to predict natural disasters. We should take all possible steps to minimize the effects of landfill pollution. Technological catastrophes arise as a result of physically depreciated fixed assets usage, unplanned energy turn off or because of employees' low professional skills and irresponsibility.

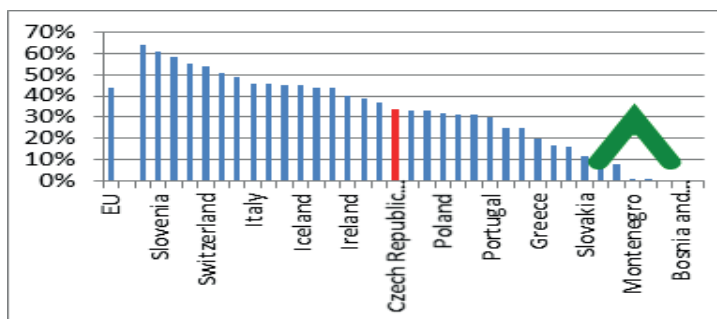


Fig. 2. Recycling of municipal waste EU 2017 [6; 7]

Resources are the business factors of the countries that are used to achieve the goals. Ecological goals: high coefficients of product safety, «ecological balance» of rational waste usage, environmental pollution retraction, profitability growth from products from waste, stiff fines imposition for environmental legislation violation. Market goals: the coefficient of market return on assets, products competitiveness, an enterprise market share, the coefficient of innovation costs, the rhythm of sales, the efficiency of advertising policy.

The definition of the economic security structure of the enterprise characterizes it as a complex system. The assessment of this system's development level consists of its sublayers analyzing. In turn these sublayers are complex assessments by groups or by a group of output indicators [4].

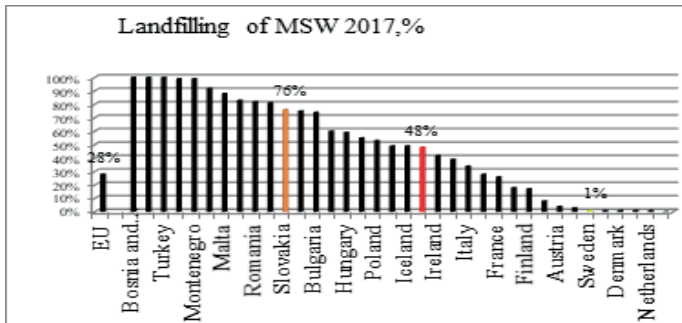


Fig. 3. Landfilling of municipal waste 2017 [6; 7]

What is increase (Figure 3) of landfilling tax for? 1) Clever and smart waste management (D2D, PAYT [9]). 2) Start-up circular waste and reverse material flow management. 3) Build up recycling industry. 4) Turn off the landfilling.

Collecting center's - secondary raw materials are redeemed.



Fig. 4. Increase of landfilling tax

PAYT [9] – new financing of waste management: 1) Start Door-to-Door collection of separable. 2) Measure amount of produced waste. 3) Weigh the waste. 4) Promote Pay-As-You-Throw principles. 5) Increase landfilling taxes.

The presence of regional development disproportions is determined with objective and subjective reasons. The first ones include the differences in the natural and climatic conditions that define one or another structure of the regional economy.

Subjective factors depend on the development strategy and productive forces placement, which in practice are implemented by regional management structures. Therefore, each region is distinguished from the other by socio-economic indicators and by average country indicators [8]. Waste Hierarchy – priority order in waste prevention, management legislation and policy: prevention; preparing for reuse; recycling; energy recovery; disposal. Environmental damage can have a significant effect on the enterprise's financial position. For example, such events as a lawsuit for

violating environmental legislation, an accident with environmental consequences in an enterprise can be transformed into losses that belong to the category of financial and environmental and are measured in monetary terms [10].

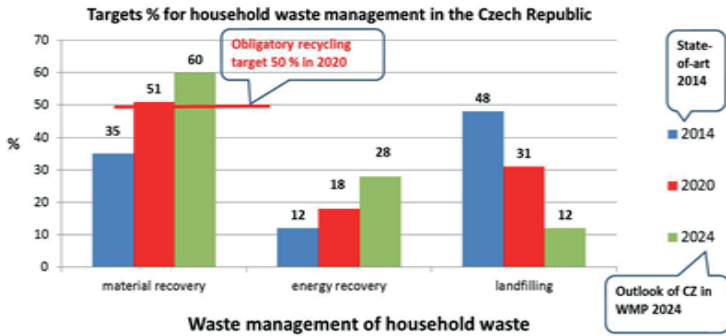


Fig. 5. Forecast of the household waste management [9]

Environmental damage caused by the health loss of a company’s employees, the reduction of production and sales affect the financial position of the company a little bit slower.

Environmental damage such as suffering due to a health loss can’t be measured in cash. Compensation for these losses is determined subjectively. Environmental damage can be uncovered or partially covered. This is a significant source of danger for an enterprise. State institutions can minimize environmental damage as well as partially monetize the processes of recycling and utilization through legislative regulation and management of reverse material flows [9].

As a result of economic activity, the enterprise itself can become a source of danger to the environment. Internal factors that impair an enterprise’s environmental safety include: mistakes made at the design stage of new products that are harmful to human health, as well as at the stage of new technologies development and introduction, fines for environment pollution and illegally created landfills.

The concept of company’s security is the officially approved document. It includes the system of views, requirements, terms of organization, personnel security measures, security of ownership. The aim of the security is to impact potential and real threats of the enterprise. The formation of economical security mechanism at the micro- level involves changing environment; guarantee of the company’s sustainability; functioning of its financial, human and information resources. The mechanism of economical security guarantee of the companies acts at the operational, tactical and strategic levels of management. It provides a strategic set of control mechanisms that affect economical security elements management. It is necessary to use strategic analysis, strategic planning (including budgeting), auditing and controlling.

Destabilizing safety factors can be classified according to their influence on functional environmental subsystems. The main groups of them are the following: 1) Natural or man-made disasters. 2) Failure to comply with current environmental norms and standards. 3) Fines imposition and licenses abolition for violation of environmental norms etc.

Waste Czech Policy 2020-2024 [9]. Fulfils 50 % of recycled municipal waste in 2020. Minimize landfilling of biodegradable waste in 2020.

CZ Ministry of the Environment and the Circular Economy: 1) Waste Management Plan 2015 – 2024 adopted in 2014. 2) Obligatory separate collection of paper, plastic, paper, glass, metal and bio-waste in all municipalities. 3) Landfilling ban on mixed municipal waste, recyclable waste and recoverable waste since 2024. 4) Financial support from the cohesion funds of the EU available OP Environment 2014 – 2020 (2023) cca 460 mil. EUR including W-2-E installations [9]. 5) New waste law proposals. 6) Economic tools and increase of landfilling taxes proposals. Keep 2024 ban on landfilling of recoverable, recyclables and mixed municipal waste alive. Reach 60 % of recycled municipal waste in 2024.

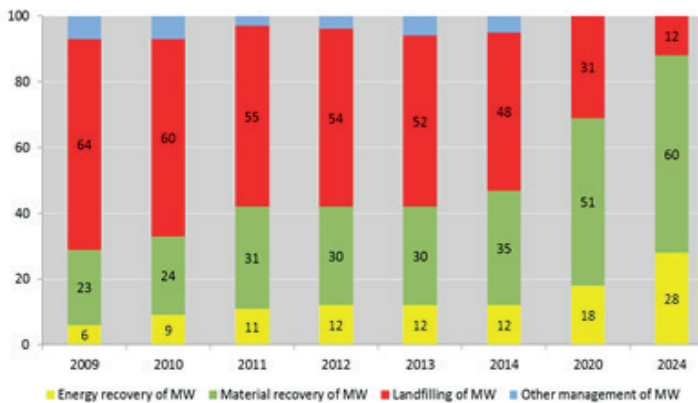


Fig. 6. Municipal waste management and outlook for 2020 and 2024 according to the Waste Management Plan of the Czech Republic, % recycling targets in CZ, calculation method Nr. 4 of CD 2011/753/EU, data MŽP [6; 7]

Priorities of European Union in the waste management for experience the Ukraine: 1) Land filling reduction. 2) Waste prevention. 3) Increase recycling. 4) Energy recovery of waste must be the part of waste management. 5) Reduce consumption of primary sources. 6) Support and motivate businesses to invest in European union and increase the waste process activities in European union. 7) Set up the real recycling targets of waste. 8) Increase land filling taxes to start up Circular Economy. 9) Unification of calculation methodology and reporting.

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BENZAPYRENE CONTENT IN THE ENVIRONMENT AND FEEDS

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In our time the problems of onco-ecology, in which the research of oncogenic factors' impact on biocenoses is conducted, are becoming especially topical. This new approach presupposes the investigation of the population effects of circulating carcinogenic substances with the aim of integral evaluating the condition of various ecosystems, determining organisms-indicators of environmental pollution with carcinogens and the control of their content [3, 14].

Benzpyrene, or benz(a)pyrene is the aromatic compound, the representative of the family of polycyclic hydrocarbons, the first-class substance of carcinogenic dangerous agents.

About 7thousand tons of benz(a)pyrene, the substance, which is extremely stable and has a high ability to accumulation in the organism and environment, comes gets to the world environment yearly.

Benz(a)pyrene is mainly accumulated in soil and sometimes in water. The soils on the territories, which are near to highways, are regularly polluted with heavy metals, petroleum products, and polycyclic aromatic hydrocarbons that are mainly contained in gas-dust emissions of automobile transport. The situation is complicated by the fact that road passages outside highway grass plots are actively used as parking places for automobiles usually for short periods of time. As it is known, exhaust gases of the warming up automobile engine have more toxic substances, especially poly-aromatic hydrocarbons (PAHs) (including benz(a)pyrene). That is why the level of chemical pollution of these plots is rather high.

It gets to plant tissues from the soil and continues its movement further on in the trophic chain, moreover, the content of benz(a)pyrene in natural objects grows a sequence higher at each stage [17].

Polycyclic aromatic hydrocarbons. A great number of poly-aromatic hydrocarbons (PAHs) are known. The compounds of this group are ubiquitous and they are met practically in all spheres of the human environment [9].

Benz(a)pyrene, cholantrene, perylene, dibenz(a)pyrene are the most carcinogenic PAHs.

Antracene, phenantrene, pyrene, and fluorantene are less toxic substances.

PAHs are well studied on the example of benz(a)pyrene, the indicator compound of this group of carcinogens. Benz(a)pyrene is characterized by maximally relative stability at different physical-chemical impacts. It is always detected everywhere together with other carcinogenic hydrocarbons, being one of the most widely spread and powerful carcinogenic agents [15].

The ways of benz(a)pyrene getting in the environment. Benz(a)pyrene (BP) has indicator meaning for all PAHs. For the first time this statement was formulated in 1966 by L.M. Shabad and his school (A.P. Ilnytskyi, H.A. Bilytskyi, A. Ya. Khesyn, A.B. Lynnyk, and others).

At present the indicator role of BP is supported by the majority of scholars and it is substantiated by the following observations:

- 1) BP is always found in places together with other PAHs;
- 2) comparing to other PAHs, BP has the most relative stability in the environmental objects;
- 3) BP is distinguished by the marked biological, in particular, carcinogenic activeness;
- 4) the existing physical-chemical methods of BP indication in different environments are the most sensitive among the methods of detecting PAHs. The fact that PAHs are extremely widely spread in biosphere enabled to distinguish the background pollution with PAHs, which was also introduced by L.M. Shabad (at the beginning for soil and water reservoirs) [6].

Volcanic activity, the processes of petroleum, coal, and shale formation are referred to natural abiogenic sources, forming the natural background of PAHs.

It was established, that BP and other PAHs appear as a product of abiogenic origin as a result of volcanic activity. Examining the samples of volcanic ash and lava, A.P. Ilnytskyi and his colleagues revealed different (as a rule, differing not more than a sequence higher) levels of PAHs content. For example, the concentration of BP in the ash of the Tiat volcano (Kamchatka peninsula) was 0.4 mcg/kg, of Plosky Tolbachyk (Kamchatka peninsula) – up to 5.5-6.1 mcg/kg. The authors calculated that at the existing level of volcanic activity, about 24 tons of BP comes yearly to the Earth biosphere with volcanic ash, and, probably, from several tens to hundreds tons with lava. The mechanism of “volcanic” BP formation has not completely been studied. On the grounds of experimental research the possibility of different PAHs formation by methane and isoprene pyrolysis at high temperatures is admitted. The consequences of the processes of petroleum, coal, and shale formation are other natural sources of PAHs. For example, benz(a)pyrene in the concentration of 75 mcg/kg is found in brown coal extracted in Beresovsk deposit, 342 mcg/kg – in coal

extracted in Irsha-Borodino deposit, and from hundreds to thousands of mcg/kg of BP can be found in petroleum of different origin. It is supposed that the formation of PAHs in the entrails of the Earth takes place as a result of thermobaric factors' impact on resinous and sulfur components leading to disintegration of the latter ones and catalytic formation of hydrocarbons. The possibility of PAHs synthesis by various microorganisms and plants has been experimentally proven. Yearly, up to 1000 tons of BP gets to the atmosphere due to such synthesis. Other factors also participate in the formation of BP natural background – for example, forest fires. Modern background level of BP in the biosphere is given in Table 1.

Table 1

Modern background level of benz(a)pyrene in the biosphere

Object	BP content, mcg/kg of dry matter
Atmospheric air, mcg/cubic m: over the continent	0.0001-0.0005
Atmospheric air, mcg/cubic m: over the ocean	0.00001
Soil	up to 1-5 *
Vegetation	up to 1-5
Freshwater reservoirs: water (mcg/l)	0,0001
Bottom sand	up to 1-3
Aquatic plants	up to 1-3

For some soils (black soil, peat bog) a higher level of BP (15-20 mcg/kg) is characteristic, and it is determined by the specific composition of these soils (a high content of organic substances, microbial structure, etc.) [12, 17].

As it is stated in the yearly Government reports “About the condition of the natural environment in the Russian Federation”: “The pollution of soils with petroleum in places connected with its extracting, processing, transporting, and distributing, exceeds background by tens of times [9, 12, 17].

The soils are greatly polluted with oil and oil products in the regions, where oil extraction and oil processing enterprises are concentrated, and also in places of accidents on pipelines. The infiltration of oil and petroleum products led to the formation of large underground oil deposits in the following cities and towns: Grozny, Angarsk, Mozdok, Tuapse, Yeisk, Orel, Novokuibyshevsk, Ufa, Komsomolsk-on-Amur, and others” [4, 6, 12].

The epidemiological analysis of tumors among some fish populations enables to connect the raising of the frequency of tumor formation with the degree of water reservoirs' pollution with industrial, domestic sewage water, petroleum products, and also to reveal the natural fish populations, which are the most sensitive to the impact of carcinogenic factors in water eco-systems. The similar research give the notion of the integral effect of all both blastomogenic and modifying factors during long-term period, while physical-chemical analysis of water samples enables to detect only separate substances [3, 8, 15].

As a result of human activities, biosphere pollution with carcinogenic PAHs has greatly increased, and in industrial regions it exceeds their natural background level by hundreds and thousands times. The main anthropogenic sources of polluting the atmosphere with PAHs are industrial emissions and automobile exhaust gases, surface transport, mainly automobiles, aviation, and water transport. It was established, that gas-turbine engine of modern plane blows up in the atmosphere 2-4 mg of BP per minute of operating. Even approximate calculations show, that yearly over 5000 tons of BP are emitted from this source in the atmosphere. BP and other PAHs are mainly formed in the process of burning various combustion materials (coal, wood, shale, petroleum products) at temperatures about 80° C and over 500° C. PAHs get to the atmosphere together with resinous substances (smoke gases, soot, etc.).

BP is identified in tobacco smoke (20-40 mcg/cigarette), marihuana smoke (29 ng / cigarette), city air (0.05-74ng/m³), exhaust gases of gasoline engines (50-81 mcg/l of fuel), diesel engine exhausts (2-170 mcg/kg of extract), used engine oils (5,2-35,1 mg/kg), polluted water reservoirs (0.2-13000 ng/l), tea (3.9-21.3 mcg/kg), culinary food products, etc. [8, 11].

BP and other PAHs are included in bio-sphere circulation of substances, they pass from one environment to another (for example, from the air into soil, from soil into plants, from plants into feeds for animals, and, at last, into food for people), they undergo different transformations, including destruction (for example, under the effect of photo-oxidizes or soil microorganisms) [19, 8]. These processes of translocation and transformation also take place in the atmosphere, hydrosphere, and lithosphere. In all these environments PAHs practically do not exist in molecular-disperse state, as a rule, they are connected with other pollutants (in the air – with solid particles of atmospheric dust, in water – with other surface components). In the air environment (in this case ground atmospheric layers are the most interesting, because they contain a large part of pollutions) the spreading of PAHs is characterized by dispersiveness of the particles, on which they are absorbed, the remoteness of the emission source from the ground and such climatic factors, as wind, moisture, temperature, atmospheric precipitations. Fine-dispersed dust remains on the upper layers of the atmosphere, while the medium-dispersed particles (1-10 mcm) persist in the breathing zone of human, animal, and plant organism for a long time. Larger particles over 10 mcm as a result of sedimentation fall from the air with precipitation and pass into the soil, plants, and water. The spreading of PAHs, as well as air pollutions in general is also largely stipulated by the degree of remoteness of the emission source from the Earth surface. In other words, the higher the chimney flue is, the longer is the distance of its emissions. According to volcanologists' calculations, volcanic ashes are as a rule blown-out at the height of 1-5 km and carried over great distances. In 1956 at the eruption of Kamchatka volcano Bezymennyi the height of emission was 45 km and its ashes reached London [5, 8].

In aquatic environment the translocation of PAHs includes both their redistribution between separate objects (water, plankton, bottom sediments, and others) and their accumulation and spreading with water.

A part of PAHs in the soluble state is carried over considerable distances. The major part of PAHs adsorbed on the medium- and large-disperse particles is settled on the bottom, forming the level of bottom depositions' pollution and penetrates into plants. The concentration of BP in water is considerably lower than in bottom depositions. Moreover, the latter are the peculiar depot for the secondary water pollution with BP. Some part of PAHs, being evaporated with water, may penetrate in the atmospheric air. PAHs in plants and phytoplankton may be accumulated in them and penetrate in other aquatic organisms, first of all, fish, which are the upper element of the trophic chain [14].

The substances of this group get into soil with atmospheric precipitations, plant residues, and in the recent years, with different domestic and industrial wastes used as fertilizers and containing PAHs. Many soil microorganisms turned out to be highly sensitive to the effect of PAHs, which results in changing the formed micro-biocenoses and influencing soil biological productivity. For example, applying BP in the soil in concentrations 40-100 mcg/kg immediately suppresses the growth of saprophytic microorganisms, but stimulates the generation of *E. coli* and fungi, mainly, actinomycetes. It is from the soil that PAHs penetrate in underground parts of plants, which is confirmed by the established ratio between BP content in soil, and, for example, in potato bulbs [7].

Benz(a)pyrene destruction. The circulation of PAHs in the atmosphere depends on disperse particles, by which PAHs are adsorbed, the degree of the remoteness of PAHs source from the Earth surface, the intensity of solar irradiation, the presence of natural photo-oxidants, contributing in benz(a)pyrene and other carcinogenic PAHs destruction. The destruction of carcinogenic PAHs can take place under the influence of ultra-violet rays and ozone.

BP, which is accumulated in the upper layers of soil (up to 3 cm), is destructed, and the speed of destruction depends on the amount of BP, soil pH and humidity, but, first of all, on the composition of micro-biocenosis. Biological soil purification from PAHs is ensured by some bacteria, which are widely spread in soil and water polluted with PAHs. The processes of PAHs transformation also take place in all the environmental objects. BP degradation in the air takes place owing to ultra-violet irradiation and different photo-oxidants, first of all, ozone and also nitrogen oxids, formaldehyde, acroeline, organic peroxides, which are accumulated in urban atmosphere. PAHs' degradation in the soil takes place both under the impact of ultra-violet (the surface layer) and, mainly, microorganisms' enzyme systems. Oxidative degradation of BP and other PAHs in water also proceeds under the impact of ultra-violet irradiation (the depth of penetration depends not only on irradiation intensity, but also water muddiness, coloring, temperature, etc.), the micro-flora of water reservoir, and also under the influence of other chemical compounds, getting in

these water reservoirs [14].

The impact of benz(a)pyrene on the organism of plants, animals, and people. Biological impacts of BP have been widely investigated on different organisms. It has been established, that PAHs can intensify the growth and propagation of a number of plants. For the first time it was shown on algae *Obelia geniculata* 60 years ago. Since that time numerous researches have confirmed, that BP and other PAHs in small concentrations have growth stimulating effect. The peculiar impact of PAHs has been noticed in inferior vertebrates. At applying some PAHs on the body surface of planaria lighter spots appeared which were explained differently by various authors – as the signs of teratogenic, organogenic, or carcinogenic effects. On the whole, as the carcinogenic effect of PAHs was revealed relatively a long time ago (when pure substances of this group were not singled out or synthesized), that is why their tumorigenic impact was investigated most of all [12].

According to the evaluation of the IARC experts there are no direct proofs about PAHs' carcinogenic impact on human and the indicator substance of this class - BP is considered to belong to group 2A, that is the category of potentially dangerous. But the Ukrainian specialists consider BP as belonging to group 1 – absolute carcinogens for people. At present, probably, it should be stated, that tumors in people appear under the influence of the PAHs' complex. These are coal-tar pitches and coal tars, shale and mineral oils, and also coal smut. Besides, such production processes and branches of industry, in which certain groups of workers are exposed to the impact of PAHs, received as a the result of coal or petroleum processing (the production of coke, cast-iron and steel, aluminium, coal gasification) are also included in carcinogens of group 1. The majority of the enumerated factors cause tumors of skin and lungs. There are also results of epidemiological investigations, testifying to their causing neoplasms of the urinary bladder, gastro-intestinal tract, blood formation system, kidneys, larynx, and mouth cavity. More than 130 PAHs, which can cause tumors in the experiments on animals, have been presently identified in the atmospheric air. Though, the IARC experts consider only 13 substances out of 42 compounds of this class to be absolutely carcinogenic for animals (BP, benz(a)anthracene, benzo(b)fluoranthene, benzo(j)fluoranthene, benzo(k)fluoranthene, dibenzo (a,h)anthracene, dibenzo(a,h)pyrene, dibenzo(a,e)pyrene, dibenzo(a)pyrene, dibenzo(a,e)fluoranthene, 5-methylchrysen, dibenzo(a,j)pyrene, and indeno[1,2,3-c,d]pyrene). In the human and experimental animal organism PAHs undergo metabolic transformations (mainly, in the liver) forming diol epoxides – the terminal metabolites, reacting with cell DNA and are eliminated as glucuronic and other conjugants [1, 9, 2].

BP and many other PAHs have mutagenic effect. In particular, BP causes DNA reparation and bacteriophage induction in microorganisms, induces direct and reverse mutations in tester bacteria strains, drosophila mutations, and also sister chromatic exchanges, chromosome aberrations, point mutations in vivo, in vitro, and also a number of other genetic changes. Besides, BP has embryo-toxic

and teratogenic effect, and it can induce the systems of microsomal oxidation. In production conditions, as a result of people being exposed to PAHs, depending on the way of contact with them and the kind of substance, such diseases may be caused: dermatitis, keratoconjunctivitis, and also a higher risk of ischemic heart disease, chronic lung diseases and other diseases of the respiratory system. For example, huge smog in London on December 5-13, 1951 resulted in 2850 deaths. BP content in this smog was up to 222 mcg/ 100m³ [16, 2, 18].

Taking into account really ubiquitous connections of this group of chemical substances in places of human habitation, their ability to accumulation, the presence in different elements of the trophic chain and variety, PAHs should be considered to be the most important ecologically dangerous factors [6].

Contaminating food products with benz(a)pyrene. The contamination of food products with PAHs takes place in the process of their technological processing, in particular, at smoking and some kinds of frying in meat, fish, sometimes in large amount (from 1 to 100 mcg/kg) [20, 10]. Roasting food products in deep-fry is especially dangerous. PAHs were also found in tea from Turkey. Considerable contamination of food products takes place at storing in polymer packaging material (milk fat extracts 95% of benz(a)pyrene from paraffin-paper packages or glasses) [13, 4].

It was proven, that smoker receives benz(a)pyrene with the products of smoking even the so called light cigarettes, and the amount of BP, one of the most dangerous carcinogens, is several times higher, than the inhabitant of a large industrial city can breathe in maximally with the air; after smoking one common cigarette the amount of BP is 5-6 times higher. The dose, which causes the minimal effect according to epidemiological indices is 3-4 times less, than that received by the above mentioned smoker. Not much lower doses are received by people, being in the zone of smoking products effect, the so called passive smoking [11].

Especially high air pollution with benz(a)pyrene is observed in Ukrainian industrial cities. It is not sufficiently soluble in water (units of mcg/l), a sequence higher – in human blood. BP is light at room temperatures, but its main amount in the polluted air is always bound with hard particles (this also concerns polluted water). Rain sufficiently and quickly purifies the air from this substance washing it down in the soil [15, 5].

The concentration of benz(a)pyrene in food raw products, obtained from ecologically pure plants, is 0.03 – 1.0 mcg/kg. The conditions of thermal processing considerably increase its content to 50 mcg/kg and more. Polymer packaging materials also contaminate food products with PAHs to a large extent.

The adult person receives about 0.006 mg of benz(a)pyrene a year with food. This dose is 5 times and more in intensively polluted areas. Maximal permissible concentration (MPC) of benz(a)pyrene in the open air is 0.1 mcg/100 m³, in the water of water reservoirs – 0.005 mg/l, and in soil – 0.2 mg/kg.

As it was mentioned above, BP can be synthesized by plants, penetrate their

underground organs from the soil and ground plant parts from the atmosphere. It has been noted, that the content of BP in plants in industrial districts is considerably higher, than in the same species, gathered in “clean” district, and exceeds the background level. Moreover, it was established, that medicinal plants, growing near busy automobile roads contain the increased amount of BP. The contamination of food plants with BP greatly depends on anthropogenic factors (industrial wastes) and the degree of remoteness from the source of emission.

The accumulation of PAHs in plants, fish, and shellfish stipulates the probability of contaminating food products and feeds with them, and, thus, penetrating the human organism [6, 14, 3].

Soil, water, green corn, and silage for feeding animals on the farms in the outskirts of Poltava were examined.

The investigation of penz(a)pyrene content indices in water was conducted according to the State Standard of Ukraine (SSU) ISO 17993:2008. Water quality. The determining of 15 polycyclic aromatic hydrocarbons in water by the method of highly effective liquid chromatography with fluorescent detecting after liquid extraction. (ISO 17993:2002, IDT).

The sensitivity of detecting benz(a)pyrene by using the given method is 0,01 mcg/dm³.

Benz(a)pyrene in soil was examined by the method of liquid chromatography.

Benz(a)pyrene in silage and grass was determined by the method SSU 4689:2006. Food products. The methods of detecting benz(a)pyrene weight fraction [11, 15].

The work was conducted on the farms, located in the outskirts of Poltava at the distance up to 1 km from the highway Kyiv – Kharkiv.

Laboratory investigations were held on the base of the state enterprise “Poltava Standard Metrology”.

The state enterprise “Poltava regional scientific-technical center of standardization, metrology, and certification” is subordinate to the Department of Technical Regulation of the Ministry of Economic Development and Trade of Ukraine.

Farm animals, cattle and rabbits, are kept on the private farms under investigation. The animals are mainly fed with silage and hay, and in the summer period – with meadow grass.

The samples of silage and corn green mass from the places where the mass is taken for ensilaging (four private farms) were taken for our research.

Thus, as we can see from Table 2, the content of benz(a)pyrene in silage varied from 6.2 to 7.5 mcg/kg. MPC of benz(a)pyrene was not established for silage in the SSU, that is why for comparison we took maximal permissible content of benz(a)pyrene in food products, which is 5 mcg/kg. In fact, the content of benz(a)pyrene in silage is 1.5 times higher than maximal permissible rate for food products.

Table 2

Benz(a)pyrene content in silage

№ of sample	Amount of benz(a)pyrene, mcg/kg	Benz(a)pyrene rate , mcg/kg
1	7.5	is not standardized
2	6.7	is not standardized
3	6.2	is not standardized

Benz(a)pyrene gets into mammals' organism, where it is neither destructed, nor excreted with urine and feces, but has the property of bio-accumulation, which increases its danger.

Examining corn green mas used for ensilaging and then animal feeding, we also received considerably high indices of benz(a)pyrene content - 9.6 – 10.5 mcg/kg. That is why it can be stated, that benz(a)pyrene in silage is not formed as a result of technological processing, but it is contained in the green mass from the very beginning.

The obtained results are given in Table 3.

Table 3

Benz(a)pyrene content in corn green mass in the outskirts of Poltava

№ of sample	Distance from the highway, m	Amount of benz(a)pyrene, mcg/kg	Benz(a)pyrene rate , mcg/kg
1	25-50	10.50+ 0.45	is not standardized
2	100	9.73+ 0.45	is not standardized
3	250	9.69+ 0.45	is not standardized
4	350	9.62 + 0.45	is not standardized
5	500	9.60 + 0.45	is not standardized

It is evident from the obtained results, that benz(a)pyrene content in corn green mass fluctuated from 9.6 to 10.5 mcg/kg, almost twice exceeding the rate fixed by the regulations for food products.

Corn green mass, taken at the distance 1000 m from Kyiv-Kharkiv highway contained 1.5 mcg/kg (sample 6).

The following stage of our research was the determining of benz(a)pyrene content in water, used for farm animals on the same farms and surface spring water near Kyiv-Kharkiv highway.

We have examined the well water (of the private farms), spring and drinking water from Poltava town public water supply.

The investigation results are presented in Table 4.

According to our research it was established, that benz(a)pyrene weight fraction in drinking water from the wells on the private farms and public water supply water in the town of Poltava do not exceed 0.005 mcg/ dm³ , thus, such water is safe for using.

Benz(a)pyrene content in the town of Poltava

Samples	Benz(a)pyrene content mcg/ dm ³	Benz(a)pyrene rate mcg/ dm ³
Drinking water from bore №1 in the town of Poltava	0.00123	0.005
Drinking water from bore №2 in the town of Poltava	0.00291	0.005
Drinking water from bore №3 in the town of Poltava	0.0042	0.005
Drinking water from public water supply in the town of Poltava	0.0031	0.005
Surface spring water in the town of Poltava (near Kyiv-Kharkiv highway)	0.098	is not standardized

Surface spring water contains 0.098 mcg/ dm³ of benz(a)pyrene, and though the limits of benz(a)pyrene content in spring water are not established, we consider it to be unsafe for consuming.

Soil has the property of accumulation. The highest content of polluting substances is mainly observed in soil upper layers, which are the principal medium for plant growth.

As soil layer is the buffer zone between the atmosphere and entrails of the earth, and this layer gets the main part of the loading from all kinds of human economic activities, including the contamination with PAHs, we conducted the examination of benz(a)pyrene content in soil.

To determine soil pollution with benz(a)pyrene the samples at the distance up to 700 m away from Kyiv-Kharkiv highway in the area of the township Nyzhni Mlyny were selected.

As it can be seen from Table 5, our research established, that benz(a)pyrene content in soil, taken at the distance of 100-400 m away from Kyiv-Kharkiv highway in the area of the township Nyzhni Mlyny, where grass for livestock is grown, varied from 25 to 50 mcg/kg, which twice exceeds the maximum permissible rate. Benz(a)pyrene content in the control sample, taken at the distance of 500-700 m away from the highway was 15 mcg/kg, which does not exceed the rate.

As it is known, benz(a)pyrene is formed at burning hydrocarbon fuel. BP is mainly found in the emissions of automobile transport, and, according to the results of our research, the nearer are soils to the highway, the more they are polluted with benz(a)pyrene. It is practically not found in the free form, but always settles on particles present in the air. Falling down together with solid particles (for example during precipitations), benz(a)pyrene gets to the soil and water reservoirs. Then BP penetrates plants, which later are fed to livestock or used as human food. Thus, benz(a)pyrene concentration in plants in separate cases may be higher, than its

content in soil, and in food products (or feeds) it may be higher than in the starting raw products for their manufacturing.

Table 5

Benz(a)pyrene content in soil

No of sample	Distance from the highway	Benz(a)pyrene amount, mkg/kg	Benz(a)pyrene rate, mkg/kg
1	25-50	50	20
2	60-100	30	20
3	150-450	25	20
4	500-700	15	20

So, it can be confirmed, that the source of contaminating animal feed with benz(a)pyrene on the private farms in the outskirts of Poltava is gas-fuel emissions of automobile transport on Kyiv-Kharkiv highway with intensive traffic, and the safe distance for ensilaging corn green mass and then feeding livestock must not be less, than 1000 m away from intensive highways.

Taking into account the facts presented above, we consider, that:

- benz(a)pyrene content in green corn depends on the distance from the highway with intensive traffic, where exhaust gases from automobiles are accumulated in the atmosphere. For example, at examining corn green mass samples, taken at the distance of 25-500 m away from Kyiv-Kharkiv highway, the weight fraction of hydrocarbon was 9.6 – 10.5 mcg/kg, and in grass samples, taken at the distance 1000 m it was 1.5 mcg/kg, which is seven times less;

- accumulated benz(a)pyrene amount in silage was 6.2 – 7.5 mcg/kg, which is almost equal to BP weight fraction in corn green mass samples, gathered near the highway;

- benz(a)pyrene amount in water from the bore and public water supply in the town of Poltava does not exceed the rate 0.005 mcg/ dm³ admissible by the regulations, and the exceeding of the mentioned rate by 20 times was observed only in the samples of spring water, taken near the highway;

- benz(a)pyrene content in the soil, taken at the distance of 25-50 m away from Kyiv-Kharkiv highway varied from 25-50 mcg/kg, which is twice higher, than maximum permissible rate. Benz(a)pyrene content in the soil, taken at the distance of 500-700 m away from the highway did not exceed 15 mcg/kg (within the limits of MPC);

- gas-fuel emissions of automobile transport on Kyiv-Kharkiv highway, having a very intensive traffic, are the sources of contaminating feed for livestock with benz(a)pyrene on the private farms in the outskirts of Poltava.

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PECULIARITIES OF PUBLIC MANAGEMENT OF ENVIRONMENTAL AND ECONOMIC SECURITY OF A REGION

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Global changes in nature revealed their rigid connection with the pattern of the modern development of civilization – the development at the expense of and to the detriment of nature, without due regard to the danger of disturbing the rational balance of the four main components that determine progress: economy, ecology, social status of people and their spiritual world. Market economy requires radical

changes in the existing mechanism for the formation of rational use and protection of land, water resources, waste accumulation, which calls for the adoption of perfect environmental-economic and legal mechanisms.

The stable state of economy as one of the most important conditions of national well-being, autonomy, independence specifies the basis of security, since production, distribution and consumption of material wealth determine viability, vital activity of society. The study of economic security depending on the environmental component is a relatively new phenomenon. Hence there is a problem of identifying the interaction of economic and environmental security. The basis of economic security is created through the provision of environmental security. The transition to sustainable development of civilization will result in a variety of acute conflicts, which will increasingly affect the struggle for markets, resources, ecological reserves and living space.

The urgency of the research is due to the fact that under the conditions of internationalization of commercial and business activity and strengthening of negative anthropogenic impact on the environment, there is an objective necessity to develop an effective mechanism for managing the economic potential of a region, taking into account the requirements of its environmental and economic security.

The problems of economic security at the regional level are considered in the works by Bohan A. V., Demykhina O. I., Karaeva N. V., Korpan R. V., Kubatko, O. V., Iskakov A. A., Malysh N. A., Wozniak V. At the same time, scientific and methodical approaches to the formation of an organizational and economic mechanism for managing the economic potential of a specific region, taking into account the requirements of environmental and economic security, are underdeveloped.

Providing insight into environmental and economic security, it is necessary to point out various aspects of this complicated political and economic category, and that its most important feature is the capacity of the economic system for sustainable maintenance of the basic values of economic, financial, social, environmental and other indicators in the parameters that provide the basis for its functioning [3].

The determination of importance of the category “environmental and economic security” in the system of economic relations involves specifying the spheres of economic activity by allocating the objects of environmental and economic security, which are the kinds of resources – mineral resources, fixed and circulating assets, etc.; differentiated parts of the security subjects – district, city, region, social group; qualitative characteristics of processes (reproduction of population, resources, age of fixed assets) and types of activities (rates of technological development) [4, 6].

The notion of environmental and economic security has a number of features that are typical in whole to the system of natural resource use as a form of interaction between nature and society. The need for security, protection against unwanted external influence and internal changes on the life of an individual, family, their property, various associations of people, including society and the state, refers to the type of basic needs. Environmental security is, firstly, the security of the

functioning of the environment, the absence of significant threats to its existence, and, secondly, the lack of environmental threats to the lives of individuals and their different communities and organizations at the macro level. Similarly, economic security covers both a low level of probability of threats to the functioning and development of the country's economy, as well as a low level of probability of threats to the development of society on the part of its economic subsystem, that is, those processes occurring in the national economy.

The results of various studies show that in the modern economic system, under the conditions of globalization and internationalization of economy, it is necessary to try to achieve a state in which the impact of any economic activity does not go beyond the limits of environmental and economic security. Under these conditions, it is necessary to use such an economic indicator which enables simultaneously to characterize both the current state of interconnections of socio-economic and environmental subsystems of a region, as well as to construct a reliable model for their development in the future. In our opinion, as an economic notion that characterizes the ability of socio-economic and environmental subsystems of a region to develop in a given direction, their ability to ensure the achievement of certain results under the existing conditions and the level of use of this ability, such a notion as "economic potential of a region" can be used. From the point of view of the systematic approach, this notion is considered as the "economic characteristics of a territory ... a complex, dynamic, polystructural system of possibilities and capabilities generated by the regional system" [5].

The important problems for Ukraine related to the relationship between economic growth and environmental conditions are defined in "The Conception of the National Environmental Policy of Ukraine for the period up to 2020" [2]. In accordance with "The main directions of the state policy of Ukraine in the field of environmental protection, use of natural resources and provision of environmental security" [1] approved by the Verkhovna Rada of Ukraine, the current ecological situation in Ukraine is recognized as a crisis one, and the main directions of its improvement are outlined.

N.A. Malysh [7] believes that the ecological situation in Ukraine is considered as a crisis one due to a number of factors: weak control of the use of natural resources potential; a low level of environmental security of natural management subjects; extensive nature of social and productive activities; a super-high degree of deterioration of fixed assets; insufficient investment in the development of advanced production and environmental technologies.

Ukraine is an integral part of the world socio-economic system, the activity of which is based on the unlimited use of natural resources in economic turnover, which results in the environmental pollution and the depletion of natural resources potential of the country, contributes to the aggravation of the environmental crisis, the emergence of global environmental and economic dangers in Ukraine. These factors are the root cause of the emergence of additional costs of business entities

and promote the loss of the gross domestic and gross regional product.

Environmental and economic security can be considered as a state of the balanced development and protection of the socio-economic subsystem of a region against real and potential threats posed by the impact of both anthropogenic and natural factors on the environment.

The conception of management of environmental and legal regulation (ELR) should join together the three main regional subsystems (institutional, socio-economic and environmental) and reveal basic principles of their interaction (Fig.1).

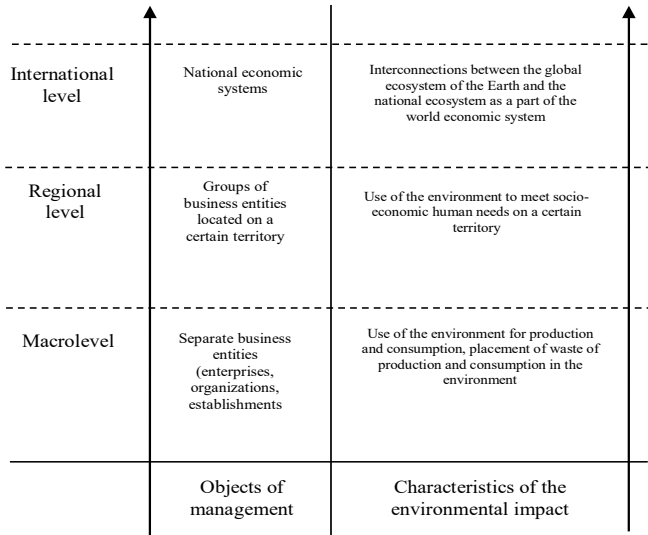


Fig. 1. Levels of environmental and economic interconnections in the system of management of the economic potential of a region [developed on the basis 5, 10]

In the context of the conception of ELR, attention should be focused on the study of environmental and economic interconnections between the elements of institutional, socio-economic and environmental subsystems of a region.

In general, taking into account the requirements of the ecological and economic security of a region will lead to a structural adjustment of the socio-economic subsystem of a region towards its ecologization.

It should be emphasized that for the successful practical implementation of the concept of ELR management, the first-order condition is obligatory expression of all interconnections between the elements of the environmental and socio-economic subsystems of a region in monetary terms, which may be characterized by the volume of income and expenditure of the socio-economic and institutional subsystems of a region. The nature of such interconnections depends on the degree of anthropogenic pressure of the socio-economic system on the environment.

Under the market conditions of economy management, one of the main conditions for taking into account the requirements of the environmental and economic security of a region is non-exceeding the integral anthropogenic load of the renewable capacity of its environmental subsystem on the environment.

Every region has its own individual maximum permitted values of anthropogenic load on the environment, which are conditioned by the individual ability of its environmental subsystem to assimilate the placement of pollutants and self-restoring.

Taking into consideration the requirements of the environmental and economic security of a region will help to coordinate the rate of the economic growth of a region and the individual capabilities of its environmental subsystem. That is, the rate of economic growth of a region should be within the range of the permitted values – to meet the individual rates of assimilation of pollutants and self-restoring of the environmental subsystem of a region. A well-known fact is that market mechanisms do not always work in terms of taking into account the requirements of environmental and economic security.

Therefore, the urgent task is to form an organizational and economic mechanism for managing the economic potential of a region, taking into consideration the requirements of environmental and economic security, and assessing the economic effect of its introduction on the basis of the system approach. With regard to the above-mentioned, we think that it is necessary to propose for consideration of interested individuals the procedure for taking into account the requirements of ecological and economic security in managing the economic potential of a region (Fig. 2).

The development of society at the present stage insistently requires the introduction of a balanced approach to solve economic, social and environmental problems. This should be considered as a logical stage in the development of human civilization faced with such global problems as depletion of natural resources, environmental pollution and signs of an ecological catastrophe. It is impossible to solve environmental problems without clear identification of the place and role of economic interests of people, their synchronization with environmental imperatives as well as formation of an ecological and legal culture, especially of those individuals who are involved in management and production.

With regard to Ukraine, it is promising to determine a new role of the state in the context of aggravating the environmental problems of its development at the regional level. The last decade has shown that it is premature to reject administrative opportunities in this sphere. The economic levers of ensuring environmental requirements in the economic activity of regions underperform without effective management, administrative control and influence. Therefore, the implementation of the environmental strategy under the modern conditions should be based on an effective economic and legal mechanism for environmental protection developed on the interaction of administrative and economic means to solve environmental problems and ensure sustainable development of regions.

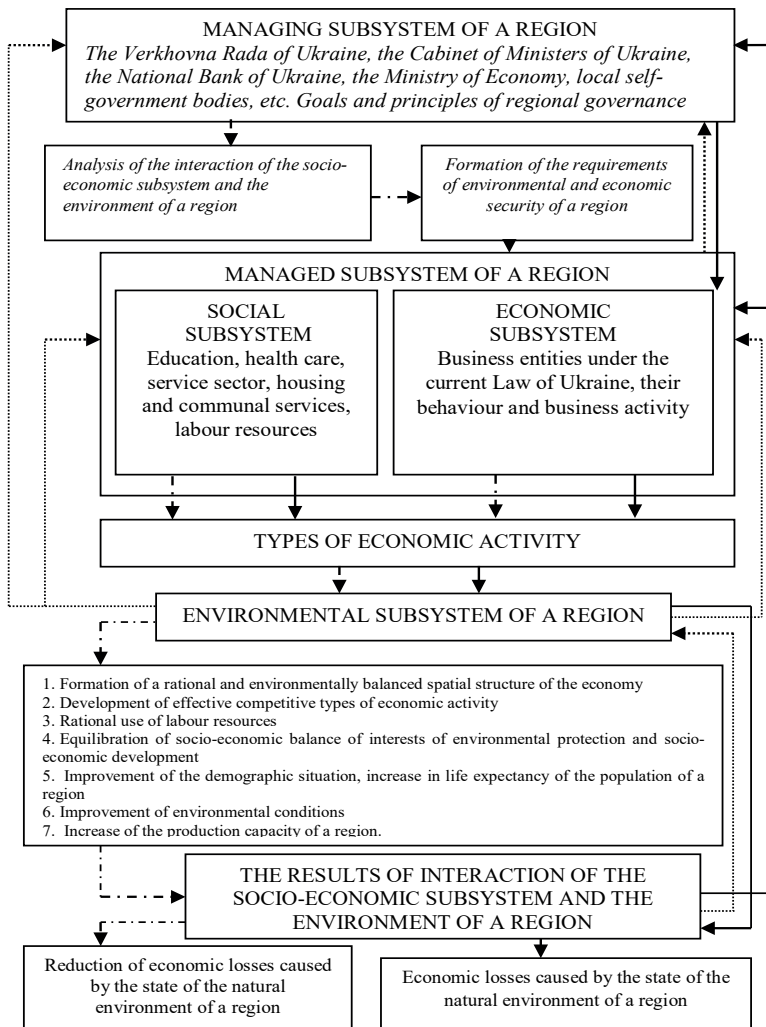


Fig. 2. Consideration of the requirements of ecological and economic security in the management of the economic potential of a region [6, 8, 9]

The task of legal regulation in this context should be, first of all, to help bring about resolution to the dispute of economic and environmental interests making environmentally incorrect activities unprofitable also economically and keeping environmental requirements in economic activities economically sound.

The economic and legal mechanism of environmental protection at the regional level provides the state policy in this area with a clear sense of purpose, formal certainty, general obligation, promotes the proper regulation of relations in the field

of ecology, the application of preventive, operational, expansionary and coercive measures to legal and private persons for the use of natural resources and their waste and legal liability for violation of environmental legislation. It is closely connected with and naturally depends on the economic, political, legal system of society, on the peculiarities of the construction and functioning of the state mechanism, as well as on the ecological and legal culture of society.

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QUALITY AND SAFETY OF FOOD AS A COMPONENT OF FOOD OF SAFETY

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As you know, food safety is one of the most important components of economic safety. In legal acts, scientific literature, international documents provide definition of food safety from different points of view. In scientific literature, food safety is treated as an economic category that defines food safety. For example, at the World food conference the term «food safety» was defined as «the availability, at any time, of adequate, nutritious, varied, balanced and moderate world food stocks of basic foodstuffs in order to ensure a steady increase in food consumption and the compensation of production fluctuations and prices» [1].

This definition is also enshrined in article 2 of the Law of Ukraine «On state support to agriculture of Ukraine» [2], which stipulates that food safety is the protection of human life interests, which is expressed in guaranteeing the state of unimpeded economic access of a person to food products in order to maintain its normal life activities.

Scientists also put forward various interpretations of food safety. So, for food safety, Pylypenko K. [3] understands such a state of the economy, in which, irrespective of the world market conditions, a stable supply of people by food is in a quantity corresponding to scientifically substantiated parameters (proposal), on the one hand, and conditions are created to maintain consumption at the level of medical standards (demand) – on the other.

Nemchenko V. [4] defines food safety as an ability to provide the population by food in the conditions of limited financial and environmental capabilities of the state in accordance with scientifically subjected norms, individual characteristics of person and his solvency and price level.

