

## Structural transformation of the national economy in the context of Euro-regional cooperation

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**STRUCTURAL TRANSFORMATION  
OF THE NATIONAL ECONOMY  
IN THE CONTEXT  
OF EURO-REGIONAL COOPERATION**

**2018**

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# INTRODUCTION

The structural transformation of the national economy in the context of Euroregional cooperation is one of the ways of identifying business, which combines social and economic goals. Therefore, the effective use of scientific potential for solving the priority tasks of the development of the national economy, which in modern conditions functions on market principles and requires constant improvement, makes the search for new ways of development and active use of innovations more intensive with its social orientation. The main purpose of this monograph is to substantiate the structural and institutional transformation of the economy to ensure its strategic development, which is connected with the modification of the mechanisms of cyclical economic development.

The content of the monograph consists of the actual achievements of the authors. In this regard, the sections that are presented in this study examined the development of national economic sectors. In the first chapter the principles of transformation of the national economy in the system of world economic relations are considered. In the second chapter – the problems and prospects of innovation and investment development of the national economy in the conditions of European integration concerning the issues of ecologization of recreational land use in the conditions of regional eurointegration of Ukraine, development of horticulture and viticulture in the context of European integration, the regional dimension.

The third and fourth sections are devoted to the transformation of the socio-economic system in the context of European integration and the issues of the strategy for the development of Euro-regional cooperation. The content of the sections has a diverse level of scientific achievements of the authors, therefore it is promising in further studies.

In connection with the foregoing, the monograph "Structural transformation of the national economy in the context of Euroregional cooperation" is addressed to the audience, mainly scientists and practitioners working in this field, which will facilitate the transformation processes of the national economy in the direction of its stabilization, solving social problems.



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# SECTION I.

## TRANSFORMATION OF THE NATIONAL ECONOMY IN THE SYSTEM OF WORLD ECONOMIC CONNECTIONS

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## TRANSFORMATION OF INTEGRATION PROCESSES AND MANAGEMENT BY DEVELOPMENT OF THE ELECTRONIC SERVICES MARKET

### Introduction

In the conditions of intensification of economic integration in Ukraine, structural changes also appear in the field of electronic services. The substantiation of modern scientific positions and methodical approaches to solving the problem of increasing the efficiency of electronic services markets, which corresponds to the real interests of business, state and society, is due to objective prerequisites and factors. Namely, the need for in-depth study of the transformational processes of innovation activity and investment intensification in the telecommunications market as an industry with an infrastructure component due to its convergent development and strengthening of the institutional and legal basis in the regulation of the processes of cooperation and integration of market players.



In particular, the permanent change in the sectoral structure, forms of economic activity and the methods of organizing cooperation require analysis of the transformation of integration processes and management of the development of the economy of electronic services.

The prerequisite for the gradual growth of economic activity and competition in domestic markets is the development of e-services, which is constantly outlined by measures in state policy and institutional provision. The works of Vinslav Y., Kleiner G., Patyurel R. are devoted to the analysis of the development of integration processes as subjects of sectoral competition, including the works of Berkman L., Granaturov V., Orlov V., Reimana L. on the telecommunications market. Nevertheless, the theoretical and methodological principles of transformation of integration processes and management of the development of the market of electronic services remain insufficiently studied.

There is insufficient theoretical and methodological level of research into the problems of transformation of integration processes and management of the development of the market of electronic services. The urgency of the topic is determined by the search for sources of electronic services development, as an important factor in improving the efficiency of the functioning of high-tech industries.

## **1. Theoretical foundations of the formation and development of integration processes in the organization of entrepreneurial activity**

The dynamic development of the branches of social sciences contributed to a change in the understanding of integration processes with the emergence of new forms and models of entrepreneurial activity. Integration processes are one of the key elements that allow us to understand modern social and business processes. However, at the same time, they have manifestations in a variety of sciences and branches of knowledge, like economics, politics, management, semiotics, and others. [1].

The theoretical explanations of the network organization differ in terms of terminology depending on the goals and areas of research, coordination mechanisms, which include the creation of, for example, joint ventures on the basis of informal communication or complex integration structures, for example, mergers and acquisitions. For instance, they predict the creation of joint ventures that are based on informal communication or complex integration structures on the

example of mergers and acquisitions agreements. Significant contribution to the explanation of integration processes is the way to regulate the interdependence between the parties, which draws the attention of H. Torelli [25].

Oliver Williamson, the representative of neo- institutionalism, is interpreted this form of organization as an alternative to the market and hierarchies, to some extent, but with the combination of elements as one and the other. To these parameters of the level of uncertainty and specificity of assets, Williamson proposed to use the frequency of transactions on the basis of which the predominance of the corresponding form of integration processes was determined [15].

Williamson argues that the choice of the corresponding form of integration processes is related to the property of transactions since the increase in their costs prevails in market transactions because of greater mutual adaptation in connection with the growth of the risk and threat of opportunistic treatment. However, they are growing less in intra-firm transactions (hierarchy).

The transformation of the industrial society into the post-industrial contributed to the transition from bureaucratic relations, as a dominant form, to social networks, the structure of which is a system with a decentralized hierarchy and minimization of formal relations.

The basis of such a society is information communications, in particular the Internet, which due to its interactivity changes the localization of subjects of management [21].

As evidenced by theory and practice, the emergence of integration structures is the result of the natural evolution of market space. Different actors can act in this space and the main institutional sectors like science, business and the state can interact there [14]. Support for modern theories of the development of integration structures on the interaction of the three institutional sectors is partly reflected in the legislative field of activity of enterprises. According to research by Henry Ickovitsa, such a format of relations is already inadequate. It requires the convergence and interaction of science, business and state simultaneously (triple spiral) [2]. Areas of co-operation, where the functions of these sectors become interchangeable (Figure 1), produce the emergence of the integral effect and the synergy of competitive advantages, which is confirmed in the theory of M. Porter [12].

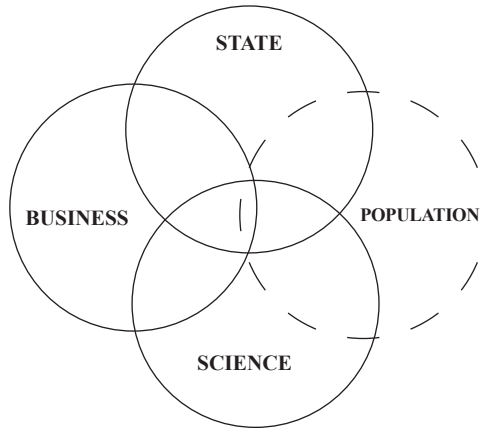


Figure 1. Intersectoral connections in economic systems.

The model of the Itskovits theory is based on the concept of interaction between technological progress and the market. It is conditioned by the effectiveness of the institutional structure with an impact on economic development. Such process is reflected in the evolutionary theory and theory of political economy, respectively, and corresponds to the model of the "double helix", since the links between business and science is inferior. The trajectory of innovation development of the country as a whole is ensured by the integration of these elements in the "triple helix". The theory of a triple spiral corresponds to an institutional approach that allows taking into account the specifics of the socio-cultural, geopolitical, resource, regulatory and legal status of the economic system as a model of strategic integration.

Structural imbalance of intersectoral interactions between science and business is also manifested in the state support of vertically integrated corporations, whose activities eventually lead to monopolization or collective dominance in the branches of the national economy. In such conditions, the limited (linear) nature of innovation processes does not contribute to the formation of network structures. On the other hand, their development requires a functional interconnection in the interactive mode of all participants. From the beginning of the XXI century, the concept of G. Iskovitsa was reformatted into a model of the fourth spiral, which includes public [22], users / consumers [23], due to their critical role in the creation and distribution of new wealth and values in which feedback and synergy effects are achieved.

The last, synergistic effect occurs when the interaction of market actors on the basis of cooperation and the exclusion of opportunistic behavior of participants in the network. It is also explained by the cost savings or reduced transaction costs. In this case, the theory of synergism is characterized by the disclosure of the essence and the assessment of the effectiveness of the development of networking enterprise as the most adequate to modern processes in the external environment. According to Haken [16] and Canther [4] it contributes to the possibility of achieving a synergistic effect through a combination of activities.

The factor that caused the development of economic relations is the change in market behavior of relations was the change in the market behavior of the subjects. In the conditions of the information society was the concentration of activities in relatively specialized areas and customer orientation, which facilitates the process of outsourcing interaction of business structures in the industries. With further deepening of specialization processes of interaction of business structures can reduce transaction costs.

In subsequent studies based on the idea of J. Schumpeter, the mechanism of innovation in business structures is revealed. The effectiveness of which is disclosed in the works of R. Lester and M. Piore through the formation of the configuration of their connections within the business association, which allows to distribute the risks of developing and introducing innovations among all parties.

## **2. Theoretical and economic analysis of the integration of entrepreneurial activity in the context of informational data processing communications development**

The vector of development of the modern economy is directed towards the activation and improvement of integration interactions. It produces the transformational processes associated with the transition to a market type of coordination of business entities. The initiation of reforms in the direction of deregulation of entrepreneurship in the field of economic activity, with the transition to its innovation development at all levels of management using infocommunication technologies, is a characteristic feature and basis of modern economic growth.

The search and comprehension of new concepts and methods of innovation development anticipates the leveling of negative trends of state regulation of industries with the change of the raw material economy to a more high-tech,

science-intensive and service which has long been realized at the state-political level [3, p. 5-6].

According to Christian Fuchs, the economic development of modern society in the era of accelerating information and technological progress does not correspond to the principles of classical theory. It is based on the principles of self-organization and transformation of the role of the company and the consumer in building relations between them [20]. The formation of a client-oriented strategy within the framework of the development of entrepreneurial activity in the conditions of information and technological progress is also noted by a number of scientists such as R. Lavrents, N. Wagner, etc. [8]. On the other hand, modern technologies, telecommunication and information networks promote technological possibilities of product adaptation on the basis of internationalization of entrepreneurship and the emergence of transnational competition in the world market.

In addition to the noted factors, in our opinion, it is necessary to highlight the factors of market development, which are also connected with the use of modern telecommunications and information technologies, the development of which leads to a transformation of the structure of the economy.

The problem of finding approaches to effective management and regulation of entrepreneurship with the growing informatization of socio-economic and political activity, increased attention to the issues of socio-economic consequences of technological development and management of NTPs for the development of the national economy and the transformation of its infrastructure [18].

Changing the influence of infocommunication through the change in the forms and methods of information interaction can lead to a restructuring of socio-economic relations and, as a consequence of the structure of society in general [3, p. 7; 11]. At the present stage of the development of the world economy, entrepreneurial networks, mostly highly integrated financial and industrial groups, are the basis for economic development (not only at the regional but also national level) and a significant increase in innovation activity and financing of industry in the EU and the US (up to 60% GDP). The intensive development of electronic communications will contribute to the growth of economic asymmetry not only on the micro and macro level, but also on the transnational one. As a result, the integration of some of the economic sectors of highly developed countries within the global economic system is based on the development of telecommunications services markets [5, 10].

In modern economic activity, information activity is an incentive for the development of socio-economic institutions, and the transformation of information exchange systems in connection with scientific and technological progress in recent decades has defined integration as a significant component in enhancing the competitiveness of high-tech industries and its subjects. As noted in the studies [6], one of the main catalysts of the above-mentioned changes was the active development of the sphere of infocommunications, which is the basis of telecommunication services markets, which, in turn, led to the formation of a new electronic environment and the formation of appropriate relations. The analysis of managerial changes shows that integration forms are an organizational perspective, which is realized on the basis of the use of information and communication (infocommunication) technologies and the combination of innovations, which will increase the competitiveness and effectiveness of socio-economic activity.

It should be emphasized that the formation and development of entrepreneurial structures and the system of relations between its participants is connected with the dynamic formation of telecommunications services markets and their influence on the self-development of socio-economic systems.

The widespread use of infocommunications in the branch markets leads to qualitative changes in the structure of the national economy and increases the importance of scientific and technological progress in the development of competition and partnership. In recent years, many countries have supported the national policy of forming a modern information space on the basis of a liberal approach to the formation of a market economy infrastructure, including and the dynamic development of telecommunications. Infocommunication is the infrastructure of the organization of most modern markets, which simultaneously serve as an innovative engine of its development, but at the present stage of development of society depends on the institutional conditions for the support of integration (for increasing investment and innovation activity in the markets) of business entities and the formation of new spheres of the economy, such like ecommerce.

In turn, the system of financial and economic relations in such spheres of the economy based on information technologies is defined as a market or network, depending on the concrete situation regarding the domination in the relations of one of the types.

Nevertheless, it is worth noting the negative effects of the integration of modern infocommunications that transform the basic foundations of the market

and some of the properties of the economy [19]: exclusiveness (the possibility of using anti-competitive methods of struggle decreases), transparency (the dependence of participants during transactions from long-term cooperation), competitiveness (intensified effect of network effect effect). But despite these effects, the development of telecommunications services markets and infocommunication technologies allows us to consider the use of the new entity for the modernization of economic structures and to note the following benefits:

1. There is a slight decrease in the transaction costs of market entities (enterprises and the state) and the acceleration of information exchanges between them.

2. Under the influence of modern telecommunication and innovative technologies, the transformation of relations in the direction of cooperation takes place, as well as long-term cooperation between the subjects of entrepreneurial activity and consumers.

3. Implementation of infocommunications in related areas (financial and banking sector, etc.) is naturally reflected in the strategy of expanding the range of services in the virtual environment. In modern conditions, the process of dynamic development of high-tech markets and telecommunications and information technology, necessitates the transition to new approaches to the regulation of financial and economic relations. However, the development of the telecommunications sector leads to the emergence of new forms of interaction of market actors, but dependent not only on the technical level, but also on the institutional structures that determine the rules of such interactions.

### **3. Transformation of management of the development of the economy of electronic services**

According to Hans Vutrich, the digitalization and development of e-business [17] serve as a basis for simulating real processes in the electronic space, but such an organizational form is temporary and voluntary, which, through optimization of the system of economic relations and minimization of costs, raises the competitiveness of its products of all participants. Firstly, due to the expansion of virtualization processes in economic activity, costs are minimized, and secondly, it helps the firm to successfully determine the potential and capabilities of interactive activities with the allocation of three separate but interrelated vectors (see Table 1).

Table 1. Vectors and characteristics of digitization and virtualization, [26]

<i>Characteristics</i>	<i>Stage 1</i>	<i>Stage 2</i>	<i>Stage 3</i>
Buyer Interaction (Virtual Meeting)	Remote control products and services	Dynamic interaction with requests from buyers	Association
Asset structure	Modules	Interdependence of processes	Resource connection
Target location	Task items	Organization	Interorganizational
Required performance	Work efficiency (ROI)	Economic Value Added (EVA)	Duration (MVA)

Based on the conceptual provisions of a number of papers [9, 24, 26], the virtual enterprise was defined by other terms and as a network structure, characterized by the formation of competencies of the enterprise through the constant selection of the most qualified partners to achieve a specific goal. In general, the process of digitalisation serves as an indicator of increasing the competence of market actors in the relevant market, but their development is characterized by a significant lag of fundamental scientific research from practical experience. In our opinion, activation of virtualization has, in domestic conditions, increased the level of investment attractiveness of Ukraine. It has provided an opportunity to obtain significant economic effect due to access to the world market of goods and services.

The main preconditions for the development of partnerships and the mechanism for coordinating the processes of managing the development of the economy of electronic services were: globalization (complication of the business environment) and specialization (deepening of competencies). They produce the unification and standardization of the market environment, the instability of the consumer's needs, the state of the market changes and the intellectualization of production, the reduction of the term for the withdrawal of innovations on the market and the reduction of transaction costs, which necessitates the transformation of the regulatory policy of the state in the field of economic activity.

The motivation for the development of the economy of electronic services was the growth and the desire to increase the synergy effect on the part of its participants (state, business, population), as well as compensation of fluctuations in market conditions due to diversification. However, current economic



realities indicate in most markets the strengthening of ownership concentration through the integration of enterprises, in the vast majority of the vertical (the motive of a monopoly), due to the properties of the institutional environment of the country. These factors, coupled with a low level of social (institutional) trust, in modern conditions hamper the development of entrepreneurship, characterized by integration agreements with the formation of large vertically-integrated structures [10].

The dynamic trends of globalization and the creation of a single information space have contributed to the emergence and development of transborder electronic services as the main direction in the development of IT and telecommunications in the last decade and, accordingly, information and telecommunication infrastructure. The noted features of convergence and parallel processes of innovative developments lead to the expansion of the boundaries of cross-border electronic services.

The convergent nature of the development of informatization promotes the emergence of essential properties of transboundary electronic services like multiservice, multimedia, mobility, intellectuality, interactivity.

Organizational and economic peculiarities of electronic services are determined, on the one hand, by the main features of telecommunications. On the other, they are determined by the participation of several market players in the process of information transfer. Convergence of the telecommunications market with other industries, as stipulated in the world and national economy, is shaped by the formation of new technological developments and the dynamic development of the information society, which changes the priorities of the national economy with increasing influence as it is globalized, in support of this, as already noted above.

The electronic services market is a modern form of society's infrastructure, developed in accordance with the technical and economic principles, and is subject to the general laws of development, conditioned primarily by the state of infocommunications in the world, which can be represented by the relevant development indicators in the UNDP methodology. Development index in a separate direction is defined as:

$$Ik_P = \frac{I_r - I_{\min}}{I_{\max} - I_{\min}} = \frac{1}{n} \sum_{i=1}^n \varphi_i Ik_{Pi} , \quad (1)$$

where  $I_k$  – coefficient of development in the interval  $I_k = [0;1]$ ;  $I_r, I_{\max}, I_{\min}$  – indicators of the level of development of telecommunications. Finally, each value can be considered as the coordinate of the Kr vector in the  $i$ -dimensional Euclidean space. And then, as a development criterion, you can take the length of this vector:

$$I_{k_p} = \left( \frac{1}{n} \sum_{i=1}^n I_{k_{pi}}^2 \right)^{1/2}, \quad (2)$$

As parameters of the development of the market of electronic services included: telephone density (fixed and mobile communications), Internet density, density of personal computers and broadband density, [13]:

$$A_j = \sqrt{\frac{1}{n} \sum_{i=1}^n \alpha_{ij}^2} \quad (3)$$

where  $\alpha_{ij}$  –  $i$ -th parameter of the  $j$ -th country, where the number of parameters "and" varies from 1 to "n", and the number of countries "j" varies from "1" to "N". The length of the infocommunication vector determines the rank of the  $j$ -th country: the higher, the higher the rank. The highest rank, equal to one, is assigned to the country with the longest infocommunicative vector.

The above recommendations [13] disclose the relationship between the development of the market for electronic services or its insufficiency, primarily due to economic gaps and the specific features of the nature of the electronic services market, which in general can be considered as an economic sector and a factor of innovation transformation.

Transformational preconditions for the emergence of the electronic services market as a set of fixed and mobile segments, access to the Internet, video and data transmission, as well as television programs. On the other hand, infrastructure development both the communications industry and the sphere of infocommunications in general stimulates GDP growth by increasing the penetration of information and telecommunication services.

The development of the electronic services market is characterized by an increase in the level of per capita GDP from the share of services in the country's GDP. An analysis of the results of the research conducted by the Interna-

tional Telecommunication Union (ITU) has shown a tendency to increase from 0.6% to 10% of GDP, with an increase in the number of mobile subscribers and broadband access services users (SCS). A comparative study of the indicators of individual countries confirms the relationship between sustainable development of the national economy and the state of telecommunication services markets, primarily the growth of their share in GDP (Table 2).

Table 2. The share of the electronic services market, billion euros

<i>The region</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2019*</i>
Europe	292	275	270	268	268	277
Asia	334	341	350	361	372	404
North America	261	283	287	284	285	294
Latin America	102	97	97	100	102	111
Africa	85	92	95	99	102	109

Source: <https://www.statista.com>. \* forecast

Technological changes in recent years have allowed the electronic services market to increase its share both in GDP as a whole and in services. The dynamics of the development of the market for electronic services is determined by the fact that under conditions of effective business operation, which depends on timely relevant information and the development of information technology, the market transformation takes place e-services. Therefore, the rapid changes in the market of electronic services are connected with integration processes with other markets, and this leads to the creation of a global information and financial sector. Electronic services have become an independent segment in both world and domestic markets, and their realization by business entities.

In-Stat / MDR analytical research on consumer preferences in the mobile and fixed-line services markets has shown that users find the best balance between mobile and fixed-line communications, as the consumption process is driven by the motives and consumer choice factors, depending on the values of a specific group of consumers.

The active development of the electronic services market has led to the introduction of the Internet of Things (IoT, Internet of Things) in various sectors of the national economy.

In general, the term "Internet" refers to a set of equipment and devices within the framework of their operation on the basis of telecommunication infrastructure and available communication channels provided by operators and telecommunication providers, with the global identification of each object and the transaction of their data through a network (global or Internet) [11].

Operators and telecommunication providers play an important role in the implementation and development of Internet-based services, since, in addition to equipment manufacturers and equipment / devices for this segment, telecommunications market operators provide the provision of communication channels and the extension of these services on the basis of mobile broadband access (4G and 5G), which provides the implementation of the most sought after Internet services.

Statistics show the market size of the global Internet services market (IoT) from 2009 to 2016 with projections from 2017 to 2019. It is projected that the global IoT market will almost double from 2017 to 2019, which will be due to the growth of users of Internet access services and the number of connected devices to it.

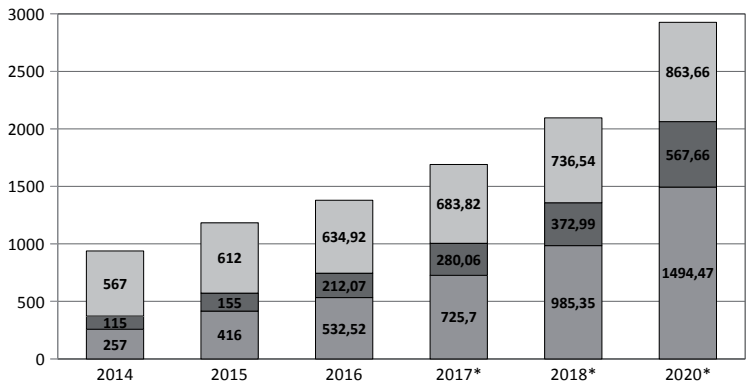


Figure 2. Volumes of the world market of Internet services, billion dollars.  
Source: <https://www.statista.com>

The main segments of the Internet services market in 2017 are consumer electronics (60%) and automotive (20%), construction (7%). Here are the main areas of Internet usage (Table 1).

Table 3. Areas of application of Internet things

<i>Object</i>	<i>Characteristic</i>
Staff (person)	Monitoring and maintaining health, productivity analysis
Trade	Self-service
Apartment	Energy Management and Safety
Transport	Traffic analysis, navigation, routing

Internet services offer significant benefits to consumers (reducing costs for goods and services, increasing convenience, and saving time), and for enterprises it will create a competitive advantage (reducing operating costs, expanding the client base and increasing assets) [12].

The potential of the Internet of things contributes to changes in the way enterprises and people interact with the outside environment, to improve the control and management of objects in the physical environment in an electronic form, which optimizes business processes, improves the quality of decision-making, improves the quality of life of nesting. The development of the Internet services market will change the basis of competition, which will change the business models of telecommunications entities, which, in the conditions of functioning of the economy, needs further intensification of the deployment of next-generation networks, support of population connections to the Internet. Therefore, it is advisable to develop a state policy for the development of the Internet services market, since IoT applications should be approved by the regulatory authorities.

The market for electronic services of the national economy occupies a special place in the modern market economy, as its development has directly, in recent decades, influenced changes in production in traditional industries. The increase of its role is due, on the one hand, to the change of organizational forms in modern economic systems connected with globalization and the complex of information and technological and managerial innovations, and on the other hand, the dynamics of the external environment, which causes the use of new methods of competitive struggle, since processes Convergence has enabled subscribers to access all types of communications and networks [14]. In addition, the complexity of continuous monitoring of market conditions and socio-economic situation in the country affects the formation and transformation of

financial and economic relations related to the search for reserves for improving the efficiency and development of market players.

## Conclusion

At the theoretical and conceptual level, the content is disclosed and the essence of economic relations in the process of integration processes is determined from the point of view of socio-institutional methodology. The methodological principles of the classification of theoretical constructions of the development of integration processes taking into account the influence on their configuration of STP and innovation activity, strengthening of integration processes and transnationalization are investigated.

Socio-economic reforms and structural transformations under the influence of scientific and technological progress and international integration of the economy have witnessed the development of integration processes and the market of electronic services. The result of these processes was the formation of steady demand for electronic services with a gradual increase in their share in operating costs and the growth of innovative capabilities of all sectors of the economy.

The transition to a postindustrial society based on the intensification of telecommunications and the growth of the use of information technology is determined by the product of their integration. Exactly, by the electronic services.

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## **ROLE OF THE COUNTRY'S IMAGE IN IMPROVING INVESTMENT ATTRACTIVENESS OF UKRAINE**

### **Introduction**

Attraction of investments is a vital element for the effective functioning and development of a country's economy, therefore, research of factors of investment attractiveness, among which one of the most important is the country's image, and the possibilities to its improvement is paramount for any country. The article outlines image of the country as a factor of investment attractiveness. The work also examines present state and features of Ukraine's image. It provides a comparative description of the positions of Ukraine and the "new" countries of the EU in the international economic and credit ratings together with the conclusions on impact of countries' joining the EU on their rankings. The article provides SWOT-analysis of Ukraine's investment attractiveness and systematizes the main recommendations for Ukraine's image improvement.

"The reputation of the state is most precisely determined by the amount it is able to borrow." – W. Churchill

"Establish a reputation which will later work in your favour." – J. Rockefeller

Reputation, image, brand ... These concepts are paid much attention in recent years: the media and scientific circles claim that this is an extremely important competitive resource, without the correct and apposite forming of which it is impossible to imagine the modern successful and prosperous state.

At present, the study of this issue is extremely relevant for any country, and especially for countries with a transitory economy, including Ukraine. The attitude of the world community and its trust, the country's attractiveness for foreign investors, the development of tourism and the opportunities for socio-

economic growth – all this depends on the image of the country and its reputation. The issue of attracting foreign investments deserves a special attention, as they encourage introduction of the latest technologies, expansion of production, creation of new jobs, an increase of household incomes, thus creating a multiplier effect.

The importance of the "image factor" in shaping the international reputation of Ukraine is beyond doubt, especially when it is necessary to prove itself as a worthy European economic partner. Unfortunately, Ukraine is facing serious problems in this field now: the weaknesses and threats are distracting attention and preventing the development of strengths and opportunities. In an age when information and virtual factors such as image, brand and reputation are one of the main values, when even the state itself becomes a brand, in my opinion, it is important to pay more attention to the formation of a positive image of Ukraine. It is good that this image can be created, and Ukraine has many prerequisites for this and, together with the positive image, it's possible to form a corresponding reputation. In its turn, a positive image will prompt investors to consider investment in Ukraine's economy as feasible and efficient.

## **1. Image of the country as a factor of investment attractiveness**

Nowadays, reputation, image and brand of a country are an important intangible asset to its economy. The reputation of the country is a public opinion about it, as well as a steady perception. Image is also a perception of the public, a certain socio-psychological stereotype. The image reflects more emotional perception and may consist of no direct experience of interaction with the country, while reputation is formed on the basis of reliable knowledge and evaluation, that is, it provides a rational, analytical approach, often backed up by its own experience of interaction.

Individual characteristics of image and reputation are often transformed into a brand – a set of unique qualities reflecting exceptional characteristics that are widely known and expressed in a concrete character in a public vision.

Reputation and brand are more durable mental structures in comparison with the image, which are characterized by a greater length of their formation in time, and focus on building a long-term perception of the country.

Although reputation and brand of the country, in my opinion, are more fundamental categories, it is expedient to consider image as a factor of the for-

mation of investment attractiveness. Hence image is dynamic and variable construction, shorter in time during formation, it is easier to manage it, i.e. it is easier to change the image of the country at first.

The concept of "image" is relatively new in science, so there doesn't exist a single definition that contains all its aspects. In modern interpretation, the concept of "image" emerged in the 60s of the 20th century, when foreign economists engaged in entrepreneurship began to work over this category. American economist K. Boulding was the first to introduce the concept of "image". He proved the need for its application for business success. He understood image as a certain behavioral stereotype that affects the actions of an individual, a group of people or a nation. Later this concept was used in politics, culture, sports, social and political psychology, etc. [1].

Despite the differences in the interpretation of the "image" concept by various scholars, summing up the most commonly used definitions, we can come to the conclusion that the majority think that the image, on the one hand, is a means of psychological influence on the individual, group and mass consciousness, and on the other – acts as a certain socio-psychological stereotype.

Image of the country is especially important for those countries whose economies are in the process of transformation. First of all, according to many scholars, the country needs a positive image to attract investments that would contribute to structural transformations in the socio-economic development of the country. Thus, the image is a factor of investment attractiveness.

Investment attractiveness of the country acts as both the image of the country in the world investment capital movement and its competitive position. So it is a complex of various factors that determine the expediency of investing in a particular state. Two main directions of research can be distinguished:

- investment attractiveness of the country as its ability to accept and effectively use investment capital, guaranteeing not only its timely return, but also obtaining a sufficient level of profit in accordance with existing risks;
- investment attractiveness of the country as a set of financial, economic, socio-cultural, political, institutional and legal conditions that ensure the investment process, determine the degree of risk of investment and promote investment activity of investors.

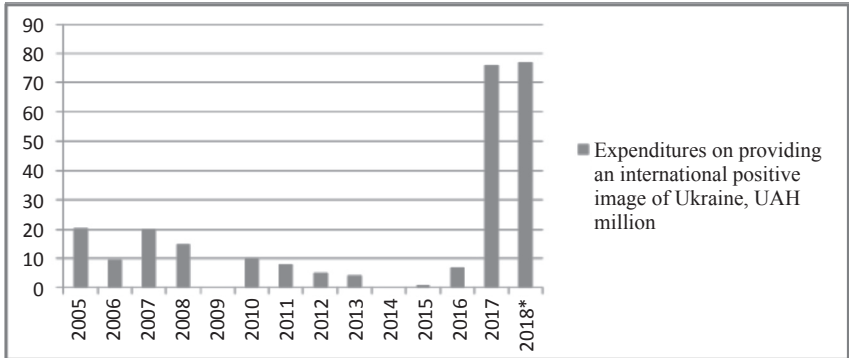
Assessment of investment attractiveness is a combination of two aspects: a subjective view of a potential investor and an objective assessment based on statistical data.

A potential investor assessing the prospects and risks of investing in the development of a country's economy in order to generate income, examines such factors as the country's internal political stability, the established legal and regulatory framework for entrepreneurial and investment activity, the nature and rate of economic growth, the state of the stock market, financial and credit system, capacity and solvency of the domestic market, natural resources, socio-cultural factors of the country and, quite often, appeals to international economic credit ratings.

The image of Ukraine is its image as a state in the public eyes. The Ukrainian image on the international scene has internal and external aspects and is highly dependent on its economic, political and social development. According to the experience of European countries, development and support in formation of a positive image of the country is very important, that is confirmed by the existence in the European Union of special institutions dealing with this issue – these include national development agencies, innovation centers, technopolises and technology parks, commercial and industrial chambers, charitable foundations and others.

There are state programs and legal acts on the formation of a positive image of the state in Ukraine, among them: the State Program for ensuring a positive international image of Ukraine for 2003-2006, the Order of the Cabinet of Ministers of Ukraine On Approval of the Program "Investment Image of Ukraine" (since 2002), The Concept of the State Target Program for the Formation of a Positive International Image of Ukraine for 2008-2011, the draft Concept of the State Target Program for the Formation of a Positive International Image of Ukraine for 2013-2015 is freely available on the Internet (but it has not been approved yet). Today there is no specific program on this issue, but in order to form and strengthen Ukraine's positive image in 2017, the Concept of the State Program for Cooperation with Foreign Ukrainians for 2017-2020 was approved, which will help to use the potential of the Ukrainian diaspora in this area.

The image budget in Ukraine, in comparison with other countries has been insignificant for many years. Developed countries spend a lot of money to promote the image, for example, the US – about \$ 2 billion annually, the United Kingdom and Germany – about \$ 1 billion. The world's leader is China, spending more than \$ 6 billion on its image. Expenditures from the state budget to ensure the international positive image of Ukraine are shown in Figure 1.



\* Draft budget

Figure 1. Expenditures on providing an international positive image of Ukraine, UAH million [2,3]

There has been a significant increase in expenditures to ensure the international positive image of Ukraine in recent years, which, of course, is a positive fact. Also in 2017, for the first time ever, the Cabinet of Ministers decided to establish a "Ukrainian Institute" whose purpose is to popularize Ukraine abroad and promote its image in the world, support Ukrainian language and culture, as well as the presentation of the country's tourism and economic potential, using the example of the Goethe-Institut, the Polish Institute, the British Council, the French Institute and others.

A variety of non-governmental organizations and foundations play a significant role in ensuring the international positive image of Ukraine. For example, the public organization The EU-Ukraine Business Council (its aim is to promote trade and investment development between European countries and Ukraine, create favorable conditions for solving market problems and legislative difficulties, on the one hand, for Ukrainian business in the EU, on the other – for European business in Ukraine etc.), the European Business Association (the goal is to establish a dialogue between the authorities of Ukraine and European companies for cooperation on creating favorable business conditions and for the attraction of foreign direct investment in Ukrainian economy). Thus, the formation and providing a positive image, as well as its management, can increase business activity, improve the investment attractiveness of the country and facilitate the flow of foreign investment.

## 2. Ukraine in international economic and credit ratings

International economic and credit ratings are an important factor in forming Ukraine's image among the international community, as well as important indicators for international partners and strategic investors. They are calculated on the basis of indexes that reflect the socio-economic, legal and other situations in the country and help to determine the degree of investment risk. The rankings are made up of a large number of scientists, organizations, funds, agencies etc, so investors can rely on the results of their work while making decisions about investing their capital.

When entering a new market, sometimes large investors order their own research, but there are indexes and rankings that are trusted by most investors: ranking published by the World Economic Forum based on the Global Competitiveness Index; ranking of countries based on attractiveness of doing there business published by the World Bank; Index of Economic Freedom, issued by the American research center The Heritage Foundation; the FDI Regulatory Restrictiveness Index by the Organisation for Economic Co-operation and Development (OECD); Corruption Perceptions Index – annual ranking by Transparency International; The International Property Rights Index of the Property Rights Alliance; reputation rating of countries (The Country RepTrak) developed by Reputation Institute. In addition, when investigating the investment attractiveness of Ukraine, it is worth paying attention to the investment attractiveness index calculated by the European Business Association.

In my view, it is advisable to consider not only the position of Ukraine in the above-mentioned ratings in the dynamics, but also the ratings of EU countries that have joined the union relatively recently. For our research we chose Croatia, which was the last to join the EU (in 2013), Romania joined in 2007, and Poland (became an EU member in 2004). For Ukraine, as for the country on the path to European integration, experience of these countries are interesting and useful. The data are systematized in Table 1.

The Global Competitiveness Index is a study that provides the most complete assessment of the national competitiveness of countries around the world, and is accompanied by a ranking of countries that gives an idea of the factors of their productivity and prosperity. The year when Poland became a member country of the EU, its position in the ranking got worse, but in subsequent years, the position was restored, and then it improved. A similar situation occurred in

Romania (tabl.1). Croatia improved its ranking in the year of joining the union, in the next 2 years its position slightly deteriorated, then became better, but it has not yet managed to achieve the results that it had in pre-crisis years.

The position of Ukraine in the study of global competitiveness is constantly changing. During the study period, it achieved the best results in 2006 (the 69th place), 2012 can also be considered successful, when it occupied the 73rd place leaving behind Croatia (the 81st place) and Romania (the 78th place) [4].

The first Doing Business rating was published in 2003 and covered 5 sets of indicators for 133 countries. Over time, the methodology has changed, and this year's rating covers 11 sets of indicators in 190 countries [5]. The Doing Business project is being finalized through feedback from representatives of governments, academics, practitioners and reviewers. The data for 2006 are not comparable with the data of the following years due to the change of methodology, therefore are not given in the table 1.

Unfortunately, the impact of Poland's joining the EU on the ranking position can not be traced, due to the differences in the methodology before 2006 with the present.

As for Romania, the country has significantly improved its position in the first 3 years after joining the EU (from the 71 to the 45 positions), but then the ranking was constantly declining till 2014, and in the last 2 years there has been not only recovery but also improvement. Croatia's ranking fell in 2013-2014, but in 2015 it improved as much as twice. Ukraine has gradually risen in the rating over the last 5 years. The table shows that the overall trend for the countries is to improve their rating over the past three years.

The Index of economic freedom is a combined indicator and an accompanying rating that measures the level of economic freedom. Experts define economic freedom as "the lack of government intervention or obstruction of the production, distribution and consumption of goods and services, except for the necessary protection for citizens and the maintenance of freedom as such". The analysis of economic freedom is conducted annually, starting in 1995 [6].

The index covers 12 freedoms – from property rights to financial freedom – and is currently being conducted in 186 countries. For each indicator countries are scoring in points from 0 to 100. The more points, the more highly estimated the level of economic freedom in the country according to the criterion. At the final calculation of the Index, the figures are summed up [6]. According to the ranking methodology in 2017, Poland and Romania are moderately free (posi-

tion 45th and 39th respectively). Croatia in this rating is classified as a country with mostly unfree economy – place 95th. Ukraine in 2017 took 166th place and was classified as a country with repressed economy, i.e. with a strong government intervention.

Joining the European Union positively influenced the Index of economic freedom of Poland and Romania. Croatian positions improved a few years before and two years after joining the EU, but in the past two years, the index has slightly decreased.

FDI Regulatory Restrictiveness Index determines legislative restrictions on foreign direct investment in 62 countries across 22 economic sectors [7]. Restrictions are evaluated on a 0 (open) to 1 (closed) scale. The overall restrictiveness index is the average of sectoral scores. The discriminatory nature of measures, i.e. when they apply to foreign investors only, is the central criterion for scoring a measure. The FDI Index is not a full measure of a country's investment climate. There are a number of other factors, including how FDI rules are implemented. Nevertheless, FDI rules may be critical important factors for the attractiveness of the country for foreign investors [7].

After joining the EU, Poland has weakened the restrictions on FDI inflows and since 2010 its rate remains stable – 0.072. There was no research on Romania's regulatory restrictions until its joining the Union, and since 2010, when it was included in the ranking, its index is unchanged – 0.008, which indicates slight regulatory restrictions on FDI. Croatia is not considered in this study. As for Ukraine, from 2010 to 2015, the index has slightly decreased, however, in 2016, Ukraine has become one of the three countries that has tightened restrictions on FDI inflow (3 other countries weakened the requirements, others did not change). The Corruption Perceptions Index estimates and classifies countries based on how corrupt the state sector is.



Table 1. Comparative characteristic of the positions of the studied countries in international economic ratings [4-10]

Year	2002	2003	2004	2005	2006	2007	2008	2009
<b>The Global Competitiveness Index (rating position)</b>								
Poland	51	45	60	51	45	51	53	46
Romania	75	66	63	67	73	74	68	64
Croatia	58	58	61	62	56	57	61	72
Ukraine	77	84	86	84	69	73	72	82
<b>Doing Business (rating position)</b>								
Poland	Another method of calculation				74	75	74	72
Romania					71	49	48	45
Croatia					134	124	97	110
Ukraine					132	128	139	146
<b>Index of Economic Freedom</b>								
Poland	65,0	61,8	58,7	59,6	59,3	58,1	60,3	60,3
Romania	48,7	50,6	50,0	52,1	58,2	61,2	61,7	63,2
Croatia	51,1	53,3	53,1	51,9	53,6	53,4	54,1	55,1
Ukraine	48,2	51,1	53,7	55,8	54,4	51,5	51,0	48,8
<b>FDI Regulatory Restrictiveness Index (Total)</b>								
Poland	n/d	0,083	n/d	n/d	0,076	n/d	n/d	n/d
Romania	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Croatia	not included in the study							
Ukraine	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
<b>Corruption Perceptions Index (rating position)</b>								
Poland	45	64	67	70	61	61	58	49
Romania	77	83	87	85	84	39	47	46
Croatia	51	59	67	70	69	64	62	66
Ukraine	85	106	122	107	99	118	134	146
<b>The International Property Rights Index (rating position)</b>								
Poland	The study was not conducted					48	50	54
Romania						56	57	64
Croatia						n/d	n/d	60
Ukraine						57	58	83
<b>Country RepTrak (rating position)</b>								
Poland	The study was not conducted							25
Romania								
Croatia								not included in the study
Ukraine								32

Year	2010	2011	2012	2013	2014	2015	2016	2017
	<b>The Global Competitiveness Index (rating position)</b>							
Poland	39	41	41	42	43	41	36	39
Romania	67	77	78	76	59	53	62	68
Croatia	77	76	81	75	77	77	74	74
Ukraine	89	82	73	84	76	79	85	81
	<b>Doing Business (rating position)</b>							
Poland	72	59	62	55	45	32	25	27
Romania	55	65	72	72	73	48	37	45
Croatia	103	79	80	84	89	65	40	51
Ukraine	142	149	152	137	112	96	83	76
	<b>Index of Economic Freedom</b>							
Poland	63,2	64,1	64,2	66,0	67,0	68,6	69,3	68,3
Romania	64,2	64,7	64,4	65,1	65,5	66,6	65,6	69,7
Croatia	59,2	61,1	60,9	61,3	60,4	61,5	59,1	59,4
Ukraine	46,4	45,8	46,1	46,3	49,3	46,9	46,8	48,1
	<b>FDI Regulatory Restrictiveness Index (Total)</b>							
Poland	0,072	0,072	0,072	0,072	0,072	0,072	0,072	n/d
Romania	0,008	0,008	0,008	0,008	0,008	0,008	0,008	n/d
Croatia	not included in the study							
Ukraine	0,144	0,144	0,144	0,142	0,120	0,120	0,124	n/d
	<b>Corruption Perceptions Index (rating position)</b>							
Poland	41	41	41	38	36	29	29	n/d
Romania	50	54	46	69	48	50	57	n/d
Croatia	62	66	62	57	61	50	55	n/d
Ukraine	134	152	144	144	142	130	131	n/d
	<b>The International Property Rights Index (rating position)</b>							
Poland	52	42	44	43	38	40	43	41
Romania	56	61	62	64	53	54	54	73
Croatia	68	69	70	66	n/d	69	70	86
Ukraine	93	113	115	108	84	105	113	123
	<b>Country RepTrak (rating position)</b>							
Poland	23	26	26	25	24	23	27	24
Romania					44	44	56	43
Croatia	not included in the study							
Ukraine	35	40	42	42	45	47	59	45

The deterioration of the investment climate is one of the main negative consequences of corruption, so the index of corruption perception is important for the investment attractiveness of the country.

A year after joining the EU, Poland started to rise in the ranking (from the 67th position in 2004 to 29th in 2016) [8]. The same it was with Croatia, which one year after joining the EU also improved its position in the ranking, but not as significantly as Poland, but it took not much time after it join the European Union. This is likely to be due to the lag effect which is related to the need to handle ratings in all countries, which leads to a significant delay in their publication, often more than a year.

The year when Romania became a member country of the EU, there was a rapid decline in corruption in the public sector (from the 84th in the ranking in 2006 to the 39th in 2007) [8]. In subsequent years, the position in the rating got worse, but did not fall to the level when Romania was not a member of the EU. Unfortunately, Ukraine's indicators during the investigated period remain disappointing, but they show a positive trend. Given the fact that corruption can not be measured by clear indicators, the rating highlights the vision of corruption in Ukraine by Ukrainians and residents of other countries, that's why a bad rating may be related with a trend of discussing corruption in Ukraine and the actual ban on mentioning corruption in some other states, which is why they are perceived as less corrupt than Ukraine.

Since 2007 the Property Rights Alliance has published research findings on the degree of protection of property rights and intellectual property rights in countries around the world. The degree of protection is expressed in the International Index of Property Rights. The ranking of countries is based on three main components: the legal and political environment, the rights of property and intellectual property rights. The study aims to show the relationship between the level of protection of property rights and the economic well-being of the state. In 2017 the survey covered 127 countries accounting for 98% of world GDP [9].

According to representatives of the European Commission, the problems with foreign investments in Ukraine will last for as long as Ukraine will be in the rating of protection of private property among the dozens of worst (in 2017 Ukraine took the 123rd place). However, it should be noted that joining the EU did not affect the position of the countries under study in the rating. So our country does not have to wait for EU membership to improve the protection of private property.

The Country RepTrak is an analytical rating that estimates the reputation of the 55 countries with largest GDP. The ranking can help to set connection between the country's reputation and its ability to develop trade and tourism successfully, attract investment and compete. The ranking is based on an international public opinion poll, which involves more than 39,000 respondents from the G-8 countries (in 2017). The main components by which ranking compilers measure the reputation of the country are: quality of life (attractive environment), institutional quality (government effectiveness) and level of development (developed economy). However, according to the report, countries with best reputation are not always the largest and most powerful countries, but the populations of these countries are happier, they are relatively peaceful and have a low level of corruption [10].

From the beginning of the study Poland's position in the ranking fluctuated within the 23-27 places. Croatia was not included in the rating, Romania entered it in 2014 and also did not significantly change its position. The best place – the 32th – Ukraine had in 2009, but in subsequent years its position deteriorated (the 45th place in 2017). It should be noted that 2016 was marked by a decrease in the rating for all countries, but in 2017 the position was restored. Also it would be desirable to note that Ukraine lags behind Romania for only 2 places.

For a more detailed analysis of Ukraine's investment attractiveness, one should pay attention to the study of the European Business Association. The index of Ukraine's investment attractiveness is calculated on the basis of a regular survey of CEOs of the European Business Association members on the investment climate in Ukraine and consists of the points that gain the country: from 0.5 to 5 points [11].