In Goychuk's O. work [5] the food safety is a level of food supply to the population that guarantees socio-political stability in society, the survival and development of the nation, individuals, families, sustainable economic development.

Thus, the analysis of literary sources indicates that food safety in these works is considered as an economic category.

Also, scientists are considering the most important conditions for achieving food safety. So, the work of Pilipenko K. [3] outlines such conditions as the potential physical availability of food for each person (their availability and supply in sufficient quantities); the economic opportunity to purchase food by all social groups of the population, including the poor (the solvency of consumer demand); consumption of high quality products in quantity sufficient for rational nutrition.

According to Ulyanchenko A., Prozorova N. [6] is such conditions as: the population of the country is provided with ecologically clean, full and healthy food products of useful production according to scientifically substantiated norms, and rationality of their consumption, taking into account age, sex, working conditions, climatic conditions and national traditions.

The availability of safe food contributes to the development of the national economy, trade and tourism, food safety and safety of food, and is one of the factors of environment development.

In the context of globalization, urbanization and changes in consumer behaviour, the demand for an ever-widening range of food products is increasing. In order to meet this demand, there is an increase in the intensity and volumes of industrial production in the crop and livestock sectors, which creates both new opportunities and new threats in terms of food safety.

Taking into account the current challenges facing food manufacturers and food industry workers, there is an additional responsibility for ensuring the quality and safety of food [7].

Consequently, besides the established economic conditions of the present, the problems of quality and safety of food products are highlighted.

One of the sources of consumer satisfaction in food is cereals, among which cereals are popular. As the object of the research were oats extra flakes «The Power of Hercules» produced by Ltd. «Hercules and K» (Ukraine, Dnipro), then for conducting research it is necessary to analyse normative documents (ND) that regulate the quality and safety of these products. At present, in the territory of Ukraine, the following standards apply to the quality of flakes (Table 1).

The organoleptic method for assessing the quality of food products is based on an analysis of the perception of reality by sensory organs (vision, hearing, smell, touch and taste) without the use of measuring instruments. According to GOST 21149 [9] in oat flakes the following organoleptic parameters are checked: appearance, color, smell and taste, and consistency. The results of the research of the organoleptic parameters of oat flakes «Hercules' Power» are represent in Table 2.

Table 1

Updating of the NS on the quality and safety of flakes

Normative document	The object of standardization and the area of distribution of activities	Actualization
DSTU 4634: 2006 [8]	Concentrates for food breakfasts dry. Flakes of cereals. General technical conditions are valid in Ukraine	from 01 July 2007
GOST 21149-93 [9]	Oat flakes. The specifications are valid in Ukraine	from 01 January 1995
DSTU 4518: 2008 [10]	Food products. Labeling for consumers is valid in Ukraine	from 01 November 2008
from 01 November 2008 GOST 26791-89 [11]	Grain processing products. Packing, marking, transportation and storage is valid in Ukraine	from 01 July 1990
SanPiN 2.3.2.560-96 [12]	Hygienic requirements for the quality and safety of food raw materials and food products are valid in Ukraine	from 24 October 1996
State sanitary norms and rules [13]	Medical requirements for the quality and safety of food products and food raw materials is valid in Ukraine	from 29 December 2012
State hygiene rules and norms [14]	State hygiene rules and norms [14] Regulations of maximum levels of certain pollutants in food products is valid in Ukraine	from 13 May 2013

Table 2

Determination of organoleptic parameters of oat flakes «The Power of Hercules»

Name of the indicator	Characteristic of the indicator	
	according to DSTU 4634: 2006	example
Appearance	Thin, roasted, of various shapes, with a surface with shallow bubbling bloating	Flakes of different shapes, evenly fried with small blobs
Color	From light brown to dark brown of various shades	Flakes of different colors and shades from cream to brown
Smell	The scent is inherent in this type of product with the taste and smell of the additives used - for flakes with additives	A pleasant cereal smell
Taste		Peculiar cereal, not sour, not bitter
Consistency	The consistency crisp, not rigid	Flakes are crisp, not rigid

Thus, extra oat flakes, «Hercules Power» produced by Ltd. «Hercules and K», according to organoleptic parameters, correspond to the requirements of GOST 21149 [9].

According to GOST 21149-93 [9] in oat flakes the following physical and chemical parameters were determined: mass fraction of moisture, acidity, weldability. The results of research are presented in Table 3.

Table 3

Results of researches of physical and chemical indices of oat flake oven extra production quality produced by Ltd. «Hercules & K»

Indicator	Value		Relevance
	normative	measured	
Humidity,% not more than	12,5	11,5	corresponds
Acidity, ° not more than	5,0	4,34	corresponds
Weldability, min.	15	15	corresponds

Thus, corresponds to GOST 21149-93 [9] oat flakes extra produced by Ltd. «Hercules and K» meet the physical and chemical performance.

Food products – the most dangerous from a medical point of view source of harmful substances for a person. The main pollutants of food include a significant amount of substances of chemical nature. Such toxic elements as lead, cadmium, copper, can accumulate in the human body and cause diseases appear gradually, without pronounced symptoms. They are distinguished by high biological activity, oligodynamic action, cumulative properties, the presence of specific, including distant, effects on the body [15].

According to Tkachuk O. and Yakovets L. [16] about 90% of heavy metals, from their total incomes in agroecosystems with mineral fertilizers, accumulate in the soil. The rest can be included in the cycle and enter the crop production, and then to the person. The most widespread heavy metal, which can migrate from the soil to human body – lead, cadmium, arsenic. It is during the introduction of nitrogen fertilizers to the soil (mg / kg): lead – 174,4; copper – 201,9; zinc – 186,4; cadmium – 1,3; mercury – 0,4; and during the introduction of phosphorus (mg/kg): lead – 138,1; copper – 155,1; zinc – 1230,1; cadmium – 2,7; mercury – 4,6. These compounds accumulate in cereals and fodder crops. The most tolerant of heavy metals is winter rye, winter wheat, oats, barley.

Since grain crops are used to produce a significant amount of daily food products for Ukrainian consumers, such as cereals, flour, pasta, bakery confectionery products, the issue of their safety in the content of toxic metals remains important. Only constant control over the content of lead, cadmium, arsenic, mercury, copper, zinc in these food products can protect you from their negative effects, which often does not immediately occur, but is the result of prolonged accumulation (accumulation) of one or another compound to the body of person. The least protected category of the population needs special protection – children whose body is most affected by low-quality and harmful food products.

The most dangerous toxic element is cadmium, in relation to which it can

be said that it is a carcinogen that kills slowly. To its negative action, first of all, include damage to the central nervous system, liver and kidneys, negative effects on phosphorous-calcium metabolism and causing the destruction of bone tissue, etc. Almost inferior to cadmium for their toxicity, mercury and arsenic. Mercury is a submersible metal, if for a long time, gradually, about 200 mg, comes to the human body, one can cause of early symptoms of poisoning – a defeat of the sensory part of the nervous system, which may be accompanied by a loss of sensitivity of the skin. Also, mercury can cause hearing impairment, blindness, coordination problems. Arsenic is the most affected by the digestive and nervous systems. Copper and zinc are the micronutrients that are needed by a person for normal livelihoods, but they become dangerous when they get an excessive amount of body. In this case, they poison the human body and cause it a series of negative changes – accelerated process of aging, there is a mental retardation, etc [16].

Oat flakes can undoubtedly be called the leader when we speak about the daily breakfast of Ukrainians. The speed of cooking, a wide assortment of products with a different price, many recipes, high consuming value make them very popular in the diet of adults and children. Therefore, the research of the content of toxic metals in oat flakes is the most actuality in present.

The content of toxic elements in oat flakes should not exceed the permissible levels established by medical and biological requirements and sanitary norms of quality of food raw materials and food products. No. 5061-89 dated August 1, 1988 Sanitary regulations and norms SanPiN 2.3.2.560-96 «Hygienic requirements for quality and safety food raw materials and food products»[12].

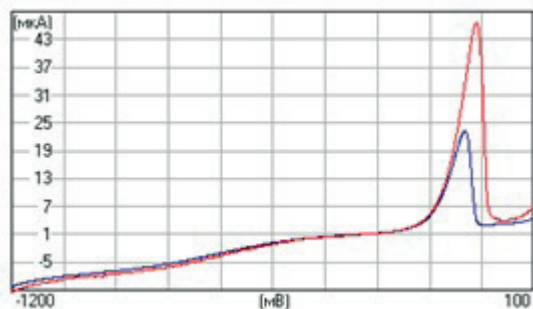


Fig. 1. Voltamperogram of the analyzed solution of flakes

Voltammetric method was used to determine the content of heavy metals in experimental samples of oat flakes based on the registration and research of the current dependence flowing through the electrolytic cell from the external superimposed voltage. Graphic representation of this dependence is called voltamperogram. At the first stage, preliminary preparation of a special solution from experimental flakes was carried out, and in the second stage – an own voltammetric research was

conducted. Voltamperogram analysis provides information on the qualitative and quantitative composition of the solution analyzed (in particular, on the content of lead, cadmium, copper) (Fig. 1).

The results of determination of the content of toxic elements in oat flakes extra «Hercules Power» produced by Ltd. «Hercules and K» are given in Table 4.

Table 4

Results of determination of the content of toxic elements in oat flakes, mg / kg

Name	Value	
	permissible levels [12]	measured
Contents: - lead	0,5	0,0758
- cadmium	0,1	0,0345
- copper	10,0	3,32

The test example is fixed 0,0758 mg/kg of lead (acceptable level – 0,5 mg/kg), 0,0345 mg/kg of cadmium (acceptable level – 0,1 mg/kg) and 3,32 mg/kg copper (acceptable level – 10,0 mg/kg). Thus, a test sample of oat flakes contains lead 6,5 times lower than acceptable level, cadmium – 2,8 times less, and copper – less than 3 times.

Consequently, the analysis of the results of the research of the content of toxic elements in the oat flakes of extra production by Ltd. «Hercules and K» showed that this food product meets the requirements of GOST 21149-93 [9] and SanPiN 2.3.2.560-96 [12] according to measured safety parameters.

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DEVELOPMENT OF THE PLANT GROWING INDUSTRY AS A PREREQUISITE FOR ENSURING FOOD SECURITY OF UKRAINE

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Plant growing plays exceptionally an important role in Ukraine's food security formation as it provides the population with food products, livestock raising with forage, food, processing and light industry -with raw materials, foreign trade - with export products. In particular, in 2017, compared to 2010, the specific weight of products of plant origin in the structure of exports of agricultural and food products increased by 12 percentage points and is 52%. At the same time 70,4% falls on grain crops, and 22,3% - seeds and fruits of oil-bearing crops [6, p. 31]. However, to date, some plant growing industries are in crisis, are low-profitable, which requires the development of measures to improve their efficiency. Under market conditions the economic instability of production is manifested not only in the productive but also in the cost component of the production efficiency. Therefore, an important place in the study of food security is the issue of economic efficiency of plant growing products production. The resolution of this issue should be carried out not only at the state but also at the regional level, where the issues of food supply to the population are solved.

Stability, productivity and efficiency as well as the level of competitiveness of an enterprise of any form of ownership are caused by the following main factors: the size of land, the level of technical and technological equipment and management. Under such conditions those entities of entrepreneurial activity, which organically combine the entrepreneurial and organizational talent of the manager with other production resources, are more effective.

The gross agricultural output in Ukraine for 2010-2017 varied, as indicated by the chain growth indices. Thus, in 2017, compared with 2016, production decreased by 3,2%, including plant growing production - by 3% [6, p. 38-39]. It should be noted that in the period from 2013 to 2017, the share of agricultural enterprises in the production of agricultural products increased from 54% to 56.4% [9, p. 47].

In the structure of the gross output of agricultural enterprises the steady predominance of crop production is 77.3%, respectively, livestock products account for 22.7% of gross output [6, p. 47].

The development of the crop sector is determined by the dynamics and structure

of the crop area, yield, the dynamics of gross fees, cost indicators - the dynamics of outlay, cost, profit, as well as relative indicators - the level of profitability and the rate of profit used to compare the effectiveness of the industry of different management entities.

During 2013-2017 there was a decrease in the area from which the harvest of grain crops in agricultural enterprises was collected by 9% and equals 10509,7 thousand hectares (66,2% of the sown area). In this case, the harvested area of sugar beet increased by 35.5% to 294.1 thousand hectares or 1.9% of the sown area of commodity crops. At the same time the harvested area of sunflower increased by 20.4% to 4980.6 thousand hectares, the specific gravity of this crop increased to 31.3%, which indicates the irrationality of the structure of the crop area [6, p. 103].

In Ukraine a steady decrease in the harvested area of potatoes, vegetable crops, fruit and berry crops is observed.

In the structure of the sown area of crops in agricultural enterprises of Ukraine the largest specific gravity is occupied by crops of grain and leguminous plants - 54.9% (Fig. 1). Among grain and leguminous crops the main place belongs to wheat - 46.2%, corn for grain - 32.8%, barley - 12.3%, while grain legumes account for 4.3%.

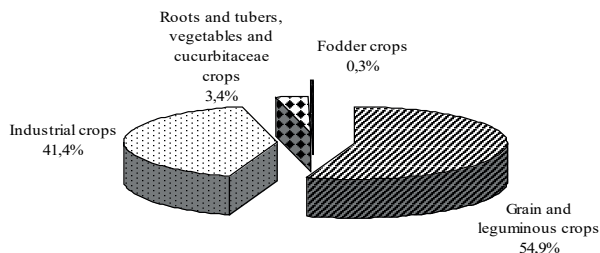


Fig. 1. Structure of sown area under agricultural crops in 2017, percentage of total area

Source: built according to the data [5, p. 13]

The second place in the structure of sown areas is industrial crops - 41.4%. Among industrial crops the main place is sunflower growing - 63.0% and soybeans - 23.0%, rape and colza have less value - 9.7% and sugar beet - 3.7%.

The share of fodder crops due to the reduction of the livestock sector is constantly decreasing and in 2017 it is 3.4%. Among the fodder crops, the largest specific gravity is fodder corn and perennial grasses for the hay and green feed.

An important condition for the growth of the economic efficiency of plant growing sectors is to increase the productivity of all agricultural crops and to reduce the material and monetary costs for the production and sale of output. Possible

reserve of improvement of the first order factors testifies experience and significant differences in the level of productivity between individual enterprises which are comparatively in identical conditions (Table 1).

Table 1

The dynamics of crop productivity in agricultural enterprises of Ukraine, 2013 – 2017

Indices	Years					Average annual growth rate, %
	2013	2014	2015	2016	2017	
Grain and leguminous crops	43,0	47,5	43,8	50,0	45,6	1,5
Factory sugar beet	419,4	490,2	448,2	494,0	484,1	3,7
Sunflower	22,8	20,5	23,0	23,5	21,3	-1,7
Potatoes	221,2	256,4	198,6	212,1	238,4	1,9
Vegetables	312,3	346,4	363,4	382,7	435,3	8,7
Fruits and berries	64,0	53,7	70,8	72,5	64,9	0,3

Source: compiled according to the data [6, p. 102].

Average annual growth rates indicate that virtually all crops have an increase in yields except for sunflower. The yield of grain and leguminous crops in agricultural enterprises of Ukraine in 2017 compared to 2013 increased by 2.6 centners / hectare (6%), but the decrease in sown area led to a 3.5% decrease in grain production.

The yield of sugar beet increased by 64.7 c / ha (15.4%) and amounted to 484.1 c / ha, while the yield of sunflower fell by 1.5 c / ha (6.6%) to 21.3 c / ha. Yields of potatoes, vegetable crops and fruit and berry crops tended to increase, but potato production decreased by 34.9%, fruit and berry crops by 24.9%.

In this regard, despite the decrease in sunflower yield, its production for the analyzed period increased by 12.2% and equals 10596.7 ths. tons.

According to the data of the table 2, 77.4% of grain production is attributed to agricultural enterprises, including 14% to farms, which is 2.1 percentage points more compared to 2013. Accordingly, the production of grain in households increased by 1.4 percentage points to 22.6%.

Sugar beet production in agricultural enterprises increased significantly as compared with households - by 11.3 pp to 95.6%. There is also an increase in the production of sunflower seeds in agricultural enterprises - by 1.1 pp and equals 86.6%, including farms - 19.3% and vegetable crops - 2.8%, although their share does not exceed 14.5%.

At the same time the production of potatoes and fruit and berry crops remains the priority of households.

The possibilities of an agricultural enterprise to realize the main strategic goal of its development - maximizing profits, are always limited to the volume of production costs and demand for products. Under these conditions, management decisions can

not be made by the management of an enterprise without an analysis of available production costs and the dynamics of their change in perspective.

Table 2

Structure of production agricultural crops by types of agricultural holdings, percentage to total production

Indices	Years					2017 from 2013, (+,-)
	2013	2014	2015	2016	2017	
Agricultural enterprises						
Grain and leguminous crops	78,8	78,1	77,3	78,7	77,4	-1,4
Factory sugar beet	84,3	92,8	92,5	95,3	95,6	11,3
Sunflower	85,5	85,7	85,4	86,1	86,6	1,1
Potatoes	3,0	3,2	2,2	2,2	1,9	-1,1
Vegetables	11,7	13,9	13,9	14,1	14,5	2,8
Fruits and berries	19,4	16,6	19,1	18,5	16,3	-3,1
Households						
Grain and leguminous crops	21,2	21,9	22,7	21,3	22,6	1,4
Factory sugar beet	15,7	7,2	7,5	4,7	4,4	-11,3
Sunflower	14,5	14,3	14,6	13,9	13,4	-1,1
Potatoes	97,0	96,8	97,8	97,8	98,1	1,1
Vegetables	88,3	86,1	86,1	85,9	85,5	-2,8
Fruits and berries	80,6	83,4	80,9	81,5	83,7	3,1

Source: compiled according to the data [5, p. 32-33]

It should be noted that during the last five years there has been some change in the cost for production plant growing output (Fig. 2).

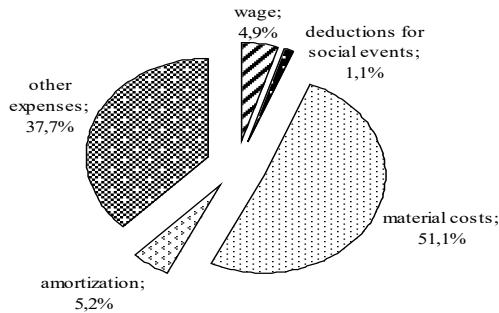


Fig. 2. Structure of Costs for Crop Production in Ukraine, 2017

Source: compiled according to [1]

In particular, the share of expenditure on labour decreased by 2.2 percentage points to 4.9%, respectively, deductions for social events - by 1.5 percentage points and is 1.1%. At the same time, the share of material costs decreases each year and in 2017 it is 51.1% which is 14.9 pp less compared to 2013. At the same time, the share of other expenditures increased by 19.3 pp by increasing the amount of payment for land lease and total production costs.

Table 3

Structure of material costs for plant growing production in agricultural enterprises of Ukraine

Cost items	2013	2015	2017	2017 (+,-) from	
				2013	2015
Direct costs of agricultural crops production including	100	100	100	x	x
seeds and planting materials	19,1	16,8	19,2	0,1	2,4
other agricultural products	0,9	0,5	2,0	1,1	1,5
inorganic fertilizers	24,4	26,6	31,3	6,9	4,7
oil products	18	16,7	17,8	-0,2	1,1
electric power	1,5	1,0	1,0	-0,5	0,0
fuel	1,7	1,2	1,4	-0,3	0,2
spare parts, repair and building materials for repairs	8	9,8	10,4	2,4	0,6
payment for services and work of other organizations	26,4	27,4	16,8	-9,6	-10,6

Source: compiled according to [1; 3; 4]

Since material costs occupy the largest share in the structure of costs and prime cost of plant growing production, it is important to analyze the structure of these costs and assess the factors influencing their dynamics (Table 3).

In the structure of material costs forming the prime cost of crop production in 2017, compared to 2013, the share of mineral fertilizer costs increased by 6.9 pp, spare parts, repair and building materials for repairs - by 2, 4 pp, seeds and planting materials - by 0.1 pp. At the same time, the share of expenses on fuel and lubricants decreased by 0.2 percentage points, which is conditioned by the active use of energy and resource-saving technologies, while the share of expenses for payment for services and work performed by other organizations decreased by 9.6 pp. to 16.8%.

Pricing for agricultural products is one of the most important ways of using economic laws for the further development of agricultural production. The index of prices on sale of agricultural products takes into account the sale of agricultural products to processing enterprises, on the market, to the population in payment for labor, shareholders for rent payments for land and property shares, exchanges, auctions and other areas. The basis for weighing to aggregate these changes is the

actual volume of sales of the respective types of products during the reporting period (Fig. 3).

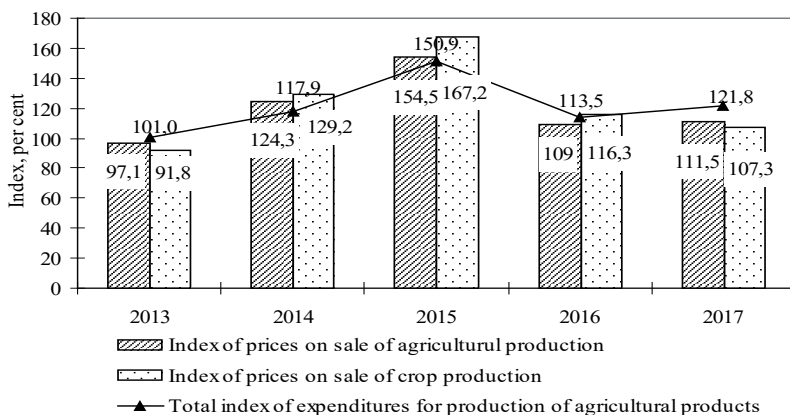


Fig. 3. Dynamics of the sales price index and the index of production costs in agricultural enterprises of Ukraine, % (to the previous year)
 Source: compiled according to [2; 6, p. 183]

As shown in Fig. 3 the largest increase in the index of prices for sales of products in agricultural enterprises was observed in 2014 - 124.3% and in 2015 - 154.5%, whereas in 2017 it decreased to 111.5%. In recent years the index of expenditures on agricultural production exceeded the index of prices of sold products, which adversely affects the financial results of enterprises.

Average prices for the sale of crop production had a steady upward trend. Thus, the price of sales of grain and leguminous crops increased by 2.9 times, oilseeds - 3 times, sugar beet - 2.1 times.

The main indicator that characterizes financial results of activity is profit. During the examine period, net profit of agricultural enterprises increased by 5.3 times and amounted to UAH 78457,7 thousand, while the share of enterprises that received net profit remained unchanged - 86,7%. The level of profitability of economic activity increased by 10.4 pp. and is 18.7% and the level of profitability of operating activity increased by 11.8pp. to 23.5% which indicates an increase in the efficiency of agricultural production [6, p. 174].

In general, agricultural enterprises in Ukraine have an increase in the efficiency of plant growing production (Fig. 4).

Thus, the profitability level of grain and leguminous crops production increased by 22.6 pp and is 25%, the efficiency of production of sunflower seeds - by 13.1 pp to 41.3%, the efficiency of beet sugar production - by 9.3 pp. and equals 12.4%.

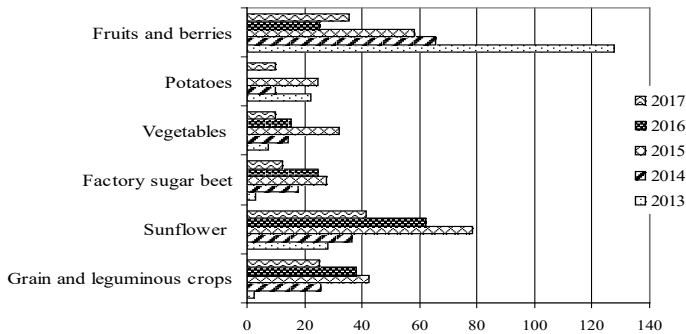


Fig. 4. Dynamics of the profitability level of plant growing production in agricultural enterprises of Ukraine, %

Source: compiled according to the data [6, p. 177]

Consequently, in the development of plant growing industry the following trends, which determine the level of food and economic security in Ukraine, are observed:

1. The expansion of industrial crops areas (sunflower and soybeans) by reducing the sown area of forage and grain crops.
2. The increase in crop yields is relatively low due to the low level of implementation of innovations and information technologies.
3. The growing role of farms in the production of grain crops and sunflower seeds.
4. The production of potatoes and fruit and berry crops remains the priority of households.
5. In the structure of the production costs of the plant growing production sector the share of other expenses constantly increases due to the increase of rent and total production costs.
6. In the structure of material costs changes are gradually taking place in favour of increasing the share of expenses for mineral fertilizer and spare parts, repair and building materials for repairs, while the share of expenses for the payment for services of other organizations substantially decreases.
7. The effectiveness of plant growing production varies considerably over the years due to a significant increase in the cost component compared to sales prices.

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THE STRATEGY OF INNOVATION SUPPORT FOR AGRARIAN ENTERPRISES AS AN ELEMENT OF TECHNOLOGICAL SAFETY

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In market economy, the most important condition for enterprise development is of competitive production. One of the directions of its support is the effective use of scientific, engineering, and technological potential, the revival of creative activity of inventors and industrial rationalizers.

Scientific and technical progress in agriculture involves the improvement of machines and mechanisms, the organization of production technology, soil cultivation systems. The high use of machine and tractor fleet is ensured by the establishment of rational technological, technical and organizational systems and other measures to implement the properties of agricultural machinery with designed features that guarantee high productivity in specified agricultural and technical terms with the greatest economic efficiency.

Technological safety is an enterprise security from internal and external factors that break appropriate functioning of the support systems, threaten the effective operation of production systems and life-support systems, thus causing a threat to the enterprise itself.

The task is, besides a significant increase in the returns from the existing production potential and agricultural equipment designed on the basis of the latest technology, to create new models of machines and units, which would significantly improve the productivity and efficiency of land and labor resources. This problem becomes more acute in the conditions of development of market relations in

agricultural sector, land reform, spreading of new organizational forms of economic management.

Solution to the problem of choice and highly efficient use of both specific machine-tractor units, technological complexes, and machine-tractor farm fleets with the aim of maximizing agricultural production should also be based on intensifying the improvement of innovative activities, not only at agro-industrial enterprises, but also in research institutions [2, p. 95].

For a long time, agriculture has been developing mainly due to extensive factors, while traditional evolutionary processes and phenomena have been dominating in the production process. These extensive factors have practically run their course, and their impact has become economically unprofitable.

Development and identification of modern production should be almost entirely based on new solutions in the field of technology, engineering, organizational forms and economic methods of management, that is, various innovations introduced into production.

The factors that slow down the assimilation of innovations in agriculture are, first of all, a lack of own financial resources and high rates on loans of commercial banks, a decrease in domestic demand and economic risk of new product development. Science, innovation and training are requirement for agricultural producers. Development of productive forces also occurs in the context of close interaction between new technologies and production.

Only radical measures for introduction of new technical and technological solutions, modern production processes useful for competitive goods manufacturing will allow agricultural enterprises to get out of protracted crisis.

Economic development of any agricultural enterprise is possible only on the basis of scientific and technical progress, regardless of the motives and forces that move the production process. In macroeconomic aspect, new scientific and technical achievements and their feasibility create conditions for widening of investment and so increasing agricultural output. Moreover, the relevance of using the achievements of scientific and technical progress arises only if the possibilities of the economic system development are completely exhausted, that is, additional financial inflows into the branch at this knowledge level are no longer able to provide a minimum of equivalent output growth.

Introduction of scientific and technological developments into production is an important issue for entrepreneurs of agricultural enterprises. After all, current political and economic conditions require of agricultural producers to improve engineering and technology, in order to ensure a strong position in the market of agricultural products and the largest possible profitability [5].

Economic transformation in agrarian sector of Ukraine should be oriented to sustainable and balanced development by means of the improvement of market relations, based on the innovation-investment model, the use of the latest advances of scientific and technical progress (STP), the expansion of information and

technological space, taking into account the needs of the post-industrial society. Activation of innovative-investment processes ensures the introduction of world-class leading and newest technologies into production, accelerates scientific and technological progress and further economic strengthening of the state. The level of development of scientific and technical sphere (science, education, knowledge intensive industries, world markets and technology) distinguishes the boundaries between rich and poor countries, creates the basis for sustainable economic growth, and innovation processes are the driving force of strategic economic growth [1, p. 63].

M. Zubets and O. Vasiliev state that there are several approaches to formulate the essence of innovations in the literature. There are two most common points of view: in the one instance innovation is considered as the result of a creative process in the form of a new product, technology, method, etc.; in other one – the process of introducing new products, elements, approaches, principles instead of existing ones.

For the agrarian sector, it is the second point of view that is more responsible, because it is a primary consumer for innovations [6, p. 194].

At the same time, it is expected that when introducing innovations in agrarian enterprises, based on a systematic approach, all innovative activities at the enterprise should not be one-time, but reproductive all the time. Therefore, all these activities should be interconnected with each other (both in space and in time) and provide together the appropriate economic development of the enterprise.

Overall, innovation means the development and the use of new engineering and economic tools, methods and techniques for optimization of production and the release of new, high-quality goods. This eventually increases productiveness in any industry and sphere of economy and living standards of population, improves working conditions, saves production resources, reduces negative social and environmental effects of economic activity, and such like. In other words, innovation is the use of new effective engineering and technological, organizational solutions in the economic and production activities [3, p. 19].

Changes in consumer demands cause a corresponding restructuring of scientific and technical policy of companies, directing it to improve the most important consumer-oriented characteristics of products. In order to take into account changes in market demand of an enterprise, before starting work on new products, they tend to identify the development trends of consumer demand better, try to predict the appearance of new, special product requirements. There is a range of scientific and technical problems to be solved based on the predicted consumer demand.

The main directions of STP in the agrarian sector are:

1. Complex mechanization and automation of production, the use of robotics and flexible production systems. The example of this is No-Till – a technology of zero tillage. It avoids mechanical method of soil loosening: cultivation, ploughing, harrowing, etc. The No-Till system involves only sowing and harvesting. Scientific

studies have shown that traditional ploughing causes more erosion than water and wind, a decrease in organic content matter in soil and a deterioration of ecological state as a whole.

2. Complex automation and regulation of production management processes based on electrical and computer engineering. Integrated automation system of production management should be created. Precision Farming has been used in European countries for a long time. It involves the following elements: precise machine control, data management (analysis and management of factors affecting soil fertility), planning, control and analytics.

The most important problems in the field are low skilled workers and a lack of willingness to work that negatively affect the profits of an enterprise. Precise machine control reduces the impact of human factor on the quality of work, but does not deny it at all. No less important one is almost general lack of reliable data on soil. This situation is especially serious for large enterprises where managers do not know the exact size of rented areas and their quality characteristics.

This data is very important for specialists to predict and analyze yields, the basis for the development of technological maps for each specific field and crop, otherwise, no overruns can be avoided. The use of satellite technology in agriculture is not only possible, but also extremely effective [4, p. 138].

The most expensive systems can be very effective in very large farms, where it is difficult to control the quality of work performed. The main difference in them is the use of more complex terminal. This device receives a task from the agronomist's personal computer. The content of the task is typically particular field name, its area, the estimated work time, mechanic's name and the like.

3. The use of new types of energy and its new sources in processing. Secondary energy raw materials mainly include biomass of plant or animal origin, as a result of «pre-processing» of plant products in animal activity (manure, muck). This raw material is used to produce biogas by the method of oxygen-free fermentation (dry fermentation). In this case, 60% of organic matter of biomass is converted to biogas, the residue is used as organic fertilizer. Experts predict that in the near future up to 12% of global demand for diesel fuel will be met by liquid biofuels (biodiesel and bioethanol).

Vegetable oils can be used as liquid biofuels for diesel engines in unprocessed or processed (ester) forms. The main producers of biodiesel in Europe are: Germany – 450 thousand tons, France – 364 thousand tons, Italy – 210 thousand tons (2017). In 2019, it is planned to increase this product by more than 6 mln. tons [1, c. 125].

4. The application of genetic engineering and biotechnology to improve crop varieties, the creation of artificial feed and medical products. The contribution of biotechnology to agricultural production is to ease the traditional methods of plant and animal breeding and to develop new technologies that improve the efficiency of agriculture. Genetic engineering growth hormone, as well as transplantation techniques and micromanipulation of embryos of domestic animals, are used to

create more effective breeding technology. It is used feed protein, obtained by microbial synthesis, to improve the productivity of animals.

5.The use of technological advances, electrical engineering and computer technology in new models of machines and equipment.

In the economic conditions, agricultural engineering should focus on speedy assimilation of the latest innovations and achievements of world agricultural engineering. Its task should be a radical (by a factor of 2-3) increase in the productivity of agricultural machinery and its technological efficiency, a decline by 30–40% in energy and material intensity and the total machinery requirements(by a factor 2–2.5). This can be achieved by means of the combination and integration of technological processes and operations, modular-block construction of powerful units and complexes. New technology should ensure the application of progressive world-class achievements in agricultural production technologies [3, c. 22].

6.The application of energy conservation methods, resource-saving and nonwaste technologies, as well as energetic products with low environmental pollution.

The ways and directions of STP show that only those countries that are able to «move» with world economic trends can expect to succeed in the future.

Managers defines innovations as new approaches (ideas) to the management and marketing, investment in machinery improvement and introduction of new technologies in production, as well as the use of advances of scientific and technical progress in their economic activities.

The evaluation of the effectiveness of innovative projects is not yet the key to its successful implementation in enterprise. Any innovative project can remain only a good alternative to the current business processes.

In order to improve innovation activity at agrarian enterprises, we can propose:

- to expand a circle of innovators;
- to shorten the research and production cycle “innovative idea – development prototype - production”;
- to create laboratories of agricultural products quality and research.

In order to improve the implementation and use of innovations for the machine-tractor fleet of agrarian enterprises, we offer the following directions that will be economically beneficial for the enterprise (Fig. 1).

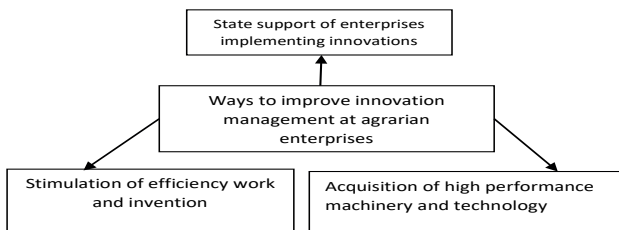


Fig. 1. Ways to improve innovation management at the enterprise [author’s development].

At the same time, one of the directions for improving innovation activity is to find technologies that fit natural laws of soil formation in order to increase crop yields and cut the cost of grown products. Energy saving is a way to reduce the production cost. Low cost production is a condition for its competitiveness in domestic and foreign markets.

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CURRENT STATE AND WAYS OF SOLVING RESOURCE CONSERVATION PROBLEMS AT THE ENTERPRISES OF THE PROCESSING INDUSTRY OF UKRAINE

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The processing industry today is one of the most important components of the national economic system of Ukraine. The main purpose of Ukraine's processing enterprises is to meet the needs of the population in quality and affordable food products.

Today in the system of the economic development there arises an economic situation, in which resource conservation and renewal play a crucial role. Their implementation requires constructing a holistic and multilevel model of the enterprise management based on resource conservation development of the economic agent.

The processing industry occupies an important place in the functional branch structure of the agribusiness of Ukraine and develops in close interconnection with its central link - agriculture. Consuming over 50% of the agricultural products of Ukraine, the processing enterprises provide animal husbandry with feed resources through the use of secondary waste from the manufacturing of feed products [1].

The processing industry maintains strong links with agriculture and machine building, which supplies the chemical, microbiological and food industries with processing technological equipment. There is a close relationship between the processing and food industries. Processing industry supplies the food industry with raw materials for their further processing, in particular, alcohol, oil, starch, sugar, etc. The processing enterprises links with agriculture are the most effective ones. The process of interaction between agriculture and processing industry is based on the organizational, economic and technological unity of production, storage and processing of horticulture and animal husbandry products. The processing industry complements the food industry and supplies raw materials and semi-finished products for their further processing. Active processes of the international integration make more urgent the tasks of increasing the role of the processing industry, its economic growth and competitiveness in the domestic and foreign markets [2].

One of the important conditions for ensuring the growth of the country's economy is the efficient development of the processing industry. Its function is to optimally meet the needs of the population of the country for the quality, economically and physically accessible food products, under the condition of predominantly self-sufficient state with adjustments for participation in the globalization processes [2].

The issues related to the functioning of the Ukrainian processing industry and ways for improving the efficiency of the processing enterprises were investigated by such scholars as Fedorus Yu., Pedram D., Mnykh O., Ivanova D., Artemenko L., Pochernina N., Mazur O., Kuvshynova A. and others.

The paper is aimed at studying the existing problems in managing the enterprises of the processing industry of Ukraine and ways for solving them; defining the stages of the development and implementation of the system of management of the enterprise resource conservation development in the processing industry.

The main problems of managing the enterprises of the processing industry of Ukraine related to the issues of resource use and resource conservation are the following:

1. Internal factors:

- high indicator of material intensity of products;
- low profitability with negative dynamics of this indicator in time;
- high cost of production and, consequently, uncompetitive price;
- outdated material and technical base;
- high indicator of resource intensity of products;
- ineffective use of material, financial, information, human and intangible resources;

- not taking into account the factor of time in manufacturing products;
- lack of clear long-term strategies, including and strategies in resource conservation;
- lack of an effective system for managing the enterprise resource conservation development.

2. Relative to competitors:

- low competitiveness of products in the national and global markets;
- a large number of competitors in the national and global markets.

3. Relative to the state:

- lack of an effective state program of support for agricultural producers;
- decline in purchasing power of the population, reduction in demand for products [3].

In addition, the processing industry is characterized by a low indicator of innovation activity and investment attractiveness of the industry.

Topical is the issue of the efficiency of the processing industries development, meaning a specific sectoral form of manifestation of the economic relations aimed at satisfying the needs of the society.

The main factor in improving the efficiency of processing industries is the development and implementation of a modern innovative scientific and technical model of production, the main components of which should be the development and use of resource and energy conservation technologies, fundamentally new types of machinery and technology; formation of knowledge-intensive production processes, competitive processing facilities, perfect mechanism of innovative development of the processing industries; ensuring efficient stimulation of the innovation activity of the processing enterprises [4].

Despite the fact that the state policy of Ukraine is aimed at reducing the resource and energy intensity of the processing industry products, domestic products have indicators 3-4 times higher than the analogous ones in the developed countries. The problem of the further reduction of resource and energy intensity is that no effective management mechanisms for the enterprise resource conservation development have been created at the appropriate levels [5].

Taking into account that the production of goods in the processing industry requires significant expenditure of resources, with energy in the first place, advanced foreign enterprises pay considerable attention to resource conservation through reuse and reduction of industrial waste, improvement of production equipment and an active introduction of alternative energy sources which not only help minimize the costs of the enterprise, but also are environmentally friendly and reduce the negative impact of the enterprise on the environment [6].

Today, in order to increase the efficiency of management of the resource conservation and resource conservation development of the enterprises in the processing industry, it is extremely important to pay attention to the following issues:

- full use of resource-saving technologies and the latest equipment at all stages of production and sale of products;
- conducting a thorough analysis of the use of resources at all stages of the life cycle of manufactured products;
- development of the new and application of the existing methods for the analysis of the efficiency of use of all resources of the enterprise;
- application of the forecasting techniques in the process of assessing the efficiency of the resource use;
- selection of the effective methods for motivating the enterprise managerial personnel;
- adopting new approaches and methods of management of all kinds of the enterprise resources [3].

The development of an effective system for managing resource conservation development (RCD) of the processing industry is extremely important today both at micro and macro levels. Implementation or improvement of the existing RCD system will allow to improve the quality of products, increase production and sales, rise profitability indicators, increase competitiveness in the national and global markets, cut production costs, increase social responsibility of employees, ensure the production of environmentally friendly products, reduce emissions into the atmosphere resulting in the absence of fines for environmental pollution.

The main stages of the development and implementation of the RCD system of the processing industry enterprises are the following:

1. Collecting information on the efficiency of using resources at an enterprise;
2. Sorting and analysing the collected information;
3. Calculating the indicators of the resource conservation level in separate areas;
4. Identifying problematic aspects of the enterprise resource conservation activity;
5. Developing the system of management of the enterprise resource conservation;
6. Organizing the resource conservation management at the enterprise;
7. Developing and introducing measures motivating personnel for useful suggestions on increasing the efficiency of using resources, and supporting resource conservation measures;
8. Following the recommendations and exercising control over the implementation of the measures developed;
9. Defining the strategic directions of the enterprise RCD [7].

Conclusion The main types of resources at the enterprises of the processing industry are material resources. In the process of economic activity, and forming a system of management of the enterprise resource conservation development particular attention is given to the energy resources. At the same time, scientists and business executives almost do not take into account the financial, human, information, intangible resources and time that underlie our further research.

Therefore, the use of many areas of energy conservation technologies is, on the

one hand, quite attractive for Ukraine. But at the same time, the main obstacle is the high cost of equipment, which hinders the process of its introduction at industrial enterprises. The issue of the processing and reuse of secondary resources in Ukraine also requires much attention in terms of improving the efficiency of the processing industry and Ukraine's economy as a whole, as well as from an environmental point of view. In addition, it can be noted that the leading domestic enterprises do not use numerous foreign developments in the management of resource conservation development. In this regard, the study of the world experience in managing the enterprise resource conservation development is particularly relevant.

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CONCEPT OF ACTIVE MARKETING INFLUENCE ON GRAIN PRODUCTION IN THE CONTEXT OF FOOD SECURITY

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Grain and grocery store is one of the leading sectors of agriculture, the sale of products of which provides the most significant foreign exchange earnings of national and foreign agro-traders operating in the Ukrainian grain market. In the geopolitical sense, due to the food component, Ukraine is able to play a much larger role in the world due to the sale of non-grain, prices for which are unstable and depend on the offer (for example, due to favorable weather conditions, providing a good gross yield, national producers significantly lose less revenue from - for price reduction, often leaving, for example, in 2018, corn on the field), and products with much higher added value, for example, starch, flour, mixed fodder, pasta, frozen x semi-finished products made from flour, gluten, corn syrup, butter and the like. That is, by reinvesting a portion of the profits obtained from the sold unprocessed grain production, the modern agricultural sector of Ukraine is uncompetitive, such that it does not ensure either national or world food security. The problem of optimizing grain processing depends to a very large extent on factors affecting both the consumer market and raw grain suppliers (agricultural enterprises, grain traders, and so on). They limit the possible intensification and increase the efficiency of processing of grain products.

In other words, the general trend is that, starting from a certain point, further market influence increases the financial and economic pressure on agricultural enterprises - potential suppliers of raw grains to the level at which agricultural producers begin to significantly reduce the quality of grain to create their break-even conditions. Other negative influences on the connections of objects of the agro-industrial sphere are also intensifying.

Existing models, for all their importance, cannot take into account the entire sequence of changes in the quality of grain raw materials for a processing enterprise and therefore cannot optimize the plan of marketing impact on crop production with the aim of obtaining a given result over long time intervals (planned periods). It is expedient to formulate the task of formulating a mathematical model for selecting actions, or rather, selecting approaches for optimal impact on crop production through the technological system of an agricultural enterprise in order to ensure the production system of the processing enterprise with high-quality grain raw materials. It is necessary to take into account the limitations of the considered models and find a way around and solve these limitations.

The direction that allows you to find a solution lies in the concept of active

marketing impact on grain production with a given qualitative load.

First, you need to decide on the terminology with which the author tried to reveal the specified concept.

We consider the production process of a grain processing enterprise in the framework of this work as a set of technological and natural (biological) processes aimed at transforming the grain production of agricultural enterprises into a finished product with desired consumer qualities. The organization of the production process in grain processing is based on knowledge of the patterns of changes in the basic properties and conditions of the grain, determine the quality of grain raw materials during the course of technological processes.

The production process in agriculture as an object of active influence of the marketing system of a grain processing enterprise is considered by as totality of technological and natural (biological) processes aimed at obtaining agricultural products of a given quality.

The organization of the production process in plant growing is based on knowledge of the patterns of changes in the properties and states of the soil and other resources during the flow of technological processes in the process of creating grain.

The period of time during which the production process is performed (from the start of work to the final product) in both cases is called the production cycle. The difference is only in the time shift of the cycle, due to the sequential location of agricultural enterprises and enterprises of grain processing in the production system of the agro-industrial complex. That is, if we assume that the grain processing enterprises are engaged in processing the current grain crop, then at the same time the agricultural enterprise implements the production cycle of growing the crop for further processing.

By the state of grain quality, we mean a certain set of indicators or its k -dimensional vector, determining the yield of grain processing products, which can be minimized into a generalized indicator of the quality of raw materials.

Similarly, the condition of the resource supply of an agricultural enterprise (including natural resources) will be understood as a specific set of indicators or its k -dimensional vector, determining the yield of grain crops, which can be minimized into a generalized indicator of the resource potential.

The production process of obtaining agricultural products is realized in the technologies of cultivation of a particular crop in certain conditions, which determines the quality of the grain, as a controlling impulse to change the efficiency of the grain processing technology. Therefore, it is appropriate to note that in this formulation of the question, the efficiency of the technology of agricultural enterprises is the determining factor in the efficiency of the grain processing technology.

We will call a set of technological methods, methods of processing, changing the state and properties of the soil, other resources, technological materials or plants that are used at certain points in time, in strict sequence and in compliance with the

requirements of agrotechnical tolerances in the process of its cultivation.

To determine the degree of optimal active marketing impact on grain production with a given quality load, it is necessary to define the concept of a single technology or technology, it is used with a single intensity.

The production of a unit of a certain product is a technology with unit intensity. A single technology is formalized as a vector, the components of which form the following sets. The first is a multitude of products. In other words, a single technology allows the production of several types of products, and their ratio is constant. Next comes a multitude of costs, with each cost element being determined by a standard for a single technology. This means that using this technology with a unit intensity, it consumes exactly the product a_j (factor of production of the resource potential).

In order to reflect the interests of grain processing enterprises, technology impact components are introduced on the level of components of the product being produced, which determine the quality of grain (gluten, protein content, etc.). For example, the use of technology with a single intensity leads to certain changes in the content of protein and gluten in the grain, due to changes in the timing of agrotechnical operations.

The concept of unit technologies allows the use of various models of linear optimization. The classical form is the task of choosing the intensities of technologies that maximize a certain performance criterion (or minimize it). For agricultural production, a single technology is determined by the area of arable land of one hectare, since all expenditures and output are specific indicators, that is, they reflect the volumes related to one hectare of arable land.

There are main and auxiliary technological operations. The main technological operation is a part of the technology; it has a complete effect, as a result of which the processed material (resources: seeds, soil, plant, etc.) acquires a new position or property. Auxiliary technological operations are a set of works to ensure the implementation of basic operations (preparation of units, fields, control and assessment of the quality of work).

Having defined the terminology, we will briefly review the process of obtaining products at agricultural enterprises, which potentially have consumer value for grain processing enterprises.

The vast majority of crop farms provide production based on crop rotation. Crop rotation is the alternation of crops on the same land area over a number of years. It is organized to support soil fertility. Crop rotation takes place in time and space, and is characterized by a period of rotation - the number of years during which the crops of all cultures, gradually alternating, will go through all the fields included in the crop rotation. Crop rotation is extremely important for balancing the load on natural resources, while at the same time for processing enterprises they are guidelines for the formation of a sustainable cyclical nature of the production system of the current supplier of grain products. That is, the subordination of its structure to the

goals of the technological system of the processing enterprise is not rational, since it will lead to a deterioration of the resource base of agricultural production, which will affect the quality of the grain supplied. However, combining the structure of individual grain crop rotations of different producers and suppliers of grain will create favorable conditions for mutual benefit in the form of high-quality grain raw materials while observing environmental management standards.