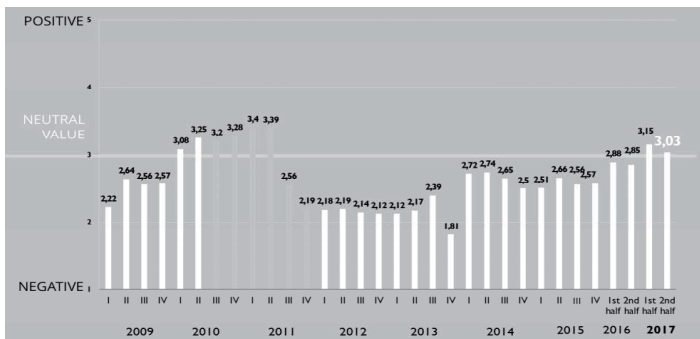


Figure 2. Dynamics of the investment attractiveness index of Ukraine according to the methodology of the European Business Association, 2008-2017 [12]

Table 2. Dynamics of long-term sovereign credit ratings of Poland, Romania, Croatia and Ukraine [13, 14, 15]

Year	Standard and Poor's				Moody's				Fitch			
	Poland	Romania	Croatia	Ukraine	Poland	Romania	Croatia	Ukraine	Poland	Romania	Croatia	Ukraine
2000	BBB+	n/d	n/d	CCC+	Baa1	B3	Baa3	Caa1	BBB+	B	BB+	B-
2001	BBB+	n/d	n/d	B	Baa1	B2	Baa3	Caa1	BBB+	B	BBB-	B-
2002	BBB+	n/d	n/d	B	A2	B1	Baa3	B2	BBB+	BB-	BBB-	B
2003	BBB+	n/d	n/d	B	A2	Ba3	Baa3	B2	BBB+	BB	BBB-	B+
2004	BBB+	n/d	n/d	B+	A2	Ba3	Baa3	B1	BBB+	BBB-	BBB-	B+
2005	BBB+	n/d	n/d	BB-	A2	Ba1	Baa3	B1	BBB+	BBB-	BBB-	BB-
2006	BBB+	n/d	n/d	BB-	A2	Baa3	Baa3	B1	BBB+	BBB	BBB-	BB-
2007	A-	n/d	n/d	BB-	A2	Baa3	Baa3	Ba3	A-	BBB	BBB-	BB-
2008	A-	BB+	n/d	B	A2	Baa3	Baa3	B1	A-	BB+	BBB-	B+
2009	A-	BB+	n/d	CCC+	A2	Baa3	Baa3	B2	A-	BB+	BBB-	B-
2010	A-	BB+	BBB-	B+	A2	Baa3	Baa3	B2	A-	BB+	BBB-	B
2011	A-	BB+	BBB-	B	A2	Baa3	Baa3	B2	A-	BBB-	BBB-	B
2012	A-	BB+	BB+	B	A2	Baa3	Baa3	B3	A-	BBB-	BBB-	B
2013	A-	BB+	BB+	B-	A2	Baa3	Ba1	Caa1	A-	BBB-	BB+	B-
2014	A-	BBB-	BB	CCC-	A2	Baa3	Ba1	Caa2	A-	BBB-	BB	CCC
2015	A-	BBB-	BB	B-	A2	Baa3	Ba1	Caa3	A-	BBB-	BB	CCC
2016	BBB+	BBB-	BB	B-	A2	Baa3	Ba2	B3	A-	BBB-	BB	B-
2017	BBB+	BBB-	BB	B-	A2	Baa3	Ba2	Caa2	A-	BBB-	BB	B-

As can be seen from Figure 2, Ukraine's investment attractiveness index was predominantly negative, and the positive zone was never reached. In the first half of 2017, the index left the negative plane for the first time since 2011, but, unfortunately, in the second half of the year, the index slightly decreased. The high level of corruption, slowdown in the implementation of judicial and land reform, the conflict in the East are the main factors hindering the growth of the index. However, business also notes positive changes: automatic VAT refunds, increased opportunities for electronic payments, steps towards increasing electronic document flow and so on. Such a symbiosis of negative and positive factors stipulated the current evaluation of the index. Significant changes have not yet taken place, but there are positive points that should add optimism [12].

In addition to a variety of international economic ratings, the credit ratings of the "big three" rating agencies Standard & Poor's, Fitch and Moody's are the tool for assessing investment attractiveness.

A sovereign credit rating is one of the components of the country's investment image, which was originally focused on lenders and affects the value of debt, i.e. interest on bonds and loans. Over time it turned out that the amount of information and indicators studied by world-known rating agencies in determining ratings is also important for investors who, in terms of information asymmetry, seek objective data on the economic and political situation in the countries they are considering as potential investment objects.

Table 2 shows data on long-term credit ratings of Poland, Romania, Croatia and Ukraine in foreign currency.

For the investigated period only Ukraine has always had ratings of a speculative grade. Poland always had investment grade ratings, Romania had a investment grade rating for almost the entire period under study, with changes only in forecast. Croatia at the beginning of the investigated period had investment grade ratings, but in recent years it has become speculative. It should be noted that the accession of the countries to the EU did not affect their credit rating.

The reasons for the speculative grade of Ukraine's rating first of all are negative trends in the domestic economic and political spheres. First, the constant political and economic instability in the country, a negative history of the restructuring of public debt. Second, the problems of non-payment in the national economy, the low level of foreign direct investment, dependence on the export of metal products and others.

However, it should be noted that in the past year all three rating agencies have raised Ukraine's credit rating: Moody's has raised Ukraine's credit rating from Caa3 to Caa2, which means changing the forecast from "stable" to "positive", Standard & Poor's and Fitch have confirmed long-term ratings in foreign currency at level B- with a stable outlook. This indicates the actions of the state, which consisted in carrying out structural reforms, which contributed to improving the country's position on foreign markets and reducing debt burden.

Thus, on the basis of the conducted research it is possible to make the following conclusions:

- among the variety of existing indicators used to assess the investment attractiveness of the state the most popular are credit ratings and international economic ratings and indices. They characterize the components, indicators and factors that form the image of the country and affect investment attractiveness;

- no country assessment methodology can be 100% perfect, but the errors are offset by using the same methodology for a large number of countries;

- there is a possibility of a lag effect, because any rating of the current year is based on the main statistical indicators of last year. The same applies to rating components based on expert opinion polls. Also, time intervals increase due to the problem of collecting statistically reliable data;

- ratings built on statistical data, on the one hand, are better than subjective ones, when respondents are interviewed. However, for the formation of a positive image and assessment the country's investment attractiveness, often the business representatives' opinion about the economy is more important than official statistics;

- accession to the European Union of Eastern European States in 2004, 2007 and Croatia in 2013 greatly influenced the structural adjustment of their economies, which is confirmed by changes in their positions in the vast majority of rankings;

- the study of Ukraine's position in international and credit ratings shows that so far there are no significant changes in ensuring a positive image and investment attractiveness of its economy. At the same time, reforms in Ukraine continue, albeit not so fast, that their consequences have already been reflected in the results of all rankings. Besides Ukraine is in a situation when, in addition to its own experience, it is possible to use the experience of those countries in carrying out reforms that have already changed the perception of their economies by foreign investors, have increased rankings and indexes. Both in the

government and in the Ukrainian society there is an understanding of the need for qualitative changes, overcoming the obstacles that still exist on the way to changing the image of Ukraine and improving investment attractiveness.

### 3. The image and investment attractiveness of Ukraine: problems and opportunities

On the basis of study undertaken in a previous section, we can generalize the main problems which exist on the way of improving the investment attractiveness of Ukraine and its image, and opportunities in this area, and conduct a SWOT – analysis.

SWOT – analysis of Ukraine's investment attractiveness

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>- advantageous geographical location and direct border with the EU;</li> <li>- significant reserves of many types of raw materials;</li> <li>- the largest black earth reserves in the world;</li> <li>- favorable climate for doing any business (absence of natural disasters, droughts, etc.);</li> <li>- sufficiently high level of qualification of the labor force at its low cost;</li> <li>- significant scientific and technical potential;</li> <li>- high level of ethnic tolerance;</li> <li>- a sufficiently large domestic consumer market (more than 40 million consumers);</li> <li>- liberal legislation in the field of environmental protection;</li> <li>- the legal basis for foreign investments is formed, which, in particular, introduces a national regime for activities for companies with FDI;</li> <li>- strengthening ties with EU countries, WTO membership.</li> </ul>	<ul style="list-style-type: none"> <li>- worsening socio-economic situation in the country and reducing the investment attractiveness of the regions of the East of Ukraine;</li> <li>- political, legislative and economic instability;</li> <li>- lack of a single strategy and plans to encourage investment;</li> <li>- lack of own policy on the formation of an international image;</li> <li>- ineffective corporate governance and corporate social responsibility;</li> <li>- infrastructure depreciation;</li> <li>- corruption, raids on enterprises and bureaucracy in government agencies of Ukraine;</li> <li>- decrease in purchasing power of Ukrainians;</li> <li>- unequal business conditions;</li> <li>- the process of decentralization is slowly moving forward;</li> <li>- the prevalence of declarations over practical actions.</li> </ul>



Opportunities	Threats
<ul style="list-style-type: none"> <li>- high potential of the agro-industrial complex;</li> <li>- attractiveness of processing industries, logistics infrastructure, pharmaceuticals, IT, alternative energy and others, where there is an opportunity for innovation;</li> <li>- participation in world projects on space exploration;</li> <li>- perspective recreational potential;</li> <li>- prospects for tourism development (modern, safe and inexpensive tourist destination);</li> <li>- gradual deregulation of business;</li> <li>- significant development of electronic services;</li> <li>- high return on investment;</li> <li>- constant adaptation to EU standards</li> </ul>	<ul style="list-style-type: none"> <li>- the orientation of the government's policy of attracting financial resources from international financial institutions, in particular the IMF and IBRD, rather than creating favorable conditions in the investment sphere for attracting potential strategic foreign investors;</li> <li>- the whole country is associated with combat operations in the East, there is no distinction between different regions of the country;</li> <li>- low positions in international rankings;</li> <li>- delays in the implementation of reforms, their inconsistency</li> </ul>

Taking into account the existing problems and threats, the volume of attracted FDI in Ukraine is currently small (Figure 3). However, according to the results of the trend analysis, with the existing strengths and opportunities of Ukraine, in the medium term, an increase in the inflow of FDI is possible.

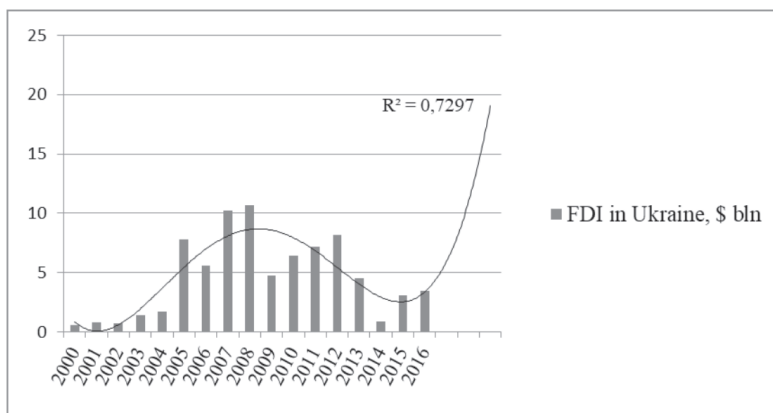


Figure 3. Dynamics of attraction of direct foreign investments in Ukraine, \$ bln [16]

Key investor countries are Cyprus, the Netherlands, the Russian Federation, the United Kingdom, Germany, the Virgin Islands and Switzerland. Based on the geographic distribution of FDI inflows over recent years, it can be assumed that this is a reinvested Ukrainian capital.

Foreign capital enters the Ukrainian economy mainly for the following reasons: a) speculative investment; b) acquisition shares of "necessary" enterprises for relatively low price; c) the expansion of markets due to the growth of domestic demand.

To improve the image of Ukraine and its investment attractiveness, it is proposed to systematize recommendations in three directions:

1. Improving the political situation in the country, achieving political stability.

2. Improving methods to fight corruption and speeding up the implementation of reforms:

– judicial reform must progress substantially, and the composition of judges should be significantly updated;

– new anti-corruption courts should be created, and international inspectors should be involved in the selection of their judges;

– ensuring progress in land reform;

– effective anti-corruption activities (including criminal prosecution of officials of any rank and judges for corruption).

3. Improving the economic situation in the country:

– lower inflation, currency stabilization;

– infrastructure modernization;

– development of a strong investment infrastructure, increase of confidence in the banking system;

– creation of special conditions for foreign investments, effective system of tax privileges for certain branches of the economy;

– ensuring reliable state protection of property rights, protection of the rights of foreign investors;

– deepening integration processes with the EU;

– development of the "uberization" of the economy and the "sharing" economy;

– raising the country's position in international rankings.

Today the information component is very important: if the media reports about the country mostly negative news, then they will necessarily affect both

its overall image and investment attractiveness. An informational presentation of Ukraine's opportunities and readiness to cooperate to the world community is necessary. So for the positive perception of the country, it is necessary to strengthen the position of the Ukrainian media in the world's information space, expand the Ukrainian cultural presence outside the state, promote Ukrainian educational services, etc. And also it is important to improve information provision of foreign investors about potential investment opportunities.

As the experience of the EU states shows, many years of systematic work are needed for receiving a lot of credible rather than speculative foreign investments.

Ukraine has already taken a number of positive steps towards improving its investment image. Thus, in the 2018 Paying Taxes rating, Ukraine has risen to 43 positions from 190 countries; for comparison, it ranked the 84th in the rating Paying Taxes 2017 and ranked 107th in the Paying Taxes 2016 [17]. So we can see the positive dynamics in this area.

There are a large number of legal acts regulating investment relations in Ukraine, including the Law of Ukraine "On investment activity", "On the regime of foreign investment", "On protection of foreign investments in Ukraine", "On amendments to certain legislative acts Ukraine regarding the protection of investors' rights ". Also, the law "On stimulating investment activity in priority sectors of the economy in order to create new jobs" is in effect, aimed at creating conditions for activating investment activity, introducing favorable conditions for attraction of investments in priority sectors of the economy of Ukraine, creation of new workplaces, introduction of the latest and energy saving technologies, development of regions [18].

The Law "On Amendments to Certain Legislative Acts of Ukraine Concerning Elimination of Barriers to Attraction of Foreign Investments" was adopted, abolishing the registration of foreign investments, replacing it with formal information for the maintenance of state statistics; grants the right to obtain a certificate for temporary residence in Ukraine to foreign investors who have a significant share in the authorized capital of Ukrainian enterprises but not employed at the enterprise and regulates the basic aspects of issuing a permit for the employment of foreigners and a temporary residence permit that will facilitate the attraction of foreign managers and foreign skilled workers, which is needed in the early stages of the development of a subsidiary in Ukraine [19].

In addition, the protection of investments is also ensured at the international level, in particular by signing international treaties on the promotion and mutual protection of investments, for example, the Washington Convention on the Settlement of Investment Disputes between States and Foreign Holdings of 1965 and the Agreement on the Promotion and Protection of Investments between Ukraine and the OPEC Fund for International Development. The Verkhovna Rada of Ukraine signed and ratified intergovernmental agreements on the promotion and mutual protection of investments with more than 70 countries of the world.

In order to improve the investment attractiveness of Ukraine, the Cabinet of Ministers established the Investment attraction and support office and approved the Regulations on the Office for attracting and supporting investments. The key areas of the Office's activities are providing information about Ukraine's opportunities, as well as work with investors in solving their needs and problems. Also the Decree of the President of Ukraine approved the composition of the National Investment Council, which is a consultative and advisory body and its main tasks are: the development of proposals for the promotion of investment activities in Ukraine, the formation of an attractive investment image of Ukraine, taking into account the best international practice; assistance in forming the main directions of the state policy on improving the investment climate in Ukraine; development of proposals on strategic directions of Ukraine's investment potential development, stimulation of foreign and national investments in the development of the state economy, etc. [19].

One of the best arguments for potential investment attractiveness is the return on investment. For example, the profitability of EBiTDA in Ukrainian agro-projects in 2016 amounted to 45%. Another example of Ukraine's investment attractiveness: from the 500 companies of the Fortune Global Index for 2016, there are more than 30 companies in Ukraine, and more than 20 companies from the 500 S&P indexes. Profitability of investments in Ukraine greatly compensates for certain risks and cautions [20].

So, despite the existing weaknesses, Ukraine has the opportunities and potential to create favorable conditions for increasing its international image, and investors will be interested in working in its territory.

## Conclusion

Image of the country is an important factor in attracting investment. The country can be investment attractive only having a positive image. It was established that image is formed under the influence of many aspects, among them positions of the country in international economic and credit ratings don't take the last place. The level of support of our country by foreign partners, the inflow of investments and, as a result, economic growth in many respects depends on them. Also, ratings are benchmarks for potential foreign investors in assessing the country's investment attractiveness. The country's unattractive image pushes away foreign capital, negatively reflected on the economy of the country and, accordingly, the welfare of its citizens. It is important for Ukraine to accelerate the rate of economic growth and increase the country's business activity.

Ukraine demonstrates progress in "narrow" ratings that assess the state of the economy in one or several close directions, for example, in the ranking Paying Taxes or the Doing Business. According to the assessment of the European Business Association, in 2017 Ukraine's investment attractiveness index went out of the negative zone. In more systematic ratings that cover many areas and components, unfortunately, Ukraine, with some exceptions, has not yet succeeded in making positive changes. This is connected with the slow pace of implementation of economic reforms, as well as the impossibility of quick changes in the investigated components of ratings and the presence of factors that don't depend on country's leadership.

The experience of "new" EU countries shows the positive impact on their rankings and image of joining the European Union. Nevertheless, it is necessary to point that they have implemented a lot of reforms and significant work in order to join the union, that means, all these processes are interrelated. Thus, further deepening of Ukraine's European integration will have a number of positive consequences for the national economy. The main issues that the Ukrainian authorities should pay attention on in order to improve the rankings and image, and to increase the investment attractiveness of Ukraine, are fighting corruption, the implementation of reforms, political and economic stability. As a result, capital inflows from foreign investors will increase, national business will develop and, consequently, the economy and the welfare of the population will grow.

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## **CURRENT PROCESSES IN THE INVESTMENT SPHERE OF UKRAINE**

### **Introduction**

The economy of Ukraine is in a sharp crisis, which is characterized by a prolonged decline in production, a decline in the living standards of the population, an increase in the size of the shadow economy, the accumulation of internal and external debt, the criminalization of society etc. This complex of social problems can't be solved without the solution of purely economic issues, and the revival of the economic situation. The solution of such interconnected problems, such as the solution to the crisis and the transition to market forms and methods of management, is due to the attraction and use of significant financial resources at the national and regional levels, that is, with the investment process. The economy of each country needs constant attraction of investment components of the production process.

### **1. The reasons for the crisis in the investment sphere of the state.**

The investment process in Ukraine has its own features, their analysis makes it possible to see the significant causes of the crisis of the investment sphere.

The first feature is associated with changes in ownership relations. The privatization that takes place in Ukraine took place without personalization of

ownership and was the basis of a not civilized market but shadow corrupt economy. In our country there were no traditions of legitimate private property. For many years three or four generations have grown in the conditions of economic values, opposite to those formed on the basis of private property. The psychological and cultural section of the previous development of society, the formed mentality of people was diametrically opposed to what is called "the spirit of capitalism." In the West, the system of private relations was built on the basis of this phenomenon of social consciousness. Historically, privatization began in the mid-1980s as a shadow, informal, nomenklatura-bureaucratic privatization of the time of M. Gorbachev, as a result of private and nomenclature property grew in shadow communications. In the post-Horbachev period, during the years of independence of Ukraine, there was a redistribution of property, which in fact was owned by private individuals. Private-nomenclature property created the possibility of rapid personal enrichment without adequate responsibility for its effective use. Ownership without a responsible owner is a system of economic relations that is not well-known in the world practice, it is not scientifically analyzed by a new mentality. In the basic branches of industry and agriculture, the property is owned without the owner.

Today, the Ukrainian economy continues the process of permanent virtual redistribution of ownership. And this redistribution is not connected with getting profits due to effective economic activity, with the formation of an additional product and the capitalization of its part, that is, investing in real capital. Investments are made in the redistribution of property and it brings much more profits than real economic activity. The source of these profits is not the expansion and improvement of fixed assets or intangible assets, but their actual residence. Income is generated by the physical reduction of fixed assets. And this income is used, on the one hand, for the purpose of private consumption, on the other, for the accumulation of funds for participation in the next virtual privatization. In this distribution, investments in real production are practically absent.

The second feature of the Investment Process in Ukraine is related to the macroeconomic policy implemented by the Ukrainian leadership. Measures taken by the Ukrainian government in the mid-1990s were aimed at monetary stabilization of the economy by reducing the budget deficit and overcoming inflation through financial and credit regulation. These measures were extremely necessary for the implementation of market reforms, but they contradicted the need for structural and innovation restructuring of the economy. Huge government



loans in the period 1996-1998 were not aimed at expanding production, not in the structural rebuilding and reconstruction of the national economy, not in accelerating the NTP and in creating a new innovative type of economic growth, not in the transition to the information society, but in support of barely surviving productions, in helpless financing of the social sphere etc. In addition, the state with its borrowings pushed private investors out of the financial market because it offered high interest rates on government securities and low tax rates on profits from these securities. This situation was described in Western economic literature. The aggregate of the negative consequences of the shortage of budget expenditures for the process of capital formation was called "crowding out" in the American literature, that is, the displacement of the private sector from the market of loan capital. And this reason has caused a deep crisis in the investment sphere of Ukraine. In addition, the non-payment crisis, the high interest rate of the NBU, the constant decrease of the exchange rate of the national currency, the weak development of market infrastructure, including the one in the investment sphere, have had a negative impact on the state of the investment climate in the country. The investment climate is unfavorable both for foreign investors and for domestic investors. The legal field of entrepreneurship, the tax system of Ukraine, the state of its stock and financial market cause the outflow of Ukrainian capital illegally outside the country. In the domestic literature there are different figures: 2-3 billion dollars per year, 20 billion dollars in recent years, and others. According to the information provided by the Verkhovna Rada of Ukraine to the governments and parliaments of the United Kingdom, Canada, the People's Republic of China, the United States and Switzerland of January 13, 1998, the illegal currency circulation in Ukraine reached about \$ 12 billion, while outside the banks it is 45-60% of the national currency. The current annual outflow of capital abroad reaches 5-7 billion dollars. These funds do not turn into possible investment resources of Ukraine, they work for a foreign economy, which, with the help of banking and functioning-as-banks institutions, are used as investments and solve problems of economic growth, structural adjustment of households, etc. All this leads to the dematerialization and degradation of national wealth. Therefore, the problem of stopping capital outflows is extremely acute in Ukraine. This may be facilitated by a tax amnesty, which was announced in March 2000 in the Decree of the President of Ukraine "On Measures to Legalize Personal Income from Which Taxes were Not Taxed" (No. 552 / dated March 31, 2000). But the Verkhovna Rada didn't

adopt the Law on measures for legalization, and outflow of capital from Ukraine continued during 2000. Here it should be emphasized: today, in the conditions of the globalization of the world economy, national states no longer have the monopoly on their inhabitants and inhabitants' savings. Capital cannot be obtained by force. Financial flows of capital move along the world channels of the united world financial space. And sovereignty of the state is manifested in attracting and retaining capital in its territory, using economic methods and levers. It is necessary to make economically attractive investments of national and foreign investors in the Ukrainian economy. The outflow of capital will be stopped in the face of political and macroeconomic stability, improvement of the legal framework for business regulation, streamlining of the tax base and stimulation of the national investment process. These conditions are also needed for foreign investors. But without the presence of purely domestic investment, external investment is unlikely. According to foreign experience, foreign investments in 2000 amounted to 4-5% of total investments in national economies. In Ukraine, this figure is 7%, and the further attraction of foreign investment is pragmatic only under conditions of effective development of mechanisms of domestic investment. Considering the causes of the crisis in Ukraine's investment sector, it is impossible not to stop paying attention to the problem of creating savings and transforming them into investment resources. On the one hand, most of the population cannot make savings, on the other – shadowing of cash incomes of citizens, concealing them from taxation. This led to a reduction in the possibilities for the formation of domestic investment resources. There are various forms of accumulation of savings: natural-money, money, financial assets. It is clear that the accumulation in the form of money is most convenient. Cash savings include cash in the hands of the population, insurance policies, deposit and non-deposit placement in financial and credit institutions. In addition, money savings can be generated and stored in national and foreign currencies. In Ukraine in the structure of monetary incomes and expenditures of the population there are instances of sale and purchase of foreign currency. The comparison of absolute amounts of purchased and sold currency for the period from 2013 to 2017 indicates that, under current conditions, foreign currency is one of the most reliable forms of savings, which, together with other negative factors, results in a narrowing of the investment resources of the country. In addition, the population does not trust financial and credit institutions, and therefore the household money does not transform into investments, do not work for the national economy. The sav-

ing of households around the world is the most important source of investment, with a stable socio-economic development of the country without any insignificant effect; therefore, it is necessary to provide a system of measures to restore and strengthen public confidence in saving money in credit and financial institutions. Distrust of household financial assets, including securities, is also one of the causes of the crisis in the investment sphere.

For various reasons, countries in transition are faced with a lack of investment in the national market and the need for their involvement abroad. These resources can play both a small and significant role in the economies of the recipient countries. But we should not diminish the role of foreign investment, given the constant increase in international production by large corporations.

Most success with bringing in and use of foreign investments among the former socialistic countries of Europe were attained by Hungary, Poland and the Czech Republic. Part of foreign capital in 2010 constituted, accordingly, 59,7%, 18,1%, 17,6%, from the national investment. What's more, economic dynamics is characterized by annual high rates of industrial production rise. This fact makes it possible to speak about considerable influence of foreign capital on the economies of the above-mentioned countries. The situation with foreign investments began to change radically from the moment of the Berlin Wall fall in 1989. The governments of these countries started large-scale program of economic transformations, opened economies for foreign capitals and know-how. Foreign investments were seen as an integral part of reformation and modernization of national industry. With the help of direct foreign investments the government wanted to renew competitive structures of the isolated markets in relation to converting to the market economy. It is necessary to highlight that such policy resulted in positive changes, which means that enterprises, as well as economy on the whole, obtained a greater competitiveness.

Foreign investments come in two basic forms depending on the aim of the investment of capital: direct and portfolio investments. It is universally acclaimed that in the case of classification of direct foreign investments, part of foreign participation is considered in size of 10%. Beginning from that amount the investor has the opportunity to control business operations of an enterprise. Smaller part does not give the opportunity of the real control and is defined as a portfolio investment. But the difference between forms is very inexpressive and contains opposition of interests of foreign investors. In the first case there is no desire to receive profit, as such, but receive it in a long run, while in the sec-

and there is interest in relation to the receipt of maximum profits for the shortest period of time. Thus direct foreign investments are conditioned by long-term factors, when the portfolio ones are conditioned by a brief one. Both forms of foreign investments are potentially in the state to assist to economic development in countries-recipients. For example, in China, bringing in of portfolio investments brought the country over to the revival of economic position, to development of national industry and growth of export. It should be noted that credits are attracted with the interest rate of 1,5-2% and for not less than 20 years. The state controls the uses of credits and directs them to the development of the most important industries. That is why Chinese economy did not suffer that much from the crisis, as it was with countries that used foreign investments for financing government spending.

Direct foreign investments are undoubtedly the most effective form of foreign presence, but this phenomenon has been studied from 1950s. The study of this phenomenon takes beginning from distribution of international investment activity of multinational corporations from the USA, such, as Xerox, IBM, General Electric, Dupont, General Motors and Coca Cola. This activity provided analysts and scientists empiric data on the study of motivations and behavior of multinational corporations in the area of foreign investing. Western scientists began to develop theories, explaining essence and reasons of direct foreign investments, and also direct influence on countries. Huge contribution in a study was brought by S.G. Haymer, M. Porter and Dg. Danning. According to S.Haymer, foreign investors try to use imperfection of the market, investors must have monopolistic advantages also, originally from imperfection of the market. M.Porter in scientific work *The Competitive Edges of Nations* showed interconnection between strategies of multinational corporations and competitive edges of countries-recipients. M. Porter formulated the following factors of competitive edges: corporate strategy, structure and competition (aim of company, management and ability to lead and other); position of factors (human, knowledge, capital and infrastructure); constituents of demand; presence of accompanying and supporting industries; role of accident; influence of governmental interventions.

Existence of the developed industries of industry appears as a leading factor in relation to direct foreign investments. While developing policies, in relation to direct foreign investments, it is necessary to try to develop interdependent industrial clusters on the basis of basic and supporting industries.

Dg. Danning in 1981 first set forth an eclectic paradigm. According to it, the volume of direct foreign investments, in one or another country, is determined by three constituents: advantages of owning property (O-advantages), advantages of internationalization (I-advantages), local advantages (L-advantages). OIL advantages contain objective and subjective constituents, because they depend on the specific activities of the company and real incomes expected, that a country-recipient offers. The desire of corporation to invest abroad grows at presence of O- advantages, which need to be estimated as compared to advantages of competitors, and also with the height of incomes or benefit, defined by L-advantages in a country-recipient. The governments of countries must develop key L-advantages in order to have the opportunity to attract a capital and know-how for the improvement of competitiveness of industry and situation in relation to employment. Various researches of L-advantages and disadvantages of different countries testify to their leading role in the process of bringing in direct foreign investments. The stream of foreign investments has a tendency to concentrate in countries, where advantages contain not only the presence of natural resources and subzero prime price, but most importantly clever economic management, reliable legislative base and good prospects in relation to support of the economic growth and development.

Direct foreign investments are defined as money sent to achieve a long-term goal, rather than present moment consumption. They have less mobility than portfolio ones, that is why are better in the case of fluctuation of the national market. Different forms of direct foreign investments influence on the economic growth in a different way, depending on the stage of the economic development. On the whole, three types of direct investments influence the modernization of industry: investments in equipment, machines, buildings and infrastructure; investments in a human capital; investments in a technological capital.

Investment operations in countries are conducted by both national and foreign investors. There is clear interconnection between the national and foreign investment. The analysis conducted in 24 countries in the period from 2010 to 2017 showed that increase of GDP in the amount of one million USD stimulated additional flow of direct foreign investments up to the amount of 33.3 million USD. Foreign investors follow national investors. It should be noted that the direct foreign investment has a double influence on the economy of host countries. On one hand, competition may brake development of national firms or

even cause bankruptcy. On the other hand, the presence of foreign firms makes national enterprises mobilize efforts for optimizations of productive potential. Foreign competition must be used as a force stimulus for the perfection of economic activity of national enterprises. The foreign investment must be regulated in industries with the low enough level of competition, because this can result in rolling up of national production. In industries with the considerable enough level of competition the foreign investment must be stimulated, national industry already does not need considerable state support and, as a result, foreign competition will only boost the international competitiveness.

Direct foreign investment is the operation of enterprise of one country that allows controlling it effectively by a legal body in another country. This means transfer of more important factors of production, such as capital, equipment, management, know-how, patents and other resources.

Direct foreign investments have following features:

- they aim at long-term presence and represent long-term interests;
- they allow the investor to render considerable influence on the management of the enterprise;
- they are mostly performed by multinational corporations;
- they may take different forms: sales department, joint ventures, operation from scratch, strategic alliances, mergers and acquisitions, transplantations.

Direct foreign investments contain four basic components: investing from scratch, charter capital, reinvestment of profit and internal corporate loans. Currently there are four types of direct foreign investments: investments from scratch, strategic alliances, mergers and acquisitions, transplantation. From the end of the 80th, investing from scratch has stopped being the leading operation of conquering markets, corporation have begun to develop the new forms of penetration. This moment is very important for Ukraine, because many powerful enterprises are not working at all or are not working to the full capacity. Major motivations of direct foreign investments are search of natural resources, effort to cut the cost of production, access to the consumers on foreign markets.

Direct foreign investments cause positive influence on the economic growth, as well as political and economic climate of the state. Long-term success of the use of foreign investments will be determined by changes in such structures: legal system, political system, management system, financial system, socio-economic system, education, culture.

The World Bank undertook a study among 3600 businessmen from 69 countries and worked out the list of tasks in relation to governments on bringing in direct foreign investments: forming clear legal base, providing macroeconomic stability, investing in industry of services and infrastructure, protecting the poor population and environment. But apart from changes in the mentioned structures, the government should develop measures that directly influence the direct flow foreign investments. They contain special incentive mechanisms in relation to western companies that are interested in construction of new plants and modernization of old ones in priority industries; creation and expansion of the special areas of development; founding information system for investors; promotion campaigns and measures to create the image; creation of government consultative service; financial engineering; strengthening of political influence of agencies on stimulation of direct foreign investments.

One of the examples of the implementation of incentive mechanisms in Ukraine is the investment project ZAZ-Daewoo, according to which the company acquired the status of monopolist of the automotive industry. When the project was being drafted, companies and enterprises that work in the area of supplying, selling and repairing addressed the open letter to the President of Ukraine, the Verkhovna Rada and the Cabinet of Ministers. The letter expressed suspicion on the prospects of this project and provided a list of negative political, economic and legal effects, in particular: using the law to influence competitors' practices, breach of GATT / WTO requirements within the protection of national producers, discrimination of other car manufacturers, increase of prices of imported cars will block the flow of revenue to the budget, monopolization of the automotive market by one foreign investor and so on. Calculations were made as to the change of volumes of revenue flow to the budget. It turned out that the work of a foreign company in 7-year-time will bring almost 6 billion USD (according to the estimation by MB-Autonews. It all came true when Daewoo announced the bankruptcy.

Ukraine also has the experience of creating territories with a special status. There are currently 11 special development zones and 9 priority development territories, in which some experience in attracting foreign investment has been accumulated. Currently these are areas for transport hubs service, but this experience will be useful in the further development of relations with foreign investors.

The strategy of attracting, using and regulating foreign investment should be used to achieve positive economic and social progress. During the strategy

development we have to take into account the experience of many countries, theories and possible effects of the use of foreign investment. It is necessary to develop traditional priority sectors and national local preferences for closer integration into the world economy.

## **2. The investment process within the context of Ukrainian economy liberalization**

There are a lot of investment process models in modern economic theory. They reflect this or that option of investment development in relation to a particular country. Each model can be specified and reflects the most common patterns of the investment process under certain conditions and at certain stages of the formation of statehood and political independence. A detailed system analysis of investment process models cannot be made in the framework of a separate publication, so let us stop on the model that causes the greatest interest in the formation of political and economic independence of Ukraine.

It is the model of the investment development in a fully liberalized economy that is united into a national market, which is greatly subjected to strong competitive pressure from global industrial companies, but is protected by methods of state protectionism. State control has begun to increase in recent years, but the role of the state for the investment and production sector is greatly weakened by the processes of privatization and denationalization, and the proposed model implementation is possible only under the following conditions:

1) investment resources necessary for a large-scale investment process should be formed, first of all, by internal sources of development, despite the limited possibilities of their attraction;

2) state policy and its economic course should be aimed at the liberalization of economy within the country and separation from the world market, within the limits which ensure the protection of national security and political independence on the world stage.

Under these conditions the investment process will be presented in the form of a free combination of productive resources and the formation of institutional mechanisms that ensure their effective application in economic practice. The main investment resources include: natural resources; material and technical resources; workforce; information resources. The combination of investment resources is carried out by all business entities, many of which act as sources of



investment resources and as consumers of financial investments that are offered at the stock market. The combination involves the abidance of a number of principles, which are conditioned by a market mechanism: a) investments should ensure the profitability and return on investment; b) payback on investment in the shortest possible period; c) sufficient cost-effectiveness of investment; d) acceptable, for existing market conditions, costs for production activities.

In the conditions of liberalization of market relations the investment process can be represented in the form of a directed movement of two flows: the flow of freely exchanged real investment resources and the flow of financial investment, represented by the forming stock market of securities. These flows involve a wide range of production factors necessary for meeting the market demand for goods and services in the investment process, create powerful incentives for improving production efficiency that are expressed in material interest and in ensuring the optimal balance between high products quality and relatively low costs of its production. During the movement of flows the selection of the most viable investment projects take place, producers who are not able to provide in full the meeting of the material and inner needs of society are excluded as a result of competition, wide opportunities for exercise of creative initiative, entrepreneurial talent and scientific search appear.

The liberalized investment process manifests in a number of positive qualitative characteristics, not only in the sphere of production, but also in the inner sphere. A wide range of real material products is offered at the market and is capable of meeting the market demand. This reflects, first of all, the diversity of the growing inner and moral requirements of all members of the society for consumed products and services. The moral principles of fair competition for the consumer at the market are starting to prevail. The entrepreneurial activity and creativity, based on the deep knowledge of business and the ethics of business relations, is increasing. The importance of moral principles, norms and rules of behavior, which form high business reputation of each investment relations participant is rising.

The proposed model implies a reduction of the role of the state in the investment sector, but this does not mean that the state is moving away from the economy and does not control the whole process of market reforms. On the contrary, its role is increasing, but the center of gravity shifts from the internal market to the foreign, the state assumes the functions of protecting the national economy from the influence of the foreign market. The foreign market in the

conditions of formation of the branch structure, establishment and development of the infrastructure of the national economy can influence these processes actively; it can even determine the nature of economic development of the country. The foreign market is a certain threat to a noncompetitive national economy due to its high degree of structural and monopolistic economy. Suffice it to say that the anti-dumping processes are organized against Ukrainian ferrous metallurgy enterprises annually; they bring huge losses and reduce the export of Ukrainian goods primarily to Western Europe and the United States. The foreign market is a well-established market regulated through intergovernmental agreements that are adopted at the supranational level with the active intervention of transnational companies and are lobbied by governments of the leading countries of the world. At the world market the policy of complete liberalization of the world economy and, above all, world trade is carried out only in relation to politically and economically weak countries, which are unable to defend their national interests and gradually transformed into raw material appendages for large transnational corporations.

The modern world economy is based on the world economic division of labor, which, unlike the international, involves the inclusion in the world economic complex of mining and processing industries of developing countries, as most sources of raw materials have been exhausted in industrialized countries as a result of their active exploitation, or their development and exploitation are less effective. Therefore, in order to preserve the volumes of industrial production in developed countries and ensure its uninterrupted growth, leading international financial organizations pursue a policy of conservation of the scientific and technical spheres and, first of all, the machine engineering industries of developing countries. The proposed investment resources are directed primarily to the agricultural and processing industries, industries that provide raw materials to the world market, thereby turning the country into a fuel and raw material appendage.

An example of post-war Japan should be actively studied and used in the economic practice of Ukraine. *'The Japanese miracle'* became possible due to the active role of the state in the economic life of the country. With the integration into the world economy widespread planning and regulation of the economy were started; introduced system of state control and the policy of protectionism in the foreign economic field brought their fruit. Despite the fact that prices for some goods on the domestic market were two to three and even five times

higher than in the world, the state retained key sectors of the national economy and ensured a balanced development of the entire economy.

However, if foreign companies were allowed on the domestic market, this led to the displacement of domestic producers with their goods, which were not competitive in relation to foreign ones. Thus, the market was monopolized, and national enterprises were transformed into an appendage to powerful transnational companies, which, after such absorption of weak, non-viable enterprises, became even more powerful, gradually imposing control over those competitive but small firms that still somehow kept their economic independence. At a certain stage of such absorptions, monopolistic structures put forward not only economic requirements, such as pricing, financing, taxation, but also determined the personnel policy of certain firms, interfered in research and development issues, exported samples of new goods and their technology for nothing. They even involved prominent experts in key areas of scientific and technological progress and exported them to their countries, where experts were offered several times higher salaries and much better working conditions. There were cases when requirements were put forward not only at the level of individual companies, but also entire sectors of the national economy. Sometimes the requirements also concerned political issues, for example, the impact on the results of the election campaign in the district, when, through mass workers layoffs tried to move towards the government certain individuals who were pursuing a policy which satisfied foreign producers, that is, they were puppets in the hands of foreign capital.

Thus, the state should control the process of attracting foreign investments, monitor the amount of financial and production resources invested, directions for their use, and most importantly, evaluate the results of such involvement for the national economy. The state should not allow monopolization of the domestic market, maintain a competitive environment and preserve national sovereignty.

The proposed model can be considered as a liberalized market model that is under the state control, which eliminates all the defects of the market and forms a socially-oriented market mechanism. It should be noted that it is difficult to build such model where the State Bank conducts a completely liberalized policy according to the domestic market and protects the foreign economic sector, but the theoretical analysis allows constructing such an abstract-theoretical model that will reflect the possible ways of investment in development countries.

This model has both its positive and negative sides, which are actively defended and criticized by defenders and opponents of this theory. The model of investment development in conditions of complete liberalization of the economy, which is completely open to the world market, has much more negative sides. In this model, cross-sectoral proportions of social development, which are formed under the influence of real investments, are also determined by market mechanism based on demand and supply. But this demand and supply are formed not on the scale of the national market, but of the world market, which includes the national demand in world market demand, the national monetary system in world monetary and financial system, substantially modifying the national interests under the prism of the world market and placing them in direct dependence on it. So, production that is extremely necessary for the country and profitable within the national economy, but unprofitable for the world market, is subject to closure. This situation is extremely negative and requires active state intervention.

The open internal market allows. First, importing new investment resources that cannot be created in the country or attracting of which needs a lot of effort, which makes them ineffective and therefore better to import them from other countries. Secondly, foreign investments allow using such investment resources, which our country did not use before, not involved in economic circulation due to lack of internal needs. For example, a highly skilled workforce that replenishes the ranks of sellers in our "wild bazaars" reminds markets of the era of initial accumulation of capital.

Thirdly, under the influence of the world market there is a partial refusal to use national investment resources, such as agricultural land, the capacities of large industrial and non-productive enterprises. For example, socially important structures as educational, medical and cultural institutions. Moreover, the market does not provide social protection, but, conversely, increases social instability in society, because the spiritual sphere of production does not provide a material product, which is the only criterion for the effectiveness of a market economy.

Fourthly, for the foreign support of the investment process the country will have to pay with its natural resources, even political concessions in matters of foreign and domestic policy. For example, when modern fighter planes were being transferred to Russia for payment of debts, the USA expressed their protest and threat to economic sanctions against Ukraine.

All these peculiarities of the influence of the world market on the investment processes in the country can be estimated and compared with the following formula:

$$PO = (IR_{ext} + IR_{int}) - IR_{fr} - IR_{tr} , \quad (1)$$

where PO is profitability or unprofitability of openness of the country's economy to the world market from using of investment resources;

$IR_{ext}$  is external investment resources entering the country as a result of its openness;

$IR_{int}$  is investment resources that are activated in the country as a result of its openness;

$IR_{fr}$  is investment resources that are frozen in the country due to the interference of foreign investors;

$IR_{tr}$  is investment resources transferred to other countries in the order of repayment of debts, compensation for imported goods.

With this formula it is possible to determine how effective, profitable or unprofitable is the attraction of foreign investments in the conditions of full liberalization of the investment process in the country from the standpoint of rational use of investment opportunities, economic prosperity of the state, which is the main goal of market transformations at the current stage of development of Ukraine. This goal must be achieved through a flexible domestic policy and protectionist foreign policy.

The above formula allows us to assess the utility of the open economy with not only absolute indicators, but also with relative indicators. Such an indicator can be obtained by the formula:

$$PO = \frac{IR_{ext} + IR_{int}}{IR_{fr} + IR_{tr}} \times 100\% . \quad (2)$$

If the indicator PO exceeds 100%, it shows the profitability of the country for global market liberalization, and this profitability is directly proportional to the increase in the number of invested resources involved. If PO is less than 100%, it indicates that the country is not well-off for that degree of openness which she established in her relations with foreign partners.

The investment policy model in a fully liberalized market economy cannot exist for a considerable time. The concentration of production, the formation of

monopolies and the aggravation of contradictions in the social sphere will lead to a decrease in the efficiency of the functioning of the market, to the protest of manufacturers in the form of strikes, which requires the state's immediate intervention in these processes, as they can endanger state security. In addition, financial flows with the speculative game of securities and currency in domestic markets can almost completely separate from real production, real investment resources and their movement. The formation of such financially closed structures which, like black holes, absorb considerable financial resources without their full impact lead to the collapse of investment mechanisms. Under extremely unfavorable conditions they lead to the increase of unemployment, the growth of inflationary processes, and the destruction of the entire social sphere.

## **Conclusions**

Ukraine is being subjected to some pressure, primarily through an economic mechanism mounted with foreign investors, who, under the external mask of goodwill, have a desire to assist in market transformation, pursue primarily their own, beneficial interests aimed at the formation of an inefficient economy with a clearly expressed agricultural orientation, a raw material appendage and a supplier to the world market of not only cheap commodities, primarily black and colored metals, but also cheap, but still skilled labor.

Thus, the positive aspects of market system of management and investment process are consistently manifested in the presence of certain conditions, which should include active state policy to involve the investment process of domestic reserves of investment, accumulation of domestic capital, increase the return on investment in the production of resources. On the other hand, the state should pursue a certain protectionist policy in the foreign economic sphere, actively intervene in the process of attracting foreign investment, select those direct investments of funds that cannot lead to structural changes in the areas of national economy and will not contribute to the increase of the status of the country as a raw materials source, the dependence of its domestic market on the world market.

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## **SECTION II.**

# **PROBLEMS AND PERSPECTIVES OF INNOVATION AND INVESTMENT DEVELOPMENT OF THE NATIONAL ECONOMY IN THE CONDITIONS OF EUROPEAN INTEGRATION**

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## **INNOVATIVE-INVESTMENT GUIDELINES FOR ECOLOGIZATION OF RECREATIONAL LAND USE IN CONDITIONS OF REGIONAL EUROINTEGRATION OF UKRAINE**

### **Introduction**

The system of world contradictions in the structure of nature management has led to the fact that the existing state of recreational territories in terms of scale and structure does not meet the modern requirements of optimal and efficient functioning. Recreational land use is deprived of the possibility of balanced development due to problems of inconsistency in the management system of the respective territories, which leads to an unregulated anthropogenic and recreational load on separate territories, inappropriate use of recreational areas, uncoordinated construction and land valuation, distribution of ownership and use, inadequate monitoring for usage of land resources.



Current trends of the world economy in the present show new priority directions of development, namely: its globalization, informatization and ecologization.

On this basis, we believe that the approaches to the environmental management system should also change. At present, the focus is on the rational use of territories in the world, taking into account the ecological development factor. It should be noted that at the same time, the territory of Ukraine is characterized by an extremely high level of agricultural land development (71.7%), which far exceeds the ecologically normal limits. Even with a decrease in this indicator in recent years, its level significantly exceeds similar indicators in most countries of the world.

The solution of the aforementioned problem is possible by introducing innovative investment tools and projects into the management system of ecologization and rational land use, since traditional mechanisms and tools are no longer able to fully overcome the corresponding obstacles to sustainable development.

### **1. Improvement of the economic-ecological zoning of recreational territories on the way to European integration and ecologization of innovation and investment policy of Ukraine**

Recreational land use is a powerful environmental factor, because it is designed to solve the function of protecting the environment in addition to the recreational functions of the population.

Based on the analysis of EU statistical data on the availability of recreational territories and land with significant negative environmental impact, it can be concluded that in most EU countries, the number of recreational areas is less than the those that have a negative impact on the environment (Table 1).

Only in Finland, Sweden and Malta the number of recreational areas is greater than the number of those that have a negative impact on the environment. This testifies to the need for a radical restructuring of the mechanism for the regulation and management of the concerned land.

Table 1. Correspondence of recreational territories and lands that have a negative impact on the environment

	Total, sq.km	Recreation, leisure, sport, sq. km	Heavy environmental impact, sq. km	% from Recreation, leisure, sport
Belgium	:	521	1 966	377
Bulgaria	:	403	2 178	540
Czech Republic	:	978	3 058	313
Denmark	:	1 615	1 935	120
Germany (until 1990 former territory of the FRG)	:	11 103	20 633	186
Estonia	45 347	749	1 262	168
Ireland	70 601	736	2 588	352
Greece	131 912	1 224	3 522	288
Spain	498 504	1 995	15 077	756
France	549 060	7 172	20 211	282
Croatia	56 539	221	1 607	727
Italy	301 291	3 211	12 735	397
Cyprus	:	58	399	688
Latvia	65 519	1 304	1 415	109
Lithuania	65 412	960	1 543	161
Luxembourg	2 595	72	134	186
Hungary	93 013	1 336	2 448	183
Malta	315	16	15	94
Netherlands	37 824	3 683	3 778	103
Austria	:	1 296	2 706	209
Poland	313 851	4 730	9 340	197
Portugal	88 847	268	3 128	1 167
Romania	239 068	470	3 808	810
Slovenia	20 277	371	524	141
Slovakia	49 026	516	1 281	248
Finland	337 547	32 732	7 825	24
Sweden	449 896	42 814	9 963	23
United Kingdom	247 763	6 771	8 741	129
European Union (28 countries)	4 369 364	127 325	135 812	107
European Union (27 countries)	4 312 826	127 103	143 820	113

\* : – not available according to Eurostat

\*\* Developed by authors on the base of [10]

Taking into account the specificity and versatility of use of recreational lands, we have developed proposals for the distribution of recreational areas into economic-ecological zones with appropriately authorized activities in each of them, taking into account international environmental standards and sustainable development strategies declared in the UN Framework Convention on Climate Change; The Europe 2020 Strategy, which reveals the European social and economic concept of the 21st century, and so on.

The strategic task of our country in the context of the signing of the Association Agreement between Ukraine and the EU is its real integration into the European economic space.