Each field of crop rotation has unique characteristics of soil fertility. These differences are due to different ancestral cultures, as well as to the various technologies used for the production of vegetable crops. Under these conditions, a specialist needs to select technologies for each field so as to grow the maximum quantity and quality of the crop, without violating the conditions for rational use of resources, which determines the conditions for the formation of the quality of future grain yields. At the same time, each technology requires different costs, characterized by different yields (revenues), the quality of the products obtained and the impact on the state of soil fertility.

Summing up, we note that from the point of view of an active marketing impact, the technological process in crop production performs two functions: the production of agricultural products in quantitative and qualitative assessment. For the grain processing enterprise, the quality parameter, as an integral indicator determining the output of finished products, is of exceptional importance. For agricultural enterprises it is important to obtain the quantity (volume) of products necessary for the formation of the break-even activity conditions. At the same time, the tasks of grain producers also include the observance of the balance of resource use. Thus, the task of an effective marketing system for the raw material supply of grain processing is the development of an action plan for the production of the target grain product while respecting the interests of all participants in the value chain, that is, a plan for ensuring the synergy effect.

From here you can determine a synergistic acceptable technology or technology with a given quality load. Synergistically acceptable technology is a method of using factors of production in which the volume of production and the quality of grain (or its state vector) will vary within acceptable limits, while respecting the parameters of rational resource use.

Such a definition is only sufficient if one-step technological process is considered. If you try to optimize a set of technological processes from several steps, at one of them the quality parameters may fall below the permissible level, compensating for this drop by significantly increasing it in the next steps or planned periods. So, it would be better to determine the sequence of technological transformations carried out in the framework of a given crop rotation. The sequence of technological methods of production, in which the quality of grain products at the final stage remains within acceptable limits, will be called a sequence of synergistically acceptable technological transformations or technologies. In essence, therefore, the planning process for the long term is reduced to the definition of marketing and

technologically acceptable sequence of technologies. With such a concept, the tasks of sustainable development of grain processing enterprises in the current conditions of agricultural production are formed.

Since the technological process of an agricultural enterprise from the point of view of grain processing forms the volume of grain production and the quality parameters of grain, it is natural to raise the question of what is more important for grain processing enterprises - quantity or quality. It is obvious that such questions arise when the decision is difficult or impossible to evaluate by a single criterion. Since we are talking about commodity production, naturally, at the level of an agricultural enterprise, it is optimal to plan economic activities in such a way as to maximize the amount of grain that forms gross income. However, as noted, such an orientation affects the quality of the grain produced in the negative direction, forming a predominantly extensive way for the development of grain production. The restrictions imposed to regulate a given grain quality at each production cycle also do not solve problems, and such models have already been considered. So, the criterion for maximizing gross volume and the conditions for maximizing the quality of grain belong to the Pareto region, and it is practically impossible to build such a region, since both such criteria are related through technological processes.

Consequently, such procedures as man-machine program complexes or the construction of value functions are impossible due to the fact that the process of production in a quantitative and qualitative sense is a single process. Moreover, as has been shown, it is not limited to one step. This means that at some stage of production it is possible to maximize the volume of production, neglecting the quality of the grain, and at some step, on the contrary, it is advisable to improve the quality by reducing the gross volume. In other words, this process should take place over a sufficiently long time interval, including at least the duration of the rotation period.

The next stage in the development of the concept is the formation of the criterion and the general principle of choosing the optimal planned trajectory of grain production for the needs of grain processing enterprises.

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PECULIARITIES OF FUNCTIONING OF SECURITY MANAGEMENT SYSTEM AT DOMESTIC MEAT-PROCESSING ENTERPRISES

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Nowadays, it is absolutely common that some Ukrainian producers are operating successfully while the others have to constantly defend their positions, being in a survival state. The activity of industrial enterprises operating on the verge of profitability are influenced by several factors such as production of low-quality products, deficit of high-quality raw materials, low purchasing power of population, etc.

At the background of such crisis situation, the need for a coherent link between external and internal markets in the context of integration processes is of great importance. It should be noted that integration affects not only interaction of markets but also the choice and implementation of the specific forms and methods of this cooperation. Therefore, we must state that achievement of socio-economic security and development of an effective system of production activity management

determines successful operation of domestic industrial enterprises.

The problems of economic security management have become the subject of interest for Ukrainian and foreign scientists. In particular, such authors as Z. Zaloha, M. Zemlianyi, M. Kovalok, O. Korobchynskiy, M. Krupko, L. Maliuta, I. Mykhasiuk, V. Ortynskiy, S. Pyrozhkov, T. Khvorost, Z. Yakubovych and others have been interested in this problem. However, monitoring of published works of the above-mentioned authors demonstrates the lack of generally accepted understanding of the essence of economic security management and the mechanism for management of economic stability of enterprises in general (not only meat-processing enterprises).

The research purpose is to study the peculiarities of formation and functioning of economic security management system at the industrial enterprise in detail and to substantiate its role in the process of economic activity.

However, before the direct analysis of preconditions of formation of the system of economic security management of production and economic activity of meat-processing enterprises, it is necessary to highlight the specific conditions for their operation. For example, a group of companies core business of which is production of agricultural products (agrarian holding company) quite naturally prefers export of manufactured products, trying to achieve large production output at the expense of large production. Hence, agrarian holding companies unlike small industrial enterprises have more powerful material and technical support.

The object of our research was the agrarian holding company LLC “Ahrokhodyn Avanhard”. It is one of the most powerful agricultural companies specializing in production of shell eggs and dry egg products. Enterprises of the “Ahrokhodyn Avanhard” company are located in 14 regions of Ukraine and export products to 40 countries throughout the world. The infrastructure is represented by 19 poultry farms, 6 feed mills, 3 hatcheries, 10 zones for laying hens, long term storage facilities. We have chosen this company due to the fact that despite successful operation, the agrarian holding company does not have its own special farm land, although at the same time it is able to remain a leading domestic producer of meat products for a long time (33.3% of the gross production of poultry meat). Experts believe that vertically integrated production cycle plays an important role in this.

A similar principle of production was introduced at the agro-industrial company “APK-invest” which has a closed cycle of production of chilled pork (from breeding raw materials, feed production and further sale of meat). Agro-industrial holding “Myronivskiy Khiboprodukt” is developing the alternative direction (growing of fruit) to poultry meat production. The vertical principle of production used by this company enables to control production costs as well.

The formation of an open socially oriented market system, as we know, is not possible without effective foreign trade relations algorithm. Under the terms of membership in the World Trade Organization state policy should be based on the principles of reduction of producers’ direct funding and price support. Therefore,

there is a need for the following fundamental rearrangements: changes in the national economy's structure in the context of its competitiveness; improvement of the export mechanisms (by increasing output of products with high added value); general support of the industrial enterprises which produce export products. Successful implementation of the above-mentioned measures will favour to strengthening of the national economy but it has to be stated that they have just declarative character. Today, existing standards, because of their non-coordination, create only technological obstacles and trade barriers. As a result, our state realizes only 48% of the livestock potential according to the official data of the specialists of the National Academy of Agrarian Sciences of Ukraine. There are several reasons for this situation. Firstly, intensification of foreign economic operations is impossible without development of adequate regulatory and legal support. Secondly, it is necessary to change the standards of animal assessment in order to assess meat's yield, not animal's weight. So, domestic producer will be able to provide both domestic and foreign market with products. Thirdly, low (20% at the state level) indicator of feeding with mixed fodder is also an important factor.

So, Ukrainian companies prefer the domestic market, considering the export activity to be unattractive and risky. By the way, factors which favour that are as follows:

1) most of products do not meet the world's quality standards; 2) operations on the domestic market are characterized by high profitability; 3) insufficient level of production and market concentration; 4) difficulties at the stage of VAT reimbursement as a result of export operations.

We believe that the further reduction of meat products' export and growth of import will provoke a decline in domestic production as a whole. The active granting of benefits to meat-importing companies will result in price abatement of meat for the period of several months. As a result, Ukrainian producers will receive fewer profits and will not be able to increase number of cattle and pigs.

Thus, import on preferential terms and combinations of other above-mentioned factors negatively affect the development of livestock farming, reducing production rate and livestock. We strongly believe that it is possible to radically change the situation by reformatting meat market and improving the regulatory framework in the field of export-import operations with meat products. It is also very important to coordinate the adopted Ukrainian standards with similar EU standards. This would make domestic products more competitive.

Relations between meat producers and raw material processors are not ideal concerning the problems of raw material supply and adequate pricing. Experts point out that today Ukrainian meat product complex is not enough to provide industrial enterprises with their own raw materials. As a result, market is filled with imported meat, which may not always meet the safety and quality standards. Prices of meat and meat products will decrease due to integration of cooperation between livestock enterprises and producers specializing in processing of meat raw material.

Considering researched material, we have established that in the modern conditions of management, domestic meat-processing enterprises are forced to independently take care of their own production in general and sustainable development in particular. First of all, it is necessary to develop an effective system of managing the economic development of an enterprise.

The term “economic security system” means an arsenal of organizational, managerial, technological, techno-preventive and marketing measures, the purpose of which is qualitative protection of business interests from existing external and / or internal threats. This definition shows complexity of the analyzed concept but ignores the fact that in the process of this system realization it is necessary to analyze probable risks and costs which arise as a result of non-compliance of economic interests of the entity and losses minimization.

Other researchers also offered their own definitions of this concept. Thus, Leonid Donets defines the system of economic security as “a combination of dependent elements which guarantee relative security of the industrial enterprise and contribute to the achievement of business goals” [1]. According to the researcher, the main attributes of this system are a subject, an object of security, a set of practical actions aimed at its achievement and the mechanism of its implementation. T. Ivaniuta and A. Zaichkovskiy [2] define the analyzed system as a deterministic combination of interconnected elements, the purpose of which is to achieve an enterprise security. The object and subject of security, mechanism and security policy are the elements of this system according to the researchers. So, the components of the security policy are its goals, objectives, functions, principles and security strategy in particular. V. Ortynskiy shares the similar statements [6]. But, O. Shnytko [9] argues that the economic security system is a system that closely contacts with the environment and therefore has features that allow to survive and develop in the conditions of various threats. T. Slobodanyk [7] considers the system of economic security to be a complex of coherently related actions of the organizational-legislative plan implemented by separate structural units of the enterprise in order to protect its priority interests as well as the state from aggressive actions of unauthorized persons which will result in financial losses and threats to economic development. L. Shemaeva [8] offered a comprehensive definition of the concept “economic security system”: “This is a combination of interconnected elements of the external and / or internal security of the enterprise, organized in a proper way”. The author structures this system into the following components: specific objects, regulatory and legal support, scientifically substantiated methodology (principles, concepts, methods, etc.), profiled bodies, services aimed to defend strategically important interests of economic entities, protecting them from various factors of the external and internal environment. Z. Yakubovych identifies the system of economic security as an open microsystem of more complex formation [10]. The researcher outlines the following elements: input, subjects, purpose, goals, principles and tools of achievement. H. Kozachenko [4] states that in the current conditions the system should be more flexible and

integrated to embrace all the principles, methods and algorithms through which interaction between the enterprise and the external environment is achieved.

We would like to complete the theoretical review of the concept's definitions with the definition proposed by O. Korobchynskyi. He defines the system of economic security management as follows: "This is a combination of organizational, technological, preventive and marketing measures developed to protect the interests of the enterprise in quantitative and qualitative aspects from external or internal threats" [5]. The purpose of such management system is to predict risks and minimize their impact on enterprise operation.

So, the necessity to develop an effective management system is stipulated by several factors: the presence of so-called weak spots in enterprises' work, requiring some timely measures in order to eliminate or minimize of those; dependence of an industrial enterprise on the environment, which often carries a certain threat, destabilizing the enterprise; successful management of enterprises' economic security is a source of rational organization of production processes; ensuring of economic security is a precondition for achieving sustainable development and competitiveness of industrial enterprises.

According to the concept of an economic security management formation, management of industrial enterprise should develop such system of priority activity directions that would represent the interests of all entities through the use of various forms and methods for reconciling their interests while providing more profitable work of industrial enterprise.

So, it should be noted that system of economic security management of a meat-processing enterprise is a combination of purposeful measures developed to protect the interests from external influences. This complex is structured into the following components: an object, a subject of system, purpose, goals, principles and tools for achieving economic security. On enterprise level the internal security department is usually taking care of matters of strictly following this system. The process of this system formation is quite complex and long because sustainable development of the whole enterprise and the level of its security from a variety of external and internal factors depend on it.

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TECHNOLOGICAL RESTRUCTURING AS A FACTOR OF PROVIDING THE FOOD SECURITY OF UKRAINE

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Food security is a strategic benchmark for Ukraine's economy, which needs constant and systematic control. First of all, the strategic benchmark is considered as a such level of food production that provides and satisfies the needs of citizens. The actual solution to the country's food security depends on many components. Macroeconomic, trade, fiscal and government policies for the support of the agri-food sector have an impact not only on the development of the food industry, but also on the development of the food distribution system in general, which affects both the supply of foodstuffs and the level of consumption [7].

The problem of providing the food security of the country, which is defined as the minimum amount of foodstuffs consumption established by physiological standards, which is provided by the domestic production and sold at prices that make them affordable to the majority of the population, has been urgent for more than two decades.

Hence, the notion "food security" has two aspects: socioeconomic (the ability to satisfy needs) and political-economical (the ability to mobilize domestic resources and agricultural potential of the country to satisfy these needs).

However, there are other views on the definition of this notion. In particular, the Rome Declaration on World Food Security defines "food security as a condition characterized by the constant physical, social and economic access of all people to

the foodstuffs of a sufficient volume, nutrition and security, which is necessary for a healthy and active life” [4].

The Law of Ukraine “On Food Security of Ukraine” gives a slightly different definition of food security: “Food security is the protection of the vital interests of a person and a citizen, society and a state in which the state guarantees the physical and economic availability and quality of vital food products to the population in accordance with scientifically grounded food package, maintains the stability of food supply of the population and ensures food independence”[2].

The continuous and rational provision of population with foodstuffs of proper quality promotes the implementation of the physiological needs of mankind according to the theory of the hierarchy of A. Maslow. The Law of Ukraine “On Food Security of Ukraine” characterizes the condition of the food security on the basis of the following factors:

- the level of food consumption by the population;
- the economic availability of foodstuffs;
- the physical availability of foodstuffs;
- the food market stability;
- the degree of the food market independence;
- quality and safety of foodstuffs;
- the level of the agri-food development;
- the natural resource potential and efficiency of its use [1].

Food security is sometimes associated with national and economic security. In this case, it depends on the following factors:

- the level of the agrarian sector development including private subsidiary farms;
- the development of food industry;
- the level of export-import operations;
- the level of purchasing power and culture of the population;
- the possibility of using innovative technologies;
- financial possibilities of enterprises;
- material support and investment attractiveness of the enterprises in the agri-food sector;
- the government support, granting enterprises of the agri-food sector with privileges, effective fiscal policy [9].

Under the conditions of globalization and integration, the problem of improving the technology of food production is urgent at domestic enterprises, where special attention should be paid to the conformance of manufactured products to international quality standards. As at this particular time, under the conditions of export possibilities of Ukrainian products, economic entities of different levels, primarily, have paid special attention to the conformance of production to international standards and world technical regulations. The above mentioned requires the introduction of modern innovative technologies for the selection and cleaning of raw materials, production, packaging, transportation and storage.

The production capacities of the vast majority of Ukrainian enterprises do not meet the current requirements. In accordance with this problem, the high-priority task mentioned in the “Single and Comprehensive Strategy and Action Plan for Agriculture and Rural Development in Ukraine for 2015-2020” is being formed [5]. The above-mentioned requires a radical change in the production system and granting of state guarantees of Ukraine regarding safety and quality of foodstuffs and other agricultural products by harmonizing national legislation with the EU legislation in the field of sanitary and phytosanitary measures. In order to achieve the task, it is reasonable to change or abolish a number of regulatory legal acts that are obsolete rules, create an unreasonable administrative burden or unreasonable material costs for market operators [5].

The fundamental changes in the existing production capacities of Ukrainian enterprises can be made through technological restructuring.

Before considering the notion of technological restructuring it is necessary to understand what restructuring is in general. The Law of Ukraine “On Restoring a Debtor’s Solvency or Recognizing a Debtor as a Bankrupt” gives the definition of restructuring of the enterprise as the implementation of organizational-economic, financial-economic, legal, technical measures aimed at the reorganization of the enterprise, in particular, its division with the transfer of debt obligations to a legal entity that is not subject to sanitation, to change the form of ownership, management, organizational-legal form, which will promote financial improvement of the enterprise, increase of production efficiency, increase of the production output of competitive products and full or partial meeting requirements of creditors [3].

Technological restructuring is an integral part of the complex restructuring of the enterprise, which belongs to active, long-term restructuring. If we analyze the internal structure of the enterprise restructuring process, then the technical and technological restructuring involves renovation, reconstruction, new construction, modernization of equipment, technologies, fuel and energy saving, materials-output ratio, resource strategy, automation [6].

The main purpose of the technological restructuring of the production capacities of the enterprise is the timely output of sufficient quantity of quality and competitive products to make profit and meet the needs of consumers.

The use of modern production and processing technologies with the aim to increase the efficiency in the sphere of production, processing and trade, improvement of product quality is a necessary requirement for joining supply chains, a guarantee of the use of existing competitive (spatial, economic, environmental, specific) advantages at the domestic and foreign markets [5]. The mentioned is possible by means of:

- application of new methods and technologies of production, technologies, forecasting of demand, formation and establishment of relations with suppliers;
- formation of an investment strategy for technological development;
- obtaining licenses;

- changes in the range of products;
- implementation of the marketing strategy oriented on consumer needs;
- changes in the geographic structure of the export;
- introduction of modern tools such as Lean Production, Total Quality Management, Kaizen, Just In Time;
- environmental protection in accordance with the recommendations of social responsible business [10].

In addition to outdated equipment, it is also necessary to highlight a low level of education in rural areas, the lack of highly qualified personnel, the lack of practical skills in using modern production technologies and the use of modern management practices.

The development of agriculture is slowed down by a number of problems related to the lack of clearly defined tasks, quantitative and qualitative parameters of the agricultural development, as well as the main measures, implementation of which will allow to achieve the established parameters [8, p. 7].

It all goes to show a low level of the food security of Ukraine, despite the fact that the state possesses significant world reserves of chernozem. Therefore, the priority goals of the implementation of the Strategy for the development of agriculture of Ukraine for the period until 2020 developed by the Institute of Agrarian Economics are foreseen as follows:

- increase of the economic potential of agrosystems, which will be ensured through the introduction of a complex of organizational and technological measures;
- provision of arable farming with a highly effective genepool of varieties and hybrids of agricultural crops;
- development and widespread use of post-industrial systems of resource-saving environmentally-friendly technologies of crop growing and transferring the field of crop production to post-industrial models of development;
- increase in milk production;
- stepping up the requirements for the quality of dairy primary products;
- increase of production output of meat from cattle;
- development of the most rapidly growing sectors of livestock farming, especially pig breeding;
- development of poultry industry;
- revival of sheep breeding;
- improvement of land relations, provision of sustainable land use; soil conservation, soil fertility recovery and soil enrichment;
- replacement and development of the material and technical base;
- improvement of the price mechanism and development of the effective pricing policy in agriculture;
- formation of the effective infrastructure of the agrarian market and ensuring enlarged access of direct manufacturers to the organized marketing channels of agricultural cooperatives;

- formation of the effective mechanisms of financial support in terms of development of agricultural production and financial regulation;
- improvement of the investment government in agriculture;
- development of production of alternative kinds of energy from biomass in agriculture [9].

In Ukraine, there is no efficient system for the transfer of innovations, the diffusion of modern technologies for production and processing of agricultural products, methods and ways for organizing and managing an agricultural enterprise, providing advisory services to small and medium-sized enterprises. The absence of such a system significantly reduces the opportunities for development of small and medium-sized enterprises in the field of agrarian production, does not promote the increase of productivity of manufacturing resources, the increase of production of value added products, and ultimately does not ensure the improvement of wellbeing of rural residents [5].

Thus, to improve the food security system it is necessary to take a complex approach. To solve the above-mentioned problem it is necessary to introduce a system of management of technological restructuring, since its effective implementation and application of its results will give an opportunity to the agri-food enterprises of Ukraine to reach a whole new level of the socio-economic development.

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INCREASING THE EFFICIENCY OF OPERATING ACTIVITY OF AGRARIAN ENTERPRISES ON THE BASIS OF ENERGY CONSERVATION

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Energy conservation is the progressive direction of using the resource potential of the enterprise, the continuous process of economy at all stages of production and economic activity, which ensures reduction of production costs, production growth, and cost reduction, with the same amount of used resources, raw materials and fuel. It should also be noted that energy conservation is a scientific, commercial, organizational and informational activity aimed at the rational and integrated use of all types of energy resources of the enterprise, taking into account the existing state of scientific and technical progress and the state of the environment.

The problem of formation of energy efficient system in the management of agro food industry should be considered in direct connection with the existing level of development of the material and technical base, with the policy of energy conservation and optimizing the use of resource potential.

Issues of energy conservation cover technique, technology, and organization of production associated with the formation of a new type of economic thinking, which is based on the effective use of entrepreneurial and intellectual resources. It is necessary to conduct searches and adaptation of qualitatively new methodical approaches to research the resource support system, efficiency determination of its functioning and, first of all, from the point of view of energy conservation. The system approach in research and evaluation of resource potential and determination of criteria for the effectiveness of its use should be done [3, 5, 9]. The solution to

this problem depends greatly on the leadership, level of planning and management of agricultural enterprises.

The degree of energy resources use by the enterprises of the agro food industry is characterized by a set of indicators characterizing production per unit of expenditures of resources, expenses per unit of sold products, profit per unit of total expenses, profitability of sold products, etc.

The prerequisite for development of the economy of agrarian sector is the competitiveness and efficiency of agricultural enterprises. The dynamics of the level of profitability of production in enterprises of the agro-food sector shows that the production of the main types of crop production is cost-effective, but has an unstable tendency.

Ensuring competitiveness of agricultural production will continue depending on the price situation and the containment of production costs, in particular the cost of production resources.

The problem of Ukrainian enterprises, and especially of the agro industrial complexes, is that nowadays most of them operate on the principle of a consumable rather than an energy conservation method. Since the time when absolutely all the resources were state property and in fact they could be spent on the instruction of the administrative command authorities in an unlimited number, without taking care of rationality, many modern managers still cannot move away from such a policy of using resources.

Another problem is that many Ukrainian entrepreneurs often have limited access to energy resources interpretation and they are usually associated with cash. At the same time, finance is just one of the resources that is needed to be managed at an enterprise, and financial performance indicators only reflect the state of the enterprise, the level of resource management. And their improvement will not be achieved only by one statement of financial accounting.

The resources of the enterprise are the whole set of values that the enterprise operates, i.e. people, machines, materials, tools, and money. Many Ukrainian firms are complaining of working capital shortage. And there are many of them who do not even know what they have in warehouses and whether they will need it, forgetting that unfinished production and materials in the warehouse are means withdrawn from circulation and frozen. It is the inability to upgrade the equipment, buy vital components and pay taxes, wages and salaries to workers [1, 8].

Thus, energy conservation is an enterprise management method based on the introduction of energy saving technologies, the adoption of effective management decisions regarding energy conservation, as well as continuous improvement of knowledge and professional skills of the respective managers.

Unlike traditional technologies, the use of resource and energy saving technologies in agricultural production provides average savings in production costs of five times, including fertilizer costs – by 30-40%, fuel and lubricants – by 60-70% , the purchase of agricultural machinery – by 80-90% [2, 4, 10].

There are the following main tasks of the energy supply of development and implementation of the strategy of increasing the competitiveness of enterprises in the agro food sector:

- ensuring high scientific level of work and energy saving processes;
- thorough justification of the directions of spending resources and energy consuming objects both within the system (in the enterprise) and in the external environment, at the expense of innovative projects;
- application of scientifically grounded methods of forecasting, optimization, economic substantiation, rationing of needs for energy resources;
- finding sources and forms of resource support from different sources;
- coupling in strategy, innovation investment projects of target tasks, objects, costs of energy resources, places, terms, performers, efficiency and other components;
- choice of progressive logistic technologies for the organization of material flows;
- selection of modern information technologies for valuation, planning, accounting and control of energy resources consumption;
- analysis of the efficiency of the energy resources use;
- stimulation of efficiency increase of energy resources use;
- organization of teaching staff for advanced technologies, methods, models and tools for the efficient use of energy resources.

The modeling of the energy saving management mechanism of the agro food industry enterprise in the system of ecological and economic development management is based on the methodology of structural system analysis (Fig. 1). The regulators of the energy saving management mechanism provide the adaptability of the structure and functional behavior to maintain the effectiveness of the management of competitiveness.

The decomposition of the enterprise competitiveness management system and the energy saving management mechanism must take into account the object hierarchy and the level of decision-making [1, 8]. The behavior of the system is described by discrete characteristics in the form of a set of indicators and their values at all levels of management. Formation and implementation of the energy saving strategy at all levels of management is one of the most important issues in the management of competitiveness, because, firstly, energy intensity is the second side of the product (the first one is quality), and secondly, Ukraine, on the efficiency of the use of resources, is several times behind the developed countries [7, 10].

A promising direction for the development of the market for energy saving products is the use of new opportunities opened up by business entities. They include:

- improving the quality of already existing products and services by adapting them to environmental requirements, requirements of international standards of energy efficiency, which enables to significantly increase the competitiveness of enterprises in the domestic and foreign markets;

- development of fundamentally new energy saving products and creation of specialized companies for this purpose (for example, production of new waste products, development of man-made mineral deposits);
- attraction of foreign capital and creation of joint ventures with representatives of countries where the energy saving market is developed. It allows using leading technologies, methods of management of energy saving activities, increasing its efficiency in Ukraine;
- further development of specialized companies for providing consulting, engineering, educational and other energy saving services, etc. [2, 6].

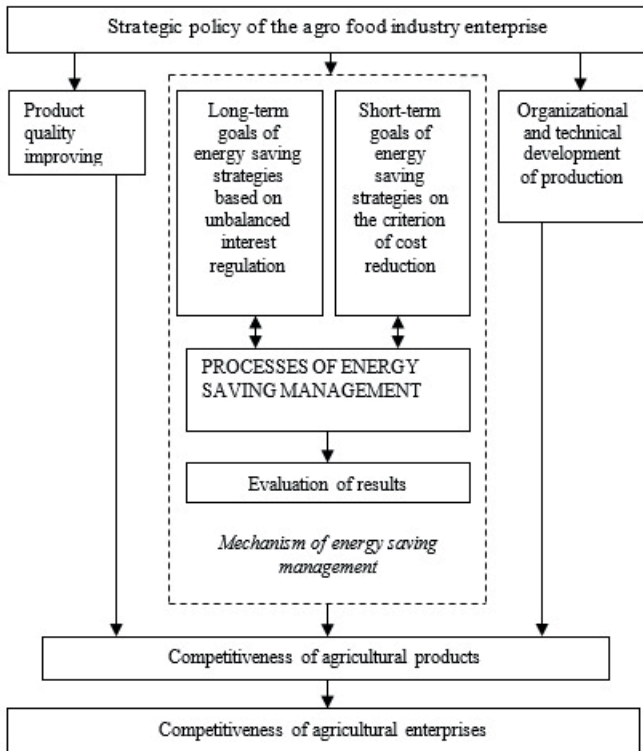


Fig. 1. Model of energy saving management of the agro-food industry

The directions discussed are mainly related to the state, regional and local levels of management. At the same time, at the microeconomic level, it is expedient to intensify work with:

- assistance from the subjects of the energy saving infrastructure to increase awareness of the population and enterprises with innovations in energy saving technologies, their ecological and economic and social advantages and disadvantages

through exhibitions, promotions, personal sales, etc.;

- public formation of the image of energy, water supply and other companies of the energy saving sector as economically efficient and environmentally friendly through the production of press releases and information materials on the activities of enterprises, custom-made articles, reports, press conferences and presentations;

- development and introduction into practice of flexible financial schemes, performance-contracting, allowing to work even with low-liquid enterprises, by the subjects of infrastructure;

- conducting explanatory work with the heads and employees of enterprises of different industries and activities on the feasibility of energy conservation, principles of the activity of audit firms in the field of energy conservation in order to create a favorable attitude to the work of auditors at the enterprise;

- expansion of the range of services provided by the subjects of the energy saving infrastructure, in particular, provision of practical assistance to customers during the development of a phased plan for the implementation of energy saving measures on the basis of their “self-financing”, training of personnel of the customers of enterprises on the basics of energy management.

The goals of effective functioning and ecologically economic development of the agro food industry in the long-term can be achieved with a stable increase in the competitiveness of products, which determines the formation and implementation of a strategy for energy conservation. With the integrated application of the proposed mechanism for managing energy saving, the level of anthropogenic load on natural resources can also be reduced. Thus, energy conservation should become a continuous process at each production cycle.

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PART 4. INNOVATION ASPECTS OF FORMING SOCIAL, EDUCATIONAL, AND INFORMATION SECURITY

PRIORITIES OF UKRAINIAN MARKET OF THE FORMING LIFELONG LEARNING SYSTEM

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Various aspects of lifelong learning are the subject of scientific research of domestic and foreign researchers. A. Goncharuk, G. Telegina, L. Shevchenko consider organizational matters of continuing education, its content and form, pay attention to financial support and developmental problems. In terms of individual costs and benefits explored the role of continuing education in the human capital theory, which laid the foundations G. Becker and T. Schulz. This aspect highlights the reproduction of the human resources also in the works of Ukrainian scientists O. Grishnova, I. Zayukov, L. Musin A. Chukhno.

The purpose of the article. To determine the direction of the formation of education for life in Ukraine need of major trends in the development of adult education to analyze the development of national systems of adult education in the leading European countries, reform and modernization in the second half of the XX - at the beginning of the XXI century, the development of concepts and economic support system of continuous education.

Presentation of the main research. Today higher education in Ukraine is in the process of transformation, due to both global trends (including the establishment of a knowledge economy, information society, the nomination of the new requirements to the production of educational capital) and reformation in the state and the transformation of Ukrainian society.

In many countries, adult education has become a new, supranational sector, which has international, European and other continental, national management structure and distribution. The development of this promising industry in the world provided the integration and interaction of public authorities and NGOs. [1]

The engine of the economy is the exchange - market. Overall, the market for education (educational services) can be defined as a «sphere of circulation or system of economic relations on the sale of educational services» [2], or a «system of commodity-money relations that arise between the seller and the buyer on the sale of specific educational goods» [3]. Fundamental changes in the rates of production

and consumption in modern conditions accompanied by a simultaneous increase in the education market, which is an instrument of mastery of reality.

Like any market, the market education has three basic components:

- 1) Educational services / product - the good, satisfying social and individual needs on the formation of certain knowledge, abilities, skills and values;
- 2) The seller (manufacturer) educational services, which forms its proposal;
- 3) The buyer (consumer), which creates demand for educational services.

Education at all age stages of life is a necessity, it not only determines its quality directly affects the preservation and improvement of human health, its offspring, longevity, but also gives a resource to solve the problems listed above. Education is a powerful productive force. Economic and social realities of today dictate the need for drastic reforms in the education system. Adequacy of education regarding current challenges and requirements is regarded as an essential prerequisite achieve economic, social and environmental objectives. It is now clearly established relationship between the level of education of society and political, cultural, economic and military power states. In Europe, education is positioned as the core of a new society based on knowledge.

Structural market lifelong learning according to the stages of personality can be divided into the following components:

- Market pre-school education and training;
- Market secondary education;
- The market of secondary education;
- The market for higher education;
- Market postgraduate education.

Man must learn throughout life, and the education system should give her such opportunities. In accordance with the objectives defined and implemented a system of continuous education, it is appropriate to allocate three components:

The first component of lifelong learning - additional professional education - promotes professional The potential of modern high-tech economy. Consumers of services of the system of continuous education is socially adapted part of the population that receives education consistently at all levels.

The second component of lifelong learning provides diverse populations to adapt to changing conditions. This subsystem provides education aimed at adaptation and rehabilitation of social and professional groups not able to adapt to rapidly changing social environment. In addition, this subsystem involved citizens who have various reasons access to the formal system of vocational education, which creates a threat for them desocialization.

The third component of adult education provides meet the diverse educational needs of individual citizens, such as language training, obtaining psychological, cultural and other knowledge, communication skills, special abilities and more.

So, continuing education can be defined as a set of tools, techniques and forms of competition, deepening and expansion of general education, professional

competence, culture and education, civic and moral maturity. For each person continuous education is a process of cognitive and meets its requests and spiritual needs, inclinations and abilities of the network of educational institutions of different ownership or by self.

By the formal structures of additional professional education include various informal structures (training groups, training and retraining in enterprises, etc.) which are sometimes based on formal structures and are often formed informally, usually for a short period. Also, this system adjacent opens education in its different forms and distance learning. Effective means of a system of continuous education is the creations of corporate universities that provide alternating obtain fundamental knowledge with practical activities.

The development of continuing education can create the conditions for the formation of flexible educational paths and leveling access to quality education at all levels of the educational system, provides a set of educational services that meet the dynamic needs of the individual, society and the economy. For the state, continuous education is the leading social policy to ensure favorable conditions for general and professional development of each individual. For society as a whole is a mechanism for continuous education expanded reproduction of his professional and cultural potential, the condition of social production, accelerating socio-economic progress of the country. For global society continuous education is a way of preservation, development and mutual enrichment of national cultures and universal values, an important factor and condition for international cooperation in education and solving global challenges of our time.

The aim of continuing education is the formation and development of the individual as in times of physical and psychosocial maturation, prosperity and vitality and stabilization capabilities, and during aging when the fore task force compensation and opportunities are lost.

Generating factor in continuing education is a public need for continuous development of the personality of each person. This activity is determined by many educational institutions: main and parallel, basic and additional state and public (social), formal and informal. Their relationship and interdependence, mutual subordination levels for the coordination and direction for the purpose, to ensure interaction between them transform the totality of such structures in a single system. Unity lifelong learning goals and specific objectives of each level organically combined with its variability and diversity of types of educational institutions, educational technologies and forms of state and public administration.

State of the domestic market potential lifelong learning is characterized by the data presented in Table 1. Thus, the value of the total annual market potential of lifelong learning is per year about 117 billion USD or 7.8% of GDP in Ukraine, describing education as one of the leading industries in the structure of the national economy.

Despite the economic crisis, unfolding as a result of the struggle for independence

and sovereignty of Ukraine and the prospect of political instability, can predict the growth potential investigated market value by 3-7% annually over the next decade. Thus, by 2024 it will increase to at least one third, 150 billion USD [5].

Table 1

State of the annual value of the domestic market potential lifelong learning

Name of units	Purpose	Demand, persons	Financing, persons:			Total, thousand UAH	Structure, %
			State	households	enterprises		
The annual value of the market potential lifelong learning	40390	12243400	101547500	9893137	6400000	117840637	100
The annual value of the market potential of preschool education and upbringing	16400	1428000	12185700	3749499	400000	60441854	51,29
			42692523,9				
The annual value of the market potential of school and school education	19700	422000	1414131,7				
The annual value of the market potential of secondary education	972	423300					
The annual value of the market potential of higher education	823	2170100	19961926,9	5154324	5000000	30116251	25,55
The annual value of the market potential of Postgraduate Education	671	4000000	1117023	989314	1000000	3106337	2,63

Source: Calculations based on data [5].

It is likely that the increase will take place primarily through postgraduate

education component, as its customers required by the Law of Ukraine «On the professional development of employees' professional competences increase every five years. In addition, the market is expected to increase the capacity of secondary education as a result of a request for trades in the country. Positive dynamics observed on school and school education under the influence of demographic factors alignment (in school will study compared numerous cohort of children born in the first decade of the 2000s).

At this stage there is a significant gap between Ukraine and European states in the quantitative coverage of the adult population of various education and training opportunities and innovative scientific training. This leads to a significant backlog of quality manpower needs of a modern economy. At present, only 9% of the numbers of the accounting staff members (or 1 million people) are covered by a system of training, retraining and skills. Frequency increase qualification of employees is on average 11 years, while in the EU - about 5 years [8].

Perhaps the most positive potential increase in the degree of mass higher education lies in the creation of a modern education industry with many jobs, the results of which have high demand. This is especially important socio-economic results are in conditions of prolonged demographic crisis and aging populations. To make full use of this potential should actively promote the development of lifelong learning, including vocational training, acquisition of new specialties, training and more. An important potential social and political consequences masovizatsiyi higher education is increasing social expectations of young people who strive for better quality of life and thus ready to make personal efforts in economic activity conscious and actively participate in political life, the process of renewal.

Education for life in the Ukraine, in our opinion, is still at a level that does not comply with global trends. The law of Ukraine «About school education» does not solve the problem because it does not regulate the integration of adult education into the general education system of the country, leaving aside the key issues and ensure quality control and recognition of non-formal education. An important step for the development of adult education in our country is a law «About education». The new law «About education» term «adult education» was registered as a full component of the entire education system in Ukraine. This allows you to directly work in this direction in the Budget Code prescribe the need for spending on development of this area of education.

In a globalized Ukraine is in a force field trends related to the transition of humanity to a new phase of civilization, which is defined as not only has the information society, and increasingly - as a knowledge society. Putting the aim of joining the circle of most developed countries, Ukrainian society has become a society that constantly learns rapidly accumulates and leverages new knowledge. The prospect of development of Ukraine in the knowledge society requires a deep reform of education and educational sphere, should be based on a reasonable combination of the best international experience with national traditions.

In Europe, many experts have expressed their desire to learn throughout life, it's the possibility of general knowledge and professional skills. Lifelong education can improve both professional and personal life, which is why even the best professionals in the 40-50 years continue to explore a variety of courses. This helps them to cope with changes in the labor market. While measures aimed at training, participants receive their financial assistance in the form of grants and loans. The state partially finances such courses. At the same time, many employees personal growth and career development more important than any compensation.

Conclusions. However, there are reasons why people are not involved in education in adulthood. Among them are the following: 1) disposition (attitude to learning); 2) situational (lack of time, family responsibilities); 3) institutional (payment, lack of evening courses, entry requirements).

As for Ukraine, the leading cause of adult education lag Ukraine the practice of developed countries can vydylyttaki:

- 1) lack of study of foreign experience;
- 2) lack of regulatory framework in this area;
- 3) focusing on the problems of children and youth education.

One of the most significant problems of a system of continuous education in Ukraine is to overcome the stereotype attitude to informal education as little significant and insignificant. Failure to understand the specifics of informal education and its social potential (compared to a traditional school or higher education) generated by insufficient attention to studying the problems of adult education. It should be across the country to analyze the activities of the existing areas of unconventional forms and educational activities of adults. It will identify the specific cognitive and non-formal learning activities of different groups of adults, motivational features and mechanisms of self-organization of these activities.

At the present stage of lifelong learning market in Ukraine we recommend to develop and implement effective public policies to support its growth, including:

- 1) stimulating enterprises to invest in training and professional development of employees;
- 2) measures to recognize the value of employee productivity growth of the principle of pay equity;
- 3) initiatives to increase the prestige of the employee education;
- 4) internationalization and exchange experience with foreign educational institutions;
- 5) introduction of innovative information technology and training;
- 6) encourage self-education and self-improvement.

As a genuine moment Practical Implementation of the concept of «learning to techenye vsey life» javljaetsja edynstvennoy deystvennoy «antykryzysnoy prohrammoy», «Exit prohrammoy IZ crisis» As for separately vzyatoy personality, and so for business and mean and the country as a whole.

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APPLIED METHODS IN INTERNATIONAL EDUCATION COOPERATION POLICIES

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International development cooperation and international humanitarian activities form an important part of Hungary's international relations and as policies developed in line with Hungary's commitment in the international donor community are key elements of Hungary's role in addressing global challenges. According to the Hungarian law in force, under the leadership of the Minister of State for Security Policy and International Cooperation of the Ministry of Foreign Affairs and Trade and the Deputy State Secretary for International Cooperation, the Department for International Development and Humanitarian Assistance is responsible for developing the policy for International Development Cooperation and International Humanitarian Assistance, for its coordination by the Government, as well as for its implementation.

Hungary's annual summary statistics about spending on official development assistance pointed out that last year – similarly to previous years – multilateral development cooperation prevailed primarily due to ratio of mandatory contributions to the EU, voluntary contributions to EU Funds and to support for international organisations. In terms of bilateral International Development programmes and projects, the problem of resources with a low level of funding reappeared. Within the OECD, the Development Assistance Committee (DAC) was founded in 1960. Hungary joined to the OECD in 1996 and since its accession to the EU, it has had an observer status in the OECD DAC as an EU Member State. As a result of the accession process launched in 2016 that took months, Hungary became the 30th full member of the DAC on 6 December 2016. As a member of the Committee, Hungary became a part of a global process that aims at coordinating Development Policy all over the world, and deals with the coordinated implementation of the UN Development Sustainable Goals in the long run, as handling crises effectively is possible only with a global approach and with the cooperation of Member States. The Sustainable Development Framework establishing the directions for development after 2015, Agenda 2030, was adopted by a consensus on 25-27 September 2015 at the UN Development Summit by the Heads of State and Government of the UN Member States with Hungary as a participant. The Framework sets 17 goals and 169 subgoals for the period between 2016 and 2030 that replace the Millennium Development Goals (MDGs) adopted in 2000. Hungary had a leading role in establishing the

Sustainable Development Goals (SDGs) since Hungary co-chaired the UN Open Working Group (OWG) commissioned to make a proposal for the goals with Kenya for one and a half years. In terms of adopting the framework, it was emphasised that international peace and security and sustainable development cannot be separated, and thus the causes triggering conflicts can only be eliminated through sustainable development. Moreover, the Agenda includes the target system and subsystem to achieve the dual aim of poverty reduction and sustainable development in a balanced manner. At the same time with intergovernmental negotiations aiming at establishing the Sustainable Development Framework, preparations were going on for the Third Funding for Development Conference of the UN held between 13 and 16 July 2015 in Addis Ababa. The final document of the Conference, the Addis Ababa Action Agenda (AAAA) forms an integral part of the Sustainable Development Framework 2030, thus providing its implementation. The Sustainable Development Framework and the Paris Agreement adopted at the 21st Conference (COP21) of the parties of the United Nations Framework Convention on Climate Change (UNFCCC) are interconnected in many ways. The transforming elements of the Agenda 2030 have an effect on the implementation of the decisions made at the Climate Summit, while the decision about the legally binding climate agreement affects all the goals of the Framework too.

Migratory pressure is still one of the greatest challenges affecting Europe. International Development Cooperation has a key role in handling factors that trigger migration locally, that is, in providing assistance with international cooperation to ensure such living conditions that hundreds of millions of people shall not be forced to leave their home countries. The main goal of the UN Sustainable Development Framework adopted in 2015 (Agenda 2030), including the Sustainable Development Goals (SDGs) is that people shall live in peace and security, under balanced and sustainable conditions in every state of the world within 15 years. Besides the “human sectors”, International Development has a great potential in terms of the Economy too. Development activities also contribute to improving international opinion about a particular country, enabling economic actors to pursue their interests in the medium to long term. While migration and asylum were not among the priorities of development and foreign policy instruments under the EU budget, due to the mass wave of migrants and asylum seekers coming to Europe, they were integrated horizontally into most of the sub-programmes, which in turn resulted in the reallocation of resources. The Commission started to use the funds in an ever increasing ratio on supporting the resettlement and assimilation of migrants and refugees primarily in the neighbouring countries of states affected by conflicts, and wherever the conditions allowed, on providing assistance for them to return to their homeland. The Commission set the overall objective of providing better living conditions for forced migrants and refugees also during the transitional period spent in refugee camps and host communities. Thus, the EU paid greater attention to provide a remedy for the consequences of mass displacements in addition to

handling the causes triggering migration (e.g. deep poverty, unstable political and economic systems, harsh security conditions etc.). However, this did not mean a complete change of focus: it was rather a more focused approach in handling consequences, which – in terms of handling causes – had been established by the beginning of 2016, mainly thanks to establishing Trust Funds . Making payments to the extra-budgetary European Development Fund, which serves the development of the African, Caribbean and Pacific Group of States (ACP) as part of the Cotonou Agreement, is Hungary's obligation flowing from its EU membership. Now the programming and the allocation of funds is going on for the 11st EDF (2014-2020). The overall budget of the 10th EDF is EUR 22.682 billion, out of which Hungary has to pay EUR 125 million based on its quota (0.55%) . The funds can only be used in specific sectors as set out in particular country strategies (in general: environmental protection, water management, energy, agriculture, food industry, health care industry, construction, education and culture, building capacities, human rights, migration and supporting democracies).

Hungary has been the member state of Organisation for Economic Co-operation and Development (OECD) since 1996. Within the organisation, the Development Assistance Committee (DAC) was set up in 1960. Hungary joined the OECD in 1996, since its accession to the EU, it has had an observer status in the OECD DAC as an EU Member State. As a result of the accession process launched in 2016 that took months, the Minister of State for Security Policy and International Cooperation, Dr. István Mikola formally signed the accession document in Paris. Thus, Hungary became the 30th full member of the DAC. As a member of the Committee, Hungary became a part of a community that aspires to a leading role in coordinating Development Policy all over the world and in the implementation of the UN Sustainable Development Framework including the Sustainable Development Goals. Handling crises effectively is possible only with a global approach and with the cooperation of the Member States. In this process and reducing poverty, the DAC plays a leading role. The DAC urges and assists its member states in establishing a comprehensive Development Policy, in coordinating their particular policies with Development Policy, and in every four year it makes a comprehensive evaluation of the International Humanitarian Assistance and Development Policy of each member state. Hungary takes part in the high level and executive meetings of the DAC, as well as in its monthly formal sessions and in the work of particular committees. As regards the reform of the ODA, the integration of new, innovative forms of funding into development funding continued in the various working groups of the OECD in 2016 with the main focus on soft loans eligible as ODAs, the administration of development activities in the private sector, and the just recognition of the amount of energy invested by the donors besides the profit of recipient countries. In terms of bilateral scholarships and contributions for developing countries in 2016, 103 students from developing countries participated in the Stipendium Hungaricum programme funded by the Ministry of Human Capacities and coordinated by the

Tempus Public Foundation. The scholarship programme that has been come well-known again after decades is especially important. It aims at improving Hungary's "international visibility", presenting our national values in the global context. The aim of the programme in educational policy is to foster the internationalisation and quality improvements of Hungarian tertiary education, to strengthen the international relations of the Hungarian scientific elite, to increase the cultural diversity of tertiary education institutions and to promote the competitive Hungarian higher education all over the world. The economic and foreign policy objective of the programme is laying the foundations of the personal and professional attachment of students graduated in Hungary, thus potentially enhancing the understanding of Hungarian peculiarities and interests among the elite of their home country, and establishing the social capital necessary for developing Hungarian economic relations and fostering its aspirations for market entry. It is not negligible that the presence of international students has a positive impact on the economic development of that particular city or region. In addition, the programme contributes to the promotion of the Hungarian language, as some students start their university studies in Hungarian following a preparatory training. In the multilateral context, the university level agricultural programme in Hungary for fellows from developing countries based on the agreement between the Government of Hungary and UN FAO, which continues the practice of previous years, falls into this category. The contribution to the UN FAO scholarship made by the Ministry of Agriculture enabled 34 countries to participate. The Regional Educational Centre of the Hungarian Competition Authority organised five seminars on competition law in 2016 as part of its annual programme for the competition authorities of its primary target countries out of which three events were held in Budapest, one in the Russian Federation and another in Serbia. Within the framework of its bilateral agreements, the Hungarian Academy of Sciences provides financial assistance for the mobility costs of joint research projects and gives mobility support for individuals who wish to travel with research purposes. The subsidised projects mainly last for 2-3 years. The Academy of Sciences provided financial support for 10 developing countries in 2016. Moldova held the presidency of the Police Cooperation Convention for Southeast Europe (PCC SEE) in the first half of 2016. The Moldavian party – due to trainings organised earlier at the International Training Centre of the Hungarian Ministry of Interior and building on the positive experiences during last year's Hungarian presidency – asked the Hungarian Ministry of Interior and the PCC SEE Secretariat to organise the Moldavian Presidency's training programme in Hungary. The Hungarian party did not only provide logistical support and assistance for the organisation, but an instructor of the Faculty of Military Sciences and Officer Training of the National University of Public Service developed the curriculum of the training programme and moderated the training together with the PCC SEE lecturers as well. 16 military education specialists from ten PCC SEE countries participated in the training which they deemed excellent both in terms of professionalism and organisation. Similarly,

professional cooperation based on special knowledge transfer was initiated by the Secretariat of the Police Cooperation Convention for Southeast Europe (PCC SEE). The target group of the training was the pool of military experts with multiple years of experience in the field of document security of PCC SEE member states. The professional forum aimed at giving an opportunity for regional professionals to share their experiences about false and forged Iraqi documents, to review trends and best practices in the field of document security and to strengthen the professional network in the area of documents within the PCC SEE. In addition to the British, German, Belgian and Swiss experts, the Pest County Policy Headquarters, the Ministry of Foreign Affairs and Trade, the Hungarian Special Service for National Security and the National University of Public Service sent lecturers to the workshop. The curriculum of the training was developed by the professionals of the Hungarian National Police Headquarters, the International Training Centre of the Hungarian Ministry of Interior and the National University of Public Service with the representatives of the Secretariat. Since 2012, Hungary has been a member of the Delhi-based Global Development Network. It is an international network of researchers in Development Studies that focuses on the development of the Third World. The organisation excels other international research institutions and networks by organising its annual conferences presenting new research results.