The European Union has become one of the initiators of innovative sustainable development strategies; the innovative development of the community becomes the main strategic direction of the global integration strategy of the EU, the economy of knowledge and innovation officially proclaimed strategic EU priorities over the past two decades, the role of innovation policy is growing. In this conditions the innovative development of land relations is important direction, as the land is the basis of production, a natural resource and an economic tool at the same time.

To ensure the sustainable development of territories, the necessary condition is their differentiation and allocation of types and directions of use. The concept of zoning of territories is universally accepted. But the recreational areas are lands that can be located in different territories – agricultural (intended for green tourism), forest (forest tourism), water fund (beaches, rivers, ponds, lakes, seas, etc.). Therefore, in order to ensure innovation-investment policy of sustainable development of recreation areas, it is necessary to conduct their zoning by type of use.

The generally accepted principles of land zoning are:

- priority use of land as a natural resource and the main means of production;
- provision of environmental criteria for land use development;
- combination of cost-effective and socially appropriate land use;
- taking into account public and private interests during land zoning;
- openness of land zoning information.

Based on the above principles and transforming them into recreational land use, the foundations of the economic and ecological zoning of recreational territories and the expected effect of their use are shown in Figure 1 and Table 2.

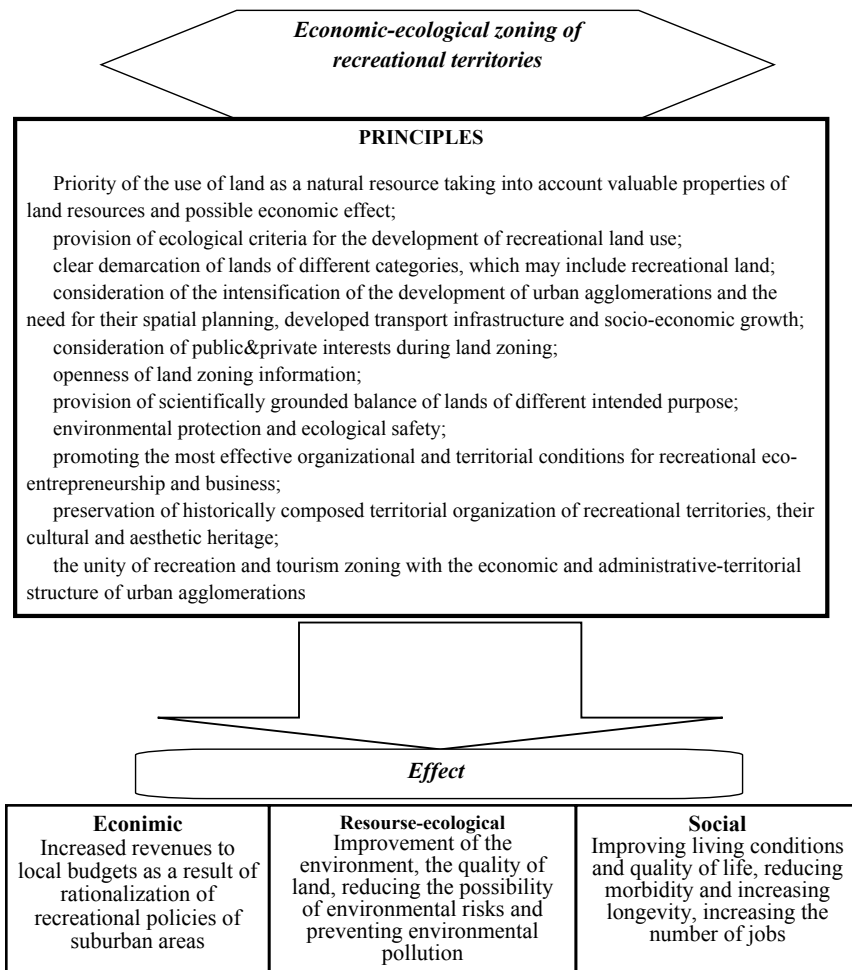


Figure 1. Scientific and economic support of zoning of recreational territories

Table 2. Typology of lands for recreational purposes on the basis of economic-ecological zoning

Zone	Substantiation	Direction of use
Resort-recreational area	<ul style="list-style-type: none"> <li>- direct proximity of water, forest, other natural objects;</li> <li>- provision of cumulative effect from the recreational complex;</li> <li>- increase of investment attractiveness of territories</li> </ul>	boarding houses, sanatoria, holiday homes, resorts, campsites, health camps, health trails
Zone of seasonal resident of the population	<ul style="list-style-type: none"> <li>- provision of recreational needs;</li> <li>- increasing the investment attractiveness of the territories;</li> <li>- increase the recreational value of the territory;</li> </ul>	country houses and garden houses
Security zones of limited use	<ul style="list-style-type: none"> <li>- compliance of the use of territories with the requirements of normative legal acts;</li> <li>- protection of the population from the harmful effects of regimens;</li> <li>- protection of areas of limited use</li> </ul>	protective green stripes, service facilities
Green zones of short-term rest	<ul style="list-style-type: none"> <li>- insufficient provision of relevant territories;</li> <li>- the satisfaction of the needs of the population;</li> <li>- increasing the attractiveness of the territory;</li> <li>- support for the improvement of the population</li> </ul>	squares of rest, boulevards, parks, landscaped paths
Cultural-entertainment zones	<ul style="list-style-type: none"> <li>- satisfaction of population needs in cultural and entertainment events;</li> <li>- increase of investment attractiveness of territories;</li> <li>- increase in the number of tax revenues to the budgets</li> </ul>	entertainment and club facilities, leisure centers, concert halls, circuses, cinemas, amusement parks,
Commercial-economic zones	<ul style="list-style-type: none"> <li>- needs of the resting population;</li> <li>- the need to place the appropriate infrastructure;</li> <li>- employment of the population;</li> <li>- economic development of the territory;</li> <li>- coordination of the tax component</li> </ul>	motels, catering establishments, service facilities, market complexes,

Aesthetic-cognitive zones	<ul style="list-style-type: none"> <li>- recreational value of territories;</li> <li>- increase of species diversity;</li> <li>- aesthetic education;</li> <li>- soil protection;</li> <li>- increase of investment attractiveness of territories</li> </ul>	tourist objects, architectural and planning areas
Service zones	the need to place technical infrastructure on the territory; the advantage of concentrating relevant facilities on a small territory to ensure the preservation of recreationally valuable areas; ensuring rational differentiation of territories for the formation of a perfect financial-economic management mechanism	administrative buildings, fire depot, rescue medical stations, residential care institutions, communication departments

Ecological – economic zoning of recreational territories is departed from economic activity, it is oriented on the ecological factor of the development of territories. But in today’s conditions of economic development of the country and interests of economic entities, the effectiveness of the appropriate type of zonation is seen as controversial.

We propose economic-ecological zoning (Table 2), which envisages ecologization of the economy taking into account the existing economic efficiency of economic activity, needs of the population and stakeholders in the system of recreational land use [4].

It is envisaged that the zones of seasonal residence, cultural- entertainment and commercial – economic zones will be the basis for the economic development of the territories. Other territories will provide ecological and recreational functions. This will ensure sustainable innovation and investment development of recreational areas as a powerful factor in ecology and economy at the same time.

## **2. Innovative technologies of integration of stakeholders in the system of ecologization of recreational land use**

In the process of ensuring the sustainable innovation development of recreational territories, it makes sense to "involve the community" to identify or find solutions to social problems. This tendency in European countries arose on the basis of attempts by the commercial world to develop innovative consumer

products or to solve complex scientific problems. Involving the public in the development of innovation has been the driving force behind the growing interest in using crowdsourcing technology and promoting online public participation programs around the world.

The recreational land use of many countries develops without taking into account the needs of the public and their participation in improving the process. This is due to the imperfection of the current state land use policy, the post-Soviet trends in regulatory and legislative regulation of activities in the respective territories, the absence of the principles of public-private partnership in the field of rationalization of the use of agricultural and recreational land, the consequences of the economic crisis, duplication of managerial functions and powers, incomplete distribution of ownership forms to the land, which is the main basis for the functioning of the recreational sphere, and so on.

Therefore, today, in the world, the issue of attracting money and generating ideas for the launch and further development of ideas is important.

In this aspect, in the system of recreational land use it is considered expedient introduction of crowd technologies – a set of effective tools, working on the principle of making many people contribute to the project. Crowd technologies in the system of recreational land use are defined by us as the use of personal resources of citizens for the production of any product, development and implementation of services or solutions to the tasks for sustainable development of land for recreation.

Popularization and widespread of such phenomena as crowdsourcing and crowdfunding once again prove the importance of the role of consumers in the process of creating a competitive product. There is a buyer's transformation into force, strengthening the position of business in the market and steering the manufacturer by creating a market-demanded product. The maintenance of competitive positions in the modern world becomes possible subject to more close interaction with the consumer. An indispensable condition for the formation of a competitive business is the participation of the consumer in the process of creating new values.

The term "crowdsourcing" (crowd – "crowd" and sourcing – "use of resources") is the organization of the work of a group of people over any task for the achievement of public goods. For the first time, it is believed that such an interpretation of crowdsourcing was used by journalist Jeff How in 2006 in the article "The Rise of Crowdsourcing" for Wired magazine [11].

The analysis of scientific points of view on the term "crowdsourcing" provides an opportunity to distinguish the following approaches to the definition of this definition: crowdsourcing, as a process of delegation of authority; crowdsourcing, as a certain technology of social interaction; crowdsourcing as a consumer-based innovation; crowdsourcing as a method of organizing work and solving business problems [2]. In this aspect, there are different directions for defining the appropriate definition:

- crowdsourcing, as a process of delegation of powers – a means of involving the collective mind of various individuals to solve the problem of organization, achieving its productive goals [3];

- crowdsourcing as a technology of social interaction – the technology of virtual (through the Internet) social interaction between state and municipal government and consumers of state (municipal) administrative services, is aimed at meeting the needs of them by giving the right to participate in the process of making public management decisions, relating to their livelihoods [4];

- crowdsourcing as consumer-based innovation, in which manufacturers rely not only on customer needs but also on product identification and improvements that could meet these needs [8];

- Crowdsourcing as a method of organizing work and solving business tasks – one of the methods of solving by involving a certain circle of unauthorized persons on a royalty-free basis, which makes it possible to reduce the cost of the final product [6].

Croudfunding (from the English "Crowd" – the crowd; "funding" – financing) is a financial instrument for attracting financial resource through voluntary collective collaboration of people through the use of special Internet platforms. Existing ways to finance entrepreneurial activities are often unavailable at an early stage and, in general, have their disadvantages, whether it is dependence and pressure from the investor or the "high cost" of the method. Therefore, recently, the new, revolutionary method of financing, which serves "croudfunding", is gaining in popularity.

Crowdsourcing and croudfunding act as components of the general public represented by individuals who attract investments and ideas for product implementation and are users of this product. The attraction of finance can be attributed to the method of network interaction, which is developed by the following properties:

- Network principle of organization of financing: funds of the population are involved by establishing the relationship between investors and project



creators in social networks. One of the successful factors of the crowdfunding projects is the social ties of their authors.

– Savings on intermediaries: the number of hierarchical links decreases due to the direct link between people who own money and the people they need. Crowdfunding can be defined as a bank that accumulates and uses' financial resources of the population.

– Savings on transaction costs: the project developer and potential investor, based on crowdfunding technology, minimize costs.

The advantages of crowdfunding are:

- independence from banks;
- free advertising and press;
- verification of the idea;
- full control over the project;
- strategic openness to new opportunities;
- assessment of the level of demand and risk reduction;
- receiving contact information, creating a consumer base.

The current development of market relations allows us to develop the form of collective investment in the form of crowdfunding to the model of collective investment – crowdinvesting.

Kind of Crowd – technology, which is associated with crowdfunding – crowdinvesting – investing funds and maximizing the benefits of investing in the project implementation [5]. An integral part of crowdinvesting is characterized by the fact that the investor receives a financial reward for investing in the project. In modern times, while using Internet resources, the process of crowdinvesting occurs only with the use of a global network, with funding made by small contributions from a wide range of participants. Thus, the implementation of innovation, business development is seen[5].

The advantages of crowdinvesting are:

- the possibility of investing small amounts of funds;
- the possibility of diversification;
- a large selection of projects;
- definition of development of competition in the market;
- promotion the growth of employment, technological and innovative development;
- reduction of the level of mediation in the economy.

Not every category of people who has free money will be at risk by investing in a large sum. Therefore, investing small amounts is the most appropriate direction for further development and operation of the project.

The possibility of diversification implies that investors can invest several projects at once in order to reduce the risk of invested funds. If at least one turns out to be effective, it will help cover all costs incurred. Therefore, recently, crowdfunding is gaining momentum, rapidly developing.

Crowdfunding gives an opportunity to be both an investor of the project and its direct participant, which undoubtedly unites the asker with the investor in connection with the general direction. This technology allows for the option of a preliminary analysis based on the rationality of the future project, the credibility of the borrower and his business reputation, assesses the market in terms of further demand for goods and risk assessment of investment in the project. Thus, modern technology expresses a comprehensive view of how attractive an investment project should be.

Crowdlending is a modern technology of crowd technologies implemented by the online process of providing loans to invest in a project of individuals and legal entities on the basis of an Internet web-site [7]. The main advantages of this technology are as follows:

- the speed, efficiency and comfort of obtaining a borrower financial resources in the case of interest in the investor;
- the possibility of obtaining financing on terms more attractive than those presented in the traditional financial market;
- accessibility of different spectrum of directions of activity;
- Simplified procedure for obtaining cash (documentary)

Crowdlending, in order to avoid risk, provides for legal relations between the borrower and the investor, and the Internet platform, acting as an intermediary between them, provides guarantees for the implementation of the project

According to the authors, taking into account the predominance of ecological and social trends in the use of territories and the need for meaningful changes in this area, the most effective vector for solving the above problems is the creation of a crowdsourcing recreational Internet platform as an innovative environmental development project for the land concerned.

Actual and effective is creation of a recreational recreational Internet platform on the principles of ecologization of the development of recreational land

use. While investigating the essence of ecologization of the development of territories, is necessary to define the conceptual-categorical apparatus of the corresponding process. Considering in this aspect recreational territories, we proposed the following definition: ecologization of recreational land use – is the process of implementing a system of innovative ecologically oriented measures to ensure the mutually agreed socio-ecological and economic development of recreational territories in order to receive appropriate services, pleasure and rest, in which the use and restoration of the natural – resource potential of recreational lands takes place taking into account the needs of the following generations. Taking into account the necessity of introducing innovative measures, the use of crowdsourcing technology in this area is effective.

In our view, in the nature conservation area, crowdsourcing should be considered as the mobilization of resources of a large number of people through the use of the latest information technologies to address the urgent issues of improving the state of the environment and preserving natural resources at the enterprise, region and society as a whole [1].

The purpose of creating an environmental innovation infrastructure is to provide both a comprehensive innovation activity and the preservation and development of the country's scientific, technical and environmental potential in the interests of society, including overcoming the decline of production, its structural adjustment, creation of new products, environmental-oriented measures of production processes.

In this aspect, the ideology of the introduction of innovative investment projects into the sphere of recreational nature management is based on the principles of the online platform of crowdsourcing, since the creation of a similar crowdsourcing recreational Internet platform is an effective solution on the way to ecologization of land use. Indeed, lands of recreational purpose include land used for recreation, tourism and sports activities. The foregoing points to the public purpose of recreational territories, therefore their development should be carried out taking into account the interests of stakeholders.

We see the expedient recreational direction of the recultivation of disturbed lands for the creation of infrastructure projects with the creation of a crowdsourcing platform in the field of recreational land use on the basis of public-private partnership in order to attract investment in the relevant sphere. After all, the involvement of private financial resources in the state land policy is a guarantee of rational and effective development of territories.

It is considered expedient implementation of the crowdsourcing Internet platform for informing the public and ensuring the process of providing the affected areas with a lease to entrepreneurs for commercial recreational activities within the framework of public-private partnership, while taking into account and ensuring ecological, economic and social development of the territories. Institutional provision and legislation on the development of public-private partnerships define tourism, recreation, culture and sport as one of the areas of activity. Therefore, the implementation of innovation and investment projects aimed at the reclamation of disturbed agricultural land with the possibility of their further recreational use is actual.

Crowdsourcing can be attributed to the tools for improving environmental policy, as the result of their implementation is meeting the public needs in reducing the anthropogenic burden on the environment. The reasonableness of the inclusion of this innovative social Internet technology in the process of ecologizing recreational land use is based on understanding the essence of the relevant tools, which is to involve volunteers interested parties and delegate them a certain list of functions for solving socially important tasks in the field of land use.

The result of the use of ecological recreational crowdsourcing can be a map of recreational areas, in the assembly and operation of which will be attended by all interested citizens, noting the places where violations of the recreational regime use of existing territories for recreation, prospective recreational lands with information about the status of a particular object environment. At the same time, every stakeholder can act as a "customer" and an "expert". The approximate structure of creation and operation of the corresponding crowdsourcing recreational platform is presented in Table 3.

The undoubted advantages of crowdsourcing in the process of ecologization of recreational land use are:

- speed of processing of any volumes of information;
- speed of collecting information from any point, regardless of geography;
- speed of checking and finding the second and third sources;
- fastest procedure of environmental audit and project appraisal;
- self-organization and self-management of communication platforms;
- solving two main tasks: accuracy and speed.

The disadvantages of crowdsourcing in the relevant field include:

- uncertainty with the right to intellectual property rights;
- complexity with the management of the quality of the intellectual product;

- low percentage of fast high-level ideas (according to specialists of consulting agencies, the percentage of high-level ideas – 5-10%);
- uncontrollable deadlines;
- possibility of manipulation by persons involved in the crowdsourcing platform;
- ability to leak information into other areas.

Table 3. Structural elements of the crowdsourcing recreational Internet platform

Crowdsourcing recreational platform (CRP)	
Defining the concept of CRP	Universal Internet platform, which is a recreational map, based on ecologization land
The purpose of the CRP	Taking into account the interests and needs of a wide range of stakeholders in the implementation of ecological projects on recreational areas; ecologization of recreational land
The customer (initiator) of CRP establishment	The authorities and local government Governmental organizations Business structures NGOs People
Support of CRP	Monitoring the implementation of innovative recreational Crowdsourcing projects
Motivation of participants	Creation of new recreational areas for the needs of the population in the rest; Taking into account the views and interests; Information support; Economic incentives
Information network	Social networks Internet sites Media Survey / Questionnaire TV, radio informing
Assessment and call for solutions	Every other crowdsourser assess the proposal for the establishment and improvement of recreational areas, forming a common recreation algorithm making and its presentation
The establishment of CRP	Development of socially oriented proposals to improve the process of recreational land use on the basis of ecologization

Source: authors development

The application of crowdsourcing will promote the development of public-private partnerships, which will provide links and strengthen cooperation in the recreational sphere.

Taking into account the aforementioned aspects of innovative tools for improving the ecological policy of recreational land use, in the conditions of the unstable state of the economy of many European countries, formation of a comprehensive land strategy program can become an effective mechanism for its modernization and the introduction of innovative technologies in the field of landuse relations. In the economic and ecological basis of land strategy for recreational land use it is worthwhile to lay principles of public-private partnership in order to achieve a high degree of interest in ensuring the sustainable development of recreational areas of the private sector. Consequently, the application of the method of crowdsourcing in the field of ecologization of recreational territories and agricultural nature management allows public-private partnerships to attract and implement large-scale innovative projects covering large areas. With the development of information technology, active citizens and other stakeholders, interested in active participation, can take part in solving the problems of ecologization of recreational land use in their region as well as in other territories.

## **Conclusions**

In the scientific research innovative and investment solutions of ecologization of recreational land use in conditions of regional eurointegration of Ukraine are offered.

It is proved that highly productive development of recreational territories on the way to increase investment attractiveness should take place taking into account innovative tools of informing stakeholders. The creation of the crowdsourcing platform as an innovative tool for the development of information technologies and one of the priority directions of improvement of the organizational and economic mechanism of recreational land use of urban agglomerations is proposed.

The analysis of the contradictions of existing domestic and foreign classifications of recreational territories became the basis for developing an approach to economic – ecological zoning, which envisages ecologization of economic relations taking into account the efficiency of economic activity, needs of stakeholders in the system of recreational land use.

We propose a comprehensive approach to the formation of a zoning mechanism for recreational purposes, which should be based on a clear demarcation of ownership patterns and use of recreational areas. It is envisaged that the zones of seasonal residence, cultural and entertainment and commercial and economic zones will be the basis for the economic development of the territories.

Consequently, in the conditions of implementation of relevant decisions in the system of recreational land use, provision of sustainable innovation and investment development of territories is possible.

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## **INNOVATION-INVESTMENT PROJECT ON THE DEVELOPMENT OF HORTICULTURE AND VITICULTURE IN THE CONDITIONS OF EUROPEAN INTEGRATION (REGIONAL DIMENSION)**

### **Introduction**

Horticulture and viticulture is one of the priority directions of agrarian development in both Ukraine as a whole and the Odessa region in particular due to the presence of favorable natural and climatic conditions for the cultivation of fruit and grape products, sufficient areas of agricultural land, powerful unrealized raw materials, industrial, labor and innovative potential for the dynamic development of fruit and berry and grape production. The actualization of the proposed project is due to a combination of the following factors:

- import substitution of table grapes and fruits, saturation of the domestic market with competitive products;
- year-round provision of the population of the region and the country with high-quality domestic fruits and grapes;
- provision of domestic organic products (apples and grapes in particular) for the production of baby food;
- exports of fruits and products of their processing (in particular, juice products) to the countries of the European Union, USA, Canada;

- ensuring high profitability of fruit and grape production by using the ampelocological potential of the region and introducing resource-saving technologies for planting, growing and storing products;
- presence of internal and external demand for fruits and grapes, as well as products of their processing;
- favorable price policy in the domestic market, which allows the sale of table varieties of apples and grapes throughout the calendar year at higher than seasonal prices;
- favorable price policy in the foreign market: export prices of processed products, in particular, juice production, are 2-3 times higher than raw material prices, are less volatile, and provide a stable income to the producer.

The objectives of the project «Development of horticulture and viticulture in the conditions of European integration» are:

1. Increasing the competitiveness of agriculture by ensuring the efficient production, harvesting, storage and processing of apples and grapes using innovative resource-saving technologies and equipment.
2. Creating prerequisites for reducing imports and increasing exports of domestic products.

According to the objectives, the main tasks of the project are as follows:

- introduction of innovative resource-saving technologies for laying, production and storage of apples and grapes;
- combination of intensive horticulture with organic horticulture, use of drip irrigation technologies;
- development of the regional and country markets infrastructure;
- the growth of sales volumes on the domestic and foreign markets;
- import substitution of table varieties of apples and grapes;
- increase employment and income of the rural population.

## **1. Current trends in the development of horticulture and viticulture in the region**

According to official statistics, the share of the Odessa region in the public areas of fruit and berry plantations is 4,5%, grapes – 67%. In 2016 the area planted with fruit and berry area in the region reached 10,7 thousand hectares, in which 8,1 thousand hectares (75,7%) were planted in the fructiferous period and include 2,2 thousand hectares of seeded fruits and 4,6 thousand hectares of dru-

paceous (Table 1). During the investigated period from 1990 to 2016, a negative trend was observed in reducing fruit and berry plantations areas from 39 thousand hectares in 1990 to 10,7 hectares in 2016 (by 72,6%), grape plantations – by half (from 62,9 to 31,6 thousand hectares, respectively). The reason for the significant reduction in the fruit and berry plantations area was the collective farms destruction and the negative experience of decomposing land when the gardens ceased to be processed and uncontrollably destroyed.

The contraction of the annual plantings of new vineyards in the nineties of the last century significantly disrupted the process of reproduction of plantations and conditioned the general aging of plantation areas (now about 50% of vineyards are aged 20 years or more), as well as their decline in productivity and deterioration in product quality. The large losses of manual labor and high price disparities in grapes and resources have led to an increase in the cost of grapes and, consequently, a reduction in the economic efficiency of viticulture [5, p. 10].

The main reasons for reducing the area of the vineyards of the table varieties were financial and economic (high capitalization of vineyards and total lack of state support) and infrastructure factors. For the Odessa region, the tendency to increase the yield of fruit and berry plantations is 2,9 times (from 36,4 hundred kilograms per hectare in 1990 to 104,3 hundred kilograms per hectare in 2016), grapes – in 1,4 times (from 61,2 to 84,5 hundred kilograms per hectare, respectively). Seeded fruits plantations have the highest yield (127,9 hundred kilograms per hectare in 2016). In 2016, the level of the yield of fruit and berry plantations of the region was somewhat higher than the country level; for the grape, there is a reverse trend (Table 2).

In the reporting period, in spite of the growth of the yield of plantations, there is a decrease in the production of fruits and berries by 23,5% (from 111,2 thousand tons in 1990 to 85,1 thousand tons in 2016), grapes – by 31,5% (from 337,6 to 231,2 thousand tons, respectively) (Table 3). Consequently, the decisive factor determining the downward trend in production volumes in the region is the reduction in the area of fruit and grape plantations

In the country production of fruits and berries, the Odessa region accounted for 4,2%, grapes – 61,2%. In the regional structure of fruit production in recent years, drupaceous fruits dominated (53,9% in 2016), while in the country structure – seeded fruits (62,9%), among which 55% are apples.

Table 1. The dynamics of fruit and berry and vineyards areas in the Odessa region\*

Planted area	Years										From 2016 to 1990,%
	1990	2000	2010	2011	2012	2013	2014	2015	2016	2016	
<b>1. Fruit and berry planted area, thousand hectares</b>	<b>39,0</b>	<b>23,0</b>	<b>10,7</b>	<b>10,8</b>	<b>10,4</b>	<b>10,5</b>	<b>10,6</b>	<b>10,6</b>	<b>10,7</b>	<b>10,7</b>	<b>27,4</b>
<i>in % of the country areas</i>	4,6	5,4	4,2	4,2	4,1	4,2	4,4	4,5	4,5	4,5	X
<b>2. Fruit and berry planted area in the fructiferous period, thousand hectares, total</b>	<b>30,5</b>	<b>21,1</b>	<b>9,1</b>	<b>9,0</b>	<b>8,5</b>	<b>8,8</b>	<b>8,7</b>	<b>8,0</b>	<b>8,1</b>	<b>8,1</b>	<b>26,6</b>
<i>in % of the areas of the region fruit and berry planting</i>	78,2	91,7	85,0	83,3	81,7	83,8	82,1	75,5	75,7	75,7	X
<i>in % of the country areas</i>	4,5	5,6	4,1	4,0	3,8	4,0	4,1	3,9	4,1	4,1	X
2.1. including the area of seeded fruits, thousand hectares	18,8	10,8	3,2	3,2	2,8	2,8	2,6	2,3	2,2	2,2	11,7
2.2. the area of drupaceous, thousand hectares	8,0	9,1	4,7	4,7	4,6	4,8	4,9	4,5	4,6	4,6	57,5
<b>3. Grape plantations area, thousand hectares</b>	<b>62,9</b>	<b>44,1</b>	<b>35,9</b>	<b>36,1</b>	<b>32,9</b>	<b>31,6</b>	<b>30,2</b>	<b>30,2</b>	<b>31,6</b>	<b>31,6</b>	<b>48,0</b>
<i>in % of the country areas</i>	35,7	40,1	41,3	43,0	42,2	42,1	61,6	67,1	66,9	66,9	X
<b>4. Grape planted area in the fructiferous period, thousand hectares</b>	<b>55,1</b>	<b>40,3</b>	<b>28,0</b>	<b>29,4</b>	<b>29,1</b>	<b>28,5</b>	<b>27,5</b>	<b>25,5</b>	<b>27,4</b>	<b>27,4</b>	<b>46,3</b>
<i>in % of the areas of the region grape planting</i>	87,6	91,4	78,0	81,4	88,4	90,2	91,1	84,4	86,8	86,8	X
<i>in % of the country areas</i>	38,5	40,7	41,2	42,6	42,8	42,5	62,5	60,7	64,2	64,2	X

\*Calculated by the authors according to the data of State Statistics Service of Ukraine and Main Department of Statistics in Odessa region [1-4].

Table 2. The dynamics of yield of fruit and berry and grape plantations in the Odessa region and Ukraine, hundred kilograms per hectare \*

Yields	Years										From 2016 to 1990, %
	1990	2000	2010	2011	2012	2013	2014	2015	2016		
<b>The Odessa region</b>											
1. Fruit and berry	36,4	31,4	82	97,4	95,1	94,1	84,9	106,1	104,3	286,5	
1.1. Seeded fruits	42,5	25,9	88,5	96,9	109,5	103,3	94,7	116,7	127,9	300,9	
1.2. Drapeicious fruits	30,3	35	78,8	100,1	91,3	93,8	83,6	107	100,8	332,7	
2. Grapes	61,2	50	62,5	77,9	72,9	90,1	95,8	93,5	84,5	138,1	
<b>Ukraine</b>											
1. Fruit and berry	42,7	38,4	78,2	84,9	89,9	103,5	95,2	104,5	101,9	238,6	
1.1. Seeded fruits	48,6	32,8	87,4	93,1	107,7	117,3	109,8	122,4	120,4	247,7	
1.2. Drapeicious fruits	34,9	53,8	70,8	78,6	71	94,5	80,9	87,8	83,8	240,1	
2. Grapes	58,3	51,7	60,3	75,5	67,2	85,8	98,6	92,3	88,4	151,6	

\*Calculated by the authors according to the data of State Statistics Service of Ukraine and Main Department of Statistics in Odessa region [1-4].

Table 3. The dynamics of fruits, berries and grapes production in the Odessa region, thousand tons\*

Criterion	Years										From 2016 to 1990, %
	1990	2000	2010	2011	2012	2013	2014	2015	2016	2016	
<b>1. Fruits and berries, in total</b>	<b>111,2</b>	<b>66,1</b>	<b>74,3</b>	<b>88,0</b>	<b>81,2</b>	<b>82,9</b>	<b>74,0</b>	<b>84,9</b>	<b>85,1</b>	<b>85,1</b>	<b>76,5</b>
in % of the country production	3,8	4,6	4,3	4,6	4,0	3,6	3,7	3,9	4,2	4,2	X
1.1. Including seeded fruits	<b>79,9</b>	<b>28,0</b>	<b>28,3</b>	<b>30,6</b>	<b>30,5</b>	<b>28,8</b>	<b>24,9</b>	<b>26,9</b>	<b>29,6</b>	<b>29,6</b>	<b>37,0</b>
in % of the country production	3,6	3,4	2,7	2,7	2,4	2,1	2,0	2,0	2,3	2,3	X
<b>1.2. Drupaceous fruits</b>	<b>24,3</b>	<b>31,7</b>	<b>37,1</b>	<b>47,2</b>	<b>41,8</b>	<b>45,2</b>	<b>40,7</b>	<b>48,5</b>	<b>45,9</b>	<b>45,9</b>	<b>188,9</b>
in % of the country production	4,2	6,3	7,5	8,6	8,5	6,9	7,9	8,9	9,0	9,0	X
The production of fruit output per one person	42	27	31	32	28	35	31	35	36	36	85,7
2. Grapes	337,6	201,4	175,1	229,1	212,3	256,6	263,7	238,7	231,2	231,2	68,5
in % of the country production	40,4	39,2	42,9	43,9	46,6	44,6	60,5	61,8	61,2	61,2	X
<b><i>The structure of regional fruit industry, % (+, -)</i></b>											
1. Seeded fruits	71,9	42,4	38,1	34,8	37,6	34,7	33,6	31,7	34,8	34,8	-37,1
2. Drupaceous fruits	21,9	48,0	49,9	53,6	51,5	54,5	55,0	57,1	53,9	53,9	+32,0

\*Calculated by the authors according to the data of State Statistics Service of Ukraine and Main Department of Statistics in Odessa region [1-4].

It is important to note the significant role of private households in shaping the supply of products in the Odessa region: they provide 92,4% of fruit and berries, as well as 98,7% of the nuciferous crop, 84,4% of berries, and 41,3% of grape production in the region (table 4).

The share of agricultural enterprises in the region accounts for only 7,6% of fruits and berries production, and 57,8% of grapes. In Ukraine, the share of agrarian enterprises in fruit and berry production is slightly higher and in 2016 it has been 18,5%, and the share of private households has amounted 81,5% [3].

Thus, the distinctive feature of the subjective structure of fruit production in the Odessa region is the domination of households, which produce more than 92% of products and require a developed infrastructure and transparent channels for its sale to customers.

In the structure of regional use of the products, domestic consumption of households is 34,8%, processing for wine –29,1%, sales through other channels – 19,6%. The region's share in the national production of grape wine is about 41%, fruit and vegetable juices – 29%, fruit juice mixes and vegetable – 24% [1-3].

The indicators of the cost and profitability levels of products in Tables 5-6 show the low efficiency of fruit and grape production in the Odessa region. So, in 2016, the cost of fruits and grapes in the region was 1,5, that is 1,1 times higher than the average for the country. During the period under study, the price of 1c of fruits in the Odessa region constantly exceeded the average price (in 2014 by 87,6%, in 2016 by 63,4%). The price of 1c of grapes, by contrast, is lower than the average level in Ukraine.

In 2016, compared to 2010, the profitability of fruits and grapes in the Odesa region increased by 13,8% and 14,4%, while the downward trend was a characteristic (by 2,9% and 17% respectively) for Ukraine. At the same time, in the period of 2010-2016, the national level of profitability of grapes and fruits (except for 2012 and 2016) stably exceeded the regional (see Table 6). This fact shows the low comparative efficiency of fruit and grape production in the region.

The main reasons for such a situation are due to the unresolved set of problems in the development of horticulture and viticulture in the stages of the production and logistics chain «planting – cultivating fruits and grapes – storage of products —processing of products – the realization on the domestic market – the export of products».

Table 4. The species and subjective structure of fruit, berries and grapes production in the Odessa region in 2016\*

Types of product	Species structure		Subjective structure, %	
	Thousand Tons	%	Agricultural enterprises	Private households
Fruits and berry, in total	85,1	100,0	7,6	92,4
<b>1. Seeded fruits, in total, incl.</b>	<b>29,6</b>	<b>34,8</b>	<b>11,2</b>	<b>88,8</b>
1.1. Apple	19,9	23,4	15,5	84,5
1.2. Pear	7,2	8,5	3,3	96,7
<b>2. Drupaceous fruits, in total, incl.</b>	<b>45,86</b>	<b>53,9</b>	<b>5,6</b>	<b>94,4</b>
2.1. Plum	8,96	10,5	6,5	93,5
2.2. Cherry	11,3	13,3	0,1	99,9
2.3. Sweet cherry	7,3	8,6	1,4	98,6
2.4. Apricot	10,33	12,1	0,5	99,5
2.5. Peach	6,31	7,4	....1	....1
<b>3. Nuciferous crop (walnut)</b>	<b>6,34</b>	<b>7,5</b>	<b>1,3</b>	<b>98,7</b>
<b>4. Berries, in total, incl.</b>	<b>3,27</b>	<b>3,8</b>	<b>15,6</b>	<b>84,4</b>
4.1. Strawberry	1,45	1,7	33,1	66,9
4.2. Raspberry and blackberry	0,73	0,9	4,1	95,9
4.3. Currant	0,78	0,9	0,0	100,0
<b>5. Grapes, in total, incl.</b>	<b>231,18</b>	<b>100</b>	<b>58,7</b>	<b>41,3</b>
5.2. Table varieties	21,8	5,6	57,8	42,2

\*Calculated by the authors according to the data of State Statistics Service of Ukraine [2].



Table 5. The dynamics of the cost indexes and prices of 1 centner (hundred kilograms) of fruits and grapes in the Odessa region \*

Indexes	Years							From 2016 to 2010, %
	2010	2011	2012	2013	2014	2015	2016	
<b>1. Fruits</b>								
1. Cost of 1 centner of products, UAH	245,59	324,13	227,27	231,71	512,7	530,4	547,0	222,7
<i>in% to the average cost of production in the country</i>	126,7	139,1	97,0	283,6	367,3	187,4	151,7	X
2. Price for 1 centner of products, UAH	262,33	347	295,31	323,47	440,5	680,5	659,7	251,5
<i>% to the average price level in the country</i>	117,8	126,3	115,8	155,5	187,6	157,6	163,4	X
<b>2. Grapes</b>								
1. Cost of 1 centner of products, UAH	212,89	220,56	245,01	212,22	238,3	333,2	366,4	172,1
<i>in% to the average cost of production in the country</i>	107,4	98,2	104,0	110,7	115,1	113,4	108,3	X
2. Price for 1 centner of products, UAH	261,77	278,52	319,61	302,75	296	455,15	503,40	192,3
<i>% to the average price level in the country</i>	68,9	79,0	78,6	78,3	88,7	76,5	85,2	X

\*Calculated by the authors according to the data of State Statistics Service of Ukraine [3]

Table 6. The dynamics of fruits and grapes profitability in the Odessa region and Ukraine, % \*

Indexes	Years							Dynamics of changes (+, -)
	2010	2011	2012	2013	2014	2015	2016	
<b>1. The Odessa region</b>								
1. Fruits profitability	6,8	7,1	29,9	39,6	-14,1	28,3	20,6	+13,8
2. Grapes profitability	23,0	26,3	30,4	42,7	24,2	36,6	37,4	+14,4
<b>2. Ukraine</b>								
1. Fruits profitability	14,9	17,9	8,8	154,7	68,2	52,6	12,0	-2,9
2. Grapes profitability	91,6	57,1	72,6	101,7	61,0	102,4	74,6	-17,0

\*Calculated by the authors according to the data of State Statistics Service of Ukraine [3]

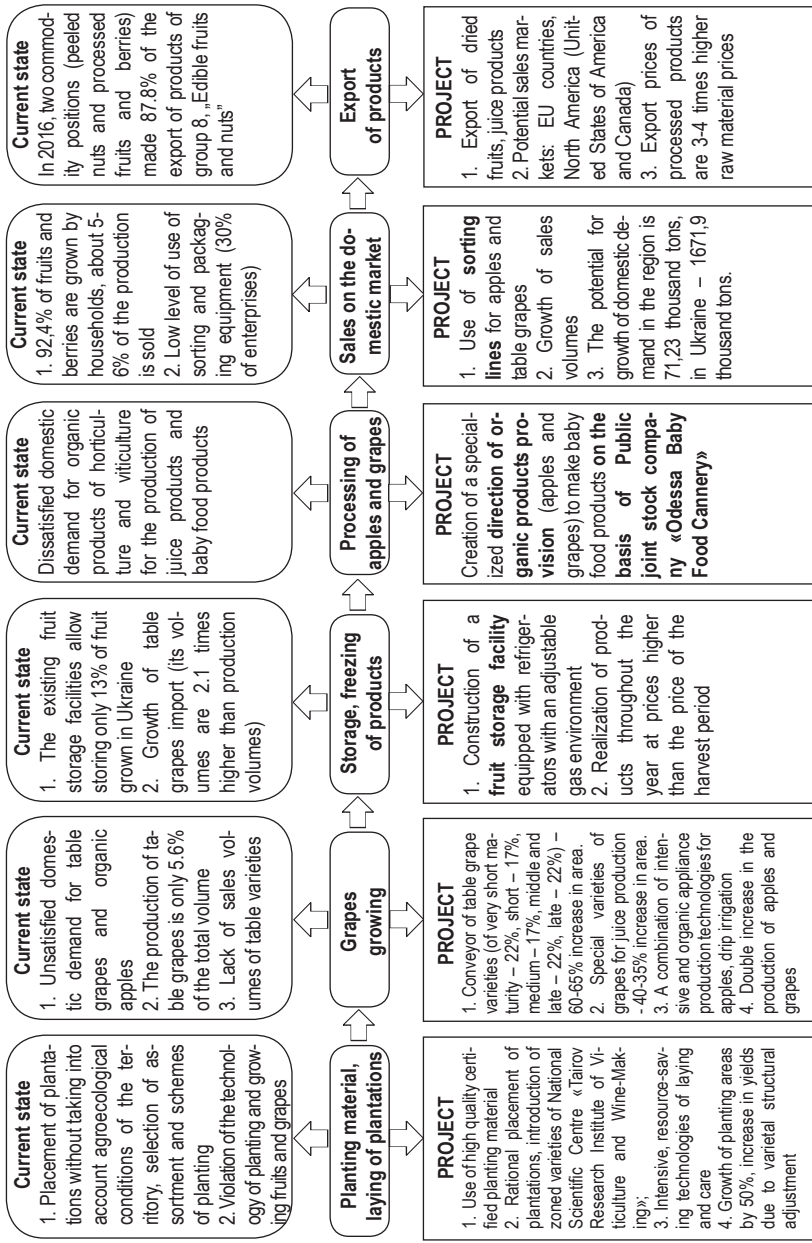


Figure 1. Schedule of project «Development of horticulture and viticulture in the conditions of european integration» [Author's development]

Existing problems of the sector development in the Odessa region are presented in logistic terms in Figure 1.

The main problems of gardening and viticulture development in the region are as follows:

- placement of plantations without taking into account agro-ecological conditions of the territory, selection of assortment and schemes of planting;
- the imperfection of existing technologies for the laying and production of fruits and grapes, insufficient level of innovation implementation;
- undeveloped regional logistics system, the lack of links after harvesting of fruits and grapes;
- imbalances between the volume of domestic supply and demand, the lack of high-quality fruit and grape varieties for the needs of consumers and processing enterprises, import deliveries of products;
- unrealized production and export potential of horticulture and viticulture, tax and social losses of the country.

## **2. The project essence and forecast indicators of horticultural and viticultural development**

The distinctive feature of the proposed project is, firstly, the target orientation to the key issues of the development of horticulture and viticulture in the region. Secondly – the logistic approach, which involves the consistent implementation of a set of measures at all stages of the production and logistics chain to ensure their economic efficiency. Thirdly – systematic, interconnected and complementary measures for the effective use of all components of the powerful sector potential (raw material, production, labor, innovation, etc).

The sequence of project activities in logistics is summarized in Figure 1. The main measures that form the essence and core of the project are the following:

- use of qualitative varietal garden material, rational placement of plantations, the introduction of regional grape varieties, created by the National Scientific Centre «Tairov Research Institute of Viticulture and Wine-Making»;
- the introduction of a conveyor production of table grapes;
- cultivation of special grape varieties for juice production – 40-35% increase in area;
- combination of intensive and organic appliance production technologies, introduction of drip irrigation;

- construction of a modern fruit storage facility;
- creation of a specialized direction of organic products provision (apples and grapes) to make baby food products on the base of public joint stock company «Odessa Baby Food Cannery»;
- ensuring the growing domestic needs in apples and table grapes according to rational consumption standards;
- export of dried fruits and apple juices to the countries of the European Union, United States of America, Canada.

An important condition for the successful implementation of the project is the development of domestic and foreign markets for sales of growing volumes of products. The calculation of the potential increase in domestic demand for fruit and berry and grape production (in the regional and country measure) will be based on the difference between rational and actual consumption (Table 7). According to the calculations and rational standards, the consumption of fruits and grapes in the Odessa region reaches 71,23 thousand tons (about 22% of the volume of regional production), in Ukraine – 1,67 million tons (about 66% of the national production). Consequently, a double increase in the production of apples and grapes in the area provided by the project (256,1 thousand tons), can be fully realized in the domestic market.

Table 7. The forecast calculation of domestic demand growth for fruits, berries and grapes in the Odessa region and Ukraine\*

Rate	The Odessa Region	Ukraine
1. Actual annual consumption in 2015, kg per person	60,2	50,9
2. Sustainable annual standard rate of consumption, kg per person	90	90
3. Spread between sustainable and actual consumption, kg per person	29,8	39,1
4. Population base, thousands person	2390,3	42760,5
<b>5. Runup of internal request, thousand tons (3*4)</b>	<b>71,23</b>	<b>1671,94</b>
<i>In % to production level, 2015</i>	<i>22,01</i>	<i>65,85</i>

\*Calculated by the authors according to the data of State Statistics Service of Ukraine [3, 4].

The parameters of the development of apple gardening and viticulture in the Odessa region as a result of project implementation are summarized in Table 8.

The forecast period is 6 years. During this period it is planned to expand the total area of apple plantations by 36,5%, including plantations in the fruiting age – by 67,4% (from 1,56 to 2,61 thousand hectares), increase the volume of apple production by 2,2 times (from 19,9 thousand tons to 44,3 thousand tons).

The increase in apple production is expected to be ensured not only by increasing the area of plantations but also by increasing their yield (by 33,1%) due to the gradual introduction of drip irrigation systems. According to statistical data, the yield of fruit and berry plantations on irrigated lands is 45,2% higher than the average in Ukraine [2].

The world trend in gardening is the formation of plantations mainly on dwarf rootstocks with a large number of plants per hectare. Such technologies require compulsory irrigation with simultaneous feeding. According to the State Geological Survey, in Ukraine, as of January 1, 2016, the total area of irrigated garden lands reaches 23 thousand hectares. It is about 11% of the total area of fruit and berry plantations in the fruiting age. In the context of European integration, the development of horticulture and berry lands necessitates the introduction of energy and resource-saving growing technologies that involve the use of micro-irrigation. World practice shows that drip irrigation increases yields in 4-5 times or more [6]. World trends and advanced European experience have been reflected in the project (see Figure 1); their account will allow to ensure its economic efficiency.

For the forecast period, the growth of grape plantations areas is 32,1%, including in fructiferous age – 47,4% (see Table 8). The project showthes the double growth in the volume of grape production in the Odessa region (from 231.2 to 462.8 thousand tons), as well as 36% increase in the yield of grapes by introducing an innovative technology for its cultivation.

The main economic indicators of apple orchard development and viticulture in the region as a result of the project implementation are systematized in Table 9. The prerequisite for achieving the forecast indicators of the efficiency of the apple orchard in the region is the involvement of households, producing 92,4% of fruit and berry products, in the market infrastructure and its development. The increase in sales of apple products in the project period is due to the reduction of domestic consumption of private households and the growth of sales volumes in the market to the customers and processing enterprises.

Table 8. The development parameters of apple gardening and grape growing in Odessa region as the result of project implementation\*

Criterion	Refer- ence period (2016)	Forecast period					6 <sup>th</sup> year in % to the reference period, times	
		1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year	5 <sup>th</sup> year		2 <sup>nd</sup> year
<b>1. Apple gardening</b>								
1. The area of new plantation, thousand hectares	X	0,31	0,31	0,47	0,16	X	X	X
2. Disposal area, thousand hectares	X	0,16	0,14	0,10	0,10	X	X	X
3. General area, thousand hectares	<b>2,06</b>	2,21	2,38	2,75	2,80	2,80	2,80	136,5
Including plantations in the fructiferous period	<b>1,56</b>	1,56	1,56	1,77	1,98	2,45	2,61	167,4
4. Yield, thousand hectares	<b>12,8</b>	13,4	13,9	15,2	15,8	16,3	17,0	133,1
5. Production, thousand tons	<b>19,9</b>	21,0	21,7	26,9	31,3	39,8	44,3	222,8
<b>2. Grape growing</b>								
1. The area of new plantation, thousand hectares	X	6,3	6,3	5,8	X	X	X	X
2. Disposal area, thousand hectares	X	2,8	2,8	2,6	X	X	X	X
3. General area, thousand hectares	<b>31,6</b>	35,1	38,6	41,7	41,7	41,7	41,7	132,1
Including plantations in the fructiferous period	<b>27,4</b>	27,4	24,6	21,9	28,3	34,6	40,4	147,4
4. Yield, thousand hectares	<b>8,45</b>	9,77	10,20	10,62	11,04	11,46	11,46	135,6
5. Production, thousand tons	<b>231,2</b>	267,7	250,5	233,1	312,1	396,4	462,8	200,2
<b>3. Total apple and grape plantations</b>								
1. General area plantations, thousand hectares	<b>33,66</b>	37,29	40,93	44,49	44,55	44,55	44,55	<b>132,4</b>
Including plantations in the fructiferous period	<b>28,96</b>	28,96	26,12	23,72	30,25	37,04	42,99	<b>148,5</b>
2. Production, thousand tons	<b>251,1</b>	288,6	272,2	259,9	343,4	436,2	507,2	<b>202,0</b>

\* Authors' calculations by statistical and analytical data [3, 4, 5]

The project envisages the involvement of households in market infrastructure through the construction of a regional fruit storage facility, which also functions as an accumulation and distribution center. Its main function is the efficient management of the fruit flow, the formation of large batches of fruit from small lots (coming from households), their sorting, redistribution to domestic consumption (through trade networks – import substitution of table varieties of apples and grapes) or processing into juices. Personal households will also be able to obtain a complex of services after harvesting of fruits (sorting, packing) in the accumulation and distribution center, and will be able to sell them independently to retail chains. The operation of the fruit storage facility will allow producers to sell their products throughout the year at higher prices, than those of the harvest period, and increase the profitability of apple production.