Recently Hungarian diplomacy has also sought to enhance cooperation between the disciplines of the Hungarian Academy of Sciences – especially in the areas of Sustainable Development, Climate Impact, Healthcare and Agricultural Sciences – and the scientific and educational professionals of countries entitled to ODAs. Bridging the gap in scientific knowledge and education in underdeveloped countries is of key importance in development. In 2016 October, the Committee for International and Development Studies of the Hungarian Academy of Sciences received the delegation that came to Hungary for the preliminary investigation before our accession to the DAC, and informed them about the cooperation between the Ministry and the academia. However, the results of these efforts also depend on the commitment of the parties. This partnership assumes governmental awareness and an appropriate national legal environment.

Success Story: Stipendium Hungaricum Scholarship Programme.

Thousands of students from all around the world apply for higher educational studies in Hungary each year. The number of Stipendium Hungaricum applicants is continuously increasing as well as the number of available scholarship places. In the 2018/2019 round of applications, more than 4100 scholarships were awarded. In the academic year 2019/2020 more than 5000 students can begin their studies in Hungary in the framework of the Stipendium Hungaricum Programme.

The programme is based on bilateral educational cooperation agreements signed between the Ministries responsible for education in the sending countries/territories and Hungary or between institutions. Currently around 70 Sending Partners are engaged in the programme throughout 5 different continents and the geographical

scope of the programme is spreading each year.

Hungary provides high quality education in the heart of Europe. Today, there is a growing demand of international students to study in Hungary. Besides the quality of education and degrees recognised throughout Europe and beyond, students are attracted by the affordable living costs with an extremely favourable cost-to-value ratio, a safe and friendly living environment with convenient public transportation, the central location of the country in Europe and the unspoiled natural beauties combined with a 1000 year-old, rich Hungarian history and several UNESCO World Heritage Sites. Hungary is also within the top countries with the highest number of scientific Nobel Prize Winners per capita, and a numerous scientific inventions from Vitamin C to Rubik's cube and so on.

The Stipendium Hungaricum Scholarship Programme was launched in 2013 by the Hungarian Government. The core mission of the programme is to increase the number of foreign students in Hungary and to encourage Hungarian higher education institutions to attract top foreign students.

Higher education sector: public and private responsibilities. The university sector or the higher education more generally, deserves much attention. Many developing countries and emerging economies as well, have seen the sector evolve in a particular way. Often one finds one, by now very large, national university which in the past drew most of the talent in the country, both as professors and as students. As student numbers began to grow new national and increasingly private universities were established (Tindemans, 2009). The (former) national university has often grown so large that concerns for decreasing quality are more than justified as funding has not matched the student numbers. Research was rather concentrated at the national university, also because in many cases this university had close links to one or two universities abroad. Private universities concentrate with few exceptions on areas such as business administration, finances, ICT or for example international relations. The mushrooming number of small universities has, however, brought a serious quality issue to the fore, making a much tighter accreditation system an absolute necessity. Sometimes, however, governments are still very restrictive with providing licenses to private universities or are in other ways, sometimes unknowingly, raising obstacles. The result is that in those countries gross enrolment into higher education is at a very low level. Public financing is often intransparent and rather more follows historical patterns than funding mechanisms that allocate the scarce public resources in the best possible way (McLendon, 2003). Moreover the national university or the few public ones rather deal with the ministry of finance than the ministry of (higher) education, creating a further hurdle towards a transparent and equitable system. In countries with a very strong Academy of Sciences the additional problem was and often still is that the development of a strong research capacity at universities was effectively choked. Establishing a more balanced system of tertiary education, which is much less focused on one or a few central universities is essential. There are very good

reasons to differentiate between universities and institutions of professional that offer shorter (one to two years) degree programs or diplomas or longer (three to four year) professional degree programs. Within universities only a relatively limited number should be encouraged or even allowed to developing into or continuing as research universities. Dilution of research funding is a threat all over the world and for example a serious issue in Europe, but much less so in the US. China here follows clearly the US example. Providing good-quality undergraduate education is an important and valuable mission for a tertiary educational institution. A set of interlinked issues relate to the functioning of institutions of higher education. But the government has to create many of the conditions that provide incentives for individual institutions to improve their management and operating methods. Universities need strong management and the traditional academic procedures for appointing persons on key positions are not always well suited to modern requirements. The same applies to human resource management already mentioned in the context of staff development. Universities and other tertiary institutions need on the whole increased autonomy, including internal financial autonomy and flexibility in employment conditions. Those conditions, at least in public institutions, often resemble those of the civil service, and the recognition that these are not suitable has taken roots worldwide. What governments are increasingly doing is granting autonomy in exchange for accountability . That is often combined with forms of performance-based funding which will be considered in greater detail in the next section. A link to national priorities is another element whether this is implemented through a financial mechanism or not. Governments may require universities to respond to such priorities in ways they may freely choose but should report upon in their annual accounts or strategic plans.

Supporting innovation: funding instruments. A contrast between developed countries and most developing countries and emerging economies is not only the availability of funding as such but also the lack of a differentiated and transparent funding system for research and innovation. It may seem a technical matter but it is not. Funding mechanisms play a crucial role in improving quality, in directing researchers and institutes, in ensuring both a sustainable infrastructure for research and dynamics on the basis of competition, as well as in providing incentives for cooperation between universities and companies. As an example, in quite a few developing countries experience is now being built up with a mechanism for providing funding on a competitive basis to excellent researchers and their teams, using (international) peer review as a selection procedure, funding coming from international partners in development.

In the first place governments provide from their higher education budgets direct funding, mostly as institutional or core funding to create the infrastructure for carrying out research. There are several ways in which this can be done. Often, also in developed countries this is still strongly based on discretionary ways, which others would describe as arbitrary. But attempts are being made to

base these core funding allocations on more or less detailed budgeting and on the funding of specific cost categories, increasingly governments or higher education funding agencies, which are tasked by governments in some countries to replace governments in doing this, are searching for formula-based lump sum contributions, implying that the governments bases its contribution on some rational calculation whereas universities retain the full freedom to spend the money in ways they deem fit. Both past performance and agreed future targets may lie at the basis of such performance - or formula-based funding mechanisms. The second major contribution to university research also comes from the government, but through and independent 'Research Council' (there may be more for different fields of science) and to a lesser degree from an 'Innovation Funding Agency'. This funding is typically provided on a competitive basis, using (international) peer review as the selection mechanism. The proportion between what is often called the 'first flow of funds' to university research and the 'second flow of funds' varies widely. Some countries (the US and the UK are key examples) rely heavily on the competitive mechanism, others put the emphasis on the core funding. It is really a policy issue: continuity versus dynamics, as some would like to phrase the dilemma. How to promote concentration of research and thus differentiation of missions of tertiary educational institutions is a vexing problem that governments in most parts of the world face. With regard to tapping private resources, whether it is for stimulating companies to carry out more research or for attracting private donations for research in public institutions, governments need to consider which tax measures will effectively trigger individuals, private foundations or charities and enterprises. Competitive funding for research projects is key as a complement to institutional funding. Almost all countries nowadays avail of a mechanism to provide such funding. The National Science Foundation in the USA is well-known example, but as part of modernizing the research and research funding systems many countries have created a 'Research Council' or a National Funding Agency whose main task is to make available research money for the best researchers by transparently assessing proposals or past performance through peer review (often international) in competition. There is a good case for letting them operate very largely in a 'self-organising' mode by scientists, though the government should set a certain framework to which such a National Funding Agency is bound. The Russian Foundation for Basic Research, the National Natural Science Foundation of China have been successfully functioning during the last twenty years, but also in for example Uganda the Uganda National Council for Science and Technology is now providing competitive grants with government money assisted by the World Bank. Even in France, which in the past relied extensively on CNRS with its own research institutes and research units at French universities, the French Research Agency (AFR) now provides competitive funding. As the STI system evolves and extends governments may wish to consider whether more research councils or funding agencies would better serve different fields of science (Tindemans,

2009). As mentioned before governments can do several things to stimulate companies to increase skill levels, productivity and research efforts. Initially for reasons of efficiency and the lack of (human) resources one may well consider to making the same funding agency that on a competitive basis funds academically-oriented or strategic research also responsible for the support measures that target companies in the first place. But eventually as the STI system matures, one usually finds a separate agency tasked with the promotion of research and innovation in companies. The reason is that proposals to get support from companies or involving companies often require some form of business plan, market assessment and a strong managerial approach. Assessing such proposals requires different skills from those required to assess on a competitive basis research proposals. Governments are also considering which instruments they can use to introduce more differentiation, concentration and specialization, which as mentioned before are important policy challenges for the higher education system. This has led in several countries to competition not between individual scientists but between institutions as a whole or departments. Sometimes one finds requirements for public-private partnerships in such competitions. Not always is the competition complete. For example in China's case the limited number of universities allowed to participate in the so-called 'Project 985' have been identified by the government, but using academic performance as an important criteria. Another strategy some governments adopt especially to increase concentration and also specialization focuses on mergers between tertiary educational institutions. It is not an easy option to implement, certainly not when one part of the problem is the sometimes very large number of rather small private tertiary institutions. Yet governments would do well to consider how accreditation could be used to increase efficiency and quality by increasing the average size of universities and providers of professional training.

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THE NEW INSTRUMENTS OF PAYMENTS IN THE 21ST CENTURY

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Introduction. From 2010 till today's the number of types of digital currencies in circulation is estimated to number over more than a thousand. This fact alone is enough to focus attention on what might be justifying the existence of these special methods of payment. In addition to the fact that trust is the main motivator, what else is behind these quickly spreading virtual payment methods? On the one hand, it is consumer

behavior, a desire for a fast and simple payment method. In our paper-inundated, over-administered world, many seek the opportunity to render anonymous payment (and not limited to transactions of shady intent). The breakdown of bureaucratic barriers and comfort are the most powerfully expressed needs with the users of digital currencies. There is no standing in line at the bank, no entering into a contract with riders in tiny script, no unsecured transactions. There is, however, this: a fast and user-friendly (downloadable) system or application, anonymity, discretion, numerous services accessible in virtual space.

In order to understand the world of digital currencies and the richness of the current, rather popular metal or secondary world, I am going to review the value added services offered to users, services which have brought about the conquest of virtual space.

Introduction to virtual reality. The meaning of the word virtual: seeming, appears realistic, possible, almost, virtually real, close to real, inherent. Based on the foregoing, the needs of the users can also be explored, namely: in a close to reality format, but still expanding opportunities and physical boundaries, we can be capable of creating, to exploit virtual opportunities beyond the dearth of the daily grind, without being inhibited by the limitations of our physical or financial constraints. Advanced technologies assist in sensing near-reality, as in these meta-worlds, vision, touch and smell alike are playing ever greater roles .

Virtual reality is an all-encompassing, multimedia or computer based simulated reality, which enables interactivity and the users can indeed interact with one another. The expression artificial reality has been used by Myron Krueger as early as the 1970s, while Damien Broderic applied the term „virtual reality” in his 1982 novel (The Judas Mandala) (wikipedia). But the expression has only become widespread around the middle of the 80s.

The European Central Bank on virtual currency. Not even that long ago, in 2012, the European Central Bank defined the concept of virtual currency, setting forth:

- unregulated digital money which is issued and controlled by the developer and is a generally accepted method of payment in the given virtual community;
- a currency that is not issued by a non-central bank or authority;
- may be transported, stored and used for payment to legal or natural persons alike.

The international organization did not address the category of the new currency or payment method, what is should be considered, a payment system, a service, or a form of currency. It does not provide clear guidance in the field of taxation.

Virtual currencies developed from loyalty programs, the coupons and bonus points can be cashed in by now, as far as their appearance is concerned, they are the digital currencies of a given brand. The collection of points and exchanging them has ascended to a higher level; a broad array of point collection cards and credit cards has appeared.

Piggy coin- „Your first Crypto”. For starters, let us begin with piggy coni, the

digital currency developed for the youngest age category. We can easily guess from the piggy coin slogan that the target group is comprised of children, who are living within the zone of attraction of the internet now. The web site developed for children introduces the downloading and use of the piggy coin application. The objective of the site is to teach children the world of crypto currencies in an enjoyable format.

Piggy coin is accessible via a web application, and android app, on paper and with the aid of a PC installed program. The user then receives a piggy coin address that they can share with their friends, and then the transaction can begin at once. The children also have an opportunity to mine and search for piggy coins as well, in which they can try out the current games. Additionally, parents can reward their children with additional piggies, if they had done their household chores or written the homework . The price of 25,000 coins is USD 25, payable by the parent via bank card. The children may even use the digital currency to make purchases, the little „piggies” can be converted in authorized stores.

The piggy coin is 10 times as fast as the Bitcoin settlement, is family friendly and one can learn financial know-how with its assistance. Prior to sending the money, the children receive a question and only after answering it is the transaction processed. A serious team of developers and educators stand in the background to enable the piggy coin bank to operate in a playful format, interlaced with education. The amount that can be issued consists of 500 million piggy coins . On the piggy coin stock exchange, the piggy is measured in Bitcoins, the rate of exchange is close to 1 to 1.

A proprietary, secure, untraceable, open-source digital currency. It was launched on its triumphant tour of conquest on April 18, 2014. The users can choose from among various identification levels, if necessary, they can provide access to other users, such as auditors, with a right of download access. With its smart mining function, it enables continuous Monero mining, even with a relatively simple infrastructure. Its block size – having learned of the limitations of the Bitcoin system (where the block size is limited) – is dynamic.

A self-limiting/self-censoring mechanism is built into the system to filter out suspicious transactions. Even though the system is anonymous, the transactions of suspicious users are recorded on a blacklist. (Untraceable?) The application is easy to download and does not require special tools, a PC or a smart phone is sufficient. The owner of MyMonero is Riccardo Spagni, one of the founders of Monero. The Light Wallet application is necessary for the Monero transaction, which is Java based. Monero recommends to each of its users to run a „Node” to make the peer-to-peer network more stable. (<https://getmonero.org>)

The Monero network is underfinanced; therefore it is awaiting contributions and in exchange provides discounts for the contributors and to those who are participating in the development. In all cases, a hexadecimal character identifier is assigned to the payments; conveying this identifier enables the beneficiary to accept the Monero. In the case of Monero, a central address is live for payment and

the payments of a user are therefore collectable to a certain extent, unlike in BTC (where one payment may be assigned to one address).

The user may operate multiple wallets/accounts; for example, one may be used for private purposes, while sharing another with a business partner or family member, etc. The network works with two keys, one is for sending, the other for access/review. The review key enables a third party to gain access, e.g. an accountant. In the case of Monero, the security of each account is guaranteed by a reminder core developed from 13-25 words at the time of account creation; it is the responsibility of the user to guard and record it.

Overview of Crypto Currencies. Entropia Universe. A developed virtual 3D environment, developed planetary world with a real monetary economy. The planets offer numerous entertainment options, including travel between planets, socialization, forging ties. There is no fee to join or subscribe. Its economy is based on a modern micro-transaction system, with its method of payment being the PED – Project Entropia Dollar. Established in 2003, Planet Calypso uses a virtual currency that is tied to the Dollar.

The continuous expansion and development of the Entropia Universe and the visitation of new planets can be viewed in parallel with Farmville, where we can obtain/purchase farms in new areas from time to time. The appearance of new geographic units, migration on planets, special themed farms associated with holidays (e.g. Halloween, Christmas) ensure diversity and an opportunity to grow for users. Entropia Universe is also accessible via mobile application, but the user data within the universe is tied to each avatar, even though this data can be fictional. (Transitional state between complete anonymity and identified user networks.)

Farmcash /Farmville. Farmcash is the virtual currency of one of the rather popular games on Facebook; it may be purchased via bank card payment on the internet. In the virtual reality of Farmville, anyone can construct the farm of their dreams, their model spread, has the opportunity to operate, build various bars and markets, to create something during the daily grind. Relaxation and game playing and the improvement of performance are fundamental motifs in this system as well. The users behave rationally on a fundamental level, just as over the course of their actual economic decisions.

Linden Dollar. The Linden Dollar is the form of payment in the virtual 3D world of Second Life. In the virtual reality of Second Life, the user can maintain ties with his/her friends and „meet” new people, chat, discover numerous 3D areas, and create his/her own virtual appearance.

The users sell each other virtual goods and services; the transaction is entered into upon the meeting of demand and supply. In addition to the virtual real estate market, there is an operating minimal wage system, an employment and a charitable organization as well in Second Life.

Dogecoin. Open source digital currency that was intended by its developers to be a developer’s joke in connection with an internet meme. Users could send each

other Dogecoins for interesting internet content and in a short period of time, this generated a lot of traffic. The Dogecoin appeared in December 2013 in the world of crypto currencies. By today it has become a worthy adversary of Bitcoin and Litecoin, operating on the same operational principle, but contrary to those, it is capable of generating inflation. The amount that can be issued is not subject to a limit. As of 2015, 5.256 billion can be mined per year. It is ranked in the 5-8 range among digital currencies. Its code is XDG, the value of a coin is around HUF 30.

An interesting aspect of Dogecoin is that it can be obtained in the form of „tips”, assuming that someone creates or shares interesting internet content. The Dogecoin Wallet is accessible via computer application, through the internet, on Android based devices (mobile phones), blackberry or in the form of a hardware device. Its mascot is the Shiba Inu Japanese dog breed, this became the logo of the digital currency as well.

Litecoin. Open source P2P internet currency, characterized by payment with nearly zero commission, faster transactions (confirmation takes place nearly four times as fast as in the case of BTC), nearly immediate confirmation, better storage security/effectiveness. It can be accessed on Windows, Mac, Android, Linux, etc. systems. All of the Bitcoin followers are trying to provide some kind of added value, e.g. Litecoin enables a larger transaction volume, faster. It is planned that Litecoin volume can reach as much as four times the Bitcoin volume. There is even a reward component that has been built into the system for the miners, namely, 50 Litecoins per block. The site is now accessible in more than twenty languages.

Ethereum. An operating system that functions non-stop, developed by ETHDEV. Fans from all over the world participate in digital payments. There is a motivational component in this system as well: bonus Ethereum is paid out for development. A precondition of utilizing the service is entering into the so-called Hello World agreement, if the user has not had previous contact with Ethereum. Its unique nature is that the user may plan and issue his/her unique digital currency, which is standardized to a certain degree, thereby rendering it suitable for commercial circulation.

Peercoin. A secure and sustainable crypto coin which has been in existence among digital currencies since 2012, thus it is one of the oldest ones. Its rate of inflation by annum is below 5%. It is the first proof-of-stake coin (it uses a proof-of-work and proof-of-stake hybrid system), and there is no need for a intensive calculating power to operate the system. An innovation of the system is time stamping, a very important operation in the financial sector. The coins are equipped with a time stamp, therefore they are aging. There is a performance reward issued after the currency if it is retained for 30 days, at a level of 1% per annum. The coins do not „age” any further. Based on the age of the coins, the user may generate a new block for him/herself, increasing the quantity of coins.

Bitcoin on the pinnacle of the hierarchy of crypto currencies. BTC is a currency, digital money, a virtual method of payment; it is essentially an electronic signal

created with an encryption process. It is a special currency which is independent of central issuers and not influenced by the authorities. Bitcoin is not an official currency, therefore it does not have an ISO code, but its generally used designation is BTC, which is rather similar to the ISO code. Bitcoin's widespread adoption has been assisted by its accessibility through any internet-connected device. It is not a generally accepted national currency, yet it is still a currency. It is based on consensus, faith governs its use and acceptance. The maximum issued volume is capped at 21 million BTC.

By now, Bitcoin might have become the most well-known digital money which also performs the functions of a medium of exchange, currency, sale and purchase tool, measure of value and savings accumulation method. Based in Switzerland, the financial service provider First Global Credit also accepts Bitcoin as security for stock exchange transactions, thereby opening new horizons for digital currencies. Numerous other crypto currencies, like Monero, launched in the wake of Bitcoin's success. The digital currencies that are following in the footsteps of Bitcoin are attempting to overcome the limitations of the BTC system, often making this claim when advertising their own currencies.

The users of digital currencies are mostly young adults, more than 60% of BTC users are under 35 years of age. The currency has become widespread nearly worldwide, but there are some nations that explicitly prohibit its use (e.g.: Russia, Vietnam, Bolivia, Iceland, China, etc.) therefore users are decidedly trespassing through shady territory with their transactions.

Zerocoin. Zerocoin's entry was warranted by the imperfections of Bitcoin. BTC does not guarantee anonymity, therefore an attempt was made to develop a more secure protocol for users, who could exchange their coins. A critique: BTC stores transactions in a public main registry, therefore these transactions can be researched going back years. Zerocoin's developers deemed this too dangerous, so they sought another solution for the problem.

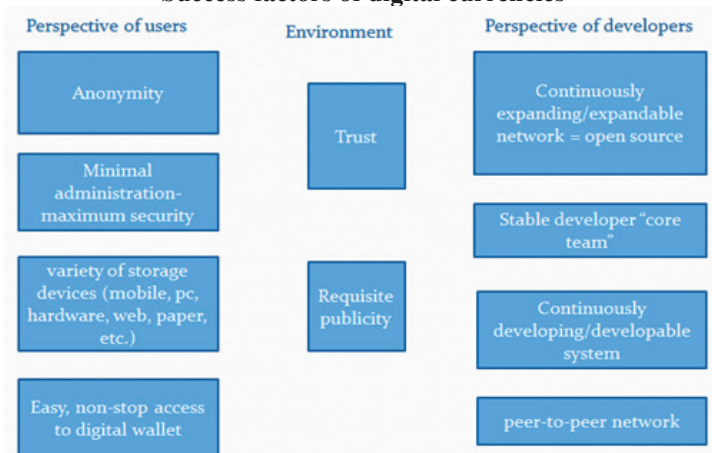
Zerocoin offers an opportunity to transform non-anonymous BTC coins into anonymous Zerocoins, thereby ensuring actual anonymity, while retaining value. This is important because one of the primary reasons for the use of digital currencies is low cost, low transaction fees. (Conversion works free of charge in reverse as well, from Zerocoin to BTC). Zerocoin's developers did not seek anonymity, their contact information and role in the creation of the system can be found on their website.

Shared characteristics:

- anonymity
- speed
- neutrality
- non-discriminatory
- digital encryption
- peer-to-peer network

- provision of resources/ and infrastructure on a community level
- opportunity to mine
- low costs
- address and private key required
- open source systems
- no age limit
- no unsecure transactions
- the download of an operating system independent application is required
- BTC and Monero may be ordered in coin form as well
- no centralized control
- one group operates the "core" system or project
- the inventor and developers of the system choose anonymity because of harassment by the authorities
- there are no fees (account management, admission fees) only transaction fees
- an interesting intermediate solution between classic batch settlement and RTGS systems (with regard to the timeliness of settlements, it approaches real-time settlement systems)

Success factors of digital currencies



Source: self-generated graph

Digital currencies tied to virtual games operate upon the infrastructure of other payment systems and can be tied to a specific service, even though strictly interpreted they fit the criteria of digital money. FarmVille and Entropia Universe strive to create a separate, identifiable, distinct space in virtual space. They form their own value system and norms and operate in accordance with certain values. It is their method of payment that can be used in virtual space in a limited manner, like Bitcoin. BTC, however, is not tied to a single segment of virtual space, but rather

strives for global domination. The role of digital currencies created for individually developed virtual games are connected with the need of the developers, namely that they enrich the users with an experience and offer them relaxation. From this perspective, Farmcash, PED, piggy coin and Ethereum contain a virtual added value in comparison with crypto currencies associated with primary payment transactions.

Barion – one example from the world of non-anonymous currency. Barion could be defined as digital currency tied to applications that ease daily payments, an electronic money issued in Hungary. The service provider ensures the use of the system alongside low costs, but it is hardly anonymous. The condition of utilizing the services is entering into an agreement and the provision of personal documents. The service provider may deny to enter into the contract, a direct intervention into the system is possible. The service operates similar to that of a traditional bank account. The users of the service do not enjoy the anonymity offered by crypto currencies and may not avoid convoluted administrative burdens. An additional disadvantage of the system is that the spectrum of those who accept it as payment is highly limited; we cannot talk about a worldwide network. There is a central registry (account management system), therefore it is centralized, the service provider provides the primary infrastructure for settlements.

Dangers. The settlement of crypto currencies, just as traditional settlements and banking systems, are subjected to numerous dangers. Cyberattacks on the networks may take place for the purpose of determining the identities of users. The identification of a single user might unmask the anonymity of other users. In this case, the operation of the entire network might be endangered, as one of the most frequent reasons for someone to choose crypto currency is to avoid administration and identification (not just terrorists desire anonymity in virtual space). Zerocoin was founded to achieve a higher level of anonymity, created with the expansion of the BTC protocol.

There may be an intrusion into the system with the intent to defraud, to enable the coins to be spent on multiple occasions (by injecting additional nodes into the system). At this time, the security and performance of the payments may be in danger. Certain external attacks may be targeted at making settlements impossible (Denial of Service), to reduce processing capacity. In this extreme case, the system may stop operating entirely.

Lacking a central issuer, in the case of abuse or theft, there is no one to intervene or investigate the fraud. This is why security and trust are so important in the operation of these systems. The improvement of security is continuously present in the world of digital currencies. Newer and newer crypto currencies endeavor to overcome the flaws of their predecessors.

On the one hand, the speeding up of settlements, on the other, the integration of check points and the increasing of their frequency may improve security. In case of BTC, these can get in the system simultaneously with the updates; in the case of Peercoin, verification and closings are continuous. [Bura i.m. 17] These security

closings are similar to the settlements of the batch-based items of traditional clearing systems.

In the case of Bitcoin, it may be a source of danger if more than 50% of calculation capacity was concentrated in the hand of a single user. At this time the user can take control of the system, able to spend a single BTC more than once, or to reject certain transactions. The stability and security of the system are well demonstrated by the fact, however, that the controller of the system cannot modify the transactions of others, change rewards for mining, or spend money that does not belong to him/her. Additionally, he/she may not create a new settlement unit, a new coin.

In the case of Peercoin, 51% of issued currency (coins) is required to intervene, but in this case the intervention/attack becomes counterproductive, as the user would be weakening the value of his/her own money. This is how it becomes apparent that Peercoin is attempting to remedy the „growing pains” of BTC.

The importance of the struggle against money laundering are beginning to be placed in the foreground by the users of digital currencies as well, limit monitoring is also built into the new system (or are planned to be integrated). Naturally, this is cumbersome, as how can there be a guarantee for anonymity? Or perhaps the basic principles are only valid to a certain amount limit? There is no direct screening in the clearing systems, it is the partner banks, not the clearing system itself which perform the identification and reporting of suspicious transactions.

Conclusions. BTC’s leading role remains unquestioned to this day; only BTC approaches the real of real currencies with its savings accumulation function. Bitcoin technology serves as the foundation of numerous other digital currencies. Its acceptance as security for stock exchange transactions has given the crypto currency a new function. The involvement of minors in payment transactions harbors numerous dangers and opportunities. It is obviously important for children to become familiar with the virtual world and payment systems, so that they can learn the value of money. The fact that they can earn money in virtual reality expands their imaginations and of innovation. They can become familiarity with the world of work and the interactions in the economy, but the exploration of the digital financial world can be dangerous as well. Minors are subjected to attacks in virtual space, meaning that parents must bear a great deal of responsibility when they determine how much freedom to allow their offspring in virtual space/economy.

Financial authorities and governments are observing the appearance of crypto currencies with concern. A serious rival has appeared in the market of payment systems. One might say: „Digital money doesn’t have a distinctive smell”, we do not know the previous history of digital money, in many cases digital currencies do not even have a tangible existence, we do not know who the payer and the beneficiary is, the flow of funds is not directly tied to a service or a good. Anonymity is a threat and a competitive advantage at the same time. Digital space is yet unexploited, thus one can expect explosive growth and natural selection to take place in the area of digital currencies in the coming years. Governments and financial authorities are

still lagging behind in the area of regulation. Fast and forward-looking steps are necessary to enable control over the continuously flowing money.

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EDUCATIONAL SECURITY IN THE CONTEXT OF ENSURING NATIONAL INTERESTS OF UKRAINE

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In the context of the transformational processes taking place in Ukraine, the issue of educational security, which is a key component of national security, deserves special attention. National security directly influences the effectiveness of changes in all spheres of public life, since it is a conscious, targeted, organized influence of the subject of management on the real threats and danger through which state and non-state institutions create favorable conditions for the progressive development of Ukrainian national interests, the sources of the well-being of a particular person, society and the state, and also ensure the effective functioning of the system of

national security of Ukraine [Lipkan, 2005, p. 26].

In order to realize the ideas of national interests, it is necessary to bring the functioning of the education system to a qualitatively new level, as the security of the state in the strategic plan is determined by the state of the education system. The education system is an environment and an essential mechanism for comprehensive development, mobilization and updating of intellectual potential, and, consequently, for innovation development. In economically developed countries, at the expense of education, they receive up to 40% of the growth of gross national product [Stetsiv, 2010].

As the national security of the country depends directly on the intellectual potential of the country, the moral and political ideals of the youth, its social values, the level of general culture and vocational training, education, above all, is the foundation for the formation of knowledge and intellectual capital. It provides security at all levels (individual, society, and state). And it plays an essential role in their strengthening. Thus, without qualified personnel, economic and military security of the state is impossible, technological security is impossible without modern scientific developments, etc.

Educational security of the state is the ability of the education system to ensure the implementation of human rights for general and vocational education, its ability to reproduce skilled labor, the state's ability to protect national interests in education from possible threats.

The Institute of Human Rights and Freedoms establishes that in the field of education, the state must create the whole set of institutional conditions for the realization of the right of citizens to education. At the same time, the intervention of the state in the educational process must be determined by the interests of the individual, society and the state, which, obviously, is dictated by the realization of human rights and freedoms, since the right to education belongs to the set of fundamental rights [Zarubezhnyi, 2001, p. 62].

Considering the aspects of security in an educational institution, there is a concept of comprehensive security of an educational institution, which G. Kodzhaspirova understands as "the state of the educational institution's security against the real and predictable social, technological and natural threats that ensure its safe functioning" [Kodzhaspirova, 2008].

The problem of implementing national security in the field of education has reached a certain solution and philosophical comprehension in the works of V. Barkhatov, D. Dzvinchuk, H. Dmytrenko, K. Karpova, K. Korsak, V. Luhovyi, A. Malolitko, S. Nikolaienko, V. Ohneviuk, S. Proleiev, M. Stepko, I. Stetsiv and others.

The national interests of Ukraine lie in the fact that education should fulfill the functions assigned to it: acquisition, extension and continuous updating of knowledge; growth of labor productivity and individual employee income; balancing the labor market, ensuring its labor force in line with changes in demand

in the labor market; social protection of workers from unemployment. According to some calculations, wages in Ukraine are 50%, labor productivity is 32-38%, and more than 50% of inventions depend on the educational and professional level of the employed. At the same time, educational factors in aggregate by 50-80% provide a positive dynamics of the results of innovation activity [Antoniuk, 2008, pp. 16–17].

There is a close relationship between education and science, since scientific knowledge enhances human, state, and society's ability to anticipate and neutralize certain threats. Nowadays, economically developed countries pay particular attention to the development of information technology, improvement of methods for obtaining, storing, searching, transmitting information, and this greatly contributes to the development of education [Stetsiv, 2010].

In view of this, successful personality development is possible in an environment in which the absolute value of each person is recognized, the activity is carried out on the principles of humanism, which gives impetus to its successful implementation. Domestic and foreign scholars and practitioners interpret the educational environment as part of the human life and social environment, which manifests itself in the aggregate of all educational factors that directly or indirectly influence the personality in the processes of education and development; it is a certain educational space, where its development is carried out.

Thus, foreign scholar V. Iasvin believes that the educational environment is a characteristic of life within an institution of education, a system of influences and conditions of personality formation, as well as a system of opportunities for the development of personality that are contained in the social and spatial-subject environment [Iasvin, 2001]. Evaluating the educational environment as a systematic tool for the formation of personality, the author proposes its structure, which includes three basic components: spatially-subject (spatially-subject conditions and opportunities for the implementation of education, socialization of the individual); social (the space of conditions and opportunities that is created in the interpersonal interaction between the subjects of the educational process (students, teachers, administration, parents, psychologists and others); psychological and didactic (a complex of educational technologies (content and methods of teaching and education), built on different psychological and didactic principles) [Iasvin, 1997, pp. 11–15].

The educational environment of higher education institution (HEI) is studied as a pedagogical phenomenon (A. Artiukhina), a factor of professional self-determination (O. Mondonen), socio-cultural development of students (N. Zybyna), professional self-consciousness (L. Andrieieva), adaptation of students in conditions of optimization of educational environment (H. Horska, T. Braun), formation of professional and civil competencies (S. Miakishev and L. Orynina). The educational environment is studied as a means of development of a student's creative personality (V. Masterova, S. Pymonova, Y. Podolska), self-realization of the personality (N. Senchenko).

The term “educational environment of a higher education institution” is understood by some scholars as a combination of the material and spiritual conditions of its functioning, which ensure the self-development of a free and active student, the realization of the creative potential of his/her personality. Educational environment serves as a functional and spatial association of subjects of education; and close diverse group relationships are established between them. It can be regarded as a model of socio-cultural space, in which the formation of personality occurs [Katashov, 2001, p. 8].

The entrant, choosing HEI today, thoroughly examines its stability, prestige and economic well-being. Such a situation necessitates the work of the HEI in creating conditions that would ensure its successful existence in order to ensure that the educational environment of the educational institution is protected and safe.

At the same time, in today’s rapidly changing conditions, the educational environment of an educational institution is not isolated from external and internal factors and their influence. These factors can have both a positive result and contain threats, dangers and risks that lead to destructive changes.

Professor I. I. Musiienko points out that “The development of the educational system in the direction of guaranteeing and safeguarding national interests is determined by the influence of such factors as: the emergence and expansion of the sphere of influence of organizations that seek to world-wide manifestation (for example, the WTO, the World Bank, the International Monetary Fund, the Organization for Economic Co-operation and Development, etc.); popularization of the philosophy of neo-liberalism, based on the absolutism of the importance of market relations and spreading them to the spheres of education, health care, social security, etc., as a government ideology; maintaining a deep divide in the level of socio-economic development between industrialized and developing countries; the desire of national and governmental organizations to create horizontal rather than hierarchical organizational structures (for example, the European Union, the North American Free Trade Area, the Southern Cone Common Market, Asia-Pacific Economic Cooperation, etc.); the urgency of the solution at the supranational level of global environmental problems” [Musiienko, 2012, p. 5]. As a result, he observes that “It is obvious that the right to education requires an appropriate institutional structure, which, created by the state, should be in line with national interests. In essence, an institutional political and legal field is formed that regulates the field of education, and it is determined by a wider institutional context, ensures the realization of human rights and freedoms. Therefore, the full implementation of the right to education by the state is connected with the conceptual content of national interests. This interest is an ideological context for ensuring national security” [Musiienko, 2012, p. 10].

Unfortunately, in reality, modern Ukrainian higher education does not respond quickly to the fleeting needs of society and the labor market, which is expressed in terms of training and discipline, which are calculated on the existing (or past)

educational environment, rather than on the planetary information space; structure of the content of training and retraining, which are formed according to the “tunnel” principle (“immit me”); pedagogical technologies, formed on information and reproductive techniques; pedagogical control, which is aimed at finding mistakes both in the teacher and in the students (that is, on the negative) [Luzik, Khomenko-Semenova].

Therefore, HEIs are under the influence of a number of factors that negatively affect their activities and threaten their safety. These main factors include:

- lowering the quality of higher education;
- outflow of qualified personnel from HEIs;
- reduction of the number of entrants;
- non-transparent mechanism of distribution of budget funds and reduction of state financing;
- aggravation of competition between HEIs for entrants and between graduates in the labor market;
- low representation of domestic HEIs in international university rankings.

The aforementioned factors create threats both for the development and sustainable functioning of the HEIs, as well as the state; determine the orientation of international economic communications; can damage the HEI or adversely affect its functioning. At the same time, the identified factors of the threat to the security of the HEIs make it possible to prevent or mitigate the impact of certain threats to the activities of higher education [Snihyr, 2017, p. 647].

The analysis of the source base shows that scientists differentiate many classifications of threats. Thus, M. Glasnyi points out 7 main threats in the system of higher education and considers them the most urgent and global problems: 1. Non-compliance with legislative requirements. 2. World financial crises. 3. Energy crises. 4. Inflation. 5. Changes in consumer demand. 6. Fight for talented professionals. 7. Epidemics [Glasnyi, 2008].

The greatest spread in science has been acquired by the allocation of threats, depending on their sphere of origin. On this basis internal and external threats are distinguished. External threats arise outside of the economic systems. Internal threats are caused by those processes that arise during the operation of economic systems. According to scientists, all kinds of threats and risks, associated with the provision of educational services, are appropriated for institutions of higher education.

L. P. Snihyr submits a classification of internal (all that creates conditions for violation of the current legislation in the field of education and licensing conditions by the leaders, faculty, other permanent staff of HEI and students) and external (arising outside the economic systems, are manifested in the negative consequences of socio-economic development of the country) threats to the security of HEI [Snihyr, 2017].

He refers the following to external threats: the instability of state policy in the field of higher education; change in the system of knowledge assessment when

enrolling entrants; unfavorable demographic situation; competition in the market of higher education; saturation of the labor market by graduates of certain specialties; the impact of the economic crisis on the consumer's purchasing power of educational services; the level of corruption and crime in Ukraine.

The scholar refers the following to internal threats: non-compliance with legislative requirements; aging of consumers and personnel in the system of higher education; constant shortage of skilled personnel; the inability to react in a timely manner to changing consumer demand; inability to innovate in the system of higher education; presence of conflicting relations between the leadership of the higher educational establishment and the teaching staff; the absence of preventive measures for manifestations of corruption, fraud in the HEI [Snihyr, 2017, p. 30].

Threats to native education have different nature, sources and forms (crisis in the field of spirituality; fall in the credibility of education (fundamental one); lack of funding; commercialization of education; unfinished reform process – from the old Soviet system to the modern, advanced world). The provision of security in educational institutions is largely dependent on the availability and use of financial resources, the stable and sufficient receipt of budget funds above all. In addition, given the fact that Ukraine has clearly identified the entry into the educational space of Europe as its guideline, respectively, there should be a gradual modernization of educational activities in the context of European requirements [Hirniak, 2014].

In order to create an effective safety system of HEI, it is necessary to have a clear idea of what factors affect the level of security threats. Awareness of the relevant factors of security threats to institutions of higher education will make it possible to prevent their impact or at least the consequences [Snihyr, 2017, p. 647].

Specialists of the Humanitarian Security Department of the National Institute for Strategic Studies of Ukraine T.V. Chernenko, M.M. Karpenko, V.S. Lozovyi and others prepared an analytical report on Security Measures of Education Policy: World Experience and Ukrainian Realities, in which it is noted that for the foundation of the security factor, it is necessary “to streamline the organizational and legal principles that determine the development of education and science, primarily forms of interaction between universities and institutes of the National Academy of Sciences, mechanisms for implementation of agreements of scientific collectives with high-tech production, in particular in the field of defense, as well as provision of public-private partnership in the field of scientific developments; to ensure sufficient financing of the joint educational and scientific projects of the institutes of the National Academy of Sciences of Ukraine and research institutes of the Ministry of Education and Science of Ukraine, which should provide elite education and conduct innovative scientific research; to implement the policy of financial and tax incentives for universities and scientific institutions that develop science, specialize in the creation of innovative knowledge; using the experience of the best European and world scientific institutions and educational institutions, to modernize the system of training highly skilled personnel for the scientific,

educational and innovative spheres, create effective mechanisms for supporting young scientists, expanding career prospects for doctors and postdoctoral students, ending the emigration of researchers, providing social protection of scholars” [Ishchenko, 2017, p. 40].

Thus, the creation of an integrated system of national security is the main task of Ukraine as a sovereign European state. In the national security system, education plays the huge and increasing role. It acts simultaneously as an object, a resource and a means that creates, strengthens the foundation of the country’s economic growth and its security. By joining the struggle for high positions in domestic and international rankings, HEIs contribute to the improvement of the quality of education. Increasing the level of economic development in modern conditions will contribute to ensuring the effective functioning of higher education institutions and their security, in particular as a result of improving the quality of training of specialists who can be competitive both on the domestic and international labor markets. That is why the development of the educational sphere should be one of the most important priorities of the national security policy.

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GENDER POLICY OF POPULATION EMPLOYMENT IN THE SYSTEM OF FORMATION OF UKRAINE'S PERSONEL SECURITY

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The issue of employment and job placement remains a topical point in Ukraine as well as in EU countries and it is considered to be one of the central problems of modern society. The problem of gender equality have a profound impact on the development of the social life of Ukrainians and it is aimed to be the center for economic and social growth. Although women have already achieved significant successes in their rights and freedoms, in reality no country in the world has ever

been able to achieve full gender equality. Once too often, women and girls are discriminated against in health, education, political representation, labor market, etc., which has a negative impact on the development of their abilities and freedom of choice.

The gender approach is an important part of the comprehensive study of market problems, because it reveals the mechanisms of gender inequality in employment, reveals its causes and consequences. Awareness and solving of this problem will contribute to the improvement of legislative enforcement within the framework of equal treatment of employees, regardless of the gender, in accordance with the standards of the European Union legislation. This problem is especially relevant in the context of personnel security forming in Ukraine, while there have been an ongoing migration processes for the last decade. The generalization of theoretical basis and practical experience of forming gender policy of employment shows that the main problems of the domestic labor market, in addition, lie in the characteristic features of mentality, national culture, traditional concept of the woman's role in the family, at work, in management. In the long-term perspective, it is necessary to get rid of the phenomenon of gender discrimination against women in the sphere of employment. It gradually exhausts the economy of our country – we lose the workers and qualified personnel and become the supplier of the “human capital” to the European countries.

Moreover, this tendency is becoming more and more serious. The countries with the higher level of economic and social development than Ukraine are considered to be more attractive for labor migrants and it causes the labor resources outflow.

Semikina M.V. notes, «The gender approach is an important part of the comprehensive study of labor market problems, since it reveals the mechanisms of gender inequality of employment, reveals its causes and consequences» [1]. The main task of the State Social Program for ensuring equal rights and opportunities for women and men for the period up to 2021 is «ensuring of equal rights and opportunities for women and men will determine the necessity of active and comprehensive work in solving the problems of gender discrimination and providing the real gender equality» [2]. Economic activity is the desire of the able-bodied person to apply his abilities, knowledge, skills, and competences while performing the work in order to obtain the income. The realization of such a desire is expressed in the economic activity employment, and non-realization is expressed in the unemployment.

The study of indicators of economic activity of the population of the country by gender on average in the first half of 2017 - 2018 (Table 1) showed that the prevailing number among employed persons belongs to men.

There is a quite insignificant percentage shift for benefit of women (it is only 0.5% of the total) in 2018. It is explained by a decrease in the number of men in the structure of the economically active population by 65.1 thousand people in the current year, in comparison the previous one.

Table 1

**Economic activity of the population on average in the
first half of 2017 - 2018, by gender**

Indexes	The whole population		Women				Men			
	2017	2018	2017	% to all	2018	% to all	2017	% to all	2018	% to all
Economically active population, thousand people	17830.6	17883.6	8425.6	47.3	8543.7	47.8	9405.0	52.7	9339.9	52.2
Economic activity level, %	61.9	62.4	55.7	×	56.7	×	68.8	×	68.6	×
Employed population, thousand people	16120.9	16283.2	7775.8	48.2	7898.1	48.5	8345.1	51.8	8385.1	51.5
Employment rate, %	56.0	56.8	51.4	×	52.4	×	61.1	×	61.6	×
Unemployed population (according to the ILO* methodology), thousand people	1709.7	1600.4	649.8	38.0	645.6	40.3	1059.9	62.0	954.8	59.7
Unemployment rate (according to the ILO methodology), %	9.6	8.9	7.7	×	7.6	×	11.3	×	10.2	×

* International Labor Organization

Source: done by the authors according to the data of the State Statistics Service [4]

In the domestic labor market, the employment rate of women in the surveyed

period is lower than that among men (9.7% in 2017 and 9.2% in 2018). The level of economic activity of women is lower than that of men (by 13.4% and 11.9%, respectively the above-mentioned years). The obtained results of the research once again confirm the existence of gender segregation in the economy of our country.

Taking into account the mentioned indicators, it is impossible to affirm with certainty the discriminatory nature of the Ukrainian labor market for women. Even though the level of female unemployment is lower than that of men (provided that the number of employed women is smaller than the number of employed men: 7.8 million employed women versus men - 8.3 million people in the first half of 2017 and 7.9 million people against 8.4 million people in the first half of 2018).

The surveys have shown that there are discrepancies in the employment rates of male and female population living in cities and rural areas (Table 2). According to the results of the survey, we can state that the number of employed people is decreasing year after year. Thus, the deviation between the reporting and base year is 3023.8 thousands people (or 15.7%).

Analyzing the data in Table 2, we can state that the number of employed people decreases each year due to the reduction of the population in Ukraine. To some extent, it is because of the Crimea annexing and some problems in the temporarily occupied territories of Donetsk and Lugansk regions. Thus, the deviation between the reporting and the base year is 3023.8 thousand people (or 15.7%).

Considering the data on the employment of the population according to the residential distribution, it is worth stating that the urban population prevails over the rural one more than twice.

As you can see, during the surveyed period the number of full-time employees in accordance with their gender distributed almost equally. However, there are significant differences in the labor application.

Traditionally, man's working spheres are: construction (81.1% of the total number of staff), extractive industry and the development of mines (75.7%), furniture production, other products, repair and installation of machinery and equipment (72.5%), agriculture, forestry and fisheries (71.4%), transport activities (70.6%), production of coke and products of oil refining and metallurgy, production of finished metal products, excepting machinery and equipment (by 70, 1%), warehousing and assistant activities in the field of transport (69.9%), machinery and equipment (69.8%), rubber and plastic products manufacturing, and other non-metallic mineral products (69.4%) [3]. In most types of economic activity, it is due to labor conditions. In particular, it is prohibited to employ women if it is necessary for them to perform heavy and harmful work. However, the low level of democracy development in the country, the characteristic features of mentality, national culture, traditional notions about the role of women in the family, in work, in management, etc. prevent the gender inequality overcoming [1].

Table 2

**Employment by sex and place of residence
(Aged 15-70 years, thousand people)**

Indicators	2010	2014	2015	2016	2017	Deviation 2017 by 2010	
						+/-	%
The whole population	19180.2	18073.3	16443.2	16276.9	16156.4	-3023.8	-15.7
from it able-bodied age	17451.5	17188.1	15742.0	15626.1	15495.9	-1955.6	-11.2
Women	9442.0	8718.9	7872.4	7827.4	7771.2	-1670.8	-17.7
from it able-bodied age	8194.9	8169.4	7489.0	7490.9	7424.7	-770.2	-9.4
Men	9,738.2	9354.4	8570.8	8449.5	8385.2	-1353	-13.9
from it able-bodied age	9256.6	9018.7	8253.0	8135.2	8071.2	-1185.4	-12.8
Urban population	13072.2	12780.9	11309.0	11178.5	11109.3	-1963.0	-15.0
from it able-bodied age	12173.4	12263.7	10869.5	10771.5	10689.2	-1484.2	-12.2
Rural population	6108.0	5292.4	5134.2	5098.4	5047.1	-1060.9	-17.4
from it able-bodied age	5278.1	4924.4	4872.5	4854.6	4806.7	-471.4	-8.9

Source: constructed by the authors according to the data of the State Statistics [4]

An important aspect of using the labor force is the wage. In recent years, the average wage of women in the economy of the country was 21.2% lower than the corresponding index for men (in 2016 - by 25.4%). Let's analyze the dynamics of women's employment and their wages by the type of economic activity in the period of 2015-2017.

Analyzing the data in Table 3, we can note the fact that in the period 2015-2017, in terms of economic activities, the wages of women are lower than that of men, which confirms the presence of gender discrimination in the field of employment in our country. The only exception was the sphere of services and cultural institutions activity in 2015-2016. It is explained by the specific features and requirements for these professions, as well as by the historical and traditional concepts of our society. However, in 2017, there was a decline in the above-mentioned types of economic activity. It should be noted, that the majority of the gaps are not caused by direct discrimination in wages but by horizontal and vertical stratification of the labor market: women are more likely to work in less-paid sectors of the economy and in lower positions.

The difficult social and economic situation in Ukraine causes and strengthens the tension in Ukraine's labor market and causes the increase in unemployment.

Unemployment is a complex multidimensional phenomenon, when the part of the active able-bodied population cannot find work [5]. Unemployment is considered to be a macroeconomic problem, which leads to many negative consequences in the country such as: increase in the social differentiation, reduction of population labor activity, increase of unemployment benefits, and as a result - decrease in the gross domestic product of the country [6].

Table 3

Number and wages of women in agriculture

Years	Average numbers of women		The average month salaries of staff workers, UAH		Wage ratio of women and men, %
	Thousand people	% to the average number of workers	women	men	
2015	129.3	31.0	2637	3307	79.7
2016	126.5	30.8	3455	4121	83.8
2017	123.4	30.4	5040	6077	82.9

Source: compiled by the authors according to the State Statistics Service [4]

Let's compare the number of unemployed population of Ukraine and the correspondent rate of unemployment in the first half of 2017 -2018 by gender. Thus, the number of unemployed in the first half of 2018 amounted to 1.6 million people, 40% (645.6 thousand) women, 60% (954.8 thousand) men. In the first half of 2017 the number of unemployed was equal to 1.7 million people, there were 38% (649.8 thousand people) of women and 62% (1059.9 thousand people) of men. Among women, the unemployment rate (defined by the ILO methodology) in 2017 amounted to 7.7% (in 2018 - 7.6%), and among men -11.3% (10.2% in 2018) (Fig. 1).

In modern globalized economy, migration is considered to be the consequence of unemployment. Today, Ukraine is among the top ten world countries, which supply the migrants, while losing not only workers and qualified personnel, but also becoming a supplier of human capital to European countries.

It should be noted that, in accordance with the implementation of the EU-Ukraine Association Agreement, we must comply with the principles of the Gender Equality Directive, which prohibits any less favorable treatment of men or women from the point of view of the sex or women due to pregnancy or the birth of a child. It also forbids sexual harassment. The European Commission [7] promulgated a detailed analysis of this Directive.

The elimination of gender inequality is impossible without reduction of social inequality. The cost of living, the minimum wage, the development of reproductive infrastructure and the children care policy have a structural impact on the life and well-being of women. The conflict which is going on in the Eastern part of Ukraine leads to the humanitarian catastrophe and has a negative influence on the life of

those women who live there [8]. Today, as ever, one needs to praise a woman who defense the Ukrainian hope and is responsible for human lineage [9].

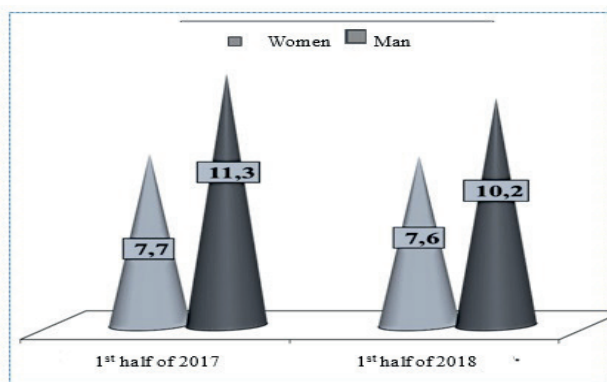


Fig. 1. Unemployment rate by gender (%)

Source: Built by the author according to the data of the State Statistics Service [4]

A lot of measures have been undertaken at this stage. Still there is a necessity to implement the combined approach in order to be able to manage the consequences and foresee the future changes.

Eliminating gender discrimination in many cases will depend on understanding the problem, correspondent gender knowledge sharing, proficiency in international standards and successful examples of gender equality implementation.

The consistent work in this direction will lead to stability, equality and justice. Today, an important prerequisite for the development of modern society is to pay special attention to personnel that creates conditions for economic growth and competitiveness in conditions of maximum use of innovations for the individual employee and the enterprise itself, and it guarantees its economic security [10].

There is a lack of institutional procedures to provide gender prioritization in various local policies. They relate to the temporarily displaced people, gypsies and women of national minorities empowerment, the system for coordinating and monitoring implementation of national policies and measures at the local level, a functional mechanism and abilities to achieve gender equality in public administration.

There is a necessity in defining the gender equality as part of the powers of local self-government bodies in order to provide administrative capacity for implementation of the gender equality policy.

The legislation itself is not enough for transformations in the social consciousness and for the creation of civilized cultural customs of gender roles in Ukraine. Unfortunately, the legislation itself is not fully implemented. It will be useful to gain some experience in foreign practice and implement the best features of it.

The equality among women and men must become a reality in the new and democratic Ukraine. There is an urgent need in the adoption and implementation of measures, which are aimed to prevent, reduce, resist and avoid gender inequality.

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ENSURING ECONOMIC SECURITY OF UNIVERSITY BY MODERNIZATION OF MANAGERIAL APPROACHES

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Entered the third millennium as an independent state Ukraine has been building a national education system. The main priorities in the modernization of the education system are its democratization, fundamental improvement, use of new learning technologies, integration of various training forms and systems. The strategic objective of the state educational policy in Ukraine is competitive entry in the world market of educational services, deepening international cooperation.

However, nowadays the majority of Ukrainian universities are facing the managerial crisis caused by discrepancy between the existing system of management and new economic conditions. The traditional management of institution of higher education (HEI) is inefficient, and the desire to preserve financial stability only affects the quality of educational and research activities.

Reformation of the universities' system of management is of a particular relevance in connection with passing the new Law of Ukraine «On Higher Education», where universities have considerable autonomy in academic, financial and organizational issues. The law enabled universities to form the desired system of management, to choose the methods and tools of management and to bear full responsibility for the impact of their activities.

Being aware of the need for reformation, some universities have begun to rebuild their own system of management, but the lack of experience and clear understanding of the problems and ways of their solution results in changes that occur haphazardly and do not bring the expected results. All this makes university leaders seek the ways to apply modern and innovative approaches to improving the system of management.

Consequently, there is a need for a new ideology of management and specific managerial practices to effectively manage the university in terms of the emerging education market and continuous innovation providing. In this regard, the purpose of the study is to substantiate the need for changes in higher education and to develop the innovative process-centered approach to the management of higher education institutions based on modern concepts of service management.

In conditions of market reformation, two main behavioral models of universities can be defined. The conservative behavioral modeled results in sluggishness of a HEI activity: it keeps mainly formed relationships and solves emerging problems in a traditional way, and if there is no solution at the level of the university, HEI expects to get it at national level.

On the other hand, the model of active adaptation contributes to utilizing the HEI's

own strength, not so much on its own resources, but on the ability to independently predict the situation and undertake the appropriate steps on its own [1].

The need for modernization of a university's management led to the need to change management approaches and, consequently, provided an opportunity to instantly respond to changes in the social environment. In order to increase the efficiency of national HEIs in the new economic conditions the innovative process-centered approach to the HEI management based on the author's concept of management of higher educational institutions as a subject of the market [2].

HEI business processes allocation, their analysis and improvement are the considerable reserve for efficiency of the university management. Among the main advantages of the process-centered approach to HEI management are the simplicity of the optimization of both processes in terms of their organization, synchronization, interconsistency and resources consumed by the processes, especially human and financial resources. In addition, there is a natural reorientation of organization and management on a consumer (client), who begins and ends all processes in the HEI.

In the context of the process-centered approach to the university management one can distinguish four main groups of business processes: the goal setting process, the operational process, the process of management and the processes of development. The following are the main features and recommendations on their improvement.

Currently, there are different approaches to define the mission of the university. Some believe that its goal is scientific discoveries, transfer and use of knowledge in the community of scientists and teachers. Others focus on the issues of economics, finance and on the response to market changes. Still others see the university as a well-ordered social and political community. Thus, the duty of the administration and the university staff is to creatively approach to the definition of the HEI mission [3]. The mission should reflect the core values of the university, its main products and target markets.

HEI's strategy determination depends on the legal form of the university, on its size and specialization. The geographical location, demographic, economic, social and cultural traits of the region are also should be taken into account. Strategic plans should include far-reaching goals: access to the world educational market, the occupation of its specific niche or obtaining the market share [4; 5]. The strategy defines the university's policy, which should aim to achieve its objectives.

Unlike the strategies, goals and objectives for a certain period of time must be specific, indicating the ways of their achievement, the appointment of responsible persons and the creation of the system control. The current environment has a high degree of variability, so the goals should constantly be adjusted. In addition, it is necessary to distinguish between internal and external purposes. External goal set by society (the state) and reflects the contents of its organization.

Operational processes of HEIs likewise the processes at any organization that carries on business in a competitive market are divided into primary and secondary

processes. The primary activities of HEIs include: educational services; research and development; production. In terms of the technology of building a business process in a HEI, the primary activities of the university correspond to the key business processes, that is a sequence of actions starts with one or more inputs and ends with the creation of products or services necessary to the consumer. In its turn, the main activities are divided into subtypes that represent the private business processes. For example, such business process components as educational activities at different levels of education, pre-university and post-graduate educational activities etc are subject to a key business process - educational activity of a HEI. Auxiliary activities that support the implementation of the key activities (key business processes) are considered to be those, which support and serve to the business processes that do not have direct access to the customer (the applicant). These are the administrative and financial, personnel, logistical support etc.

Each auxiliary business processes in its turn is divided into subtypes similar to the key business processes. The interdependence between basic and additional activities is provided by the unified organizational structure and the system of management on basis of the both transparent information systems support and quality assurance. Each type of activity (main and auxiliary) must be aligned with the current legal framework [6, 7].

Thus, in accordance with the process-centered approach to the HEI management the key roles belong to the processes, their purposes and executives. The role of functional departments fades into the background. Thus the focus of management is shifted from structural educational units (dean office, department, center) to the educational process, but rather to the organization and implementation of educational (research) programs. The research of the educational business process as the key process of HEIs allows to coordinate resources allocated to an education program or research project with the rights and responsibilities of process managers. Thus, in order to be effectively managed each process should be leaded and presented by the process team.

These processes are the binding components of the HEI business system. Managerial functions are presented in each operating process. If we consider the educational process as the key business process of a HEI, it begins with development of educational (research) programs, is followed by educational process planning, organization and its direct implementation as well as motivation of its participants, control at all stages of the process and finally ends with the results assessment.

To link resources allocated to the education program with the rights and duties of the head of the team it is expedient to draw up the estimate of educational programs. Although the processes by the educational programs are not displayed in the structure of a HEI system of management, but they are used as means of the internal control of the process team. The abovementioned breakdown of estimates is required to both take into account the consumption of resources by the each process team and to coordinate their work [8]. Scheduled budgeting should be done on the

basis of self-sufficiency of educational (research) program and processes teams that carry it. This requires on the one hand a new understanding of planning and financial activities of a HEI and on the other – change of approaches to the evaluation of educational structures (dean, department) and the units they serve.

Organization as a management function includes: forming the management structure, division of tasks and resources, allocation and delegation of authority. Most universities use a closed management model based on linear-functional organizational structure, and only a small number of universities are shaping and implementing an open management model, able to respond flexibly to environmental conditions.

Each process team should be headed by the process manager who individually is liable for the process team work and provides interconnection between managers of the other core processes [8]. Both the matrix and project organizational structure, which provide a direct connection between the linear and functional units at any process are able to provide the necessary flexibility in the management of educational activities.

As practice shows staff motivation as a management function in a HEI is not provided sufficiently with financial resources. To solve the issue of financial security, in particular of the process of motivation in the conditions of educational systems restructuring and economic crisis, it usually takes time. So, the university management support and provision of staff self-development can serve as an effective motivating tool. Employees training to improve their skills is a central component of a HEI development in the information society. Care of the university teachers, teaching both teachers and students to efficiently work in team are the main objectives of the university.

Control function in the management of university provides the achievement of its goals and development in the given organizational conditions. The main tasks of control are: collection and systematization of information on the state of both the outer environment – market needs, customers inquiries, competitive advantages of the other universities, etc. and inner environment – education, research, economic, financial and other activities; assessment of the results for all activities; analysis of the factors that influence the effectiveness of operational processes; preparing and implementing managerial decisions

The leading place in the hierarchy of objectives the universities are currently facing belongs to quality assurance in all spheres of its activities and, above all, in education. This process is an integral part of every primary and secondary process and should be organically included in any of them. Therefore, according to the innovation process-centered management, the process of quality assurance is imposed as an invisible network on all its components and is reflected in the functional responsibilities of each employee having a link to a specific business process.

The other processes that have an impact on a HEI's development are the process

of creating a positive consumer's experience and loyalty; the process of innovation providing; the process of image growth and progress support.

The customer receives a positive experience in the service. Such an experience provides a long term relationship between a university and its graduates, and the process of a comprehensive customer experience management at all stages of its interaction with the university guarantees customers' satisfaction with the final result. Loyalty formation assumes maintaining and increasing of a customer's positive experience with a HEI. Loyalty reflects a positive customer's attitude to the services provided as well as to the university and to a certain extent reflects the degree of satisfaction with the HEI.

The main indicator of innovation is the progress in a HEI development compared to traditions and widespread practice. Therefore, innovations in education are related to amendments in the objectives, content, methods and technologies, forms of organization and management; in educational programs and the organization of educational process; in monitoring and evaluation of education; in the educational and methodological support etc. The innovation may be determined by the needs of the region, the city; achievement of the human sciences; by the advanced pedagogical experience; by the serendipity and creativity of the university leaders and teaching staff; by the experimental work; by the international experience, etc [9; 10].

A HEI's image is the image that occurs in public or individual consciousness. It is influenced by media and non-media factors and efforts on the basis of a positive experience and loyalty in order to create a positive attitude to the university in the public mind. Image of a HEI includes satisfaction of the students with quality of the education services provided, and satisfaction of the teaching staff with the results of their educational and research activities, price policy, advertising and marketing communications, and position which the HEI occupies in the national and international rankings of universities.

It should be noted that the most acute indicator of a HEI's image and ranking university is the level of its graduates' employment in the labor market. Employment and demand of the graduates, their personal professional success crucially depends on the competencies acquired during the study. Therefore, the results of the quality assurance of education are the primary components of the university's image.

Support of the progress achieved by a university is needed to ensure sustainable development in a changing competitive environment which is enhanced by hard integration into the European and world educational area. The national universities struggle to survive in the new conditions, but according to the principle of natural selection only those HEIs which have powerful potential and willpower to win will survive and flourish.

So the success of universities in achieving their objectives using a process-centered approach is stipulated by the result-oriented staff involved in the process implementation. Effective management depends on the degree of consistency

between the team and the leadership on the mission and strategy of the university. Values, corporate culture and the attitude of the university management to changes are considered to be the important factors for a HEI's development.

The proposed innovative process-centered approach to a HEI management based on modern concepts of customer-centered management makes the scientific novelty of the research. The approach is characterized by refocusing the management on a customer's subjective and objective needs and demands.

Unlike existing approaches the innovative process-centered approach enables to determine the subsystem that prompts the HEI's development and presented by the process of quality assurance, the process of creating a customer's positive experience and loyalty, the process of continuous innovation providing, the process of a HEI's image growth. The proposed modernization of the managerial approach contributes to the economic security of a HEI's in modern economic conditions. The practical value of the current research results in development of methodological recommendations on restructuring of the system of universities management and a university's adaptation to a competitive market and functioning as an autonomous economic entity.

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FEATURES OF GOVERNMENT REGULATION EDUCATIONAL CLUSTER FOR THE OBJECTIVE OF THE SUPPLY SOCIAL SECURITY

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The social vector of strategic development of our country requires the development and introduction of new methods of management in all spheres of economic activity in order to increase their competitiveness, especially in the context of strengthening the processes of European integration. In the process of implementation of the innovative model of economic development, the educational cluster plays an extremely important role as the basis for ensuring the social security of the state.

In today's conditions, social tensions in Ukraine are intensifying and accumulated social problems create threats to national security and the further development of society, which can become a cause of imbalance and stability. Therefore, research on the provision of social security in Ukraine is urgent in order to develop preventive measures and prevent the threats that can destabilize the situation. The complex nature of social security brings it to the interdisciplinary level and determines its multidimensionality [1, p. 3].

The theoretical work on the problems of ensuring social security shows that the study of the category «social security», measures and forms of social security are significantly dependent on the personnel component. Efficiency of labor potential is determined by the level of education and the quality of educational services [2, p. 137; 3]. In different historical periods, the quality of the training of specialists depended on the degree of development of productive forces, the forms of state regulation of the educational cluster, political regimes, and geopolitical situations. Existing plurality of approaches to the definition of the term «social security» includes a wide range of methodological aspects of social security of the state [4, p. 118; 5, p. 201].

Modern economic science defines social security as a combination of conditions and factors that ensure the independence of the national economy, its constancy and the ability to constantly use innovative technologies [6, p. 621; 7, p. 314]. This is done only if there is a high level of training and effective use of knowledge provided by a knowledge economy. It is necessary to take into account the expanded

idea of social security, which includes additional approaches for determining the need to take into account the dynamic parameters of social development and the factors of influence of the environment in conditions of uncertainty [8. p. 156; 9, p. 603]. In complex comprehensive and multidimensional studies of social security issues, attention was focused on the protection of national interests and the capacity of educational institutions to create mechanisms for the implementation of quality educational services for the development of the domestic economy and support of social stability. Such an approach allows us to use the categories of sustainability of the national economy, the protection of social interests from internal and external threats, and ensuring the independence of the national economy [10, p. 2; 11; 12]. The system of state regulation of the educational cluster provides all the conditions for achieving the main goal of the educational system - ensuring the high quality of knowledge of specialists for the purpose of their implementation in conditions of modernization changes in the state. Such an approach creates the basis for the protection of the social interests of the state. Modern approaches to defining the category of «social security» can be divided into several groups.

The first direction defines the category of «social security» because of the sustainability of educational policy and the independence of public administration from the influence of factors of the external and internal environment [13].

The second synthetic approach is based on the definition of a combination of the category of «social security» through the interests of society, as well as independence from regional and local conditions of development.

The most important of these approaches is the component, which is opened due to the notion of sustainability of the development of the state educational cluster and protection from external threats, which is practically limited to parameters of the development of the economic system and level of state economic security.

The main aspects of social security are connected not only with the development of the educational sphere of the state, but also with the problems of the political direction. The meaningful study of all spheres of human life and society, in the conditions of information transformations, shows that the basis of social security is the possibility of investing major investments to ensure sustainable development of the state. Such doctrinal changes emphasize the need to identify a set of parameters that characterize the state of social security of the state, parameters that reflect the impact on the sustainability of globalization processes taking place in the world, which determine the contradictions in preserving relative national autonomy and competitiveness. The close relationship between social security of the state and the solution of the most important tasks of the sustainable development of the educational cluster is ensured by the need for harmonization of approaches to the solution of these interconnected tasks. The key task of creating a system for managing social security is identifying possible threats and developing measures to create mechanisms for ensuring the country's social security. Identification of indicators that allow monitoring the parameters of social development are under the

influence of external and internal threats. Establishing the values of these indicators is one of the tasks of the mechanism of preventive measures for the loss of social security.

Analysis of the factors of influence on socio-economic processes, as well as monitoring of these factors, using the system of indicators, allows us to develop a forecast of possible threats and to take preventive measures to solve social problems. External factors affecting the social security of the state create appropriate barriers to the development of the state's educational cluster. Such factors in transitional economies are: lack of monitoring of the main parameters of the knowledge economy, underdevelopment of educational infrastructure at the regional and local levels, which makes it impossible to use modern educational technologies and significantly reduces the level of training of specialists in connection with remoteness. The sharp drop in the innovative activity of educational institutions is manifested in the degradation of scientific and technological potential, the loss of a leading role in certain areas of technical development that arises as a result of the migration of young people and the loss of prestige of intellectual work. The weak level of motivational incentives to improve production, as well as to reduce the quality of management at individual enterprises, is associated with obsolete production equipment, a decrease in production capacity due to the lack of re-equipment of technological equipment. The great deterioration of the means of production, as well as the lack of effective communication systems, leads to improper state of infrastructure objects.

The factors that determine the social situation in the state should include an increase in the stratification of society, the growth of unemployment, the presence of negative and uncontrolled migration processes. This significantly influences the increase of the threat of the sustainability of the development of the economy and the aggravation of regional (territorial) problems. Identifying imbalances in various economic areas is a significant threat to social security.

The influence of these factors, some of which, in the modern period, are dominant, provoke real threats to social security. Therefore, these factors should be identified to develop responses to the current situation.

The analysis of scientific sources, which are devoted to determining the factors influencing the emergence of threats to the loss of social security, as well as the mechanisms of such a plan, can identify the main violations of socio-economic development in the conditions of social production and take into account the need to preserve the socio-economic potential of the state. Such threats are manifested in the insufficient development of individual branches of production, which are vital for the functioning of the state. In today's extreme conditions, it is necessary to ensure the process of reproduction of the labor force irrespective of the factors of external influence and to create state control over the strategic resources of sustainable economic development. As a result, mechanisms will be formed, the implementation of which will reduce external threats to the sustainable development

of the educational system and destabilize the formation of labor resources of the state.

Under the conditions of social development, the risks associated with international economic activity are the risks of socio-economic positioning of the territory. The more the types of such activities are carried out, the greater the level of total threats. Commercial operations, a large number of transactions, the presence of international partnership forms external threats and determines the degree of dependence of socio-economic development of the state. Unregulated international economic ties as a result of unfair competition significantly reduce the degree of openness of the economy and the intensity of foreign economic activity. This is due to the threats of degradation of scientific and technological and technological potential, which influences the training of personnel for individual industries.

Modern socio-economic development is characterized by the leading role of scientific and technological progress in ensuring economic growth. However, significant threats to increasing environmental imbalances, reducing the innovation activity and competitiveness of some sectors of the state, leads to the loss of a significant part of the educational potential, falling industrial and technical conditions at the regional and local levels.

The investment policy in the conditions of modernization changes becomes regressive. This is due to a significant degradation of technological structures and an increase in personnel shortages. Such shifts in scientific and technological potential force the national economy to reorient to the import technological base, which leads to the creation of threats to social stability, which also has a critical impact on the educational sector. The existence of high social polarization of society leads to significant disparities and provokes socio-political tension. Reducing the resource base of sustainable development of individual regions is causing negative demographic processes, as well as increasing the criminalization and degradation of the population in certain regions and cities.

The main source of such threats is unemployment, which provokes a state of social discomfort and increases the burden on the occupied population by increasing the cost of retaining the unemployed. This leads to a loss of skills and labor skills, which greatly increases the damage to the entire national economy.

Violation of the unified social space of the state, as well as the normal cooperation of the regions within the single information space, leads to the creation of an economic crisis and aggravation of the problems of differentiation of socio-economic development of the regions. The development of specific recommendations for addressing identified problems involves identifying priority strategic measures that affect the qualitative and quantitative component of social challenges in different regions, as well as reducing regional development imbalances that are relevant for the entire state.

Identifying the threats that significantly affect the development of the state and their identification in the trajectory of sustainable development allows us to

formulate an integrated approach and create mechanisms for partial compensation of the impact of social threats by reducing their level. Analysis of the classification of threats and mechanisms of their impact on social security allows to determine the possibilities for their reduction and to form a system of imperative measures on new properties. The competitiveness of an educational cluster is understood as the ability of a knowledge economy to constantly increase its share in the world market through the creation of benefits that are conditioned by social and economic factors for the formation of quality educational services. Efficiency, which is understood as the rational use of educational resources, implies the achievement of sustainable development. Flexibility, as the ability of an economy to adapt to a changing situation, allows timely responses to changes in internal and external factors.

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PECULIARITIES OF SOCIAL AND ECONOMIC SECURITY OF AGRARIAN ENTERPRISES

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In the context of global changes the current state of agrarian enterprises does not provide their competitiveness. Agrarian enterprises are dependent on natural factors and have seasonal type of production. Moreover, they are more vulnerable and technologically backward in comparison with economic entities of other branches and therefore they are less adaptable to changing economic, social and technological conditions. In addition, market modernization substantially modifies basic conditions of agricultural production and it leads to raising an urgent problem of providing social and economic security of agrarian enterprises.

Social and economic security is a general concept which includes various types of security of certain spheres of social and economic information. Each sphere of scientific information has its own vision of security, its sources, factors and risks, which together make it possible to analyze the whole system of theoretical and practical problems concerning such phenomenon as security. Taking into account the concept 'danger', security refers to the state of social and economic system, its balance level and ability to life and sustainable reproduction of the main system elements required to provide its functioning. However, in order to maintain the balance of the system and its security it is necessary to provide a special social activity, which will not distort the balance and will be focused on working out and implementation of certain arrangements to preserve system integrity and stability.

Ensuring social and economic security of agrarian enterprises is one of the priorities, since provision of state security is impossible without proper functioning of agrarian sector [5].

As the result of the analysis, it has been found out that there is a fair number of scientific papers concerning fundamental approaches to the research of certain aspects of ensuring social and economic security of enterprises [2, 6, 9, 13]. However, it should be stated that not enough attention is paid to such mechanisms of improving social and economic security of agrarian enterprises, which will take into account branch peculiarities and destructive impact factors [2]. Therefore, there

is an urgent need to provide theoretical and practical background of this problem in order to understand the main point of social and economic activity of agrarian enterprises and to work out some arrangements to improve this type of security.

In the age of globalization the enterprises dealing in agrarian branch and possessing a sufficient economic independence have to search for new approaches to ensure economic security [7]. Moreover, it requires global changes in the whole security system of economic interests of these enterprises.

In respect to the above-mentioned information, it is necessary to focus on the definitions that describe economic security not only as the economic state of an enterprise but also characterize its social orientation.

Social orientation of economic security can be seen in the definition given by H. Pasternak-Taranushchenko, who supposes that “social and economic security refers to the state, in which all needs of a certain group are fully and timely satisfied and it provides the appropriate functioning and development of the whole system and all its elements” [8, p. 131]. He considers social and economic system as a complex system that is established by performing a certain number of actions and has many directions, such as ecology, resources, fresh water, food, energy, information etc. [8, p. 131].

According to V.K. Senchahov, “the essence of social and economic security can be defined as the economic state, which provides an ensured protection of interests of an economic entity, social orientation of the enterprise strategy and sufficient defense potential even under unfavourable conditions of development of internal and external processes” [9, p. 47]. In other words, social and economic security is not only the protection of enterprises interests, but also the readiness and ability of managerial staff to work out the mechanisms of implementation and protection of interests of employees and local community as well as maintenance of social and political stability [9, p. 47].

O.S. Vlasiuk states that social and economic security is a complex social phenomenon and includes social, sociological, technical and economic aspects of studying.

V. Serebrianykov focuses on the protection of social aspects and refers social and economic security to the complex of arrangements to protect interests in the social branch, to develop social structure and relations in the community, life support and social involvement system as well as lifestyle according to the demands of progress, current and future generations [9].

Political scientists consider social and economic security from the point of view of the result of social and economic politics of different subjects of activity and relations. Lawyers are interested in legal norms and guaranties of ensuring economic security and legitimacy of activity of various bodies. Sociologists pay their special attention to the research of public opinion and its changes dynamics according to different threatening factors to economic interests of enterprises and citizens. Economists are concentrated on the study of economic relations and

economic activity from the point of view of security, which requires developed economic infrastructure, skilled labour force, integratedness of economic entities into the world system of economic links [14, pp. 6-7].

To summarize the above-mentioned definitions it should be stated that social and economic security is a complex multifactor category, which provides a possibility to maintain stability to external and internal risks and characterizes the ability of the economic state of enterprises to extend selfreproduction in order to satisfy the needs of people, community and a state at a certain level.

To estimate the peculiarities of social and economic security management it is necessary to describe the main risks to agrarian enterprises. They are the following:

- low level of resource and technical support (inability to provide production with full scale physical resources);
- lack of own financial assets;
- no capital investments (it makes the process of reproduction of fixed assets impossible);
- low level of investment attractiveness of the branch and increased competition;
- low level of labour productivity;
- lack of skilled staff at enterprises;
- inefficient use of land resources;
- low level of price competitiveness of enterprises;
- environmental and human risks;
- natural and climatic conditions.

Despite the fact that agrarian branch is vulnerable to uncontrolled factors, such as weather and climate, it is economic and social factors that have the largest negative impact. Therefore, agrarian enterprises face an urgent need to develop an efficient mechanism of social and economic security management.

The mechanism of ensuring social and economic security refers to the combination of organizational, economic, ecological, technological and legal arrangements to prevent risks in economic security. This mechanism includes the following elements:

- forecasting of social and economic development taking into account detected and potential factors and processes which endanger economic, social, ecological, food, investment and energy security;
- monitoring and analysis of factors and processes which cause external and internal risks in social and economic security;
- working out and implementation of arrangements to prevent possible risks in social and economic security in all branches of national economy;
- project expertise of laws and regulations concerning financial and economic issues from the perspective of protection from external and internal risks in the branch of social economy (Fig. 1).

The key result of the implementation of the mechanism of ensuring social and economic security must be creating optimal conditions for living and development

of a person, social and economic stability of community, preserving state integrity and offsetting the impact of internal and external risks in social, economic and other types of security.

The mechanism of ensuring social and economic security fulfils a number of significant functions, such as protective, regulative, preventive, innovative and social [3].

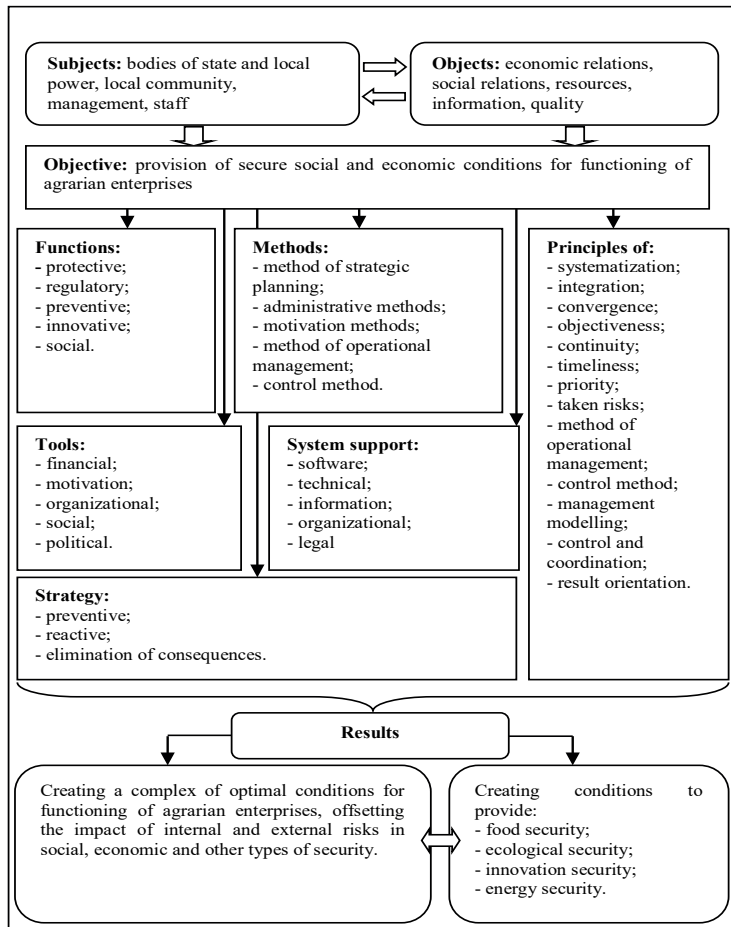


Fig. 1. The structure of the mechanism of social and economic security of agrarian enterprises [developed by the author].

According to the suggested mechanism, the following aspects of the development of agrarian organizations must become the priorities at the current stage [4]:

- stimulating a certain number of agrarian organizations to use advanced

technologies in application of fertilizers and manure as well as highly efficient feeds;

- consulting scientific and research institutes and using the results of their work to implement innovative technologies in farming focused on raising the level of competitiveness of agrarian organizations;

- transfer to the system of energy-efficient productive resources of agricultural production;

- orientation of agrarian organizations to step-by-step technical re-equipment and improvement of agrarian technological park;

- cooperation and integration of small and medium-sized agrarian organizations into prospective economic entities with the aim of efficient solution of problems concerning raw materials and marketing;

- appropriate actions in the sphere of the state support of the most significant sectors of agrarian production, budgeting of agrarian organizations and using of financial and credit resources in order to improve the functioning of agrarian organizations;

- stable and progressive development of social relations, life sustainment and improvement, protection of social relations quality, which provides necessary conditions for the development of a person, community and state;

- coherent and complex social and economic policy of careful attitude to people and their potential, with the focus on social aspects as the priorities in the social and economic development;

- stable economic growth or loss minimization under the conditions of negative factors or crisis in the world economy;

- tough anti-inflationary policy, promotion of general welfare and ensuring security of people's savings;

- improvement of external economic links and investment attraction, which makes agrarian producers more competitive on the world market;

- realization of social and economic rights of citizens, first of all their right to work and get fair wages, which means high income levelling in comparison with most countries and providing high labour cost and maximum employment [14].

First, all the above-mentioned requirements are necessary for providing the appropriate level of general welfare. Secondly, only if these requirements are met, the corrective policy will smooth over social differences, improve social solidarity and prevent external and internal negative impact on the stability and efficiency of agrarian production.

Thus, social and economic aspects become the priorities in the process of ensuring security at all levels and functional areas of agrarian production. The development of economic and social spheres, in which one can observe an impact on security with regard to various risks and vulnerabilities, determines the necessity to work out and implement the efficient mechanism of social and economic security of agrarian sector.

At the current stage, social and economic security of agrarian production is

the system that with the aid and support of bodies of state power at all levels can promote the well-being of rural population, enhance the state food security, preserve the countryside landscape and lands and improve investment attractiveness of rural territories.

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INFORMATION SECURITY IN THE PROFESSIONAL ACTIVITIES OF THE SOFTWARE ENGINEERS

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The intensive and rapid economic development, utilization of the information and computer technologies in all spheres of a society life offer not only a wide range of opportunities but also give rise to very serious problems and calamities. Thus, “the following problems need immediate solution or improvement: providing the legal basis for ensuring pluralism, transparency and impartiality of the media in creation, dissemination and consumption of information, especially it concerns improvement of the legal regulations regarding the observance of professional ethical norms by the journalists, consistency of the terminology in the information legislation, specification of the intellectual property protection under the conditions of the Internet technologies expansion» [2].

Information has become a factor that can lead to large-scale accidents, military conflicts, disorganization of public/state administration, etc. The Law of Ukraine «On Information» dated October 2, 1992 defines the concept of information as a documented or publicly disclosed information about the events and phenomena occurring in the society, the state and the environment ...The right to information can not violate the civil, political, economic, social, cultural, environmental and other rights, freedoms and legitimate interests of the citizens and legal entities [1].

Experts in the field of information technologies are unanimous in the conclusions, that the wide spread of informatization (computerization) affects the world so much, that it has become a source of significant threats to the society, state and humans like once the achievement of nuclear physics caused the danger of nuclear war. The higher the level of informatization of a society, the more pronounced and acute is the need for reliable information security, since nowadays the realization of the interests of people and states more and more often depends on the use of informatization / cyber resources. In view of this, the information security is an integral part of national security and is considered as a priority function of the state.

In recent years the researchers have become increasingly interested in the issues of information security, problems of the national information space protection. The problems are highlighted in the works of national experts (I. Zaitseva-Kalaur, A. Maruschak, V. Petryk, V. Lipkan, B. Kormich, V. Pocheptsov, Y. Yakubivska) and foreign scientists (A. Giddens, M. Yablonsky, M. Kalinsky, A. Kerkovska, G. Tomashevsky, N. Polmar and T. Allen, M. Hermann, L. Kozhenovsky, Z. Ljudziievsky). The urgent issues of cybernetic security are investigated by R. Lukianchuk, V. Buryachok, A. Babenko, V. Havlovsky, D. Dubov, V. Nomokonov, M. Pogoretsky, V. Shelomentsev and other scientists. The psychological aspect of

the educational environment safety is considered by I. Baeva, E. Laktionova, L. Gayazova, G. Kozheshpirova, V. Rubtsov and others. I. Aristova, G. Pocheptsov and other scholars are engaged in studying the role of the state in the formation of the information society. A number of publicists (V. Suprun, V. Yarochkin) have developed a set of the basic principles of ensuring information security.

There are many interpretations of the concept of information security. Thus, in the Law of Ukraine «On the Basic Principles of the Information Society Development in Ukraine for 2007-2015» this term is interpreted as “the condition, under which the vital interests of a person, a society and a state are protected, which involves protection from the harm caused by incompleteness, timelessness and unreliability of the information used, negative information influence, negative effects of information technology, unauthorized dissemination and use of information, violation of the integrity, confidentiality and availability of it « [3].

According to the doctrine of Ukraine the information security is an integral part of each of the spheres and aspects of the national security. Along with this, information security is an important independent sphere ensuring the national security in general. That is why a steady development of Ukraine as a sovereign, democratic, legal and economically stable state is possible only when its information security is at a sufficient level of protection [4].

Some researchers in their studies argue that information security focuses on determining the gravity of threats to devices, systems, traffic segments and information security measures, aimed at revealing the probability of any threat emergence. Information security can be defined as an action, system or method aimed at protecting information resources transmitted and stored in the memory of computers and telecommunication networks. This is not only a protection against unauthorized access, data theft or destruction, but also a component of physical, personal-organizational and IT security of the business entity or any other institution [11, p. 290-291].

I. Zaitseva-Kalaur considers the concepts of information security of an individual and society as closely related notions, since, according to the researcher, the individual information security ultimately generates information security of the society and a state [7, p. 182]. Information security can be defined simply as the protection of information. It implies the complication and difficulty in obtaining data about the physical nature of the current or planned state of things and phenomena in their own space of operation, precluding modifications or changes in the information communications and eliminating physical destruction of information carriers. According to M. Yablonsky and M. Melus [13, p. 11-14] information security involves a series of measures to be taken to provide a desired state of safety (prevention, deterrence, indication and warning, detection, emergency preparedness and response to possible attacks).

Foreign scientists (M. Kalinsky, A. Kerkovska and G. Tomashevsky) argue that information security is not only physical safety and protection of the technical

information resources, it seeks to ensure and maintain the confidentiality, integrity, availability, accountability, authenticity, reliability and credibility of information and systems in which it is processed [12, p. 10-14].

The dynamic changes caused by the development of the information technology give rise to new, previously unknown threats. Thus, in the case of crises or the aggravation of conflicts the informational confrontation can turn into the information warfare, which is carried out with the help of information weapons. Purposeful, large-scale and complex informational actions are the indicators of it [5].

Equally important is the information component of the educational environment security system, which according to N. Kyrylenko has a massive and global influence on the personality through the use of ICT in education [9, p. 150] Among the matters of negative impact of information on the modern educational environment the author places importance on: the lack of appropriate mechanisms for monitoring the quality of the information material accessible through modern telecommunication means/media, which allows the penetration of inaccurate or false information into the educational space; uncontrolled penetration of information of dubious and aggressive content, which may contribute to violence, bullying, cyberbullying, etc.

There is no doubt that for every society the question of security is one of the main dimensions of its perception of social reality. The main task of information security is the creation of a system for counteracting information threats and protection of its own information space, information infrastructure and information resources of the state [6].

Information threats (in the broad sense) are the information influences (internal or external) which create the potential or actual (real) danger of changing the direction or pace of progressive development of the state, society, individuals, causing damage to the vital interests of an individual and society through the meaningful and purposeful impact of information on the public consciousness. Information resources and the infosphere of the technical systems represent a set of factors that impede the development and use of the information environment for the benefit of the individual, society and the state [7].

The unique feature of the information threat is that it acts as an independent kind of threat and, at the same time, is an implementation basis for other types of threats at the information level, and quite often is their root cause.

An integral component of the state information security is the information-psychological security of a software engineer personality and a society on the whole. This component occupies a special place in the national policy of any state. The complexity of providing information and psychological security of software engineers is determined by the three main factors – political, socio-economic and spiritual. The political factors include: changes in the geopolitical situation which involve fundamental changes in regions; formation of a new conception of national interests; establishing the statehood on the basis of the democratic principles, legality, information openness; destruction of the existing system of a command-

administrative type of state governing; the informational expansion of the developed countries, which succeed in the global informational influence aimed at propagating the philosophical, political and spiritual values and ideals of the Western world; strengthening international cooperation on the basis of maximum openness of the parties; low level of the political, legal and informational culture in the society.

The socio-economic factors include: the difficulties of transition to a market economy; the continuation of inflationary processes and the decline in the standards of living of the population; increase in unemployment, property polarization; the proliferation of crime and criminalization of social relations; deterioration of health indicators of the nation; an increase in ethnic confrontation.

The factors of spiritual nature are also of great importance, especially the following ones: the crisis of state ideology, systemic deformation of the norms, attitudes and values, which manifests itself in the inadequate evaluation of the information-psychological impact on the society; the establishment of new forms and patterns of influence on the individual, group and public consciousness; development of the new types of mythological consciousness; undervaluation of the national and cultural-historical traditions and penetration of the Western mass culture patterns into the public consciousness; weakening role of the important socio-cultural institutions of the state, science, education, upbringing and culture; imperfection and insufficiency of the ethical norms system in the sphere of information functioning [10, p. 233-248].

Therefore, the guarantee of information security in the professional activity of the software engineers is determined, firstly, by the insurance of the national security of Ukraine as a whole; secondly, by the neutralization of those threats to the information sphere of the country that could seriously harm the general national interests; thirdly, a deep understanding and apprehension of the fact that with the help of information it is possible to influence and control the changes in the consciousness and behavior of people.

The objects of the informational-psychological protection of software engineers personality are: the state of their spiritual and physical comfort; the conditions and factors that ensure the advantageous development of all spheres of an individual and society, including culture, science, art, religion and international relations; the favourable linguistic environment, social, ideological and political tendencies, social relationships, the psychophysical factors, that manifest themselves in the form of physical, chemical and other impacts of the natural, anthropogenic and technogenic origin, the gene pool of people inhabiting the state; individual and mass consciousness.

The main personality-creating qualities for the individual are the integrity (the tendency to stability) and development (the tendency to change). When these qualities are disrupted or deformed, the personality stops to exist and function as a social subject. It means that any information-psychological impact on a person should be considered from the standpoint of preserving or annihilating personality

as a single entity.

The means/devices of information-psychological influence created on the basis of modern information and communication technologies and software have become a crucial factor in terms of the effectiveness and strength of their impact on the psychology of software engineers personality and mass character of an audience coverage. These tools are an integral component of the so-called virtual space or virtual reality in the professional activity of software engineers.

The virtual reality is an artificial space, created with a help of modern information-communication technologies (ICT) and has all the features of the reality, which is open to penetration and transformation from the outside. Moreover, virtual reality is stuffed not only with the actual information and lively communication of real people, but is also filled up with a huge number of artificial «worlds», role-playing computer games, the sites devoted to the alternative religious trends, non-traditional sexual orientation, violence and antisocial behavior which are interpreted as a social life stereotype of young people.

Uncontrolled access to such information resources, the lack of psychological stability of software engineers, the blurriness of the social, moral and ideological values are the factors which represent immediate information danger by themselves.

In order to understand the goals and content of the tasks of informational and psychological protection of a software engineer's individuality and the society in general from the destructive influence of modern information-psychological confrontation, it is necessary to comprehend the mechanisms of information-psychological influence on the behavior of a software engineer, including the decision-making at any level of social and state structures and in any sphere of their professional activities. The emphasis should be laid on the mechanism of verbal information influence, understanding that its basis is the law of conscious perception of information, namely its content. This mechanism is universal by its very nature and reflects the general laws of information dissemination in the social environment.

Thus, information security of software engineers in their professional activities is one of the most essential components of the national security of the country. Providing information security of software engineers through the consistent implementation of a well-formulated national information strategy could greatly contribute to the successful solution of the problems in the political, social, economic and other spheres of the state activity.

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MEDIATION OF LABOUR DISPUTES: LEGAL AND PRACTICAL ASPECTS

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Currently, the institute of mediation has gained a highly positive reputation due to its successful application in Western countries. The United States was the first country, where they began to resort to mediation in resolving various disputes. Having proven itself well, the institution of mediation has spilled over to the countries of continental Europe, Canada, Australia, Great Britain and other states. According to the Center for Effective Dispute Resolution report, 85% of the disputes that were resolved through mediation at that center ended with the conclusion of a settlement agreement (with an average duration of mediation in one and a half days), 6% were peacefully settled within three months after mediation and only 9% of the disputes were submitted to the court [1]. This practice is widespread in the developed countries and represents a separate institute of the pre-trial practice for resolving legal disputes. In Ukraine the mediation institution has not yet gained popularity, though it is recognized as quite successful and effective.

In general, mediation is a way to settle disputes with the assistance of a mediator, based on the voluntary consent of the parties, in order to reach a mutually acceptable solution. In other words, it is an alternative court procedure for resolving disputes involving a third neutral, impartial party, not interested in the conflict, which helps the parties to reach an agreement over a disputed issue or issues [2]. It should be noted, that the method of mediation, particularly in the labor conflicts, can be an effective way of solving them at the macro level.