According to the Association «Ukrsadprom», there are about 250 fruit storage facilities in Ukraine today with a total storage capacity of 270-280 thousand tons. Less than a quarter of them are equipped with refrigerators with an adjustable gas environment. Such capacities allow storing only 13% of all fruits and berries produced in Ukraine. For example, in Poland, the capacity of fruit storage holds 1,5 million tons of fruit (about 40% of the total yield) [6].

The main expected effects of the project implementation in the Odessa region are as follows (see Table 8, 9):

- the double growth of regional apples and grapes production (from 251,1 to 507,2 thousand tons);
- regional areas expansion of plantations in the fructiferous age for 6 years by 50%, incl. apples from 1,56 to 2,61 thousand hectares, grapes from 27,4 to 40,4 thousand hectares;
- increase in the productivity of apples and grapes in 1,3 times;
- income support for apples and grapes regional production, earnings enlargement from products sales by 5,4 times, profit to 1 hectare of plantations by 6,2 times, the increase of products profitability from 36,7% to 83,6%;
- the increase of the employed number in the regional horticulture and viticulture by 1,3 times;
- the increase of tax revenues;
- providing food security to the region and country.



Table 9. Economic indicators of apple gardening and viticulture development in the Odessa region as a result of project implementation\*

Criterion	Reference period (2016)	Forecast period						6 <sup>th</sup> year in % to the reference period, times
		1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>d</sup> year	4 <sup>th</sup> year	5 <sup>th</sup> year	6 <sup>th</sup> year	
<b>1. Apple gardening</b>								
1. Volume of apple sales, thousand tons	3,98	6,29	8,69	13,43	18,79	23,88	26,60	6,7
2. Sales revenues, mln hm	26,3	50,8	78,0	139,7	215,4	307,2	384,7	14,7
3. Profit, mln hm	4,5	12,9	21,6	45,4	74,2	115,3	156,0	34,8
4. Profit to 1 ton, hm	1127	2058	2482	3383	3950	4829	5864	5,2
5. Profit to 1 hectare, thousand hm.	2,88	8,29	13,82	25,66	37,45	47,08	59,88	20,8
6. The cost of marketable output to 1 hectare, thousand hm	16,88	32,53	50,00	78,89	108,64	125,43	147,68	8,8
7. The level of profitability, %	20,6	34,2	38,2	48,2	52,6	60,1	68,2	3,3
8. Volume of employment, thousands of people	0,87	0,94	1,01	1,17	1,19	1,19	1,19	1,4

<b>2. Grape growing</b>										
1. Volume of grape sales, thousand tons	136,3	160,6	150,3	139,8	218,4	277,4	324,0	2,4		
2. Sales revenues, mln hrn	686	998	1056	1106	1918	2636	3461	5,0		
3. Profit, mln hrn	187	351	402	448	820	1142	1595	8,5		
4. Profit to 1 ton, hrn	1370	2184	2677	3206	3752	4117	4924	3,6		
5. Profit to 1 hectare, thousand hrn.	6,82	12,80	16,38	20,43	29,00	33,03	39,50	5,8		
6. The cost of marketable output to 1 hectare, thousand hrn	25,04	36,43	43,02	50,38	67,87	76,20	85,69	3,4		
7. The level of profitability, %	37,4	54,2	61,5	68,2	74,6	76,5	85,5	2,3		
8. Volume of employment, thousands of people	13,43	14,91	16,38	17,74	17,74	17,74	17,74	1,3		
<b>3. Total apple gardening and grape growing</b>										
1. Volume of sales, thousand tons	140,3	166,9	159,0	153,3	237,2	301,3	350,6	2,5		
2. Sales revenues, mln. hrn.	712,4	1048,9	1134,4	1245,4	2133,7	2942,7	3845,6	5,4		
3. Profit, mln hrn	191,3	363,8	423,8	493,8	893,9	1257,6	1751,1	9,2		
4. Profit to 1 hectare, thousand hrn.	6,60	12,56	16,23	20,82	29,55	33,96	40,73	6,2		
5. The level of profitability, %	36,7	53,1	59,6	65,7	72,1	74,6	83,6	2,3		
6. Volume of employment, thousands of people	14,30	15,85	17,40	18,91	18,93	18,93	18,93	1,3		

\* Authors' calculations by statistical and analytical data [3, 4, 5]

### **3. The global trends and prospects for the export of Ukrainian fruits and berry production**

The global trend of the last decade has been a significant increase in the production and sales of table grapes, fruits and berries, availability of products throughout the calendar year, the dynamic development of post-harvest technology and logistics. The European market is characterized by a rather high demand for fruit and berry gardening and wine-growing of table varieties, with the need not only for raw materials but also for processed products. According to statistics the Food and Agriculture Organization of the United Nations (FAO), since 1961, fruit production in the world has grown more than 3.3 times [7].

According to Food and Agriculture Organization of the United Nations, China (46,6%) is the world leader in fruit crops, India (11,8%) is the second, then goes Brazil (7,4%). The share of Ukraine is only 0,34%. The world's largest producers of grapes are China (16,7%), Italy (10,8%), United States of America (9,3%) and France (8,3%). In 2015, the world's grape growing volume amounted 75,7 million tons (an increase of 9,4% is in comparison to 2011). The highest growth rates of grape production are characteristic of India (117%), China (37%) and Egypt (23,1%) [7].

It is necessary to note the rather high rates of actual consumption of table grapes in some foreign countries. Thus, the average annual rate of consumption of grapes in Turkey is 26,5 kg/person, in Iran – 19,8 kg/person, Egypt – 17,5 kg/person, China – 6,5 kg./person. In Ukraine, the actual consumption of table grapes reaches only 2,1 kg/person, incl. domestic products – 0,9 kg/person, at a rational norm of 8 kg/person [3].

The above-mentioned ratios update the tasks of restoration and development of Ukrainian viticulture and gardening for the provision of food security of the country, import substitution of table varieties, export of environmentally safe fruits and berries, as well as products of their processing into foreign markets. In order to develop foreign markets, it is necessary to take into account the world trends and requirements for product quality. It is important for producers-exporters to provide foreseen production volumes, control over the spread of varieties and planting materials, guarantee the safety and quality of products, and also introduce the latest technologies and modern equipment.

Today, the most promising area of Ukrainian exports is products with high added value – frozen fruits and berries, fruit juices and wines, dried fruit. In

2016, two commodity items (peeled nuts and processed fruits and berries – sub-groups 802 and 811) made 87,8% of the products export of Group 8 of the UCT ZED «Edible Fruits and Nuts» (Table 10). The sum of the positive balance of subgroups 802 and 811 amounted to 111,8 million dollars against the background of the negative gross balance of commodity group 8 (UAH 328 million).

In 2016, the main buyers of Ukrainian products of sub-group 802 «Other nuts, fresh or dried» were Turkey (16,8%), Iraq (16,6%) and Iran (14,3%). At the same time, European countries – Poland (37,1%), Italy (11%) and Germany (8,8%) [3] became the main exporters of products of sub-group 811 «Fruits and Nuts».

In the analysis of the volumes of export-import flows of fruit and berries, it is necessary to draw attention to a significant negative balance of grape products (fresh or dried, sub-group 806), which in the reporting period amounted to almost 34 million dollars, exceeding the sum of the general balance of the commodity group 8 (see Table 10). Significant is the sum of the negative balance of subgroups 809 «Apricots, cherries, sweet cherries» (18,9 million dollars) and 810 «Other fresh fruits» (26,8 million dollars). Ukraine possesses a powerful resource potential for the production of almost all subgroups of fruit and berry products; its effective use will contribute to the gradual import substitution and the replacement of a negative foreign trade surplus with a positive, increase in the value added created at different levels of the production and logistics chain.

In 2016, the balance of group 20 «Products of processing of vegetables and fruits» had a positive value (29,5 million dollars). At the same time, the sub-group 2009 «Fruit Juices or Vegetables» amounted to 41% of the export of processed products; the balance for this subgroup (\$ 32,2 million) is the highest surplus of the entire commodity group of 20 (see Table 10). The main buyers of national products of processing of vegetables and fruits in 2016 were the countries of Europe (73,7%), in particular, Poland (53,6%), Austria (8,8%) and Slovakia (6%), as well as Belarus 13,8%) [3].

It should be noted that Ukrainian apple and grape juices are in great demand in the European market. Quotas for duty-free export of these goods within the framework of the free trade area with the EU are exhausted. Thus, in March 2017, Ukraine has completely exhausted quotas for duty-free exports of grape and apple juice to EU countries; the volume of the quota was 12 thousand tons. In 2015 and 2016 the volume of the quota was 10 thousand tons and was fully exhausted [8].

Table 10. The balance of Ukrainian foreign trade in fruits and products of their processing in 2016 \*

Code of foreign economic activity	Commodity items	Export		Import		Balance, thousand dollars
		Thousand dollars	Structure, %	Thousand dollars	Structure, %	
<b>08</b>	Edible Fruits and Nuts, in total, incl	<b>148221,9</b>	<b>100</b>	<b>476179,7</b>	<b>100</b>	<b>-327957,9</b>
802	Other nuts, fresh or dried	79191,8	<b>53,43</b>	13563,9	2,85	<b>65627,9</b>
806	Grapes, fresh or dried	62,5	0,04	34035,4	7,15	-33972,9
808	Apples, pears, quince, fresh	3139,7	2,12	12097,0	2,54	-8957,4
809	Apricots, cherries, sweet cherries, peaches, plums and blackthorn, fresh	870,6	0,59	19758,9	4,15	-18888,4
810	Other fresh fruits	8834,0	5,96	35591,3	7,47	-26757,3
811	Fruits and nuts, processed	50876,0	<b>34,32</b>	4714,3	0,99	<b>46161,7</b>
813	Fruits, dried	2504,7	1,69	7618,8	1,60	-5114,1
<b>20</b>	<b>Products of processing vegetables and fruits, total, incl</b>	<b>140278,7</b>	<b>100,0</b>	<b>110804,7</b>	<b>100,0</b>	<b>29474,0</b>
2006	Vegetables, fruits, nuts canned with the addition of sugar	46,1	0,03	622,3	0,6	-576,3
2007	Jams, fruit jelly	1816,7	1,3	5913,0	5,3	-4096,3
2008	Fruits, nuts, cooked or otherwise preserved	17980,6	12,8	28432,1	25,7	-10451,5
2009	Fruit or vegetable juices	57546,0	<b>41,0</b>	25305,3	22,8	<b>32240,7</b>

\*Calculated by the authors according to the data of State Statistics Service of Ukraine [3]

Table 11. Ukraine's export prices for raw materials and processed products in 2016, USD US / Ton

Code of foreign economic activity	Commodity items	Price	Code of foreign economic activity	Commodity items	Price	Code of foreign economic activity	Commodity items	Price
8081	Apples	<b>215,2</b>	8133	Apples, dried	<b>551,3</b>	2009	Fruit juices	<b>812,9</b>
80231	Other nuts (walnut) in shell	<b>1053,0</b>	80232	Other nuts (walnuts) without shell	<b>2426,6</b>	2006	Vegetables, fruits, nuts, canned with sugar	<b>4049,8</b>
8101	Strawberries (fresh)	<b>465,0</b>	8111	Strawberries (frozen)	<b>1395,4</b>	2008	Strawberries (canned)	<b>1651,3</b>
8102	Raspberry, blackberries, mulberry fruits (fresh)	<b>1119,7</b>	8112	Raspberry, blackberries, mulberry fruits (frozen)	<b>1267,9</b>	200897	Mixtures of berries (canned)	<b>1883,3</b>

\*Calculated by the authors according to the data of State Statistics Service of Ukraine [3]

An additional incentive for the growth of domestic exports of processed fruit and berry products is the price policy favorable for exporters. The statistical data show that export prices for frozen fruits and berries, as well as their processing products, are 2-4 times higher than the raw material export prices (Table 11). Thus, the cost of fruit juices exceeds the price of fresh apples by 3,8 times, dried apples – by 2,6 times. The export price of walnuts without shell exceeds the price of nuts in the shell by 2,3 times. The cost of strawberries, frozen strawberries and canned products exceeds the export price of fresh products in 3 and 3,6 times, frozen raspberry and the canned mixture of berries – in 1,13 and 1,7 times, respectively.

The values indicated in Table 11 show the economic expediency of exports of processed fruit and berry products with a higher added value compared with fresh produce. As a rule, no country can fully meet its needs for the entire product range of processed products, therefore, there is a stable high demand practically everywhere. It varies according to the needs of a particular state [8].

In addition, the world price for processed products is less fluctuating (compared to raw materials) and provides a stable income for the producer, motivating it to develop the external markets for such products.

Special attention should be paid to the export of organic berry products. According to expert estimates, the Ukrainian market of organic berries is growing by 2-3% annually, and its volumes make up 200 thousand dollars (180-190 thousand tons) of berry produce.

The profitability of organic berries production reaches 200%, and of concentrate or jam – even more. Moreover, the berry market in Europe is so developed that the area under the berries is already limited. Consequently, the volumes of supply of organic berries from Ukraine are practically unlimited; domestic berry products are not a subject to customs duties and do not have restrictive quotas.

In addition, the organic markup in Europe is 50-60%, and in Ukraine – only 30-40% [9, p. 28-29]. As in Ukraine, 90,1% of the berry products are grown by private households (in the Odesa region – 84,4% – see Table 4), it is expedient to introduce mechanisms for the cooperation of organic small producers to form large export batches of organic berries.

Exports of processed fruit and berry and grape products with high added value, and dried fruits and juices, in particular are the part of the project. Its implementation is provided at the last link of the logistics chain (see Figure 1).

Potential external markets for domestic products are the countries of the European Union and North America (United States of America and Canada). The main expected effects of the growth of Ukraine's exports of fruit and berry and grape products and products of their processing are: increased value added, jobs in the processing industry, revenues of producers of fruits and berries with an extended term of implementation.

## **Conclusion**

1. The agricultural direction, particularly horticulture and viticulture, has a special priority in the Odessa region. The development of fruit and berry and grape production is facilitated by positive factors: favorable natural and climatic conditions, availability of sufficient areas of agricultural land, strong regional potential, in particular, its industrial, labor and innovative components.

2. The recent trends in the development of horticulture and viticulture in the Odessa region are as follows: (1) the reduction of the area of fruit and berry and grape plantations (by 76% and 52% in 2016 compared with 1990); (2) increase in the yield of fruits and grapes (2,9 and 1,4 times); (3) reduction of volumes of fruit and berry and grape production (by 24% and 32%); (4) dominance in the structure of domestic consumption by households (35%); (5) a higher level of fruit and vine production costs and a lower level of profitability in the region compared with similar indicators in the country. The share of the region in the country production of fruits and berries reaches 4,2%, of grapes – 61,2%.

3. The proposed project has a targeted orientation to address the main problems of horticulture and viticulture development in the Odessa region and is based on a logistic approach, envisaging the introduction of a system of measures at all stages of the production and logistics chain. The core of the project is to formulate the following measures: (1) the use of qualitative varietal planting material, the laying of regional grape varieties; (2) the introduction of conveyor production of table grape varieties, cultivation of special grape varieties for juice production; (3) the construction of a fruit storage facility; (4) provision of organic products (apples and grapes) for the production of baby food; (5) realization on the domestic market with the use of after-harvesting technologies; (6) exports of dried fruits and juice products to European countries, United States of America, Canada.

4. According to the calculations, the forecast growth of domestic demand, based on rational consumption of fruits and grapes in the Odesa region is 71,23



thousand tons, in Ukraine – 1,67 million tons. The main expected effects of the project implementation are as follows: (1) to double the growth of apples and grapes production in the region; (2) the expansion of the planting space in the fruitful age by 50% within 6 years, the increase in the productivity of apples and grapes in 1,3 times; (3) increasing the efficiency of production, increasing sales revenue in 5.4 times, the number of employed in 1,3 times. An important condition for achieving these effects is the involvement of households that produce 92,4% of fruit and berry products in the region in the market infrastructure and its development through the construction of a modern fruit storage facility and the creation of an accumulation and distribution center for efficient management of fruit flow.

5. The balanced development of horticulture and viticulture in the region involves taking into account the current world trends, such as: growing demand for fruit and grape products of table varieties, as well as products for their processing; availability of products throughout the year; dynamic development of after-harvest technology and logistics; compliance with safety and product quality standards at all levels of the logistics chain.

6. Ukrainian exports of fruits and products of their processing undergone a series of transformations under the influence of world trends. Thus, in 2016, the subgroups 802 and 811 (peeled nuts and processed fruits and berries) made 87,8% of the export of products of Group 8 «Edible Fruits and Nuts»; the subgroup 2009 «Fruit Juices or Vegetables» made 41% of the exports of Group 20 products. The growth of exports of domestic fruit and berry products is a positive trend, which produces an increase in value added, the number of jobs, producers' incomes. The most promising direction of Ukrainian exports is products with high added value – frozen fruits and berries, fruit juices and wines, dried fruit, as well as organic berry products. Potential external markets for its sales are the countries of the European Union and North America (United States of America and Canada).

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## **ORGANIZATIONAL AND ECONOMIC FOUNDATIONS OF FORMATION OF THE INNOVATION PROJECT IMPLEMENTATION MECHANISM**

### **Introduction**

Implementation of innovations in the process of production, management and planning of economic activity is a requirement for success in entrepreneurial activity or individual business processes at the present stage of development of domestic enterprises. That is why it can be confirmed that the effectiveness of any enterprise depends directly on the results of scientific progress, which in its turn is based on innovation activity.

1. The innovation activity of the enterprise is a complex process of creation, use and dissemination of innovations in order to obtain competitive advantages and increase the profitability of production. It consists of:

2. Production and distribution of new types of equipment and technologies.

3. Advanced intersectoral structural shifts.

4. Implementation of long-term scientific-technical programs with high payback periods.

5. Financing of fundamental research for qualitative changes in the condition of the country's productive forces.

6. Development and implementation of new resource-saving technologies that are aimed at improving the social status of the population, the ecological situation, etc. [1].

Nowadays, innovation activity is one of the most important factors that allows the company to hold stable positions in the market, receiving significant advantages over competitors.

Innovation development is one of the interests of both the state and individual enterprises. Therefore, innovation financing is widely used to enhance innovation activity. Innovation investments determine the level of development and success of different structures. Due to the fact that it is impossible to commercialize absolutely all innovation projects, the responsibility for adopting competent management decisions to assess the effectiveness and selection of innovation projects increases. It is clear that innovation itself is not always able to bring significant profit, therefore, it is necessary to evaluate properly the project and to substantiate scientifically the development plan of its implementation. The foregoing determines the relevance of the chosen topic of the article.

## **1. Determination of the economic essence of innovation activity of the enterprise**

Solving economic, social, managerial and personal problems in modern society involves a specific, innovation style of management, based on orientation on innovation, systematic and purposeful innovation activity.

Preparation, justification, assimilation and control over the implementation of innovation are an innovation activity.

Innovation activity involves investing in research and development aimed at implementing qualitative changes in the composition of productive forces, progressive intersectoral structural changes, the development and introduction of new types of products and technologies.

The essence of innovation activity lies in its directions:

- conducting researches and developments aimed at the creation of intellectual property objects, scientific-technical products;
- development, assimilation, production and distribution of fundamentally new types of equipment and technology;
- development and implementation of new resource-saving technologies intended for improvement of social and ecological status;
- technical re-equipment, reconstruction, expansion, construction of new enterprises, carried out for the first time as industrial development of the production of new products or the implementation of new technology [2].

Innovation activity as a system has the following properties: interconnection and interaction of all elements, integrity, consistency and synchronization in time, consistency with the tasks and aims of the organization, adaptability, environment changes flexibility, management structure autonomy, management functions, multifunctionality and multidimensionality, updatability.

The motives of innovation activity are both external and internal factors. External motives include:

- 1) need to adapt the enterprise to the new management conditions;
- 2) changes in tax, monetary and financial policies;
- 3) improvement and dynamics of markets and consumer preferences, ie demand pressure;
- 4) competitors activation;
- 5) market fluctuations, structural changes in industry;
- 6) emergence of new cheap resources, market expansion of the production factors, ie supply pressure, etc.

The internal motives of the innovation activity of the enterprise are:

- 1) desire to increase sales;
- 2) expansion of market share, transition to new markets;
- 3) improving the firm's competitiveness;
- 4) economic security and financial stability of the enterprise;
- 5) profit maximization in the long run.

Innovation activity of the enterprise is carried out in 3 types (figure 1):

1. Implementation of new products and technologies that are not the result of their own development;
2. Allocated participation in innovation activity;
3. Specialized activity of the company as an innovator.

If the innovation activity of the enterprise is carried out in the form of a dedicated participation, or a specialized participation of the company as an innovator, such activity consists of an innovation process.

Innovation process is a way of organizing a complex of interrelated subsystems of innovation activity to ensure the profitability of an innovation entrepreneur, ensuring his competitiveness and achieving a certain goal.

The innovation process covers the entire complex of production and consumption relations and is a period from the birth of an idea to its commercial implementation (Figure 2).

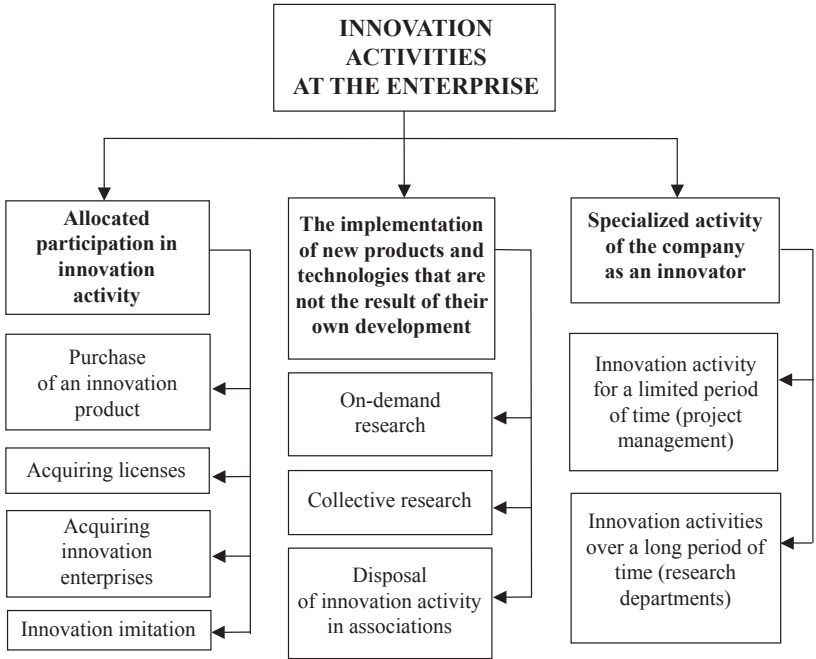


Figure 1. Types of innovation activity at the enterprise

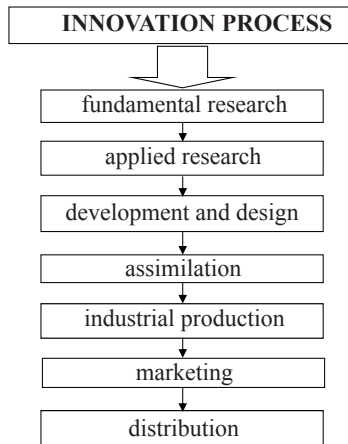


Figure 2. Model of innovation process

The innovation process in various spheres of activity as a result of the development of scientific-technological progress can go through different steps in terms of duration and costs. In the production (investment) environment, this process takes place in the following stages:

- certification (patenting) of the idea;
- scientific and technical-economic justification of a new product or technology;
- experimental implementation of samples;
- bringing to industrial production;
- obtaining a new product to the extent necessary for its commercialization.