Important and actual issues of mediation in conflicts are elucidated in the works by P. A. Astakhov, V. S. Hopanchuk, O. A. Bryzhynsky, D. A. Davydenko, D. B. Elisieev, S. I. Zapara, A. M. Lushnikov, C. I. Kalashnikova and others. Although considerable amount of research has been devoted to the method of mediation in general, little research has been undertaken to study the rationale of implementing this method as an effective means for managing relations within and beyond the organization.

The world practice uses three basic mediation models:

- 1) private (extrajudicial) mediation, characterized by complete independence from the process of considering a dispute by a court;
- 2) mediation, which has some coordination with the court process, but is procedurally separated from the court as an institution;
- 3) mediation within the judicial process, characterized by a local and personal

connection with the court and the actions that are implemented within the consideration of the case by court [3, p. 53]

According to the current Labor Code of Ukraine primary authority in resolving individual labor disputes is the Labor Dispute Commission (LDC), although the law provides that the parties may apply directly to the court. Effective LDC activity is currently quite rare due to a number of factors:

- 1) a significant number of labor disputes can be considered only in the courts;
- 2) in many organizations there is no LDC at all – either because of the lack of initiative on the part of the employees and/or the employer or because the number of employees at the enterprise is small;
- 3) stipulated by Art. 223 of Labor Code of Ukraine extra duties of the authority or the body authorized by him regarding the organizational and technical support of the LDC (provision of the equipped premises, printing and other equipment, necessary literature, organization of record keeping, registration and storage of statements of employees and cases, preparation and issuance of the decisions copies, etc.) do not stimulate the owner to create a Labor Dispute Commission at his enterprise;
- 4) insufficient competence of the members of the LDC, who are not always able to understand the complex issues of the current legislation due to lack of legal training or the lack of relevant experience, etc.;
- 5) the decisions taken by the Labor Dispute Commission are often not implemented by the employer voluntarily since the LDC is not really an authoritative body for the employer [4, p. 79].

The resolution of the collective labor disputes (conflicts) in Ukraine is entrusted to the National Mediation and Conciliation Service. However, some scholars question the effectiveness of its work when comparing the number of the resolved disputes and the expenditures from the state budget for the maintenance of the specified structure [3, p. 42]. In view of the above mentioned, it is the mediation system that many scholars regard as an effective alternative to the existing ways of resolving labor disputes. The current mediation procedure in Ukraine remains unregulated by the legislation. The experts have submitted to the Verkhovna Rada of Ukraine three bills, which are at different stages of consideration:

- «On Amendments to the Tax Code of Ukraine (regarding the introduction of the procedure for mediation)» dated 28.12.2014 under No. 1666;
- «On mediation» dated 17.12.2015 under No.3665;
- «On mediation» dated 29.12.2015 under No.3665-1.

The draft of Labor Code of Ukraine, prepared for the second reading, does not contain any norms on mediation as a way of resolving labor disputes. At the same time, it preserves the possibility to resolve individual labor disputes not through a commission on labor disputes, but in the court, which is specified in the law as the main body.

Analyzing the bills on mediation, O.S. Shchukin draws the conclusion that

they violate the fundamental principle of mediation – voluntariness. In particular, according to the scholar, this is manifested in the statement that mediation should be carried out exclusively on a professional basis. O.S. Shchukin interprets this norm as an interference of the state into the sphere of civil society. In his opinion, the voluntary agreement of the parties of an individual labor dispute regarding the direct application of mediation must necessarily be in writing and tripartite. The scholar also objects to the leading role of a mediator when choosing the media and methods of mediation, since the final decision must always remain for the parties to mediation. The scientist believes that the mediator may refuse to participate in the mediation procedure only under the following circumstances (especially in the case with the professional mediators): if he is not sure that he will be able to keep neutral or if he believes that he is not qualified or competent enough to resolve the conflict. According to O.S.Shchukin, the item concerning implementation of the mediation agreement should be included in the mediation procedure [5].

Table 1

The mediator functions in resolving labor disputes

Function	Content
Analytical	prompts opponents to analyze carefully the conflict situation, tries to make the parties promulgate the available information on the dispute and determines the most significant moments of the conflict.
Active hearing/listening to the parties (therapeutic)	shows attention to both conflicting parties, but at the same time trying to separate openly the facts and feelings/emotions.
Organizational (procedural)	organizes negotiations, promotes an agreement on the correctness of relations between the parties in the negotiation process, sets the tone for negotiations, announces breaks and requires confidential conversations (caucus) from each of the parties alternately.
Generating ideas (creative)	provides participants of the conflict with information or helps them to find the necessary information, but only the facts.
Expanding the resources of the opponents (informational and consultative)	provides participants of the conflict with information or helps them to find the necessary information, but only the facts.
Controlling	controls the actuality of the ideas expressed and the implementation of the agreed arrangements
Educational	teaches to think, act and negotiate with the directive of mutual cooperation, reminds the parties not to use the «prohibited» techniques, to see the problems from the perspective of the opposite side, properly manages the negotiations.

Source: [designed on the materials of 7].

Y.P. Lyubchenko also points out a number of shortcomings in the existing legislature. For example, the bill does not specify the types, extent of liability, organization or institution, whose competence will include bringing the mediators to justice. The scientist considers as mistaken the definition of the moment of the

mediation starting – the day when the parties agreed to meet with the mediator for the procedure of motivation. Y.P. Lyubchenko offers the following wording as more expedient: «when one party turned to a mediator and the other agreed to participate in the mediation», ie accepted the offer. The scientist considers controversial the issues regarding the requirements for a status of mediator – the training must include at least 90 academic hours of initial training, including at least 45 academic hours of training in practical skills. However, the bill does not specify what such initial training is and what is training practical skills [6].

Consequently, the adoption of one of the above-mentioned bills in the presented form will not solve the problem of labor conflicts, on the contrary, they may create new threats for the new conflicts occurrence.

The reasons for conflicts that arise in a modern organization are multifaceted and can be caused both by the subjective and objective factors. The consequence or result of the conflict can be positive (constructive conflict) or negative (destructive conflict). But, in our opinion, the mediator services are beneficial in both cases. This is due to the functions it performs (Table 1).

Naturally, the mediator is, first of all, an individuality with his/her peculiarities of character, temperament, style of behavior. Therefore, when mediating a conflict, one can observe different styles of a mediator behavior (depending on the situational and personality factors), (Fig. 1.)

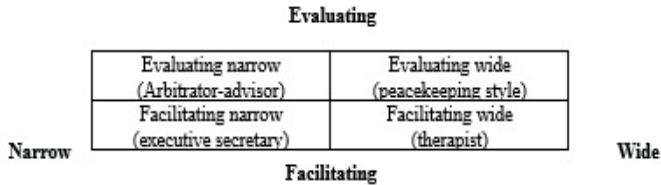


Fig. 1. Mediation Styles [7]

In any case, the mediation procedure should be conducted in accordance with the strict principles (Fig. 2).

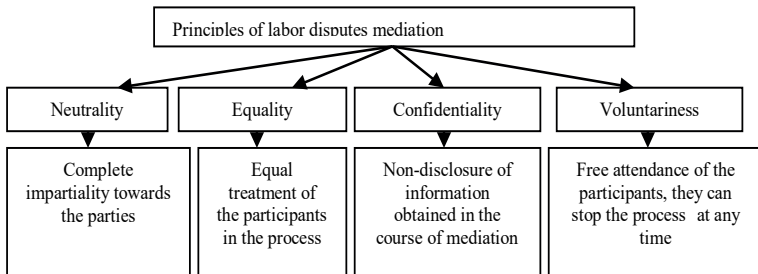


Fig. 2. Immutable Mediation Principles [designed on basis of [8]]

The mediation procedure can be highlighted from the standpoint of the systemic and process approaches. We will focus on the latter (Fig. 3).

The parties, who started the mediation process are not obliged to bring it to the end and the mediator does not have the authority of a judge, he can not make a decision and obligate the parties to execute this decision, he only serves as a catalyst for negotiations and helps to negotiate more effectively, directing the talks in the right direction.

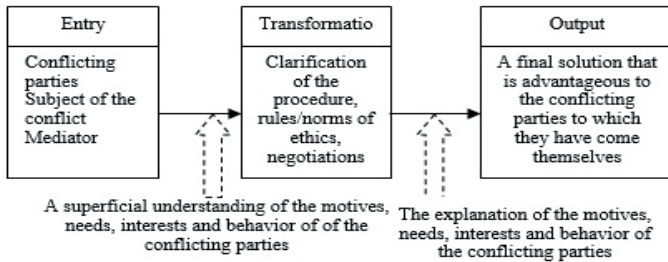


Fig. 3. Mediation as a process [author's development]

We want to draw attention to the mediation method functioning within the organization, the employment of «regular/salaried» mediators. In our opinion, modern organizations must necessarily have appropriately trained specialists who can even be integrated into the mediation service. It is expedient to appoint for the position of mediator graduate students who have higher education and who have taken the appropriate vocational training program (mediator school). The procedure for creating a mediator service should include:

- informing about the initiative of creating a mediation service;
- motivating measures for joining this service;
- development of procedure and coordinated actions of the mediation services;
- teaching the methodology of mediation to the employees;
- networking with counseling organizations (to ensure continuous improvement of the mediation skills).

In our opinion, neither the mediation service nor some specialists who have received the appropriate training should not be an official structure or post in the company's staff. Under the conditions of most Ukrainian organizations this is inappropriate. But, in our opinion, mastering the method of mediation is obligatory for the leadership (at all levels), part of the specialists (mostly non-formal leaders) of the organization.

It is important to remember that the main thing in mediation is careful attentive attitude towards people, attention to their needs. The task of the mediator is to help the conflicting parties to show themselves to the maximum, which will allow them eventually to develop a unique solution that exactly satisfies their needs.

It is worth knowing for all parties of the conflict that the mediator acts as a neutral person, but at the same time he manages the procedure, studies the problem and the cause of the conflict and promotes decision-making by the conflicting parties themselves. The mediator does not judge the parties to the dispute. The range of the techniques and methods of the mediation process is unlimited

The use of the mediation method for managing labor conflicts/disputes is beneficial for the state, for the organization and for the conflicting parties. For the organization – a positive image is maintained, productive cooperation is being established (people better perceive and execute the decisions that they have adopted themselves), conditions are created for improving the moral and psychological climate in the team and loyalty of the staff increases. For the conflicting parties – meeting their needs, motives, maintaining working relationships, saving time and money, psychological and emotional satisfaction.

Thus, mediation teaches to live in conflict without destroying relationships, use dispute for development and get benefits from it.

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INFORMATION SECURITY WITHIN THE FRAMEWORK OF ANTI-CRISIS MANAGEMENT

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An important factor of the crisis is the underdeveloped system of innovative communications: the lack of optimal information support for anti-crisis management and the low level of technology transfer. The studies show that information management is based on all anti-crisis management procedures. Thus, the issue of interoperability of anti-crisis management and information technology is relevant.

Considering the fact that the current economic potential is being increasingly determined by the level of development of the information structure the information influence vulnerability increases proportionally. Therefore, it is extremely necessary to provide protection of information flows in the system of anti-crisis management that is an essential condition for survival and improvement of economic activity efficiency

The studies have proved that the global development of a distributed computing environment and cloud technologies (GRID) improves the electronic entering into enterprise computers providing additional opportunities for a systemic economic crisis. The economic activity of modern enterprises is impossible without an effective production management system; it provides complex automation of the processes of collection, transfer, storage of economic information and making management decisions. In this regard, the issue of information security support in the context of anti-crisis management is becoming topical.

While studying the scientific sources we have discovered that physical inaccessibility to a computer does not guarantee the integrity and security of economic information since the advent of computer networks [4, 10].

The studies have shown that the most significant effect of information security risks for modern enterprises is economic and image losses [13, 14]:

- Disclosure of commercial information can lead to serious direct losses on the market.
- The information about major theft of information greatly affects the reputation, resulting in commercial transaction losses.
- Competitors can make use of information theft, if it unwitnessed, in order to completely ruin the enterprise, enforcing fictitious or intentionally unprofitable transactions.
- Wrong information at the stage of transfer as well as at the stage of storage at the enterprise can lead to huge losses.
- Repeated productive information attacks on the enterprise reduce the customers' trust of the company, which will affect the level of income.

We should identify an important component of information subsystem in the system of anti-crisis management.

The scientific studies indicate that the following categories are applied to information systems and they are the methodological basis of the information component of anti-crisis management [12]:

- reliability – the guarantee that the economic system works in normal and abnormal modes as planned;
- accuracy – the guarantee of accurate and complete implementation of all management decisions;
- access control – the guarantee that different groups of people have different access to information objects, and these access restrictions are constantly accomplished;
- controllability – the guarantee that a full check of any component of software package and a database of economic information can be performed at any time;
- identification control – the guarantee that a client who is currently connected to the business processing system is one and the same person;
- special failure tolerance – the guarantee that with the special introduction of errors within the pre-agreed norms, the economic system will work as specified.

At the present time, the issue of scientific foundation for the criteria and the development of information security evaluation methodology is a priority.

Now, the following organizational and legal documents can be distinguished. They have made a considerable theoretical and practical contribution to solving the problem of economic information security [9]:

- Evaluation criteria of computer security systems of enterprises, known as the «Orange Book».
- Information Technology Security Evaluation Criteria adopted by Europe. These criteria are developed considering the identified shortcomings and limitations when using «Orange Book» and they are corrected and extended concerning the first ones.
- Canadian security evaluation criteria of reliable company computer systems in competitive safety.
- the US federal criteria, developed on demand of the US government, are focused on removing the constraints and problems of practical application and the shortcomings of the «Orange Book».
- the International Standard ISO / IEC 15408 – «Information Technology Security Evaluation Criteria» or Unified Management Criteria.
- The working draft standard CEM-97/017 – «Common methodology for Information Technology Security Evaluation» for management.

The above-mentioned referenced documents, and especially the last two ones, make a significant contribution to the development of a unified international scientific and methodological foundation for solving the problem of information security of enterprises on products and information technologies.

Information security is an important component of the general economic security of an enterprise, and the conducted research has shown that management of the socio-economic system of any enterprise should be based on a clear information and communication platform. The formation of an effective work procedure with information flows of a modern enterprise is an important foundation of the anti-crisis management system. The research [2, 6, 7, and 11] has demonstrated that in order to solve the problems of information security support of an enterprise, together with the formal methods for modeling processes and evaluating systems, it is necessary to widely use decomposition and structuring methods of the systems and processes components, informal methods evaluating and decision-making.

This means that the analysis system apparatus must be used at all the stages of the life cycle of information security systems.

But the existing standards, documents, and communication crisis tools on their basis do not provide answers to a number of key questions: how to create an information system so that it is protected at the required level that is objectively verifiable; how to practically form the mode of economic security and maintain it in conditions of the constantly changing external environment and structure of the system itself; what is the real level of information security and how effective is the system of economic and management information protection [3].

If we consider anti-crisis management as an integral system, the external environment provides constant challenges to the conditions of enterprise existence that poses the threat to economic security.

The system approach to creating mechanisms for the protection of information systems requires the following positions [15]:

- The concept of consistency is not simply the creation of appropriate protection mechanisms against crisis factors, but is a regular process that is carried out at all the stages of the enterprise's life cycle. At the same time, all means, methods and measures used to protect information are combined into the holistic mechanism - the system of anti-crisis management.

- The main postulates that have not lost their relevance today are outlined in the first papers on information security: absolute protection cannot be created; the information security system should be comprehensive; must be adapted to constantly changing market conditions.

- It is necessary to add other axioms to the above mentioned. Firstly, the system of information security should be the system itself, but not simply, in many ways, by chance and chaotic set of some management technologies, technical and organizational measures, as is often observed in practice. Secondly, the systemic approach to the protection of economic and management information should be applied starting from the preparation of the technical specification to the assessment of the efficiency and quality of the information security system within anti-crisis management [3, 5].

- Unfortunately, the need for the systemic approach to information security issues

is still not well understood by decision-makers in modern anti-crisis management systems.

- Managers, economists, and producers, one way or another, have to deal with information security issues today. This is due to the fact that in the near future we will have to live in the society (environment) of information technologies, where all social problems of mankind are to be solved, including the issues of economic security and anti-crisis management.

Thus, according to the research results, information risk may be due to the reflection of incomplete information about the financial position and internal business processes, inaccessibility of information concerning the situation of commodity and financial markets, the lack of information about the business environment, asymmetry of information, unpredictable changes in legislation, etc. As a result, mistakes can be made in choosing anti-crisis strategy, sources of financing for reorganizational measures, the development of production-technical, organizational-legal, social measures, etc., which makes it impossible to withdraw the enterprise from the crisis situation [2, 7, 8].

The research has proved [1, 15] that the current design of information support of enterprise management should be guided by the current concept of management, which requires the combination of process, system, situational and scenario approaches. The process approach to management characterizes information support as a series of consistent, continuous, interdependent actions aimed at achieving the goal. The system approach requires the allocation of the subject and object of management and the development of measures to combine their characteristics. Situational approach assumes that the management of the information support development of the management system should provide preventive effect on various situations occurring outside the enterprise and within it [15]. The scenario approach requires assessing the sensitivity of the enterprise economic position parameters, depending on the choice of the management decision.

However, it should be admitted that today in scientific and practical circles there is no methodological basis that would allow for theoretical generalizations on information security in the context of anti-crisis management.

In our opinion, the system of anti-crisis management should provide the effective solution to the following tasks: early diagnosis of crisis phenomena; urgent reaction to challenges and threats to the environment; studying and implementing the opportunities for the enterprise to recover from the crisis state.

The studies have shown that causing damage to the intellectual property of enterprise can lead to such effects as the loss of market positions, permanent and temporary competitive advantages or the reduction of trademark cost. That is why making decisions should be based on the qualitative assessment of possible effects.

In order to maintain the confidentiality, integrity and suitability of information in the process of effective anti-crisis management, it is expedient to develop information security strategy in the context of anti-crisis management. The implementation of

strategic directions will allow enterprises to reduce both possible material losses and to maintain competitive advantages and positions on the market.

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INFORMATION SECURITY THREATS ON THE PART OF THE PERSONNEL: SPECIFICS OF ORIGIN AND REALIZATION

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According to a survey of the leading national IT companies, most Ukrainian companies allocate 5-15% of the budget to protect information systems. Accordingly, the information security budget directly depends on such parameters as the size of the enterprise and the individual business needs related to the specifics of its activity [1, 8].

Only after an asset valuation, threat model generation and risks assessment you can assess the expenditures on the implementation of integrated solutions to ensure information security of an enterprise. Along with this, the complex of measures to ensure information security, both the external perimeter of the information network and internal IT-systems, varies depending on the type of an organization, the stages of its development and the degree of IT structures maturity, as well as the level of users consciousness.

Just a few years ago, a two-level mechanism to protect information systems was applied as the most effective approach. Namely, reasonably believing that the main threat to the information security comes from outside (the Internet), ensuring protection of the external network perimeter had become the task of prior importance. The preventive measures were limited to the introduction of firewalls on unix-based operating systems. On the other hand, internal protection, as a rule, was organized on the basis of using antivirus programs in operating systems of local users. However, such a set of measures to ensure the security of the corporate information network is insufficient [3, 6].

Providing information security at the physical level is critical for the overall and comprehensive protection of information and for the continuity and stability of the operation of the information systems. The factors such as access control, fire security, backup of business critical data, leakage control and availability

of information have the greatest impact on the information security in general, either directly or indirectly. The two-level security mechanism remains relevant in the global informatization environment. However, the rapid development of information services and increased use of the Internet has led to an increase in the number of external threats. In this regard, the protection of the outer perimeter of the information network is necessary to restrict external access.

Information security risks from the personnel constitute a separate group of information security risks for the organization, but the range of causes and conditions for their implementation is extended.

The most dangerous are the intentional threats that come from both external and internal sources. Therefore, it is expedient to distinguish the following types of threats of this group:

- threats related to the intentional actions of the persons who have access to the information systems of the enterprise, including users and other employees of the enterprise, who pose threats directly within the enterprise (internal violator);
- threats related to the intentional actions of the persons who do not have access to information systems of the enterprise and realize threats via external communication networks of general use or networks of international information exchange;
- threats related to the intentional actions of the persons who do not have access to information systems and realize threats via technical channels of the information leakage [7].

In the context of the above-mentioned discription, it is relevant to distinguish between accidental and intentional sources of threats to information security.

Random (unintentional) sources involve such vulnerabilities as errors made when designing the enterprise information system and its elements, software errors; various kinds of failures and damage which are intrinsic in the information system. Such sources include the suppliers of various types of services, personnel of organizations and emergency services, etc. Actions (threats) coming from these sources are due to ignorance, inattentiveness or negligence, from curiosity, but without malicious intent.

The intentional sources manifest themselves in the malicious actions of intruders [6]. The main purpose of this type is the intentional disruption of the enterprise work or the termination of the operation of the enterprise system, distortion, modification or destruction of information via penetration into the information resources of the enterprise using unauthorized access.

Internal entities (sources) are represented by qualified professionals in the field of development and operation of the software and hardware property, which are extremely important regarding the specifics of the tasks they perform, and which are dependent on the structure and basic functions of the software and hardware protection of information. These sources, as a rule, have access to use the equipment and technical means of the network. It concerns the main staff, representatives of

the information security service, supporting staff, technical staff. Among internal sources of threats a special place is occupied by the threats in the form of false actions and / or violations of the requirements of operational and other documentation by the employees of the organization.

In the course of the study, a list of five types of offenders (including external violators) was arranged depending on the range of the expected damage from their actions. The average score (level of danger) per each type of offender has been calculated (Fig. 1).

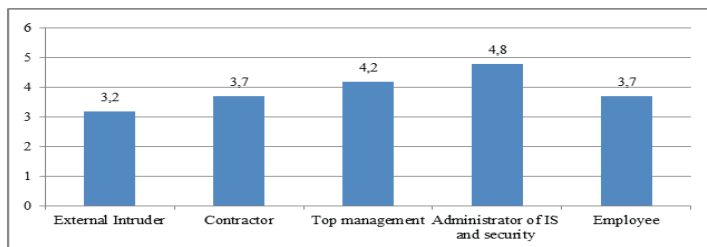


Fig.1. Map of the offenders types relevant to the severity of the expected losses for the business. The average score is calculated on the basis of [1, 4]

According to the analysis, the employees with the enhanced rights of access to information and information infrastructure - network administrators, databases, information security systems and others – represent the greatest ganger. However, the distribution itself turned out to be almost homogeneous, the difference in results is within the range of 1,6 points (in the range of 3,2-4,8).

On the basis of the classification of threats to information security of the enterprise from the personnel and the formed map with the types of offenders in accordance with the severity of the expected losses for business, it is logical to draw a structural and logical scheme of subject-object relations (Fig. 2). The description of the information security risks from the personnel is presented as a model of factors - a system of causes and conditions that contribute to the realization of such risks. The overall structure of the factor model of information security risks on the part of personnel is presented in Fig. 2.

Risk factors within the proposed model are linked to a single network of causal relationships. The risk factors in the proposed model are divided into two levels:

- the risk factors of the first level directly affect the actual implementation of the risks, they consolidate the impact of the totality of risk factors of the second level and allow you to simplify the work with the model;

- the risk factors of the second level are relatively insignificant phenomena that can be processed each separately (evaluated, managed) by the organization; there are numerous interconnections between the factors of this group.

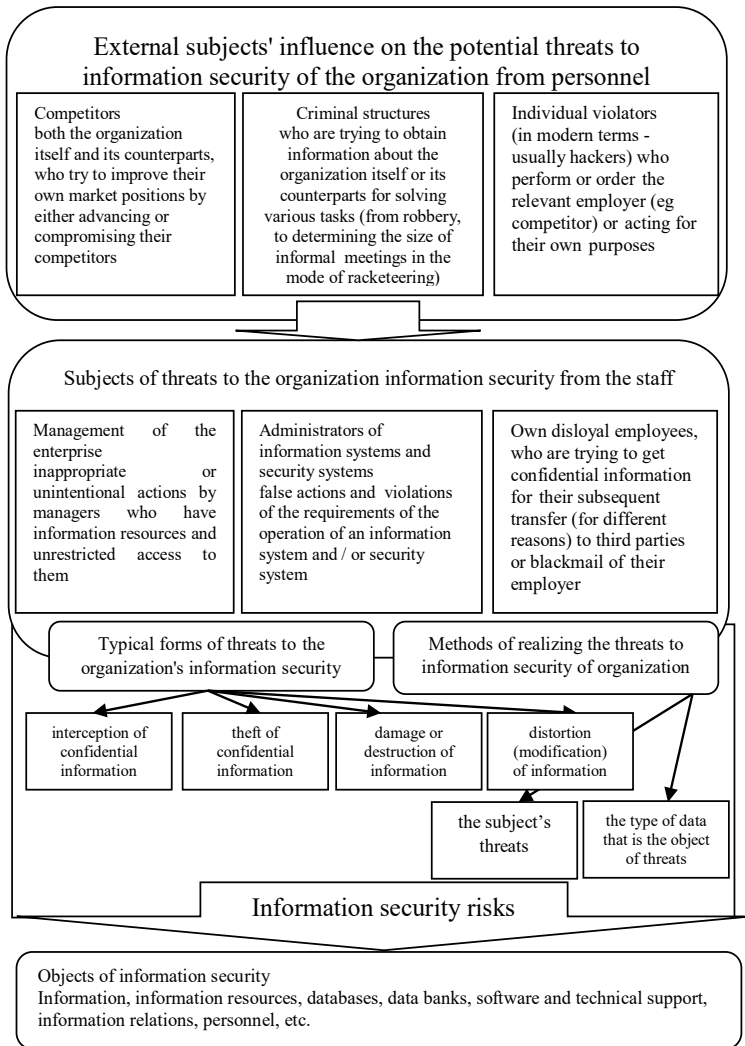


Fig.2. Structural-logical scheme of subject-object relations in protection of information from the personnel of the enterprise[author's development]

Risk factors of the first level - these are the phenomena that directly and most strongly influence the possibility of realizing the threats to information security from the staff in the organization. Risk factors of the second level are essential in the model due to their plurality and networked structure of the first level factors. All system factors are interconnected within a huge causal network, in which there is a part that is a subject to monitoring and control and the part that is hidden from the

management control of the organization. It is obvious that increasing the information security from the staff threats can be achieved by assessing and monitoring the organization of the second level risk factors.

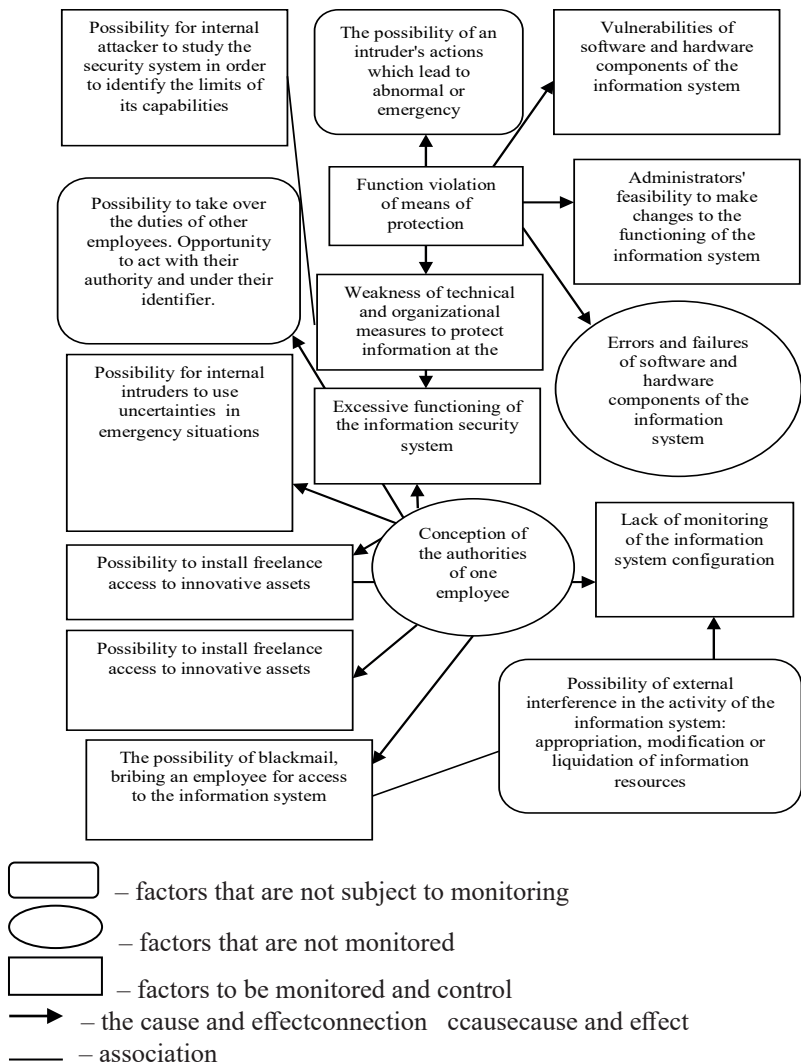


Fig. 3. Networked model of the risks for information security on the part of the personnel [developed on the basis of 2]

The proposed system of factors model can be used for:

- determining a set of factors that are subject to monitoring and control and

development of methods of their measurement;

- determining a set of the superintended factors and establishing a mechanism for their control;

- organization of the control system of information security risks related to personnel with the help of the established mechanisms;

- implementation of a set of successive measures to bring the information security risks from the personnel to the expected level, ei minimize them.

In addition, the model of information security threats from the staff can be used to solve the following tasks in response to the indicated threats:

- Comparative analysis of the danger level for the organization coming from various threats to information security on the part of personnel;

- Support activities for the development of the organization's internal regulatory and organizational-administrative documents;

- Analytical support for the activities to identify areas of the increased risks for information security on the part of staff;

- Other tasks related to both the adoption of decisions on the protective measures and utilization of such protective measures.

Thus, when we integrate the proposed structural-logical scheme of subject-object relations of information protection from the threats on the part of personnel at the enterprise and the networked model of information security risks it will facilitate the formation of an effective system of information security of the enterprise, constant support of the atmosphere of responsible attitude to the security issues, reduction of the negative influence of the human factor on the security of information systems and the state of information security, and as a result, to choose the appropriate situational measures to counteract the emergence and realization of information threats from the personnel at the enterprise.

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THEORETICAL BASES OF MANAGEMENT OF THE PROFESSIONAL SAFETY OF ENTERPRISE IN THE TRANSFORMATIONAL ECONOMY

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Ukraine’s economy over the past decades has undergone an extremely ambiguous and difficult period of transformation, caused by socio-economic changes, increasing competition, globalization processes, and so on. The main purpose of these changes is to ensure the company’s economic security, since security is a universal category that reflects the security of the subject of economic relations at all levels: from state to person.

For the domestic economic science, the process of providing and organizing personnel security becomes essential, which is a prerequisite for minimizing social and economic threats and risks of production and commercial activity, and increasing the efficiency of enterprise management. Determining the place and level of influence of the staff component in the overall system of financial and economic security of the organization requires a thorough research [6].

The theoretical aspects of personnel security management became the object of studying domestic and foreign authors, in particular: I. Burdi, S. Vasilchak, A. Dzhobavy, Z. Zhivko, A. Kibanova, O. Kirichenko, V. Kravchenko, O. Lashchenko, V. Savchenko, I. Chumarina, L. Shwyka and others. However, the theoretical foundations of personnel security management require more detailed consideration and generalization.

The purpose of the article is to synthesize and analyze the theoretical foundations of personnel security management of enterprises in a transformational economy.

Practical experience proves that at the present stage of the development of management methods in organizations the staff takes on top priority as the most important tool for effective performance. The staff affects all aspects of the organization's life, and is inextricably linked with financial and economic security [6].

Previously, the problems of the safety of the operation of personnel were considered through the prism of the work of the personnel department, within the framework of the implementation of the processes of labor protection and personnel motivation, without being separated and not perceived as an independent object of management.

Investigations of experts prove that the most complex link in the security system is personnel, and the very human factor can have the greatest impact on the efficiency of the enterprise. That is why personnel security is one of the top priorities in the structure of economic security.

Analyzing the theoretical foundations of personnel security management of enterprises, it is first of all to determine its conceptual basis. Due to the increased attention to personnel security, today there are many interpretations of concepts related to personnel. Many modern scholars interpret this concept in their own way.

Famous Russian scientist I. Chumarin believes that “ personnel security is a process of preventing negative effects on the company's economic security at the expense of risks and threats associated with personnel, its intellectual potential and labor relations in general” [10].

I. Bourda defines personnel security as an integral part of the company's economic security, whose priority is to protect against risks and threats to create the conditions for the most effective human resource management as a determining resource to ensure a high level of enterprise competitiveness [1].

O. Lashchenko characterizes personnel security as the state of the economic system, in which there is an effective interaction of all its functional components. It provides security and the ability to withstand internal and external influences and personnel-related threats. At the same time, it is able to carry out diagnostics, content and structural analysis and forecasting of the influence of personnel on internal and external indicators of the functioning of the economic system [8].

According to L. Shwaika and H. Zhidetskaya [11], the most complete definition of personnel security was given by a well-known specialist in personnel management A. Kibanov. He believes that personnel security is a general direction of personnel work, a set of principles, methods, forms of an organizational mechanism for defining goals, tasks aimed at preserving, strengthening and developing human resources, creating a responsible and highly productive united team able to respond in a timely manner on a continuous basis changing market requirements, taking into account the organization's development strategy [5].

Another approach to the characterization of the essence of personnel security was expressed by S. Vasyachak and I. Matyunyak, who believe that the main objective of personnel security of the enterprise is not only to prevent negative

influences from the personnel, but also to protect the workers themselves, create favorable conditions and incentives for their work. . At the same time, it should be borne in mind that staff is a productive resource, to which, unlike other resources, it is necessary to apply the principle of humanity and social protection. The task of the security service is not only to counteract the negative impact that comes from the staff, but also counteract those factors that are directed toward it [2].

It is interesting to note Zhivko Z., that personnel security is not only a state but also a company’s ability to counteract internal and external threats, protecting the interests of the enterprise, improving human capital, supporting an efficient human resources management system and providing safe working conditions [4].

Summing up the above, it is appropriate to conclude that all definitions are related to each other, but the approaches of the authors differ in the emphasis on separate elements of the essential characteristics of personnel security.

Therefore, it is worthwhile to argue that personnel security as an element of the company’s economic security aims to implement such labor, social and cultural relations that guarantee the enterprise a break-even. Thus, personnel security of an enterprise must be considered as a set of its components (Table 1) [7].

Table 1

Components of personnel security of the enterprise

Security components	Security
Life activity	Health safety, physical safety
Professional	Labor safety: informational, intellectual, pension and insurance safety
Social-motivational	Financial security: career, technological, aesthetic, administrative security
Anti-conflict	Psychological security: patriotic and communication security

As I. Chumarin notes, there are 3 main factors influencing the personnel security of the enterprise:

- hiring (search of candidates, selection, adaptation, certification, training);
- loyalty (solidarity, identity, engagement);
- control (regulations, restrictions, valuation operations) [10].

According to L. Shwaika and H. Zideczka, the following factors in the management of personnel security are also important: incentives for personnel, that is, motivation, the problem of personnel turnover and the improvement of the skills of employees. The authors also note that the management of personnel security of the company covers, in addition to some specific components of it, the whole set of personnel management process - from attracting and finding workers to their adaptation, forging a corporate and patriotic spirit, controlling work, career growth or dismissal. And only with the overall effective work of all these components can be achieved stability and growth of business, because the staff is the foundation of any enterprise, and effective and efficient management of them can become its main

competitive advantage [11].

One has to agree with V.A. Savchenko [9], which gives the following interpretation of the concept of professional development of personnel: as a purposeful and systematic impact on employees through vocational training during their work in the organization, in order to achieve high efficiency of production or services, increase the competitiveness of the personnel in the labor market, ensuring the implementation of new, more sophisticated tasks by the workers on the basis of the maximum possible use of their abilities and potential opportunities. Agreeing with the above, it should be noted that professional development of personnel is one of the main in the development of personnel security of the enterprise.

In the ever-growing role of the company's staff as the main link in ensuring competitive advantages and attaining strategic goals, there is a growing worsening of the socio-psychological climate in the teams, the spread of conflict disputes, which significantly reduce the loyalty of staff and make the company unprotected from the negative impact on economic security.

It becomes clear that the personnel security of the enterprise is endowed with specific, inherent only features, and its provision and constant support is a rather complicated process of enterprise management.

It should be understood that the threats to the enterprise by their own personnel cannot be completely prevented, but they can be managed and minimized. This should be understood by the top management of the organization of any level to play a leading role in ensuring the security of the organization and integrate the actions of the relevant units, especially the security and personnel management.

Thus, in today's economic conditions, the main objective of ensuring the economic security of an enterprise is to achieve maximum stability of functioning, as well as to create the basis and determine the prospects of growth for the achievement of business objectives, regardless of objective and subjective factors (threats, negative influences, risk factors , etc.). Changing business conditions in Ukraine has led to the appearance of new kind of problems in the enterprises, one of which is the problem of ensuring the personnel security of the enterprise.

Accordingly, personnel security can also be defined as a process to prevent potential and actual human-resource hazards (employing labor potential, human capital development, human resources management, improving labor relations, etc.) [3]. Consequently, the organizational security of the personnel security system is increasingly needed, which is considered as a process of preventing negative effects on the company's economic security through the risks and threats associated with personnel, its intellectual potential and labor relations in general. Therefore, the organizational and economic prerequisites for the formation of an effective system of personnel security management of the enterprise will be promising directions for further research.

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PART 5: MANAGEMENT OF ECONOMIC SECURITY IN CONDITIONS OF INTEGRATION PROCESSES: CASE OF UKRAINE

ECONOMIC SECURITY OF THE COUNTRY AS AN IMPERATIVE OF NATIONAL SECURITY AND SUSTAINABLE DEVELOPMENT FACTOR IN OVERCOMING THREATS

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The publication contains findings of the investigations conducted within the research “Trends of Modernization of Economy Management Systems” (State Registration 0118U001636) under the direction of Doctor of Science (Economics) Tetiana Ponomarenko to the order of Academician Yuriy Bugay International Scientific and Technical University.

ABSTRACT. In response to intensified integration processes, issues of forming a set of steps ensuring Ukraine’s economic security, developing methods of confronting new external and internal threats and overcoming destructive factors become more and more urgent.

Integration processes will enhance Ukraine’s economy and its ability to resist destabilizing actions of internal and external threats, facilitate the community’s sustainable development and competitiveness in the world economic system.

The sustainable development strategy “Ukraine-2020” [1] states that integration in the European Union political and economic structures is Ukraine’s major priority. The association agreement between Ukraine and the EU provides for systemic social and economic reforms aimed at the country’s democratic development, economic welfare and enhanced security as a basis for increasing stability of the national economy and fulfillment of requirements of the EU membership.

Several Ukrainian scholars and practitioners including I. Burakovskiy, L. Voloshchenko, M. Kyzym, T. Melnyk, V. Movchan, V. Nyzhnyk, T. Ostashko, T. Ponomarenko, V. Reznikov, V. Sidenko, V. Tochylin have studied the issue of enhanced integration impacts on the country’s development. At the same time, the country’s economic security and formation the concept of its provision in the context of enhanced integration require greater publicity.

This section of the monograph is intended to present theoretical principles of

the problem of Ukraine's economic security in the age of its active integration into the world economy; the legal field where tasks of forming a complex system of economic security are solved; consequences of Ukraine's entrance to the World Trade Organization and signing the economic part of the EU Association Agreement in terms of their impact on Ukraine's national interests, opportunities for ensuring sustainable development and potential new threats; highlighting major achievements of Ukrainian scholars searching for an appropriate concept of the country's economic security and its basic principles.

Economic security of the country as an imperative of national security. The notion of security comes from the phenomenon of insecurity, which in various forms occurs as threats to economic systems' activity. That is why, insecurity and threat are initial notions in considering security problems.

Insecurity is a real possibility of affecting negatively the community, an individual, a state, the environment, or an enterprise resulting in harm, damage, deterioration and expenses. Insecurity is a fully perceived, yet not fatal possibility of doing harm to anyone or anything that is determined by availability of objective and subjective factors capable of affecting the economic system [1].

Insecurity types can be classified according to: the character of direction; sources of insecurity (natural, technogenic, social); the probability rate (real, potential); the range and scale of possible negative consequences (international (global, regional); national or local (within a country); private (an enterprise, a company, a person); areas of social life and types of human activity.

A threat is the most concrete and direct form of insecurity or a set of conditions and factors causing insecurity for the state's interests, society, companies, individuals, national values and lifestyles [1]. Threats are negative changes of the external political, economic or natural environment which do appreciable real or potential damage to the state as a whole, its structural elements as well as Ukrainian citizens' vital, political, and economic interests.

Threats can be classified by various features, namely: the character of origin (natural, technogenic and social); human activity (political, economic, social, legal, military, environmental, demographic, scientific, technological, intellectual, informational, etc.); the source of origin (internal (the source is inside Ukraine) and external (the source is abroad)); probability of occurrence (real, potential); consequences (general (concerning the whole Ukraine), local (separate Ukrainian regions), private (individuals).

Threat sources of technogenic origin are determined by the condition inherent in a technical system, an industrial or transport object, which can occur in the form of negative impacts of the technical system on a person and the environment in case of a technogenic emergency. The negative impact reveals itself as direct or indirect damage to an individual and the environment as compared to standard functioning of technical objects.

Threat sources of social origin are determined by the condition inherent in a

country's social and political regime which results in a set of living conditions not meeting people's vital interests and needs [1]. This social and economic condition can turn into a social conflict, which is the highest level of social and political contradictions in the society and characterized by acute collision of aggrieved parties (people, social and political groups). The Ukrainian Revolution of Dignity, which took place in 2014, is a present-day example of a conflict. The threat of social origin in the subsequent period (2014-2018) is noted for Ukrainians' deteriorated living standards resulting from economic stagnation, corruption, able-bodied population withdrawing abroad, adoption of some faulty legislative decisions, etc.

Natural threats include: global disasters (floods, earthquakes, volcano eruptions, tsunami, tornadoes, hurricanes, landslides, temperature changes, magnetic storms, solar and moon eclipses, ozone holes, greenhouse effect, contamination, destruction of natural balance, epidemics, disequilibrium of natural self-regulation mechanisms, exhaustibility of the planet's resources, etc.

To eliminate natural threats, Ukraine's economic development priority is step-by-step steadfast introduction of technological, managerial and other decision-making systems enabling increased efficiency of natural resources use, improvement, or at least, maintenance of the environment quality on local, regional and global levels. This development type is called sustainable, which, according to Cambridge English Dictionary, means causing little or no damage to the environment and, thus, able to continue developing for a long time. It is the only widely-recognized long-term type of economic development of the world economy and therefore of the Ukrainian one as well.

Threats to the community can be external and internal. The basic external threats include: 1) a trend of turning Ukraine into a fuel-raw material periphery of developed countries that has an inefficient economic structure; 2) increase of the external debt and unsatisfactory balance of export-import operations; 3) excessive dependency on super state financial and political organizations; 4) a low level of the country's energy independence; 5) imperfect migration policy.

Internal threats include: 1) the ineffective structure of the gross domestic product and unsatisfactory dynamics of its growth; 2) excessive monopolization in the key areas of the economy; 3) the country's low investment and innovative activity; 4) currency withdrawal from the country; 5) destruction of the scientific and technical potential; 6) deepening of property stratification of Ukraine's society; 7) corruption and criminalization of the economy; 8) a low level of state institutions' efficiency; 9) an unsatisfactory level of independence of legal proceedings.

To prevent social threats, a complex strategic programme of Ukraine's economic development should be developed and implemented to partially or fully eliminate the mentioned negative phenomena. This will both eliminate part of the threats and increase the economy's and society's resistance to those remaining.

Under Law of Ukraine No. 2469 "On National Security of Ukraine" dated 21.06.2018, Ukraine's national security strategy implementation is based on the

country's economic and intellectual potential using mechanisms of state-private partnership with international consulting, financial, logistics support [4].

The appendix to Ukraine's Cabinet of Ministers Resolution No. 1277 dated 29.10.2013 defines economic security as "a state of the national economy that enables maintenance of resistance to external and internal threats, providing high competitiveness in the world economic environment and characterizes ability of the national economy for sustainable and balanced growth" [5].

An imperative of the national economic security (NES) is: the internal material basis; a rather high level of productive forces able to provide essential part of natural and cost elements of the extended reproduction of the national product; the stable internal social and political basis of economic security; a rather high level of social consensus concerning long-term national ideas that enables formulation and adoption of a social and economic development strategy to be implemented through the state policy steadily supported by the majority of the population.

As a rule, major factors and tasks of increasing economic security of any country are as follows: provision of continuous economic development; formation of the efficient economic structure; reduction of the budget deficit and government debt; increase of living standards and social protection levels.

These tasks determine the country's economic security strategy which implies substantiation and formation of major priorities of national development at a certain historic stage within the framework of certain national interests, and creation of mechanisms to address current problems.

In the course of globalizing, national economic security is becoming more integrated into the international one. Manifesting itself in spheres of influence of other kinds of national security (social, political, military, environmental, legal, technological, cultural, intellectual, informational, demographic, genetic, psychological etc.), penetrating into and interacting with them, economic security accumulates their influences but still stays a basis for national security.

A state is a major subject of providing security.

Besides the state, producers of goods and services, households and individuals are also security providing subjects.

A state's economic system on the whole and its main components, a society and its institutions, economic entities of all levels of the economic system are objects of economic security.

Security is achieved through a single state economic security provision policy, a system of economic, organizational, political etc. actions responding to threats to individual's, society's and country's vital interests.

To create and maintain the necessary level of protection of security objects, a system of legal standards is being developed to regulate relationships in the sphere of security. For this purpose, principle directions of government bodies' activities and management in the sphere are also being determined; and bodies responsible for security as well as mechanisms for controlling and supervising their activities

are being formed.

The current system of Ukraine's economic security requires improvement: it should exercise a number of principal functions, prompt determination of potential and real threats, their analysis and neutralization (or prevention) through relevant legal, administrative, economic and information actions. At present, Ukraine does not have a complex system of threats monitoring, determination of their level and developed measures for their prevention or neutralization.

National economic security comprises the following components: macroeconomic, financial, foreign economic (international), investment, scientific and technological, energy, production, information, demographic, social, food security etc.

Production security is the state of the country's production which ensures the most efficient use of available production capacities, their modernization and extended reproduction, increase of the production innovation and national economy's competitiveness levels:

- demographic security is the state of the country, society and labor market protection against demographic threats which ensures development of Ukraine considering the whole range of balanced demographic interests of the country, society and individuals in accordance with constitutional rights of citizens of Ukraine;

- energy security is the state of economy that facilitates efficient use of the country's energy resources, availability of the sufficient number of energy producers and suppliers, availability, differentiation and environmental compatibility of energy resources;

- foreign economic security is the state of compliance of foreign economic activities with national economic interests that ensures minimal losses caused by negative external factors and creates favorable conditions for economic development due to the country's active participation in the world division of labour;

- investment and innovation security is the state of the country's economic environment that stimulates national and foreign investment into expansion of the country's production, facilitates development of high-tech production, integration of research and production spheres in order to increase efficiency, enhance specialization of the national economy when manufacturing products with a great added value share:

- macroeconomic security is the state of economy with balanced macroeconomic reproductive proportions;

- food security is the state of the country's food production capable of complete satisfaction of needs of every member of society in food of appropriate quality, assuming its balance and general availability;

- social security is the state of the country's development which enables decent and qualitative living standards for its population regardless of the people's age, gender, income level, promotes development of the human capital as the most

important component of the country's economic potential;

- financial security is the state of the country financial system which allows of creation of financial prerequisites for stable social and economic development, provision of its resistance to financial shocks and imbalances, creation of conditions for maintaining integrity of the country's financial system. In its turn, financial security consists of the following:

- banking security is the level of financial stability of the country's banking institutions that enables efficient functioning of the country's banking system and its protection against external and internal destabilizing factors regardless of conditions of its functioning;

- security of the non-banking sector is the level of stock and insurance market development that enables complete satisfaction of society's needs for definite financial tools and services;

- debt security is the level of internal and external debts with considered costs of their servicing and efficient use of internal and external borrowings and the optimal correlation between them, sufficient for satisfaction of urgent social and economic needs that does not threaten the country's sovereignty and financial system;

- budget security is the state of solvency and financial stability of government finance that enables government bodies to most efficiently exercise their functions;

- currency security is the state of exchange rate formation which is characterized by the society confidence in the national currency unit, by its stability, and creates optimal conditions for steady development of the national economy, attraction of foreign investments, integration of Ukraine into the world economic system and defends from shocks on international currency markets;

- monetary and credit security is the state of the monetary and credit system that provides all the national economy subjects with qualitative and available credit resources in the amount and under conditions beneficial to achieving increase of the national economy.

In its turn, financial security comprises the following: banking security; security of non-bank financial market; debt security; budget security; currency security; monetary and credit security.

In terms of levels of economic security system building there can be singled out the following components: global (international) security, national security, enterprise security, and security of an individual.

Global economic security is the state of protection of international economic relations against threats of their destabilization. It is provided through creating conditions for execution of international agreements that stipulate protection of each country's national economic interests against external threats.

Enterprise security is the state of protection of an enterprise against negative impacts of the economic environment and ability of the enterprise to function steadily and develop in accordance to its statutory goals.

Security of an individual is the state of protection of vital interests of an individual

in the economic sphere against disservice and living standards degradation.

It should be noticed that the components are similar at different levels of economic security system building, i.e. one may talk about both the countries and enterprise financial security or draw a parallel between social security of a country and personnel security of an enterprise.

International economic security (IES) is a complex of international conditions of co-existence of agreements and institutional structures when each member country of the world community is enabled to choose and implement its own strategy of social and economic development without any external pressure and interference, in the climate of mutual understanding and collaboration.

This can be implemented through abandonment of imposing development models, economic and political enforcement. It is essential to understand that in a long-term outlook all countries will benefit from other countries' progress rather than from their plunder. Legal guarantees of IES consist in recognition of the principle of equality of countries regardless of their social and political order. IES should ensure collaboration of countries in solving both national and global problems. IES should become a basis for peaceful nuclear-free co-existence.

It should be noticed that building systems of national security in various countries is one of the factors of ensuring international economic security.

Advanced countries of the world demonstrate worth-while practices of building national security systems. For instance, Japanese scholars have developed the concept of "comprehensive national strength" [6] to the order of the National Economic Planning Agency. According to experts, the concept is synthesis of traditional and new methods. The method of calculating the so-called "comprehensive national strength" index embodies three great parts consisting various components.

The category "ability to contribute to the international community" is the centerpiece of the comprehensive national strength index. This means countries' financial- economic, scientific-engineering and political-diplomatic potentialities to commence creation and development of international social and economic projects, systems, organizations, corporations. The components of the index are:

1) basic potential consisting of the economic force, financial capacities, science and technology;

2) opportunities for implementing the basic potential globally that include currency and financial resources, consensus for international policy issues, ability to perform efficiently on the global stage.

The second category of the "comprehensive national strength" index reveals ability to survive in crisis and extreme international conditions. It consists of the following components: geographical conditions; population size; natural resources; economic force; defense forces; national morals; diplomacy and collaboration in the field of defense.

The third category estimates the potential of "possible power pressure", i.e. ability of a country to lobby their own interests. This means that each country is

guided by its own interests that are supported by: military force; strategic materials and technologies; economic power; diplomacy.

After calculating values of each of the three above-mentioned components, weighted average values of the three elements of the “comprehensive national strength” index are determined for each country which is the “comprehensive national strength” index.

The concept of determining the “comprehensive national strength” index can be applied to comparing states of national security in various countries.

The President of Ukraine plays a leading role in the national security issues. All executive authorities responsible for fulfillment of the key security types report to him.

Under section 5 of Ukraine’s Law “On the National Security of Ukraine”, dated 21 June 2018, the President of Ukraine governs the national security and defense field in compliance with the Ukraine’s Constitution. In particular, he:

- 1) ensures state independence and national security;
- 2) heads the National Security and Defense Council of Ukraine, brings into force its decisions in the statutory manner.
- 3) indicates real and potential threats and hazards and takes required actions to eliminate them.

Under section 85 of Ukraine’s Constitution, The Verkhovna Rada of Ukraine executes parliamentary control and passes the laws of Ukraine which determine and regulate the activity of security authorities.

Within the authority determined by Ukraine’s Constitution, it ensures various types of national security, economic security as well.

The Cabinet of Ministers of Ukraine as the highest authority within the system of executive authorities:

- ensures the state sovereignty and economic independence of Ukraine; conduct of national and international policy; implementation of Ukraine’s Constitution and laws;
- ensures the conduct of financial, price, investment and tax policy; labour and employment policy; social welfare; education, science and culture; conservancy of nature, environmental safety and environmental management;
- establishes and ensures the conduct of international business activity and customs affairs;
- directs and coordinates the work of ministers and other executive authorities in the national security field.

The National Police of Ukraine perform the following key functions ensuring national security of Ukraine:

- 4) financial crimes enforcement within the most criminogenic and vital for Ukraine’s economy fields, first of all credit and financial and banking;
- 5) anticorruption efforts;
- 6) illegal migration combating;

- 7) involvement in environmental security provision;
- 8) involvement in data security provision;
- 9) involvement in international security provision (cooperation establishing with worldwide national security organizations; partaking in peace-keeping, rescue and humanitarian operations under UN and OSCE auspices).

State Border Guard Service of Ukraine conducts the state policy in the field of the state border security as well as Ukraine's sovereign rights protection in its economic zone [7].

The National Bank of Ukraine establishes and conducts monetary policy in the interests of the state security of Ukraine according to the main concepts of monetary policy [9].

The National Bank of Ukraine establishes and conducts issuance financing policy in the interests of the state security of Ukraine. The following functions of The National Bank of Ukraine can be related to the national security field:

- 1) provision of Ukraine's currency unit stability;
- 2) establishing and conduct of monetary policy;
- 3) determination of development trend of current electronic bank technology; creation, coordination and control of electronic payment facilities, payment processors, automation of bank operations and bank data security facilities;
- 4) representation of Ukraine's interests in central banks of other states, international banks and other credit institutions where collaboration is maintained at central banks level;
- 5) provision of foreign-exchange reserves accumulation and storage, operating them and precious metals;
- 6) evaluation of monetary, financial, price and currency relations;
- 7) the state policy implementation on the state secrets protection within the National Bank system;
- 8) identification of the peculiarities of Ukraine's banking system functioning in the event of a martial law or a special period introduction, preparedness activity of the National Bank system;
- 9) elaborating the Monetary Policy Fundamentals and presenting them to the Verkhovna Rada of Ukraine for reporting, monitoring of compliance with the Monetary Policy Fundamentals;
- 10) analyzing the impact of Ukraine's monetary policy on the state of social and economic development of Ukraine and developing proposals for introducing appropriate changes in it;
- 12) banking regulation and supervision in order to ensure the security and financial stability of the banking system, protecting the interests of depositors and creditors.

General jurisdiction courts conduct legal proceedings in cases over Ukraine's national security diminishing.

Public control over the national security provision is carried out by citizens of

Ukraine through public associations.

In accordance with Ukraine's Constitution and laws, as well as the constitutional provisions, public associations registered in the statutory manner are ensured the right to receive the information on security sector activity from the state authorities, receive information from the state authorities in accordance with the established procedure, information on the activities of the components of the security sector.

Mass media, covering issues of national security and defense, inform the society about the state of Ukraine's national interests' protection.

Potential of Sustainable development model in overcoming threats. Development of basic principles of sustainable development of the world economy and economies of different countries as its integral parts has become an area of focus for the world scientific elite and authoritative international organizations. In 2015, the Summit of the United Nations Organization on sustainable development issues approved global Sustainable Development Goals (SDGs) [2] which are observed by all world countries by determining their own indicators.

The SDGs include 17 goals and 169 particular tasks approved at the General Assembly meetings in September 2015, namely: overcoming poverty; solving the problem of famine; health maintenance; high-quality education; gender equality; clean water and adequate sanitary conditions; use of renewable energy; decent jobs and economic growth; innovations and infrastructure; reduction of inequity; cities and communities living according to sustainable development principles; responsible consumption; the planet's protection; provision of life under water; provision of life on the Earth; peace and justice; cooperation to achieve goals.

The Global Goals of sustainable development were adjusted to specific features of Ukraine's development. In September 2017, The Government of Ukraine presented the National Report "Sustainable Development Goals: Ukraine" [2] compiled by the Ministry of Economic Development and Trade, which determined the basic indicators of achieving SDGs. The report was ratified by the inter-ministerial work group on the issues of SDG introduction in Ukraine under the chairmanship of Minister of Economic Development and Trade of Ukraine, Humanitarian Coordinator, UN Coordinator in Ukraine, Permanent Representative to the UN Development Programme in Ukraine (N. Walker).

In Ukraine, consultations on SDG issues were conducted on both central and local levels. More than 800 leading experts in specific areas of SDGs took part in determining national tasks of ensuring assessment impartiality and conformity of forecasting indicators. Local consultations were held in 10 Ukrainian regions involving central and regional government bodies, local self-government, communities, international organizations, public institutions. The work was supported by all UN agencies in Ukraine, in particular, UN development programmes in cooperation with the Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine.

The sustainable development goals actually continue the tradition of the

Millennium Development Goals (MDGs). For the last 15 years, this document has been a strategy enabling the Ukrainian community to control the authorities by applying the monitoring of 33 key indicators [3].

The SDGs in Ukraine represent a new system of mutually agreeable managerial steps according to economic, social and environmental (nature-saving) parameters aimed at creating social relations based on principles of trust, solidarity, generation equality and the safe natural environment. Ukraine's sustainable development is based on inalienable human rights to life and appropriate development. The SDGs in Ukraine are to enhance integration of all efforts of the authority branches to ensure the country's economic growth, implement Ukrainians' striving for justice, efficient use of natural resources and overcome the current environmental crisis, all this calling for in-depth and profound changes in Ukraine. Achievement of the SDGs is conditioned by elimination of corruption in all spheres of the country's development as this phenomenon is a substantial obstacle to the country's advance.

In his report at the UN Summit during the 70th Session of the UN General Assembly, President of Ukraine, Petro Poroshenko presented his general vision of Ukraine's development by 2030: "To achieve the Goals of Sustainable Development on the national level, Ukraine is going to implement new programmes and projects aimed to enhance macro-economic stability, environmental balance and social integrity. The SDGs will provide a general basis for further transformations in Ukraine" [2].

POTENTIAL, OPPORTUNITIES AND THREATS OF INTEGRATION FOR ECONOMIC SECURITY OF UKRAINE

Ukraine as the World Trade Organization member. An important task for the Ukrainian government is making use of benefits provided by Ukraine's WTO membership in order to expand export opportunities of domestic commodity producers and protect the economic interests of the state at foreign markets.

The Ministry of Economic Development and Trade is appointed by the central executive body to be responsible for the co-operation between Ukraine and the WTO.

In 2018, it has already been 10 years since Ukraine gained full membership in the World Trade Organization. «Ukraine's accession to the WTO became an important aspect and system factor for ensuring further development of the state and gave impetus to structural changes in the country's economy, in particular by adapting its legislation to world rules,» said the First Vice Prime Minister - the Minister of Economic Development and Trade of Ukraine Stepan Kubiv.

The main positive results of Ukraine's accession to the WTO are the expansion of opportunities for the development of Ukrainian national business and the creation of a number of benefits for it, of which:

- WTO membership allowed domestic exporters to obtain a predictable and

favorable non-discriminatory regime at the markets of the Organization's members, enabled settling of current trade problems and controversial issues in both bilateral and multilateral formats.

- The accession to the WTO allowed for initiating talks on making a number of free trade agreements with the main and prospective trade partners of our state, such as the EU, the European Free Trade Association (Iceland, Liechtenstein, Norway and Switzerland), Montenegro, Canada, Turkey, Israel. Some of the agreements are already partially made.

- The state has extended the possibilities of using trade defense instruments, protective measures regarding a balance of payments, certain non-tariff measures, a mechanism for settling disputes, etc.

- Within the framework of the negotiation process on Ukraine's accession to the WTO, the EU and the United States assigned Ukraine the status of a market economy country, which is an important positive factor in conducting antidumping investigations on Ukrainian goods.

- After joining the WTO, Ukraine acquired the right to participate directly in the multilateral trade negotiations of the Doha Development Round and in the negotiations on the accession of new members to the WTO to uphold the state interests in trade and economic sphere.

- Admittance to the information system of the WTO and benefits from using the system of early information exchange provided the possibility for Ukrainian enterprises to access information and sources of information on changes in trade regimes of WTO members, and to initiate a dialogue and discussions with the aim of improving trade conditions.

- The in-depth analysis of trade regimes provided the possibility to consider changes and trends of the economies of the WTO members and became a solid ground for expanding export opportunities of domestic companies, protecting their interests at foreign markets.

«Ukraine has regained its credibility as a reliable and foreseeable trading partner in the WTO. We have learned how to properly use tools and capabilities of this organization to make them work for business, such as settling of trade disputes, access optimization to the markets of the countries joining the WTO, removal of the barriers at foreign markets, participation in global trade talks to create brand new parameters of World Trade», - said the Deputy Minister of Economic Development and Trade - Trade Representative of Ukraine Natalia Mykolska [10].

Ukraine's ratification of a number of new WTO agreements should be mentioned as one of the key achievements of the last years of Ukraine's WTO membership. Mainly, these are agreements on trade facilitation and accession to the Agreement on Government Procurement. Together with WTO members, an important decision on export competition is made. It ensures the abolition of export subsidies in agriculture providing Ukrainian exporters with fair competition with other world exporters of agricultural products.

Equally important achievements are the successful completion of the first «Ukrainian Trade Policy Review» – a so-called «international audit» of Ukraine in the WTO, and a consistent response to the trade aggression on the part of the Russian Federation.

At the same time, it cannot be argued that Ukraine has managed to ensure the effective use of its membership in this international organization over the years of its membership. To do this, it is required to carry out a lot of work, including the implementation of Priority Actions Plan prepared by the Government prior to 2020 and the Export Strategy of Ukraine for 2017-2021. Therefore, the important task to be fulfilled by the Government is to ensure Ukraine's active participation in the WTO to expand its foreign economic relations and to sustainably increase and diversify export of Ukrainian goods and services.

Meanwhile, Ukraine has proved itself to be one of the main players at the international market of agri-food products, in particular in segments of sunflower oil, cereals and oilseeds. Apart from that, it was possible to diversify the geographical structure of supply of domestic agricultural products through deeper immersion in the system of global trade within the WTO and by signing new agreements on the establishment of free trade zones. Having lost the greater part of the Russian market after the start of military aggression in Eastern Ukraine, Ukrainian exporters quickly reoriented to other, even exotic, markets of the world. In recent years, export of products and services to the EU countries has tripled.

However, over these 10 years Ukraine has not been able to overcome substantial scarcity of foreign trade in goods. For example, the scarcity of trade in goods in January-March 2018 reached USD 1.691 bn, an increase of 25.4% compared to the same period last year. As a matter of fact, Ukraine has reached a surplus in service trade, but this figure is not decisive for the above-mentioned period – USD 245 m.

For 10 years of Ukraine's membership in the WTO, no dramatic changes in the domestic commodity structure of agricultural products occurred. A significant predominance of crop production over livestock has remained within 80% and 20% respectively. In addition, there is a gradual decline in the proportion of ready-made food from more than 20% in 2008 to 16-17% in 2018.

Despite the fact that the WTO terms prohibit import restrictions, Ukraine repeatedly faced with Russia's discriminatory actions concerning the import of meat, dairy and confectionery products, as well as the blockage of inbound goods at the border. In 2016-2017, there was a bilateral embargo between Ukraine and Russia for the supply of most groups of agri-food products.

However, in this difficult situation Ukraine has entered the European market with fruit and berry products, and Ukrainian meat products have found wide geographical diversification. Now they are mostly bought by European, Asian and African countries.

Although Ukraine managed to strengthen its position at many new foreign markets, it was mostly achieved due to raw materials, not high-tech. Besides,

Ukraine lags behind in the issues of proper certification and standardization of its products.

Ukraine needs to increase the competitiveness of domestic products, otherwise there is a risk of its transformation into a raw material supplement of developed countries and a large market for foreign goods.

Analysis of opportunities and threats of creation of free trade zone Ukraine-EU. In 2014, the European Union (EU) and Ukraine signed the Association Agreement (AA), which represents a new stage in the development of European-Ukrainian contractual relations, with the aim of political association and economic integration.

After signing the political part of the EU-Ukraine Association Agreement at the Ukraine-EU Summit on 21 March 2014, both parties signed the economic part of the agreement on 27 June 2014. The complete Association Agreement between Ukraine and the EU came into force after its ratification by all EU member states.

The Association Agreement contains provisions on the establishment of a deep and comprehensive free trade zone (DCFTZ). The DCFTZ was created to provide Ukraine with preconditions for modernization of its trade relations and economic development by opening the European Union markets along with gradual elimination of customs tariffs and quotas, and a comprehensive process of harmonization of laws, regulations and rules in trade-related fields. It was assumed that these would provide a background for bringing the key sectors of the Ukrainian economy in line with the EU standards. The economic part of the Association Agreement became partially operational since 1 January 2016.

An important part of the agreement was the introduction of a visa-free regime for Ukrainian citizens. A large number of civilians has already experienced benefits of increased mobility and positive impact of this factor on society.

Under conditions of openness of Ukraine's economy due to its accession to the World Trade Organization and the EU Association Agreement, our state must solve the following priority tasks: to increase export potential of the Ukrainian commodity producers; improve investment potential of the country; strengthen the competitiveness of national producers; achieve a positive export and import balance, and trade and current balance of payments.

The solution of the above-listed tasks actualizes the need for an optimal combination of Ukraine's foreign economic openness and protectionist policies based on real capabilities and needs of national production and interests of domestic consumers.

Ukrainian scientists emphasize that the successful integration of the country's economy into consistent foreign goods, services, capital and currency markets is possible provided that the respective national markets are developed. Western economic thought substantiates positive impact of «economic expansion» of developed countries on developing ones. But in developing countries, more critical assessment is made on the positive effects of economic globalization.

Proceeding from the essence of modern protectionism doctrine, the main

principle of the integration strategy of our state into the world economy should be pragmatic observance of the priority of Ukraine's national economic interests and their protection using the possibilities of European integration institutions and international trade unions, in particular the World Trade Organization.

At the same time, the efficient use of protectionist actions, including the incentive provision to national producers, will be achieved only if they are directed at the most promising sectors of national economy.

It is impossible to encourage all sectors of national economy at a time applying protectionist actions. Some of them should be targeted at import substitution, while the unprofitable in Ukraine products are to be imported. But in general, one should realise that any product being in demand with the Ukrainian nation, in case it is produced in the country, contributes to the increase of national security level.

Unfortunately, today the state support of certain branches of national economy, enterprises and regions is carried out inconsistently and without science-based criteria resulting in low efficiency of Ukrainian foreign economic activity.

The integration strategy of Ukraine's economy to the world economy is not limited to the liberalization of foreign economic activity. It also includes stimulating the national economy growth as a whole, enhancing the role of national producers, strengthening Ukraine's role in international cooperation.

It should be noted that protection of national production from negative external influences must only complement actions aimed at ensuring economic growth taking into account broad interests of domestic consumers.

Protectionism is common in many developed countries, but it is not sufficiently provided by Ukrainian legislation. Protectionist actions are always temporary and set for a limited period of time sufficient for establishing certain industries and market segments.

First of all, protectionism is needed in order to strengthen viable and structural industries and sectors of economy in market environment. At the same time, protectionist means of foreign economic activity regulation should not hinder the improvement of national economy. The establishment of protectionist barriers is essential for developing countries to ensure emergence of new national industries, structural adjustment of existing capacities or overcoming of crisis phenomena in certain industries.

The most widespread protectionist instrument is customs tariff for goods importation. Customs tariff ensures not only the replenishment of the state budget, but also encourages structural adjustment of the Ukrainian economy, which is no less important for its successful integration into the world economy. To achieve this goal, it is required to determine the development priorities of our state and build a concept of institutional strategy of Ukraine's integration into the world economy.

It is important to anticipate possible threats to the national economy and gain benefits for the state from integration.

The integration vector of Ukraine's national economic interests' implementation

should include:

- on import of goods: differentiation of customs duties according to the main directions of structural policy; use of compensatory and anti-dumping duties to promote the development of national producers;
- on export of goods: incentive and development support of export-oriented industries; promotion of Ukrainian products to foreign markets; an increase of high value added goods in the export structure;
- concerning investment flow: improvement of the national legislation on foreign investment in Ukraine and Ukrainian investment abroad and ensuring its execution; exert effective customs and banking control over agreements with non-residents in order to reduce capital export.

Ukrainian economists argue that targeting exclusively external factors of growth deprives our country of additional opportunities for developing the competitive national economy. To this end, the state should ensure the actions that stimulate restructuring of the economy, improve investment climate, reduce business rates and credit costs.

To stabilize financial and economic situation, most countries provide state financial support to private banks and financial and non-financial corporations in certain sectors of real economy, and take other actions to support national economy.

Similar actions were taken by the governments of France, Germany, Italy, the USA, the Great Britain and the BRIC countries (Brazil, Russia, India, China). Despite the fact that such actions are defined as protectionist by the European Commission for Competition, the European Union itself carries out covert protectionist actions through import non-tariff restrictions in the EU countries.

Developed countries are increasingly introducing protectionist actions not only in the field of trade in goods and services, but also in investment activities. In particular, the Australian government officially stated that foreign investment not responding to the national interests of Australia was to be blocked after the Investment Agency of the State Currency Administration of China bought 1 % of assets in each of the three Australian banks – National Australia Bank, Commonwealth Bank of Australia, and Australia & New Zealand Banking Group in 2008. Similarly, the USA, Canada, Japan, Germany and France sometimes act in contradiction to the fundamentals of the WTO on free flow of capital, goods and services.

Thanks to protectionist actions in the form of export subsidies paid to cotton producers since 1994 up to now in the United States, this country was able to become the second leading producer and the number one exporter of the world. The rate of state financial support for this industry in the United States is 89.5%. Despite Brazil's protests (the fifth largest world cotton producer) and repeated sanctions and bans of the WTO, the US Congress re-approved a program of assistance to its farmers in the amount of USD 289 bn in 2008, with the largest share of this amount being allocated to producers of cultivated plants, in particular cotton.

Ukrainian scientists draw attention to how well, in comparison with Ukraine,

China uses the WTO rules to protect its national interests. By the way, Russia has also defended the interests of national exporters for a long time in accordance with the RF Law «On special protective, anti-dumping and countervailing measures for importing goods».

Thus, the global financial and economic changes occurred in 2017-2018 showed that our country must above-all consistently defend its national interests in the foreign economic activity being a prerequisite for the economic security of the state and counteracting to the numerous global challenges and threats.

Scientist A.M. Poruchnyk substantiated the need for Ukraine to introduce a model of economic development, which he called «mobilization», based on a combination of national resource base and global economic drivers. For Ukraine not to remain on the periphery of global progress and the new order of world economy regarding its development strategy, it is required to take into consideration that the mechanism of international economic relations in the XXI century is fundamentally changing and is being increasingly based on a high level of coordination of regulatory actions, either within one country or between countries. Nevertheless, each state is primarily concerned about protection of its national economic interests.

The practice of modern international relations shows that the formation of a new world order is developing according to a scenario that reflects the middle ground between the two alternative models mentioned above. Consequently, the integration vector of Ukraine's national economic interests implementation should become one of the main components of its institutional market model of effective development, while the issue of making use of economic openness through the regulatory functions of the state, the optimal combination of foreign economic liberalization and protectionist policies requires further implementation of legislation and within authority of all executive bodies [15].

This approach is significant because instability at the international financial, currency and commodity markets and recurrent crises (2008-2009) indicate that the current global financial and economic system is inadequate. Therefore, the issue of concerted international actions for the world economy development considering national economic interests of each country is observed by both Ukrainian and foreign scientists, specialists and politicians. A Professor of Yale University (the USA) Paul Kennedy emphasizes the viability of the Bretton Woods system reformation pointing out that the international structures in the financial and economic field created in 1944-1945 are in line with the needs of the 21st century. Such organizations as the IMF, the World Bank, the WTO, OPEC, UNIDO and other sectoral regulatory bodies can no longer ensure stability of global economic processes. The analysis of scientific papers, the proceedings of the G-20 summits, the World Economic Forums and other sources on the current state of the world economy shows that there is a need to improve the concert of states in the development of both national economies and the global economy as a whole.

In the face of globalization challenges every country has to decide whether to

solve problems of national economy itself or to join forces with other states. Ukrainian academician V. Heyets, after analyzing the practice of the Eastern European states, emphasizes that convergence with the EU allows counting on developed European countries, but national economic interests of different countries are not identical, so we must think about national interests first.

Ukrainian scholars - representatives of the scientific school of globalization (O.H. Bilous, D.H. Lukyanenko, A.M Poruchnyk, etc.) [15] believe that states are not completely sovereign or relatively sovereign as they are interdependent. Therefore, in a context of post-industrialism and a new global environment, the world needs a new quality of coexistence – controllability and democratic solidarity in development processes.

Present world has to solve a difficult issue – to reach a compromise concerning interstate harmonization of actions aimed at eliminating global risks along with ensuring national economic interests of every state.

According to the resolution of September 2009 Summit, the G-20 is proved to be the main international coordinating forum for addressing the global economy, while the World Bank is responsible for such global issues as food security and climate change.

Having allocated USD 5 bn to support global economy, of which USD 1 tn through the International Monetary Fund (IMF), the G-20 adopted an essential resolution to introduce a system of global control over the activities of hedge funds, which significantly limits freedom of speculative capital movement. The international coordinator for the global market, called «Financial Stability Board», was established at the G-20 London Summit [18].

It is remarkable that along with the efforts of the leading G-20 nations to join forces for the development of the world economy and declared fidelity to high ideals of free international economic competition, one of the first effects of the 2008-2009 global crises was the introduction of protectionist actions by 17 countries of G-20 after the Washington Summit. After many years of countries' sovereignty dilution, there is a tendency to certain strengthening of national state approaches, primarily in the field of economic security.

Analysis of the Association Agreement between Ukraine and the EU have performed in the Table 1.

Far-Eastern vector of economic relations as a significant component of Ukraine's economic security. As mentioned in the analytical report of the National Institute of Strategic Research, modern world development is characterized by improved performance of Asian states in the economic, political, investment, and scientific and technological spheres. The countries of Northeast Asia (China, Japan, South Korea) are transforming into a driving force of world development.

Table 1

Analysis of the Association Agreement between Ukraine and the EU

Advantages	Disadvantages
Liberalization of «basically all» tariffs and duties	Reduction of revenues to the state budget as a result of reduction of rates of customs payments and curtailment of domestic productions
The gradual harmonization of Ukrainian standards with pan-european, Ukrainian customs officials technical assistance of colleagues from the EU	Implementation of additional restrictions on trade of Ukrainian goods in the EU markets because of non-conformity of the product standards, differences in customs system and procedures, etc.
Reducing corruption by simplifying customs procedures	The need for modernization of customs and retraining of personnel, which requires additional expenses from the state budget.
Opportunities	Threats
Increasing of the competitiveness of Ukrainian agricultural and food products through the introduction of appropriate standards of health protection and citizens' interests to EU standards	Withdrawal from the FTA of the main agricultural product nomenclature due to non-compliance with EU standards
Access to the EU market, to consumers with high purchasing power	Contrary to the manufacturers of industrial goods already supplied to the CIS countries (and with which all standards are agreed upon), the introduction of new (often more rigid) EU standards
Possible elimination of the main problems of the metallurgical industry, expansion of the presence of Ukrainian metal products in the EU markets	Low investment attractiveness of the metallurgical industry (outdated fixed assets, low quality and value added of production), trade in metal products is limited by non-tariff barriers, such as distorted competition, through the provision of state aid
The growth of the share of machine-building products in the overall structure of imports. Unification of the standards of industrial products of Ukraine and the EU will promote the development of industrial production and the entry of Ukrainian enterprises to the European chain of production and supply	Existing problems of non-conformity of machine-building products with technical and other EU standards are additionally complicated due to the general unfavorable investment climate and inefficient border crossing system.
The development of the energy sector within the framework of the agreement is possible in the context of the development of trans border electricity markets, and subsequently in the gradual formation of a single energy market with the EU	The weak ability of Ukrainian energy companies to export electricity due to underdeveloped infrastructure and differences in technical standards and rules under which the energy markets of the EU and Ukraine operate
Application in the mutual trade of protective, anti-dumping, countervailing measures on the basis of the WTO Agreement	Losses for individual industries due to their low level of competitiveness
Improving the business environment and increasing the volume of foreign investment	The threat of crowding out the domestic producer from some sectors of the domestic market
Saving or creating an FTA with other countries	Increase in unemployment due to reduction of production by economic entities and increase of labor force motivation to migration to other countries
	Reduction of state budget revenues during the adaptation period

Therefore, at the present stage, Ukraine's foreign economic policy is to be targeted at finding the best relationship models with each of the countries of this region [16].

Interaction of Ukraine with the specified Asian states during 2016-2018 became an important component of foreign policy. The significant developments occurred in the bilateral relations which attracted attention to the foreign policy efforts of the Ukrainian state it puts to develop the Far Eastern vector of its foreign policy.

The strategic partnership relations between Ukraine and China, declared at the time of L. Kuchma presidency and enshrined in the relevant agreements in 2011-2013, began to recover and strengthen during 2016-2017. This is evidenced by the intensification of bilateral cooperation in such sensitive areas as space, military and technical cooperation, and contacts between the security agencies of both countries.

The main achievement of Ukrainian-Chinese relations at the present stage was the meeting of the President of Ukraine P. Poroshenko and the Chinese President Xi Jinping, held on 17 January 2017, within the framework of the World Economic Forum in Davos. Japan is an important country in the Asia-Pacific region and a key partner for our country; relations of global partnership are established between Ukraine and Japan, especially given that in 2016 they were elected as a non-permanent member of the UN Security Council for 2016-2017. Besides, 2017 was declared to be the Year of Japan in Ukraine by a decree of the President of Ukraine.

Ukraine is interested in developing a political dialogue and comprehensive economic cooperation with the Republic of Korea being a promising economic partner in North-East Asia.

According to the results of 2016, Asian countries, including the Republic of Korea, are the key partners of Ukraine in the regional structure of the agricultural trade turnover, with the share of 40.9%. Exports of agricultural products in January-September 2017 increased by 24.3% compared to the same period last year and amounted to USD 13.7 bn, or 41.7% of Ukraine's total exports. The geography of main regions – importers of Ukrainian agricultural and food products has not changed over the last year. Mostly we continue to export to Asia; the amount for the period specified is USD 5.525 bn.

During 2016, the Ukrainian-Chinese relations improved to certain extent.

However, there are no grounds to state that a high level of interaction is restored.

There was a pause in the senior level dialogue and uncertainty in further implementation of the Strategic Partnership Development Program, enacted in Beijing in December 2013, between Ukraine and China aimed at large investment and economic projects conduct in 2014-2018.

The lion's share of questions regarding Ukrainian-Chinese interaction concerns the Ukrainian part and requires reaction from the Government, ministries and executive departments of Ukraine.

Restoration and expansion of bilateral trade in goods and services were agreed upon. Recognizing the problem (volume reduction) has become an important step

forward.

The Sub-committee proposes the following steps: to prepare a list of export-import goods; to encourage companies to participate in exhibitions and fairs; to set up cross-border e-business platforms; to improve a regulatory mechanism, simplify trade procedures; to create joint ventures in the industrial sector.

In response, Ukraine proposed to sign the Action Plan Ukraine-China on the joint implementation of the New Silk Road Economic Belt Project at the next meeting of the Sub-committee.

The Chinese part, supporting the search for new opportunities for economic growth, such as implementation of new projects in the agroindustrial complex, construction of affordable housing, modernization of port and railway infrastructure, emphasized the importance of previously made joint resolutions implementation.

The meeting of the Sub-Commission resulted in signing the Protocol and the Memorandum on mutual understanding regarding the use of trade defense instruments in international trade. These documents confirm some positive dynamics, but the achieved results cannot be classified as sufficient.

In this context it is appropriate to mention the initiation of the Chinese Business Association in Ukraine, which brings together representative offices of large state and private corporations of China in our country.

In October 2016 several deputy ministers attended the party on the occasion of the Association's first anniversary. This fact was not neglected by the Chinese party.

After two years of almost complete neglect of Chinese foreign policy and economic directions by national officials, some positivity was achieved. In particular, in 2016 on the level of the authorities of Ukraine's ministries and offices there was recognition of the importance of collaboration with the PRC, apposite view of economic collaboration and unbiased attitude to Chinese business representatives in Ukraine.

On 29 August 2016 in Beijing there was held a meeting of Ukraine-China Sub-Commission on military and technical cooperation between the Government of Ukraine and the Government of China. The fact of the meeting itself generated significant interest. Further development of Ukraine-China cooperation in this field of the DIC (Defense Industrial Complex) and arms is of great importance to Ukraine in both economic and security terms. So, during the meeting there was reaffirmed the Chinese government's stance on aggression of Russia against Ukraine.

On the other hand, there are certain problems concerning perception of Ukrainian-Chinese relations in Ukraine. In Ukrainian lower level officials' opinion China is still far and obscure and thus a country of no interest. An average Ukrainian official shows little interest in the Chinese experience, the state of Ukraine-China collaboration in any sphere, and this fact is the major bottleneck of further bilateral collaboration development.

Though China ranks fourth in the list of Ukraine's strategic trade partners, Ukraine accounts for only 0.17% of China's foreign trade. Last year the Chinese

government announced its intention to increase the amount of investment in other countries to USD 500 bn up to 2020. With very insignificant Chinese investment activities (up to USD 70 m) in the country, Ukraine is still a country of potential interest to Chinese economy as it has a free-trade zone with the EU and other countries. According to Chinese experts, possible Chinese investment in Ukraine may reach USD 50 bn.

Creation of the Asian Infrastructure Investment Bank in 2015 is an important step of China in building the New Silk Road Economic Belt. This bank immediately attracted a rush interest of many world countries. Leading EU countries as well as Georgia and Azerbaijan became bank members. During scientific events Chinese experts often wonder why Ukraine shows no desire to use the bank's potential. Nevertheless, Ukrainian officials' attitude cannot be cleared up.

Among the most important Chinese proposals concerning Ukraine the idea of creating a free-trade zone between the two countries is of particular interest. It is quite clear that in conditions of the negative trade balance Ukraine should carefully study all pros and cons.

This must be a complex analysis performed by leading scientists and experts. However, two years after the proposal was made, no information on the analysis of the kind has yet appeared. Georgia has taken the opportunity so far, and Georgia-China FTZ (Free-Trade Zone) has come into being.

Unfortunately, it should be noted that there is corruption in Ukraine-China relations. Corruption in Ukraine's relations with China has resulted in actual loss of leading positions in determining directions of bilateral relations development. The corruption has created a situation which is unusual and obscure for Chinese partners, a "toxic" environment where any initiative capable of strengthening relations between the two countries is destroyed. Only a few Chinese companies do established business in Ukraine. Other companies with great capital can only enter the country under the condition of overcoming corruption, creating favourable conditions for business, determining clear priorities in collaboration with China, learning China's approaches to implementation of the "exit" strategy, capital and investment export, the Silk Road Economic Belt project building.

Despite its difficult financial and economic situation, Ukraine still possesses a range of scientific and production capacities which are of interest to China in the context of development of Chinese leading industries and implementation of important strategic projects in various fields. Ukraine's economic sanctions against Russia narrow considerably exports to the RF, thus demanding search for new markets for machine building, aircraft industries and products designed for military and dual purposes. Here, it is necessary to use already accumulated experience of military and technical cooperation between Ukraine and the PRC in order to adjust it to current conditions. Science and technology make the most powerful and long-lasting basis for the two countries' collaboration. Ukraine's economy requiring fast and efficient modernization, its adjustment to the modern

world market, investment, production, scientific and technological capacities of the PRC can make a considerable resource of development and modernization of corresponding Ukrainian industries, momentum for restoring positions of Ukraine on the world technology markets. Simultaneously, this enables Chinese businesses to fill the corresponding niche on the Ukrainian market which is quickly integrating into united Europe.

Collaboration with China in the space sphere is of a particular interest to Ukraine as it enables rational realization of the Ukrainian space potential. In this sphere Ukraine's financial sources are limited while China is becoming one of the leading investors into space exploration. At present Ukraine is executing 21 contracts with China for over USD 67 m in total. The PRC is known to have a very ambitious and sufficiently financed space programme. China demonstrates clear interest in high-tech imports and Ukraine should consider this fact and use it to the benefit of the national production. At present, engine technology and unit and assembly engineering are considered the most promising in Ukraine-China aerospace collaboration. The PRC is among the first countries to which Ukraine exports its aircraft products, the Chinese aircraft market is the world's most dynamically developing one.

The agricultural field is another very important issue of Ukraine-China collaboration. Agricultural production is conditioned by two important factors - fertile land and innovative technologies. In the recent years China has greatly advanced in growing crops and livestock farming. Availability of great areas of arable land with high productivity potential is strategically important for possible cooperation in this sphere. In mutually beneficial collaboration with China, Ukraine is quite capable of making a significant contribution to international food security and becoming a powerful player on the international food market. For its part, China is able to import strategically necessary volumes of food from Ukraine.

According to its declarations, China's authorities seek to double national consumption of meat, soy and crops in the next two decades. This offers great opportunities for Ukrainian exports. The national agrocomplex requires investment and advanced technologies. Nevertheless, most Ukrainian agricultural companies are oriented to export of crops.

Crops processing and production of meat, milk and other agricultural products with their further exporting to the Far East countries seem more promising. Ukraine should develop and increase capacities of its own food industry exports, it is reasonable to export ready-to-eat flour-based products instead of grain and meat products instead of meat for processing. Modern packing, brand-name goods can be supplied to Asian markets attracting Asian banks' credits.

Collaboration should be focused on the following: complex machine building (DIC, aircraft and ship building, space industry etc.); attraction of Chinese investment in Ukrainian AIC (prioritizing highly productive and technological projects), starting new enterprises for agricultural production and processing, supply of the

Chinese market with a wide range of agricultural and food products; collaboration in the social services sector, development of tourism; export of educational services; development of transport services collaboration.

In its current state “One Belt and One Road“ Initiative (the Silk Road Economic Belt) is one of the most attractive for Ukraine geoeconomic projects. The key principles and advantages of the project are inclusiveness, openness, and profitability for all participants, transition to uniform trade regulations, integration and coordination of countries’ development strategies and programmes. The Chinese project does not contradict Ukraine’s pursuit of further economic cooperation and economic integration with the European Union. On the contrary, it is capable of enhancing Ukraine’s advantages in this process. As an alternative, it can help reduce negative consequences of breach of relations with Russia and overcome Russia’s prohibition on transit of Ukrainian goods to Asia. Potentially, the countries-participants in the project account for 55 % of the world GDP, 70 % of the global population and 75 % all known energy resources.

If the Chinese initiative is implemented, it can impact considerably the geopolitical landscape and result in creation of a range of alternative economic associations and opportunities. An interesting fact is that initially China itself supposed to add about USD 2.5 tn to its river trade turnover in a decade of the strategy implementation.

Since the moment Xi Jinping, the leader of the PRC, announced the initiative to build the New Silk Road in the university of Astana (Kazakhstan) in September 2013, 56% of all Chinese foreign investments has been directed to the countries-project participants. This fact testifies to the Chinese authorities’ close attention to this initiative. China has created the Silk Road Development Fund with capital of USD 40 bn. The Asian Infrastructure Investment Bank (created at the initiative of China, too) with the capital of USD 50 bn and perspective increase to USD 100 bn is gradually turning into a key institution that invests in projects in countries along the Silk Road in addition to capitals invested by Chinese business structures.

Though Ukraine was the first among European countries to declare support of the above Chinese initiative on the highest level in 2013, the course of events in our country resulted in the fact that Ukraine’s participation in the project remains declarative. An attempt in early 2016 to undertake practical steps concerning railway transit of goods to Central Asia and China within the project framework was not economically successful. At present, Ukraine is negotiating decrease of rates for transporting goods by one of the branches of the new Silk Road through Kazakhstan and Trans-Caucasian countries.

Another project negotiated by Ukraine and China concerning development of trade routes is the one of building a deep-water seaport that can actually double Ukraine’s port infrastructure capacities to satisfy needs of the new Silk Road. The port of this kind with the designed annual capacity of 100 m t is being built by Georgia on the eastern coast of the Black Sea near the settlement of Anakhlia.

Investment in this construction makes USD 2.5 bn. The Government of Georgia itself invests only USD 100 m. Ukraine is just studying technical feasibility of building a port of the same capacity on the northern coast of the Black Sea.

Experience of neighbouring Belarus where China invested into creating the “Great Stone” industrial park proves that Chinese investors’ attention can be focused on building technoparks, exchange of technologies and their cooperative development, creation of joint production and Chinese production logistic centers close to markets, movement of excessive production facilities of Chinese enterprises to countries located along the new Silk Road. The volume of investment in the Chinese project in Belarus is declared to make about USD 2 bn with possible further doubling. At that, Belarus investments make USD 500 m.

According to the Strategy of national security of Ukraine dated May 2015 [18], our country seeks development of privileged partnership relations with Japan – the country which Ukraine considers to be its reliable partner on the international arena.

Attending the exhibition of traditional and modern Japanese art “Imaginary Guide. Japan” on 9 November 2017, President of Ukraine P. Poroshenko said that Japan is a supremely important strategic partner for Ukraine and thanked for support and assistance to our country during our hard times.

For Ukraine, development of cooperation with Japan as one of the world’s most powerful economies with considerable technological and investment potential, a leading country in Asia-Pacific (the most dynamic region of nowadays) is of a strategic character. Japan is an active and influential member of the global community and participates in numerous associations (the Asia-Pacific Economic Cooperation (APEC), the “Asia-Europe Meeting” (ASEM)), a G7 member and has allied relations with the USA.

Ukraine-Japan cooperation within the UNO framework is characterized by a high level of collaboration in issues of elections to the UN governing or auxiliary bodies and functional committies.

According to Japanese Embassy in Ukraine, assistance to our country totals more than USD 33.1 bn (as of September, 2017). Construction of terminal “D” of the international “Boryspil” airport was a pilot Ukrainian-Japanese project within ODA. In March 2014, the Japanese government decided to grant a credit within ODA of 108.193 bn yens (about USD 900 bn) for implementation of the Bortnychi aeration station reconstruction project (Kyiv). The project is of supreme importance for improving the environmental situation. The project was signed on the 6 June, 2015 during the visit of Prime-Minister of Japan to Ukraine and ratified by the Verkhovna Rada of Ukraine in September 2015.

Another important direction of support of Ukraine by the government of Japan is the “Kusanone” grant programme for human security projects. For almost 15 years of activities there have been implemented 113 projects of the kind for USD 8.2.m. Within the programme over 80 medical and educational institutions of Ukraine have received assistance in the form of equipment for diagnostics and

treatment, premises repair, installation of modern water purifying systems, facade heat insulation and replacement of old windows. As of October 2014 nine projects were in the process of implementation. Japan participates in the UN projects of restoration of Ukraine's eastern territories in two directions: assistance to residents of the pro-Russian separatist-controlled areas (the residents receive humanitarian assistance) and assistance to internally displaced persons. The latter also receive financial aid from Japan as well other international organizations (UNDP, UNICEF, the International Organization for Migration and the International Red Cross and Red Crescent Federation (IRCRCF)). Besides, additional financial aid was rendered to increase personnel of the OSCE Monitoring Mission.

One of the Ukraine-Japan projects is handover of 1 568 hybrid "Toyota Prius" automobiles to the patrol service of Ukraine's reformed law enforcement system within Green Investment Schemes (GIS). Besides, within this project there was performed heat insulation of facades, windows and roofs of 135 social infrastructure facilities (schools, hospitals etc.), and modernized 135 carriages of Kyiv underground system using Japanese energy saving technologies.

Introduction of modern energy saving and environmentally friendly technologies in various economic sectors (energy engineering, industry, municipal sector) of Ukraine is still a prospective area of collaboration with Japanese companies. Attraction of Japanese investment in development of Ukraine's transport and energy infrastructure, agriculture and its physical facilities in particular is also a promising direction of cooperation.

Japan as one of the largest importers is a supremely targeted and promising market of Ukrainian grain crops. Japan pays considerable attention to Ukraine's agriculture potential. In global terms it is a predictable and solvent consumer of grain and oil bearing crops. The situation will stay unchanged in future. Ukraine is able to enlarge volumes of national grain supplied to the Japanese market. Even now our country ranks fifth in terms of agricultural products imported by Japan and, apparently, can enhance its position on the Japanese market.

Conclusion of the key bilateral Agreement between Japan and Ukraine for the Promotion and Protection of Investment in 2015 provided a favourable climate for investing in Ukraine. This agreement is no doubt an important signal for business circles of both countries and has laid the foundation for enhancing Ukraine-Japan economic collaboration. It should be noted, however, that this agreement is a framework one and it should be followed by other documents aimed at creating favorable conditions climate for Japanese investors.

According to the Embassy of Ukraine in Japan, direct investments in Ukraine as of the end of September 2016 made USD 160.5 m. Japanese investments are mainly concentrated on selling and servicing Japanese automobiles and components and tobacco goods production. Considering direct investments of affiliate branches of Japanese companies located in Europe, Japanese investments in Ukraine's economy amount USD 300 m. Particularly, during the period under consideration

“Fujikura” started operation of a factory in Lviv (Lviv industrial park “Riasne 2”) with manufacturing of electric cabling for automobiles in its work the company relies on advantages of a common market with the EU. The first stage provides capital investments of 6 m Euros and creation of about 300 new workplaces. To turn this primary experience of creating an enterprise with participation of Japanese investors into a trend, united efforts of regional and central authorities should be applied to make conditions comfortable for Japanese business. There is no Ukrainian investment in Japan. Japanese companies demonstrate their interest in investing in production intended for not only internal market but also for export to markets of Europe and the CIS countries or use in final European products. This trend is very promising due to Ukraine joining the common EU market within the framework of enhanced and spacious free-trade zone Ukraine EU.

The Visegrad Group (V4) countries’, especially Poland’s and the Czech Republic’s experience of collaboration with Japan and attraction of direct Japanese investments in their economy is an instructive one for Ukraine. In the recent decade the Czech Republic has succeeded in attracting USD 5 bn from Japan. Nearly 240 Japanese companies currently working in this country have created at least 50 thousand new workplaces and are playing a significant role in Czech economy. The largest Japanese investment traditionally has focused on world automobile manufacturers.

Poland is currently hosting 300 Japanese companies or their branches, 100 of them are engaged in production. Among V4 countries Poland has attracted most of Japanese investment.

In our country there are currently only 40 delegations of Japanese companies, but Japanese business diaspora in these delegations is small, usually 1-2 persons on the part of Japan on top management positions. Nevertheless, leading Japanese companies like “Sumitomo”, “Itochu”, “Mitsui”, “Marubeni”, “Mitsubishi”, “Mitsubishi Heavy Industries” are represented in Ukraine.

Ukraine’s accession to the European common market on signing Ukraine–European Union Association Agreement offers new opportunities for investors and brings momentum to Japan-Ukraine investment cooperation.

Japan International Cooperation Agency (JICA) and the New Energy and Industrial Technology Development Organization (NEDO) conducted pilot investigations due to which energy saving technologies and alternative fuels were introduced in Kharkiv oblast, efficiency of the combined cycle energy facilities in Kyiv was increased, the project increased energy efficiency of Kyiv Underground was implemented, and Burshtyn and Trypilska power plants underwent auditing with the purpose of their further modernization.

Development of Ukraine-Japan collaboration in science and technology holds an important place in Ukraine-Japan relations, especially in the context of implementation of mutually beneficial projects and collaborative investigations conducted by research institutions of both countries.

Despite the fact that there is no contractual basis on the intergovernmental level, collaboration of institutions of the National Academy of Sciences of Ukraine (NASU) and research institutions, companies and business structures of Japan is actively developing. In terms of collaboration of the two countries in the nuclear sphere, collaborative research work on overcoming consequences of the “Fukushima Daiichi” nuclear disaster should be mentioned. Commencement of collaboration with Japan concerning studying and applying the Ukrainian experience of post disaster remedial actions in Chernobyl, so called “Fukushima-Chernobyl” collaboration should be paid special attention to. Considering the difficult situation in Japan concerning the post disaster remedial actions continuing up to present, this new direction of collaboration has gained and will hold priority in relations between two countries in the near future.

In 2013 scientists of the NASU started work on collaborative studies at The Institute of Environmental Radioactivity, Japan. This fact testifies to Japan’s interest in attracting Ukrainian scientists having Chernobyl studies experience to solution of Fukushima problems and exemplifies the practical content of “Fukushima-Chernobyl” collaboration. It should be mentioned that national scientists are engaged in research in the sphere of solid state physics, gene engineering, chemistry etc. at Japanese research centers. At the same time, on the government level Ukraine and Japan cooperate only in the field of Chernobyl catastrophe studies, other fields are not involved.

The Republic of Korea (the ROK, South Korea) is a country with a developed economy. Due to dynamic development through implementation of a range of economic reforms the ROK managed to quickly and successfully integrate in the global economy and become a hi tech industrial developed country. Now the ROK is one of the four “Asian Tigers” – the countries which underwent rapid industrialization. Note that during 1980-1996 South Korea increased GDP from USD 68 bn to 603 bn.

In 2016 the country’s GDP in dollar terms ranked 11th in the world and amounted USD 1.411 tn. The economic growth for two years in succession makes 2.8%. According to estimates of the IMF, the level of the ROK economic development made 3% in 2018.

The ROK ranks 6th in the world goods and services export, 9th – in the world trade. Gold and foreign currency reserves make USD 378.4 bn as of June 2017 (9th largest). According to a number of forecast in case of maintaining growth rates the ROK may rank 9th in the world up to 2025, in terms of per-capita income may rank 3rd.

Major economic partners of the ROK are:

- the PRC (China – South Korea Free Trade Agreement) became effective in December, 2015; bilateral trade made USD 227 bn;
- Japan (in 2016 its turnover made USD 70 bn);
- the USA (Korea – U. S. Free Trade Agreement, KORUS FTA became effective

in March, 2012, in 2016 bilateral trade made USD 144 bn);

- ASEAN countries (the framework ASEAN – Korea Free Trade Agreement was signed in August, 2006);

- the European Union (a free-trade agreement was signed in 2009, partial implementation started in 2011, official ratification occurred in December, 2015) with over 50% part in the country's total turnover.

In 2016 the total amount of investment that came into the ROK made USD 10.8 bn. In particular, the share of the largest Korea's investor – the EU (Germany – 4%, the Netherlands – 9%)- made over USD 7.5 bn which is 3 times larger than for the previous year.

In 2016 Chinese companies invested over USD 2 bn in Korea which is by 3.6% greater than in the previous year. During the last three years Chinese investment in Korea's economy is showing stable and considerable growth: the total amount of direct PRC investment has exceeded USD10 bn. Investments in production (almost 40%), trade (20%), services (15%), information technologies (15%), transport (12%) and other spheres are priorities of the ROK development.

At the state reception held on 10 February, 2017 on the occasion of the 25th anniversary of diplomatic relations between Ukraine and the ROK, Mr. Lee Yang Goo, Ambassador Extraordinary and Plenipotentiary of Korea in Ukraine, said that our countries should keep to three principles: directivity to values, globality and future. Directivity to values is general prosperity, integration and peace-making. Directivity to globality which is to be built on the basis of bilateral collaboration will be expanding on the European continent and further – globally. Directivity to future means that both parties are to collaborate on the basis of future global trends – food, energy and water resources, climate change and the fourth science and technology based industrial revolution. Activities of the Intergovernmental Ukrainian-Korean Commission on Trade and Economic Cooperation (hereinafter referred to as Commission) created in 2008 is an important mechanism of trade and economic cooperation.

On 3 October, 2016 the 3rd meeting of the Commission was held in Kyiv on the results of which agreements were concluded on activation of bilateral cooperation in industry, agriculture, renewable and nuclear energy, transport and development of infrastructure, healthcare, finance and tourism.

In addition, there were created a number of institutional mechanisms that play an important part in enhancing bilateral cooperation, namely:

- Joint Ukrainian-Korean committee on scientific and technological collaboration;
- Joint Ukrainian-Korean commission on collaboration in the sphere of defense and material support;
- Joint committee on collaboration on peaceful uses of outer space.

Collaboration between legislative bodies of both countries – the Verkhovna Rada of Ukraine and the National Assembly of the Republic of Korea – has reached a high level.

The Republic of Korea ranks 5th among Ukraine's trade partners in the Asia-Pacific after China (annual turnover of USD 6.5 bn), India (nearly USD 2.4 bn), Indonesia (USD 2.11bn), and Japan (USD 736 m).

In 2016 sales between Ukraine and the Republic of Korea grew by 2.6% and made USD 668.89 m. Ukrainian exports reached USD 413.7 m (4/6% growth), import from the ROK made USD 255.28 m (0.4% decrease). At that, it should be noted that the bilateral trade surplus made USD 158.42 m

In 2016 supply of crops (maize and wheat in particular) accounted for almost a half of the Ukrainian exports to South Korea (the ROK is the 7th largest crops importer in the world. Maize accounts for 60% of the ROK imports, wheat – 25%, barley, rice and other crops – nearly 15%). According to the South Korean ambassador, besides crops, sunflower oil, organic food and other non-GMO products as well as pork and beef are now the most promising segments of increasing Ukrainian agricultural exports to the ROK market.

Ferrous metals and metal products made almost a third of Ukraine's exports. Other export articles were timber and products, non-precious metals, tobacco. Major goods that are traditionally imported from the ROK were cars, devices and machines, plastic and polymer materials, pharmaceuticals.

It should be noted that in 2016 a working group on designing a large scale programme – the General Plan of Ukraine-South Korea Economic Cooperation was created in the Embassy of Korea in Ukraine. On behalf of Ukraine the group consists of representatives of governmental institutions, science, education, business and sector associations. The activity of the group has resulted in “The White Paper on Economic Cooperation between Ukraine and the Republic of Korea” (2016), and “The Master-Plan of Economic Cooperation between Ukraine and the Republic of Korea” (2017).

Five Ukrainian-Korean economic forums have been held in both capital cities alternately (the 4th and 5th were held in 2017 in Seoul and Kyiv respectively) with support from the Embassy of Korea in Ukraine, Korea Trade-Investment Promotion Agency (KOTRA), Korea International Trade Association (KITA), the Embassy of Ukraine in Korea, Ukraine's Chamber of Commerce and Industry and other stakeholders focusing their efforts on implementation of successful Ukrainian-Korean cooperation.

In October 2013 in Seoul, Then-President of the ROK launched the “Eurasia Initiative” aimed at creating a peaceful community on the basis of economic collaboration and collective innovations. This was announced a month after the head of the PRC Xi Jinping had declared the “One Belt One Road” initiative.

The Eurasia Initiative was supported by the EU in September 2015. Ukraine's position of the intersection of trans-European transport logistics is a good precondition to becoming part of the corridor to supply goods from the EU to Asian countries, and East Asian ones in particular. Achieving ambitious results within this framework requires joint efforts of all the project participants. Accordingly,

attraction of countries-partners at all possible levels appears to be of supreme significance.

Implementation of China's "One Belt One Road" initiative supported by the ROK authorities is now gathering pace with clear focus on the necessary increase of volumes of trade between European countries and South Asian countries. As testimony to this, a new route of rail freight "Port Dalian (Liaoning Province) – Bratislava (Slovakia)" through Ukraine (Chop) was opened on 27 October, 2017. The first train on the route carried 41 containers with electronic machine engineering and consumer products manufactured in China and South Korea for which Dalian is an advantageous transshipment point. This route started working on a regular basis in January 2018.

Korean companies are treating Ukraine as one of possible areas for investments. During the 5th Ukraine-Korea economic forum (July, 2017) Chung Un-chan, ex-Prime Minister of South Korea (2009–2010), pointed out that Ukraine is located in the strategic region of Eurasia and possesses rich natural resources. The Republic of Korea is Ukraine's prospective economic partner. Similarly, Korea is a good strategic partner in the sphere of infrastructure, traditional and alternative energy, finance, agriculture, civil engineering, information and communicative technologies etc.

Agricultural, housing, machine building complexes; the financial sector, energy (incl. renewable); transport infrastructure (implementation of Smart City technologies); joint manufacturing of high-speed transportation; healthcare, information technologies (development of digital society) are considered prospective for Korean investments.

The State Statistics Service of Ukraine reports the total amount of direct Korean investment in Ukraine's economy in the amount of USD 198.7 m (as of July 2017) that makes 0.5% of the total amount of foreign direct investment (FDI) attracted to Ukraine's economy. The country's industry received most of the investment (over 90%). According to Korea's Ministry of Foreign Affairs, investment in Ukraine's economy made USD 358 m (2016).

At present, Korean capital participates in 28 enterprises in Ukraine (incl. the largest Korean companies Samsung Electronics, LG Electronics, POSCO Daewoo and Hyundai Corporation). National specialists are also involved in work. For instance, Samsung Research and Development Institute Ukraine employs over 1000 highly qualified IT specialists working in the sphere of recognition technologies, multimedia content, information security, artificial intelligence etc.

Ten high-speed electric trains Hyundai Rotem travel between major Ukrainian cities and the Hyundai Corporation is planning to create facilities to produce high-speed electrotrains and locomotives in Ukraine. This may help modernize urban transport and related infrastructure with partial localization of the production and maintenance provision.

POSCO Daewoo is one of major players on the Ukrainian grain export market in

countries of Asia and Middle East and an encourager of the project of modernization of agricultural machinery in Ukraine for small and middle farms and construction of a grain terminal in the seaport Chernomorsk. Besides, POSCO Daewoo declared its intention to build grain elevators in Ukrainian ports.

“Hyundai Motor Ukraine”, an official distributor of the famous Korean Hyundai Motor Company, successfully cooperates with numerous Ukrainian auto dealers. There is no direct Ukrainian investment in Korea. Considering the fact that Ukraine and Korea both adopt principles of free trade, that there is a free-trade regime between Ukraine and the EU, it is quite expedient to start negotiating a Ukraine-Korea free-trade agreement.

It also reasonable to start, within technical assistance projects, a system experience exchange between the Republic of Korea and Ukraine concerning export-credit agencies’ activities, creation of free trade zones, implementation of projects on creating industrial parks in Ukraine.

Ukraine’s potential crops export capacities offer favourable prospects on the South Korean market. Both countries demonstrate their interest in collaboration in the agricultural sphere.

Ukraine wants to increase agricultural exports to South Korea, while the ROK is intent on increasing its investment in Ukraine’s agriculture (growing agricultural crops, e.g. quality sorts of onion to be exported to the EU; import of Ukrainian meat, dairy production etc.) through implementing joint agricultural investment projects.

Obviously, considering experience of the ROK in development of modern greenhouse facilities, it may become one more prospective direction of collaboration of the two countries.

Current Ukraine-Korea trade volumes in the agricultural sphere make a considerable part of the total sales. Only in 2016 the agricultural turnover between our countries made nearly USD 283 m, of which Ukrainian exports amounted USD 278 m. Korean investors are ready to grow grains in Ukraine for export to the ROK and other markets. The projects of the kind are under way in Poltava and Cherkasy oblasts.

The parties express mutual interest in scientific and technical cooperation and activation of collaboration in such priority directions as peaceful use of outer space, energy saving and information technologies.

Korea notes a high level of development of space technologies in Ukraine, fruitful collaboration of the “Pivdenne” design bureau and “Pivdenmash” SP with Korea Aerospace Research Institute (KARI). In 2013 the first Korean Earth observation satellite KOMPSAT-5 (also known as Arirang-5) was launched on a “Dnipro” launch vehicle. The second launch was performed on 21 November 2013 (STSAT-3) and the third one – on 26 March 2015 (KOMPSAT-3A).

To expand humanitarian, educational, scientific ties with Ukraine, over 1 000 Ukrainian students study the Korean language at 10 higher and secondary educational institutions of Ukraine including Taras Shevchenko National University of Kyiv,

Kyiv National Linguistic University, Kyiv gymnasium of Oriental languages. In July 2017, Ukrainian-Korean Educational Centre started working at the National Technical University “Igor Sikorsky Kyiv Polytechnic Institute”. It should be noted that both parties are developing a new Agreement on Ukraine-Korea educational cooperation and expanding collaboration in science and technology.

1. In contemporary geopolitical conditions strategic cooperation with the PRC remains an important reserve for providing Ukraine’s urgent needs. Appropriate use of the current external potential of Ukraine-China collaboration in various fields is capable of pushing Ukraine forward on its way to modernization and economic movement, strengthening Ukraine’s position on the world arena.

2. China’s “One Belt One Road” project does not contradict Ukraine’s pursuit of further economic cooperation and economic integration with the European Union. On the contrary, it is capable of enhancing Ukraine’s advantages in this process. As an alternative, it can help reduce negative consequences of breach of relations with Russia and overcome Russia’s prohibition on transit of Ukrainian goods to Asia.

3. Introduction of active Ukraine-China dialogue on a “17+1” basis will close the issue of Ukraine’s geopolitical identity and strengthen significantly the country’s agency in present-day international conditions.

4. The present state of Ukraine-China relations is insufficient due to weak mutual information sharing concerning processes occurring in the countries, especially those of the “Ukrainian crisis”. To enhance the situation, it is reasonable to diversify cooperation forms of informing corresponding governmental structures and country leaders.

5. Ukraine-Japan relations possess great potential making them an important and very promising direction of Ukraine’s foreign policy that is capable of becoming a significant factor of ensuring needs of economic and political development of our country.

6. Japan’s active position helps counter the aggressor. At that, Japan expects Ukraine’s clear understanding and, above all, deliberate actions in implementing the Minsk arrangements, reforming, economic integration with the EU, remedying corruption.

Within Ukraine-Japan economic and trade relations framework our country prioritizes complex development of the relations that involves active trade and economic cooperation with the emphasis on attracting investments in strategic energy, agriculture and transport fields. Japan’s experience is of supreme importance to Ukraine in terms of energy security issues and energy industry reforming through implementation of Japanese innovative technologies.

7. Priority directions of Ukraine-Japan collaboration are:

- maintaining a high level of the political dialogue and regular contacts on high and highest levels;
- enhancement of trade, economic and investment cooperation, in particular through use of financial instruments of Japan Bank for International Cooperation

(JBIC) and Japan International Cooperation Agency (JICA), transition to practices of planning bilateral economic cooperation development, in particular planned turnover levels;

- investing in introduction of new technologies and innovations, production, transportation and use of traditional energy carriers;

- attracting Japanese investment in the infrastructure projects, within the programme of official assistance in particular;

- investing in our country's agricultural infrastructure – building of grain elevators, terminals, growing grain and bean crops considering Japan's interest in providing its food security and high level of the country's dependency on agricultural imports;

- cooperation in the agricultural sphere, in particular Ukrainian agricultural exports to Japan, within the Japanese food security programme;

- collaboration with Japanese companies in the sphere of Ukrainian export-oriented production (metallurgy and chemical production) modernization.

8. Several issues of Ukrainian-Japanese relations still require further collaboration of the parties. These are the asymmetric visa regime and establishment of direct air links between Kyiv and Tokyo. Settlement of the issues will facilitate both active economic collaboration and tourism.

9. Activation of the political dialogue and trade-economic collaboration with the Republic of Korea is an important task of Ukraine's foreign policy nowadays. Use of investment and technological capacities of this "Asian tiger" is an additional opportunity for modernization and re-industrialization of Ukraine's economy.

10. Priority directions of Ukraine-Korea collaboration are:

- further enhancement of Ukrainian exports to the ROK;

- declaration of interest in intensifying trade economic collaboration and setting its goals and tasks within the framework of high and highest level contacts;

- strengthening of the contractual basis of the economic collaboration;

- active development of production and investment collaboration and setting its goals and tasks;

- active development of production and investment collaboration through production localization by joining efforts at Ukrainian enterprises;

- involvement of the Korean diaspora in Ukraine that may become a bridge between the two countries' economy and society as well as another factor of further dialogue enhancement.

11. As for the nuclear-missile issues, North Korean regime will go the whole way as it is its existence that is at stake. Coordination of the DPRK plans and actions with Chinese authorities is now a must and Beijing will in no case allow or support them. That is why the major and only task is the search for a political solution of this problem on the basis of multilateral negotiations.

- transition to practices of planning bilateral economic cooperation development, in particular planned turnover levels;

- investment in introduction of new technologies and innovations, production, transportation and use of traditional energy carriers;
- attraction of Japanese investment in the infrastructure projects, within Japan's programme of official assistance in particular;
- Japan's investment in our country's agricultural infrastructure – building of grain elevators, terminals, growing grain and bean crops considering Japan's interest in providing its food security and high level of the country's dependency on agricultural imports;
- cooperation in the agricultural sphere, in particular Ukrainian agricultural exports to Japan, within the Japanese food security programme;
- collaboration with Japanese companies in the sphere of Ukrainian export-oriented production (metallurgy and chemical production) modernization.

PROPOSALS ON THE CONCEPT OF ECONOMIC SECURITY OF UKRAINE

In terms of Ukraine's national economic interests, some controversial processes are taking place. On the one hand, the state-monopolistic crony capitalism keeps developing. On the other hand, some fragments of the market-type capitalistic model are generated, this calling for support from the corresponding government bodies to promote this new model type in Ukraine.

The model of the state-monopolistic capitalism provides for creating self-contained oligarchic groups based on the state-monopolistic property and aimed at developing the export-oriented and raw-material model of the economy. It means that the clan that "has seized" and is re-distributing the state property in their own interests comes to power. This group of people tends to be transformed into the upper caste with features of financial oligarchy [18].

The economic model characterized by the property totally monopolized and owned by crony-corporate groups forming a power oligopoly system gives rise to a corresponding monopoly model of power. The single upper caste keeps a tight hold both of power and property. This model type is characterized by: massive lumpenization of the state population; extremely high quantity of the bureaucratic-managerial and penalty-police apparatus; control over citizens' income sources and business activity; censorship and complete control over mass media including the financial-economic one; decline of intellectual, scientific, research and educational activities; creation of a "carnival-type nation" model [15].

If we analyze all these parameters and compare them with the real situation in Ukraine, an obvious coincidence is observed. Thus, there are some reasons to consider a caste-monopolistic model of the state capitalism the ruling one in our country, the caste oligarchy being its driving force [15]. This model results in formation of a pyramid-type society, its apex being represented by financial oligarchy (5% of citizens). These are ruling castes that became property owners

in the unluckiest for most citizens way having seized the former national property created by all people in the former USSR times and keep parasitizing on the state-owned sector by grasping the monopoly part of the community income. Oligarchy formed in our country belongs to a monopolistic type and is cosmopolitical and comprador in its essence [19]. It controls the Supreme Council of Ukraine and other bodies of state power, in particular medium segments of administration in the legislative, judicial and executive branches.

According to Ukrainian policy maker, economist and scientist, as for the middle part of the society pyramid is composed of two parts:

1) influential forces in the state government structures who serve the Ukrainian crony oligarchy's interests. At present, this stratum is able to form segments within the taxation bodies, the State Security of Ukraine economic departments, the Ministry of Internal Affairs and the Ministry of the Economic Development and Trade. This stratum also includes representatives of security structures, top managers, mass media (in particular, television), and the scientific elite, who do not always have Ukraine's national interests in mind, as well as a great number of other members of the society;

2) the middle class people (about 15% of the citizens) whose condition is depressed now;

3) the lower stratum (about 70% of the citizens) is presented by a great number of lumpenized people of low income, deprived of any property and having no impact on either oligarchs or the authorities [23].

It is evident that the model of the state-monopolistic capitalism established in Ukraine presents a threat as it is aimed at creating an inequitable society based on exploitation, corruption and moral insanity. This model results in irrevocable rapid depopulation of the Ukrainian nation. The authorities and oligarchy providing their financial support are in continuous conflict of interests with the principles of forming a competitive national economy and sustainable development of society as well as the goals of turning Ukraine into a powerful Central European state.

Many representatives of the state power, public organizations and political parties of Ukraine realize the need of changing the country's economic model.

Present-day global challenges like the scientific-technological, informational, energy and environmental revolution call for corresponding changes in the economic development model of our country. It is natural that Ukraine is unable to become competitive, if its economic model keeps functioning guided by principles of authoritarianism or monopolism. In response to current worldwide challenges and opportunities, Ukraine is to build a democratic development model of its society and the corresponding economic model to become a competitive country in the heartland of Europe.

The Prime Minister of Ukraine Volodymyr Hroisman, a candidate for presidency Yuliia Tymoshenko and other political and public figures are focusing their attention on this problem. However, the public believe that definition and formation of a new

economic model will be hindered by the ruling crony financial-corporate groups as well as other cosmopolitical formations because this problem concerns profits and property re-distribution for the benefit of certain economic entities and groups.

The economy of Ukraine is a small-scale open economy; much of its GDP includes exported raw materials and products of low value added. Due to de-industrialization in the last 27 years and absence of the state strategy for new industrialization, at the beginning of 2019, the country remains a raw-material-based economy with cheap labour force and low living standards. Notwithstanding the fact that Ukraine is one of the largest countries in the centre of Europe, its domestic market is actually underdeveloped because of ineffective demand of population. That is why, Ukraine's market potential as a development driver and a compensator of external economic threats and challenges remains unemployed. This raw-material status is extremely dangerous for the country as it is characterized by dependency on the world raw-material market and fluctuations of global financial markets. The national economy accounting for 0.15% of the world GDP [20] is operating on highly competitive and risky raw-material markets and has almost no influence on the world prices unlike developed industrial countries forming prices for their own high-tech products. In other words, the Ukrainian economy is functioning in accordance with a raw-material model being an appendage of highly developed industrial countries.

Until our state transforms into a new-type industrial country dominating in certain fields of the world high-tech innovative markets, it will remain in deep global external dependency formed by price, financial, institutional, technological, demographic and information channels that threaten Ukraine's security [20]. Considering this situation, it is essential to have an idea of global economic and technological trends to determine current risks and threats to Ukraine's economic security and work out a corresponding strategy either to overcome them or reduce their impact on the economy.

Global financial and economic trends of the early 2019 [20]:

1. There appear some fundamental changes in the monetary and financial control paradigm established in the world economy in 2008 (following the beginning of the financial and economic crisis). Due to the introduced programmes of "quantitative easing" [25], the global financial system was saved, lending to the real economic sector was stimulated in developed countries of the West, their economic advance was restored and new industrialization 4.0 was promoted [26].

According to experts, in the nearest future, the increase of interest rates of the world leading banks is expected, this leading to possible fluctuations (volatility) on the world financial and currency markets resulting in increased debt service expenditures of developing countries including Ukraine, thus escalating its vulnerability to exchange rate risks [20]:

- Risks of escalating interstate trade wars are growing, this being reflected in increased protective import tariffs for trade partners (in particular, the USA-China, the USA-Turkey, etc.).

- The world GDP rates are slowing down. According to the World Bank's predictions [20], the world GDP growth will slow down up to 3.05 % in 2019 and to 2.9% in 2020.

In particular, the real GDP increase of the US is expected to be equal to 2.7% in 2018, 2.5% in 2019 and 2% in 2020;

- the EU economy growth: 2.1% in 2018, 1.7% in 2019, 1.5% in 2020; in Poland: 4.2% in 2018, 3.7% in 2019, 3.5% in 2020;

- the real GDP dynamics in Japan: 1% in 2018, 0.8% in 2019, 0.5% in 2020;

- the slowdown of China's economy: 6.5% in 2018, 6.3% in 2019, 6.2% in 2020.

India demonstrates the best economic dynamics: 7.3% in 2018, 7.5% in 2019, 7.5% in 2020.

Only 45% of all the countries are expected to accelerate their economic advance, this figure being 56% in 2017.

The fourth industrial revolution and transition to the sixth technological mode of the world economy are gaining momentum (Table 2).

The development of the fourth industrial revolution in developed countries can escalate inequality among countries, their polarization in response to their success in global competition which does not employ natural resources and cheap labour force, but intellectual capital and innovative technologies.

The global economic and technological trends of the early 2019 create the following challenges for Ukraine.

At present, over 35 countries accounting for a greater amount of the world GDP have developed and introduced their own national innovative strategies. Both advanced and developing countries are engaged in step-by-step transition from market fundamentalism strategies [21] to the active state control over economy and intensive state stimulation of innovative development.

The documents by the EU, the OECD [21] and some other international organizations as well as those determining the countries' economic strategies call innovations and up-to-date high technologies key drivers for steady increase of economies and living standards both at present and in future.

The global economy has entered the competition phase on the level of the knowledge economy when intellectual capital and high technologies become major drivers of economic advance. With this fact in mind, a country's competitive position on the world market will be determined by its global innovative advantages. Therefore, there is a so called global race of developing innovations and obtaining these competitive advantages.

Many world governments are introducing quite aggressive innovative strategies based on the system of institutional, legislative and fiscal-monetary mechanisms and tools aimed at intensifying the national high- tech capital and attracting that of the world [20].

Table 2

Characteristics of technological modes

Technological modes	The first technological mode	The second technological mode	The third technological mode	The fourth technological mode	The fifth technological mode	The sixth technological mode
Formation and prosperity	1770-1830	1830-1880	1880-1930	1930-1970	1970-2010	2010-2060... (according to experts)
Basic resources	Water energy	Steam energy, coal	Electric energy	Energy of hydrocarbons, the beginning of nuclear power engineering	Atomic power engineering	Alternative energy sources, nanoenergetics, intellectual capital
Major industries	Textile industry	Transport and ferrous metallurgy	Heavy mechanical engineering, electrical engineering	Automobile industry, nonferrous metallurgy, oil processing, synthetic polymer materials	Electrical engineering and microelectronics, information technologies, genetic engineering, telecommunication software, space technologies	Industrial application of nano- and biotechnologies, atom-based technologies, new materials, additive technologies of 3-D printing, IT and telecommunications, artificial intelligence industries, robotization, new air- and space-industries
Nucleus of the technological mode	Textile machines	Steam engines, steam drivers of machines	Electric engine, steel	Internal combustion engine, petrochemistry	Microelectronic components	Nanotechnologies, biotechnologies, artificial intelligence, robots, new air- and space-technologies
Institutional environment	Competition of businessmen and association in partnerships	Production concentration in large-scale organizations, development of corporatization, capital concentration based on principles of limited liability	Merging of companies, production concentration in cartels and trusts, domination of monopolies and oligopolies	Transnational corporations, oligopolies on the world market, vertical integration	Global value chains, international integration of small- and medium-scale businesses based on IT, outsourcing, integration of production and sales	High concentration of competences in clusters. Horizontal networks of interrelated educational, scientific, research, IT industrial organizations, service and financial companies in innovative clusters, development of national innovative economic systems of the 2nd level (clusters formed by cluster structures). Competition and cooperation inside clusters and on the global scale (coopetition).

There is a full-scale process when innovative business and technological institutions enter the countries with the most favourable investment environment. In other words, creation and development of national innovative systems capable of attracting massive investments and achieving a rapid technological advance become an effective competition tool. The states are implementing their industrial and cluster-based strategies, introducing fiscal incentives, changing paradigms of their monetary and financial policies. The countries lagging behind these processes are losing global competition and their traditional markets and facing the threat of continuous (secular) stagnation [20].

In accordance with [20], the Blumberg Innovation Index-2018 determines the top ten countries with the most developed innovative clusters including Northern Korea, Sweden, Singapore, Germany, Switzerland, Japan, Finland, Holland, France and Israel [23].

2. The world restrained demand for Ukraine's exported industrial products of low value added will determine high volatility (changeability) of their prices, and therefore, increased vulnerability of the national economy as to currency, bank and payment crises in case of maintaining the current model of raw-material-type economy.

3. The energy paradigm is changing as fossil fuel is replaced by renewable energy sources accounting for 90% of all the energy at the EU power plants.

4. There is a transition to a new technological mode with additive 3-D printing technologies. According to experts' predictions, 3-D printing will become the production basis for numerous fields from medical equipment to aircraft construction.

5. There is increased application of innovative materials replacing conventional ones (for example, grapheme replaces ferrous metals, aluminium, etc.). There are massive changes in the world production based on developments of material studies and nanotechnologies. According to the US Scientific Fund, by 2020, the world trade of products manufactured by means of nanotechnologies will have exceeded USD 5 tn.

6. The role of IT, digital technologies, automation, robotization and artificial intelligence systems is enhanced, reaching fully-featured substitute of people in the industry. The top-100 global companies are investing over USD 250 bn into these areas every year, their annual profits accounting for over USD 4 bn [20].

7. Transnational companies are changing their strategy. The trend of locating their capacities in cheap labour-force countries is changing into that of allotting more complicated and precise manufacturing of the new technological mode closer to the markets of highly-qualified personnel and product consumption. The western countries are returning their production capacities replacing industrial outsourcing by insourcing as well as conducting the national industrialization 4.0.

8. The significance and influence of scientific and industrial innovational clusters that are technological nuclei or points of merging successful countries' economies are growing. They become suitable places for concentrating scientific

centres, interdisciplinary research laboratories, global and local technological companies, auxiliary production and services, institutions of voucher funding. The major feature of these innovative economic systems and scientific-industrial clusters is concentration of ideas and high-level competences in one geographical zone around an academic institution, interdisciplinary and cross-field character of joint production, openness to global informational and material flows and simplicity of business operations. Great amounts of investments from state and private funds to develop clusters are a predominant trend.

9. Transition to the fifth stage of production development (massive personalization) is outlined. It means that the world production has passed four development stages in choosing its position on the scale “individual approach-standardization” and goes to the fifth stage (Fig. 1).

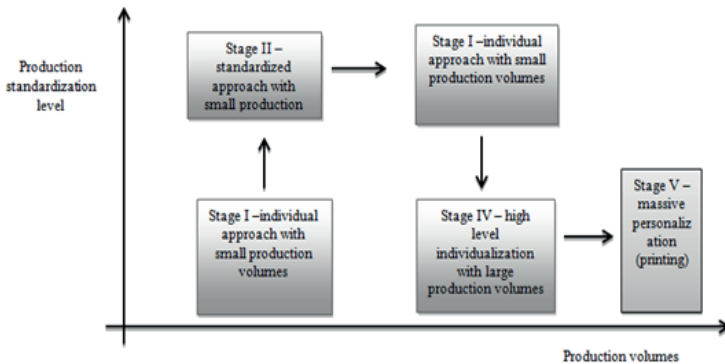


Fig. 1. Stages of production development and global trends of transition to the fourth technological mode

10. In the nearest future, countries’ global competitiveness will be determined by the following areas: biotechnologies and high-tech medicine, material studies and nanotechnologies, new technologies of transport control (automobile, aircraft, and space industries), electronics, informational and digital technologies, computer design, big data analysis, blockchain, telecommunications, automation, robotization, and artificial intelligence, 3-D printing, alternative energy engineering, etc.

Thus, Ukraine’s global markets and environment are under the action of fundamental technological and institutional changes causing substantial transformations and escalated polarization of countries’ incomes depending on how successful they are in terms of their innovative development and adaptation to the knowledge economy. The countries’ global competition for innovative competitive advantages leads to active application of state innovative development strategies as catalysts of developing their national innovative economic systems. In these conditions, countries become either innovative leaders in some fields and through

application of competitive advantages greatly increase their national wellbeing or risk lagging behind technological changes and turning into raw-material appendages with cheap labour force which cause systemic social and demographic crises and continuous stagnation [20].

Thus, in the present-day geopolitical situation, Ukraine is facing global economic and technological challenges which escalate the risks to the national economic security against the country's economic backwardness.

Ukraine's national interests. Among the most important national economic interests determining the Ukrainian state's future, the nation's wellbeing and prosperity, the following ones are distinguished:

- creating a self-sufficient, competitive, socially-oriented, powerful national economy;
- creating a reliable system of the economic security of Ukraine, ensuring its independent, advanced social and economic development;
- transforming the economy structure;
- ensuring efficient development of the national industry;
- conducting protectionist measures aimed at supporting national manufacturers;
- providing the energy security and substantial reduction of energy- and material-intensity of the national GDP;
- fulfilling radical modernization of manufacturing and developing its science-intensive branches;
- creating closed-loop industrial cycles to manufacture strategic products, in particular, military equipment and weapons;
- searching for and exploiting oil, gas, coal, gold, diamond and other deposits;
- providing alternative sources of oil and gas;
- creating a powerful military and industrial complex, in particular, the rocket and space industry;
- maintaining and developing Ukraine's intellectual and scientific-technical potentials;
- securing Ukraine's share of the former USSR external state debts and assets (gold reserves, diamond and currency funds, financial resources, the property abroad, foreign countries' debts);
- creating sufficient state gold and currency reserves;
- implementing the energy- and resource-saving policy;
- implementing advanced economic transformations on the basis of the national reform model;
- providing a wide range of institutional changes aimed at developing the national economy;
- implementing the reform of the taxation system, enhancing the stimulating impact of taxes on production development;
- ensuring financial stabilization, overcoming the payment crisis;
- overcoming inflation;

- implementing the land reform, supporting farms;
- implementing the agro-industry reform, recovery of rural regions;
- implementing the monetary reform and providing convertibility of the national monetary unit;
- attracting internal investments to develop the national economy;
- increasing Ukrainians' wellbeing;
- the state's solving social problems (unemployment, poverty, crime, housing, etc.);
- providing people with food products, improving the structure and quality of consumption;
- developing the domestic market and demand;
- fighting against the black economy;
- creating a socially homogenous environment in all the regions of the state, eliminating imbalance in their social and economic development;
- ensuring people's employment and high-level labour resources;
- creating equal social and economic opportunities for all Ukrainian citizens;
- Ukraine's taking an appropriate position in the world labour distribution and the international trade, integrating into the world economy;
- transforming economic relations with other countries on the principles of equality and mutual benefits;
- enhancing competitiveness of national products;
- improving the product structure of export and import;
- ensuring the geographical balance of export and import;
- increasing the export potential, enhancing a positive balance of the foreign trade activity;
- supporting national exporters, promoting manufacturers of import-substituting products, especially those of critical import;
- protecting the national market from unfavourable actions of the world market conditions and foreign competition;
- Ukraine's efficient use of its own geographical position to perform international transit.

Potential and current threats to Ukraine's economic security. According to the character of their origin, threats to the state economic security are divided into external and internal.

External threats of the present-day historical period of Ukraine's development are formed under the action of current global risks. According to the experts of the World Economic Forum of 2019, they include escalated economic confrontation of the world largest countries, violation of multilateral trade agreements and rules, and political confrontation among the largest countries.

The top-10 global and most probable threats also include massive cyber-attacks that become a recent trend of informational wars, spread of fake news, and possible loss of countries' trust to the current security agreements. The report also indicates

global advance rates reaching their maximum. The economic policy not so long ago allowing competitors to gain profits in trade relations is often considered a strategic tool of competition nowadays. Stable international economic relations are threatened and this may have negative consequences for the world market [16].

Prevailing world trends determine the character of external threats to Ukraine's economic security. In terms of the early 2019, they can include:

- high dependency of the Ukrainian economy as a whole and its essential areas on: external economic conditions of the world market and international financial and trade organizations; imported high-tech and strategic products, including energy resources;
- restricted supply of certain home-produced product groups to the EU and US markets because of the quantitative control;
- Ukraine's step-by-step losing its energy transiter status from Russia to Western European countries;
- destruction of Ukraine's economic complex integrity due to military actions in the eastern part of the country;
- underdeveloped transport infrastructure that seriously confines the volume of export-import operations.

Internal threats to the country's security are formed due to negative factors affecting the civil society, namely, reduced quality of living standards, economic and financial crises, escalated corruption and criminality, political instability. The factors of these threats are given below.

1. Labour migration and people's massive departure abroad.
2. Intensified property stratification of the community.
3. Low incomes of vulnerable segments of population and high percentage of poor citizens. A low income-level does not enable decent living standards of the majority of Ukrainian people to satisfy their needs in food required for active living. Persistently high numbers of poor people do not encourage the domestic demand for services and products and provide a social basis for increasing criminality including, drug addiction, crimes, prostitution, tramping, etc.
4. Increased costs of obligatory paid services in healthcare and housing and utilities sectors that greatly exceed the growth of people's real incomes; shifting these extra expenses onto the middle-income people who provide increased solvent demand and savings.
5. Low quality of mass services in healthcare and housing and utilities sectors.
6. Delays in salary payments, enterprises' stoppage.
7. Population decline and aging that will cause extreme reduction of the state's labour potential and growing demographic load on able-bodied people.
8. Low-income people's restricted access to public health, education and culture that causes deterioration of their physical and spiritual conditions.
9. An increased gap between economic conditions in different Ukrainian regions as well as among the country's capital, cities and villages.

10. The unsatisfactory environmental situation in Ukraine's industrial regions causing people's increased sickness and death rates.

11. The authorities' incompetence resulting in low legal, financial and contractual discipline in all activity areas, massive income concealing and tax evasion, economy criminalization and corruption of economy management.

12. Imperfection of the judicial system.

13. Unsatisfactory rates of establishing the most important institutions of the modern market economy.

14. The structural deformity and inefficiency of the Ukrainian economy expressed in prioritizing its raw-material orientation, underdevelopment of science-intensive and high-tech industries.

15. Sufficiently low competitiveness caused by: a retarded technological base of most industries, high energy- and resource-intensity of production; the country's low investment and innovative activity, technical and technological lagging behind advanced countries; reduced intellectual potential due to "brain drainage" abroad, loss of intellectual work prestige; insufficient funding of research including that financed from the budget; escalated violations in the informational and intellectual areas;

16. Increased risks of accidents and technogenic disasters with considerable negative environmental consequences because of: considerable wear of basic production capacities, especially in case of continuous technological cycles, transport communications and gas pipelines; increased volumes of accumulated industrial wastes, radioactive and toxic substances, imperfect utilization and burial technologies.

17. Insufficiently stable condition of the monetary and bank system caused by: disproportions of Ukraine's foreign trade balance; probability of sudden fluctuations on the currency market; high "dollarization" of the Ukrainian economy and non-confidence to the national currency, etc.

18. The lack of positive impact of the taxation-budget system on the economic advance due to: an insufficient budget-financial potential to promote production, updating of production capacities on the basis of innovative systems and technologies; low encouragement of taxes; the imperfect system of the state currency control.

19. Increased gap between economic conditions in different Ukrainian regions, as well as among the capital, cities and villages.

20. The underdeveloped stock exchange market.

21. The imperfect state-property privatization policy, etc.

Modern threats are characterized by the fact that they are constantly transferred from one area into another, for example, from the military area to that of political, economic, informational, social, environmental, and language problems and vice versa.

The instable situation in the Ukrainian economy, the potential threat of the next world economic crisis and the Russian pressure are portending economic

destabilization in 2019. Russia is expected to intensify its economic pressure which can be quite effective because of the remaining economic dependency of the Ukrainian energy and bank sectors and active dual-purpose products trade with such satellite-countries as Kazakhstan and Belarus. In 2019, the gas negotiations as to continued transit of Russian energy-carriers across Ukraine in 2020 will be of great importance as the alternative “Northern” and “Turkish” flows remain underutilized.

The National Bank of Ukraine has named presidential and parliamentary elections, labour migration and the world crisis to be the threats to the Ukrainian economy in 2019 [17]. The permanent representative of the ICB Gosta Ljungman indicates the following challenges for Ukraine in 2019 [18]: preservation of macroeconomic stability; attraction of investments; enhancement of state institutions; structural reforms.

The above mentioned crisis trends characteristic of the current Ukrainian economic condition have determined internal threats to Ukraine’s national interests, their level and character being as hazardous as those of the external ones.

The mentioned internal threats to the national economic interests enable us to conclude that at present, Ukraine is unable to create the economic system capable of ensuring the state’s advance and its independence in forming and implementing the home and foreign policies to build the civil community that would meet current world-recognized democratic standards.

Strategic tendencies of ensuring the economic security on the national and regional levels. The economic security problem is unique in each country, yet some similar features for all countries include: availability of possible threats to national interests; determination of assessment methods; formation and implementation of steps to eliminate threats.

The priority of ensuring the economic security of Ukraine is formation of the economic development model that would guarantee: realization of the citizens’ social and economic interests according to the Constitution of Ukraine (Article 3) [3]; ensuring macroeconomic stabilization and the country’s sustainable development in the longer term in the globalizing conditions of the world economy.

Solution of the problem of Ukraine’s rapid economic decline partly owing to the current military conflict in the country’s east calls for updating the national strategy of the economic development and the external economic policy to adapt Ukraine’s economy to new conditions, challenges and threats.

The priority of the external economic policy implies ensuring the country’s competitiveness in the foreign trade relations as this complex and multi-aspect notion determines the level of the state’s external trade security.

The state’s foreign trade security is the condition of the foreign trade ensuring increased export of domestic products characterized by high technology and considerable value added, the products with no competitive advantages in the country and not manufactured here for some reasons; raw-material products used by raw-material enterprises, all these ensuring the national economy development

and enhancing the country's competitive advantages in the global environment [12].

The basic steps of ensuring Ukraine's external economic security include:

1) increasing efficiency of current free trade areas and creating some new ones in collaboration with trade partners as well as entering new trade blocks (for instance, the Transatlantic Free Trade Area - TAFTA). With respect to this, in order to implement the potential of the Agreement on the free trade area with the EU which is Ukraine's most large-scale international project, it is necessary: to adjust Ukrainian technical regulations to meet EU standards; to develop a system of steps to assist national manufacturers in certifying their potentially competitive products to export them to the EU markets; to create a database of importers and lobby quota increase for Ukrainian products; to organize an international informational campaign to create a positive image of the "Ukrainian product" brand;

2) developing a logistics infrastructure of export activity, namely: creating new logistic routes for transporting Ukrainian products and imported raw materials to manufacture them; ensuring the functioning of product supply routs between China and Europe ("New Silk Road"); participating in the investment projects of building grain storehouses on the Nile river banks to increase export of grain to the region; participating in the project of turning the territory along the Suez Canal into an international logistics centre and an industrial hub to intensify product flow from Ukraine;

3) introducing an effective investment policy of attracting foreign investments in order to use non-monetary factors of increasing competitiveness of the industrial sector and integrate the country's economy into value chains and industrial networks on the regional and global scales;

4) adjusting mechanisms of protecting the national economic interests to meet the best world practices as well as define and fix equal directions of the external competitive policy which implies: developing and implementing the state programme of enhancing competitiveness of Ukrainian enterprises on external markets considering the following aspects: planning priorities, quantitative and qualitative availability of Ukrainian producers in international value chains; dynamic responses to anti-competitive discriminatory steps against Ukrainian producers on external markets;

5) considering possible expansion of Ukraine's representation in leading bodies of the World Trade Organization and international financial organizations, etc.

External economic security results from high competitiveness determined by the country's ability to create the national business environment, in which domestic producers can constantly develop their competitive advantages, take and maintain stable positions in certain segments of the world market.

Therefore, the national strategy of Ukraine's economic development should be aimed at creating a powerful economic potential to facilitate the economy growth on the innovative basis and a developed system of market institutions, having a considerable intellectual potential and investment resources, reacting to changes of

the world market conditions in a flexible way and diversifying production accordingly. This very strategy ensures implementation of the national interests to enhance the economic security and high living standards of Ukraine's population [26].

The level of the economic security in Ukrainian regions is mostly determined by efficiency of enterprises functioning, their competitive positions and activities creating the basis for the state's security. Real economic sector enterprises' activity is a source of increasing the country's economic potential and competitiveness.

Security of the real sector enterprises is an objective prerequisite of enhancing the state's economic security in the globalization age and a priority of the national economic policy. Improvement of competitive positions and intensification of national enterprises' industrial activity is an essential factor of regional development and security due to the increased gross regional product and allocations to local budgets, improvement of such structural components of the regional economic security as financial, social, technological, food supply, demographical, energy and environmental, as well as enhancement of the innovative component of the national competitive economy [12].

At the same time, the insufficient security level leads to formation of the environment in which enterprises are not motivated to do legal business, long-term capital investments in the innovative areas of low-profitable and capital-intensive types of activity as well as energy-saving and environmental sectors, form a resource basis of the economic development and be a social partner of the state. It results in structural, field and regional disproportions and reduced levels of the state's economic security.

In the globalizing economy, ensuring enterprises' security, especially in basic industries, is a priority of the state policy of guaranteeing the state's economic security. These enterprises' security is an objective prerequisite of entrepreneurial sector development, enhancing such structural components of the state's security as financial, social, technological, food supply, demographical, energy and environmental, as well as reducing probable realization of serious threats to the national interests in the economic sphere.

Before another world economic crisis starts, it is essential for the government to implement some measures to enhance Ukraine's long-term economic security, namely: encouragement of the economy's structural transformation, transition from raw-materials export to that of end products; diversification of the energy-carrier market; recovery and development of the domestic market of products and services; avoidance of external debt increase; reduction of the Russian products and services share; the search for new markets, in particular in Asia and Africa; provision of low and stable inflation; creation of a stable, transparent and efficient bank system; restoration of extensive crediting; efficient control of the financial sector; free capital movement; financial inclusion.

Conclusions. Integration into the world economic space is a strategic benchmark for Ukraine. The European choice of Ukraine is due to long-term national interests.

The formation of economic security is a dynamic process that encompasses economic, political, social aspects, issues of democratization and spirituality. In the conditions of activation of integration processes, the problem of formation of a complex of economic security of Ukraine, development of ways of confronting new external and internal threats to national economic interests become actual.

On the basis of theoretical developments of scientists, a number of international and Ukrainian scientific schools [26] gaining theoretical and practical weight in the concept of national security, which is based on the following provisions:

- activation of integration processes affects all spheres of the country's society;
- threats to the national economic interests of the country are manifested in the economic, political, social and spiritual spheres;
- under the influence of integration processes, the problems of ensuring economic stability of Ukraine have to be diagnosed;
- possible scenarios for ensuring Ukraine's economic security are bifurcated;
- structuring of problems of economic development of the country's security is cognitive;
- there is a need for decomposition of components and threats in the process of strategic planning of the country's economic security;
- the uneven development of economic security and its components in Ukraine and the EU member states determines the choice of the cluster of countries for integration;
- corruption is the main destructive factor that reduces the level of economic security of Ukraine.

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Markina I., Aranchiy V., Safonov Y., Zhylinska O. and other. Security of the XXI century: national and geopolitical aspects: [collective monograph] / in edition I. Markina. – Prague. – Nemoros s.r.o. – 2019. – Czech Republic. — 500 p.

Scientific publication

**Security of the XXI century:
national and geopolitical aspects**

Collective monograph

In edition I. Markina, Doctor of Sciences (Economics), Professor

English language

Passed for printing 15.02.2019

Circulation 500 copies

ISBN 978-617-673-845-9

Nemoros s.r.o.,
Rubna 716/24, 110 00, Prague 1
Czech Republic, 2019