Given these stages, distinguish three forms of innovation process:

1. Simple internal organization (natural);
2. Simple interorganization (commodity);
3. Expanded.

A simple internal organizational innovation process is the process of creating and using innovation within one organization [3].

A simple inter-organizational innovation process involves separating the functions of creating and producing innovation from its consumption function. This means that it becomes a subject of sale.

The advanced innovation process is reflected in the emergence of new innovators, in violation of the novice manufacturer monopoly, which promotes the improvement of consumer qualities of the product, through mutual competition.

In the process of innovation activity of the enterprise, innovation investments which are the main form of real investments are implemented.

The main form of real investment is innovation investments, which are realized in the process of innovation activity of the enterprise.

The notion of "investment" as an economic primary category is an extremely informative and multifaceted phenomenon that has been intensively studied by scholars and economists around the world for several centuries. Most scholars associate the genetic origin of the term "investment" with the Latin word "invest", which means "to invest".

In a broader definition, investments represent a capital investment in order to further its growth.

Consequently, investments in the innovation activities of the organization should provide a certain level of their profitability, which would be no less than the return on the investment of free financial funds for deposits.

It is obvious that investing in innovation processes is risky, but entrepreneurs agree on risk, waiting for additional profits to succeed. Moreover, the dependence can be traced here – the more entrepreneurs hope for more success in the future, the higher costs he has to agree now choosing the innovation. But the problem of selecting an investment object is not limited by the maximum amount of funds. As a rule, companies tend to finance the projects that have a high potential for efficiency and provide them with profits. Such innovations can be found not only in the scientific-technical, but also in the organizational, economic, social spheres. The investment attractiveness of these innovations should be determined primarily by their internal characteristics. But no less important for the decision to invest in an innovation project are the conditions for attracting financial resources.

Sources of investment for innovation can be both own funds of enterprises and borrowed funds from other organizations.

## **2. Mechanism of introduction of innovation project at the enterprise**

Having examined the achievements of the modern scientific community [1-7], we came to the conclusion that the concept of innovation is a rather simple concept, which initially means searching and introducing new ideas, but gradually this concept is incredibly complicated. And in order to divert this trend, the term "innovation" should be simplified. To do this, you need to define what innovation actually is and what it is not. First, the typical traps should be avoided. In order to simplify the term, it is necessary to return to the most basic definition from the dictionary: "innovation is an act or process of introducing new ideas, devices or methods" [4].

Today, this concept is damaged by the fact that it is permissible for each minor change (whether it is innovation in packaging design, a slight improvement of the process or an additional service) to fall under this definition. No one says that there is something bad in these things, but they are more likely to be a part of a normal business process rather than the real "introduction of new ideas, devices and methods".

In our opinion, innovation is a new way of using knowledge, tangible and intangible assets to create more value. Innovations can be implemented in many ways: new products, services, business models, processes or management methods. Therefore, all traditional work moments can not be considered as innovations.



Secondly, it is necessary to dispel the myth about the process of introducing innovations and innovation project. Sometimes the head of an enterprise does not understand the significance of the introduction of innovations in his business. Some managers of enterprises exaggerate their importance, while others, on the contrary, underestimate them.

That is why the decision to implement an innovation project requires an integrated approach in analyzing the situation and developing the most effective mechanism for implementing an innovation project at the enterprise.

The development of the implementation mechanism begins with answering the questions what innovations do we need and do we need them at all? To answer these questions, first of all you need to examine the work of the company carefully and assess its financial situation.

For today, there are many methods that help determine the financial sustainability of the enterprise. For example, using the method of economic analysis, which takes into account the indicators of capital structure and profitability, business activity and liquidity, etc [5]. The specific set of parameters that will be evaluated varies depending on the industry and other factors. In any case, if an analysis of this aspect shows the existence of a crisis, which means the innovation is needed.

After conducting financial analysis of the enterprise and detection the need for innovation, the company will have to make a very difficult decision, since it is about the acquisition and renovation of existing technological infrastructure. Should I try to do everything on my own with my own IT department? Or, maybe, to entrust work to a third-party company? Is it possible to choose a more "strategic" way, such as partnership with other companies? Whichever approach seems to be more appropriate, it is important to ensure the relevance of technology and minimize risks in product development, customer service and company reputation.

Planning for technology and project updates requires careful resolving of strategic tasks, aims and realistic options for outsourcing. When implementing technological projects it is important to cover the entire picture.

There are several transaction models that companies can use to develop new technologies and use existing infrastructure. For example, an enterprise may apply a traditional outsourcing: companies do not have to implement the project on their own, though, on the other hand, outsourcing limits access to innovation technologies. Alternatively, an acquisition may be an alternative way, as it may be a quick way to acquire new and innovation technology, but integrating new systems into existing corporate infrastructure may take a long time.

However, the fastest way, which does not have a lot of risks at the same time, is the purchase of ready-made innovations. After all, this technology has already been tested on the basis of another company.

Despite the quick results, there are some disadvantages such as the complexity of integrating purchased technology and the likelihood that the technology may not be sufficiently productive. But if you approach the acquisition process responsibly and analyze future technology, then the risks described above will be reduced, and the acquired technology will become an effective tool for the company's development. Having decided on the method of attracting innovations, there is another, equally important question to the enterprise: where to take money for the implementation of an innovation project?

Sources of investment for innovation can be both own funds of enterprises and borrowed funds from other organizations.

The main sources of investment for most Ukrainian enterprises today are their own profits and depreciation deductions. But in some cases, due the justification of the business idea and its high evaluation by the competition committee, financing can be made at the expense of the state budget, funds of the innovation fund (free of charge) or at the expense of micro-loans provided on non-interest or preferential terms [6].

Unfortunately, such an effective and popular way in countries with developed market economies, the way to increase own funds of the company, such as shares emission, is poorly used in our country due to the lack of development of the stock market and the imperfection of the legislation. However, recently, non-traditional ways of lending to innovation, such as leasing, forfaiting and franchising, have become widespread.

The next step is to justify the need to ground an innovation project and determine the performance indicators. Obviously, any innovation project is being developed with a goal to obtain a positive effect. It is possible to evaluate an innovation project in terms of efficiency and effectiveness. The effect is a purely commercial result, while efficiency is the ability of innovation to generate additional revenue per unit of resource utilization [7].

Based on the definitions, you can distinguish the following types of effect from effective implementation of the innovation project: scientific-technical, economic, social, ecological. There are a number of options that you can use to evaluate an innovation project. Innovation should be evaluated in terms of all aspects.

From a practical point of view, both for investors and for natives, commercial effect is more interesting. It is defined what is the difference between revenues and expenses that arose as a result of its implementation. The effectiveness of innovation activity is estimated by the following indicators: project cost, net present value of the project, profitability, internal rate of return and payback period of investments. At this stage, it may be difficult to solve the issue of the amount of resources that need to be invested in an innovation project. Sometimes, executives of companies find a sudden gap between planned future financial indicators and the current growth of investment. It is necessary to identify this "growth gap" because the more the gap, the faster the company needs to look for new opportunities outside of its existing offerings, markets and business models, and the more these growth opportunities extend beyond the current capacity of the company, the faster the organization needs build systems to manage these unique capabilities.

That is why we offer a plan that will help you calculate the growth gap and take the necessary steps:

- first you need to set the growth limits that the company wants to achieve over a certain number of years (the parameters can be any – income or profit, dividends on shares or a combination of these indicators);
- then it is necessary to calculate what income business will bring at particular time, based on current opportunities and conditions of certain improvements;
- calculate the income that would have to contribute to a new growing business at particular time;
- summarize the results from the second and third columns and compare them with the numbers in the first one.

The difference is the growth gap.

Also, it should be noticed that the introduction of an innovation project is always associated with significant risk. Risks during the implementation of an innovation project may arise either at the stage of choosing the idea of an innovation project, or at the stage of direct development and implementation of an innovation project. In any case, the later it turned out to be one or another risk, the greater the probability of occurrence of losses or the more difficult it will be to reach the set goals. This stipulates the need not to ignore the risks, but to take due account of the justification of measures aimed at preventing, reducing or compensating for these risks.

The next step is the actual implementation of the innovation project. This stage begins with the development of an implementation plan: the definition of tasks complex, resources, performers and terms; creation of project implementation group. Implementation management is one of the most important elements of the formation of an effective mechanism for the implementation of an innovation project. We often can watch how a company starts to implement various innovations, but it lacks the managerial will to bring the implementation process to completion. After implementation of the project, it is necessary to monitor the results obtained. Control is a mandatory element of the management process, and the results of control and audit give an opportunity to speak about the level of achievement of the project objectives, its significance, efficiency and financial results.

Consequently, under the condition of the successful introduction of innovations, the enterprise receives a significant economic effect, which is the subject of financial and economic analysis among those that determine the effectiveness of financial and economic activity of enterprises. It is a real indicator of how efficient the company operates and how effectively the innovation project implementation mechanism was developed; determines real, actual possibilities of the enterprise to finance further scientific-technical and social development; moreover, only profit is the source of the company's ability to pay a profit tax to the budget.

That is why the efficiency of an enterprise depends to a large extent on the quality of managerial decisions regarding the use of profits. In making these decisions, the owners (managers) must thoroughly weigh the direction of the priority investments of financial resources, based on the financial condition of the enterprise, the level of its material-technical base, social development of the collective, the possibilities of profitable placement of funds in the securities market, in the monetary sphere, etc. Enterprises distribute net profits in the areas of use at their discretion. In the process of distribution of funds resulting from the introduction of new technologies of economic effect, funds are formed for the purpose of funds directed at the development and improvement of production; funds funded for social needs; fund for material incentives; reserve fund; funds which are directed to payment of dividends; deductions for other purposes. For today, most companies are sending the largest amount of funds to the accumulation fund. This is quite logical and due to the fact that the accumulation fund is created to finance the industrial development of the enterprise, namely, to finance capital investments and to expand new developments, but as it was already discovered, investing in new technologies is a prerequisite for the development of each enterprise.

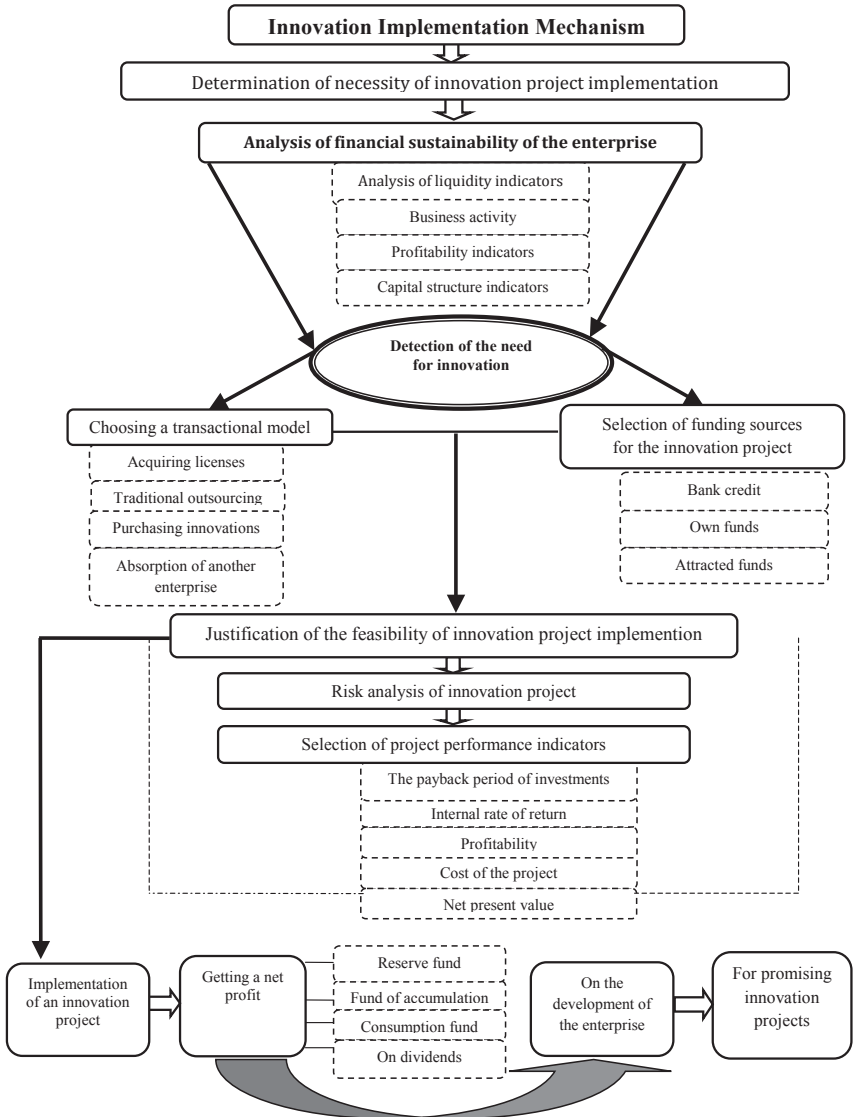


Figure 3. Mechanism of introduction of innovation project at the enterprise

Summing up the foregoing, we propose the mechanism of implementation of the innovation project at the enterprise shown in Figure 3 to the practical application.

We believe that the implementation of the proposed mechanism will not only increase the efficiency of innovation and investment activities, but will also help increase the competitiveness of the enterprise, which is developing in today's changing market conditions.

### **3. Proposals on the use of the economic effect from the implementation of an innovation project at the enterprise**

The enterprise receives a significant economic effect from successful introduction of innovations, which is the subject of financial and economic analysis among those that determine the effectiveness of financial and economic activity of enterprises. It is a real indicator of the enterprise work effectiveness and how effectively an innovation project is implemented, identifies the real possibilities of an enterprise to finance further scientific-technical and social development, and moreover, only profit is the source of the company's ability to pay a profit tax to the budget.

The efficiency of an enterprise depends to a large extent on the quality of managerial decisions relating to the use of profits. In making these decisions, the owners (managers) must thoroughly weigh the directions of priority investments, financial resources, based on the financial condition of the enterprise, the level of its material and technical base, social development of the team, opportunities for profitable placement of funds in the securities market, in the monetary sphere, etc

In accordance with the provisions (standard) of accounting the Financial Results Report distinguishes between several types of profit (loss):

- gross profit (the difference between the amounts of net income (revenue) from sales of products and the cost of sales);
- financial results from operating activities, which will be less than the first amount due to the deduction of "administrative expenses" and "expenses for sales";
- financial results of ordinary activities before taxation (finance losses, losses from equity are deducted from the previous amount);

- financial results of ordinary activities after taxation (tax on profit from ordinary activities is deducted from the previous amount);
- net profit (extraordinary expenses are deducted).

The profit received by the enterprise from the implementation of the innovation project is the object of distribution.

Two stages can be divided in the distribution of profit . The first stage is the distribution of balance profits. One part of it in the form of taxes and fees is paid to the state budget, and the second part remains at the disposal of the enterprise. The second stage is the distribution and use of profits remaining at the disposal of the enterprise after making payments to the budget.

The profit remaining after the payment of the listed taxes, goes under the full control of the enterprise (in economic practice, this part of the profit is called net profit). Enterprises distribute net profits in the areas of use at their discretion. Monetary funds of the intended purpose are formed in the distribution process of the received as a result of the new technologies implementation of economic effect: funds directed for the development and improvement of production; funds directed for social needs; funds for material incentives; reserve fund; funds directed to payment of dividends; deductions for other purposes.

While making decisions about the distribution of net profits, the enterprise should find the optimal ratio in directing additional financial resources to the purposes of production and technical development, social development, material incentives for workers (shareholders, stockholders) and for other purposes.

The funds for development and improvement of production (accumulation fund) is spent on meeting the needs related to the growth of production volumes, technical re-equipment, improvement of production technology and other needs that provide growth and improvement of the material and technical base of the enterprise. Specifically, these costs represent capital investments in the construction of new production areas, the reconstruction of enterprises, the purchase and installation of new equipment, other capital expenses, including environmental protection and those aimed at improving working conditions and safety. It also costs research and development, preparation of new advanced technologies and products. Due to this part of the net profit, enterprises pay arrears on long-term bank loans for investment purposes, as well as interest on these loans.

The funds directed towards social needs are mainly used for such expenses, which promote the social development of the enterprise's staff. The funds for Tangible Incentives are used to stimulate the interest of the company's em-

ployees in achieving high end results. In this direction, the economic effect of the introduction of innovation technologies is used to pay remuneration for the general results of the work at the end of the year, for the one-time bonus of individual employees for the performance of especially important production tasks, payment of bonuses for other achievements in work, as well as provision of one-time material assistance to workers and employees. These two funds are still called the Consumption Fund.

Reserve funds can be created at the expense of profits by enterprises of all forms of ownership for use in the event of a sharp deterioration of financial position as a result of temporary changes in market conditions, natural disasters, etc.

The company's profits can transfer funds to specially opened accounts of charitable foundations, make contributions to cultural institutions, education, health care, physical education and sports, community organizations for people with disabilities, etc.

At the expense of the profit remaining at the disposal of the enterprise, it must compensate the losses and expenses which according to the current legislation do not relate to the reduction of balance profit. In particular, it concerns fines and penalties for payments to the budget and extrabudgetary trust funds, fines for non-compliance with requirements for environmental protection against pollution and harmful influences, for non-compliance with sanitary norms and rules, fines for violating the terms of economic contracts recognized by the enterprise or on ones that have been received from decisions of courts (arbitration courts), etc.

The mechanism of the distribution of the economic effect from the introduction of innovations must be one to fully contribute to increasing the efficiency of production, to stimulate the development of new forms of economic activity and, at the same time, to increase state revenues.

Net profit is distributed according to the company's charter. At the expense of net profit, funds of accumulation, consumption, reserve fund and other purposes are created. Summing up the foregoing, we have developed and depicted the general scheme of innovation and investment activity in the form of figure 4.

We believe that the implementation of practical activities of the measures we propose will improve the efficiency of the enterprise in the current conditions.



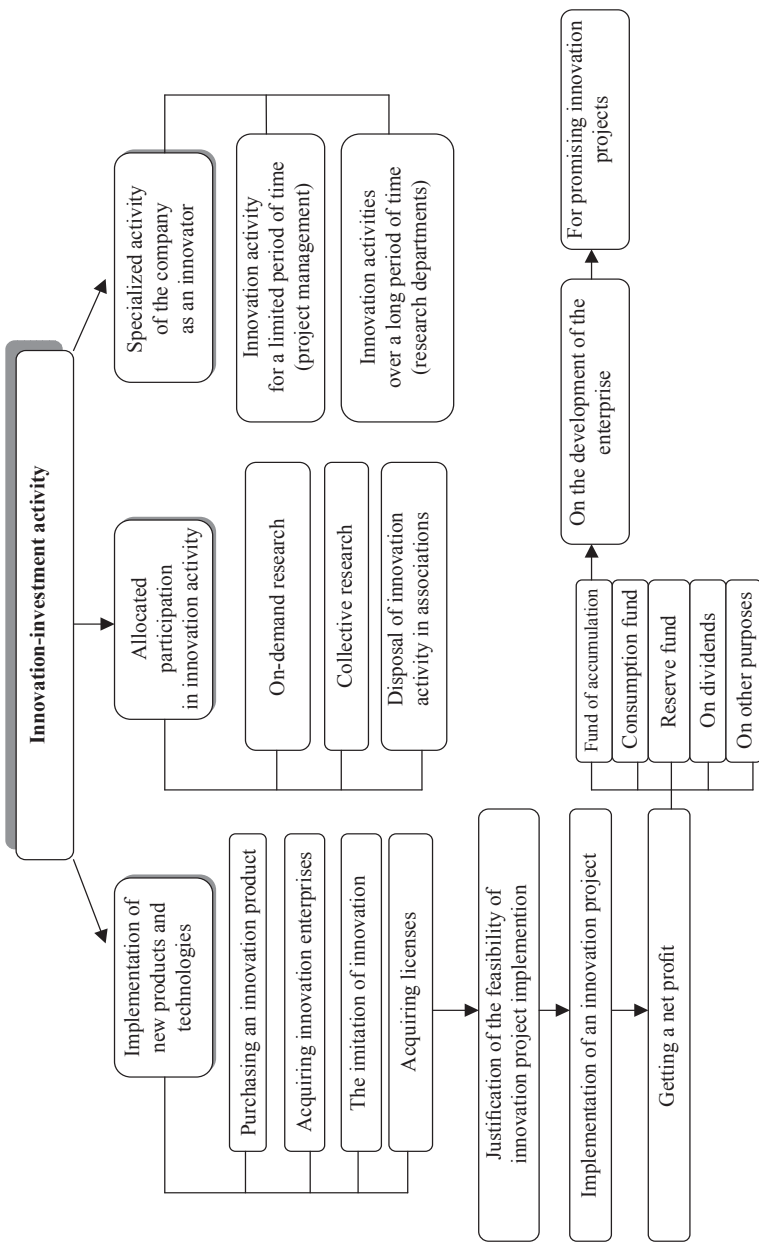


Figure 4. General scheme of innovation-investment activity

## Conclusion

As innovation activity is one of the most important means of ensuring economic growth, competitiveness and financial stability of any enterprise, then it will be possible to achieve high results only with the development of a clear mechanism for the implementation of innovation projects. This mechanism consists of well-developed ways, a specific economic algorithm, which implies an analysis of the financial condition of the enterprise; selection of a transactional model and sources of funding for an innovation project; substantiation of feasibility of implementation; development of indicators of innovation project efficiency; diagnostics of the probability of the risk of innovation implementation into the activity of the enterprise. Only on compliance with this mechanism, the company will be able to achieve its goals and receive the expected economic effect, which will be used for the development of the enterprise in the future.

The results of the research will be used while developing a model for managing innovation projects aimed at attracting investors and the interest of business entities in the implementation of innovation projects.

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# SECTION III.

## TRANSFORMATION

### OF THE SOCIO-ECONOMIC SYSTEM IN THE CONDITIONS OF EUROPEAN INTEGRATION

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#### ACCOUNTING ENSURANCE IN THE SYSTEM OF MARKETING COSTS MANAGEMENT

##### **Introduction**

Under the conditions of doing business in the open economy area, the formation of a reliable information environment in the enterprise, as a tool for managing business risks, is a necessary element of its management system. The accounting subsystem is an integral part of the information system of any enterprise, which is intended to represent the state of its activities in the most complete and objective way. In turn, the rapid use of various marketing tools and the outdated method of displaying these operations in the accounts by enterprises, causes the formation of information asymmetry between the marketing and accounting department, which manifests itself in the preparation of poor-quality information for its users. The article considers the importance of accounting in the system of marketing costs management of the enterprise and suggests approaches to its evaluation, as the better the quality of accounting information, the greater the likelihood of success in business, and this is largely due to the fact that accounting can be considered as a system for measuring information and communications systems for the maintenance of macro and microeconomic activity of the enterprise.

## **1. Accounting as the primary source of information. Information asymmetry**

In the conditions of modern active informatization of society, the amount of information resources increases every year, which makes them accessible to each business entity and individual users, in particular, while retaining their value. Taking into account that previously the success of entrepreneurial activity was largely dependent on a combination of various factors of production, today it can be confidently said that it is determined by the efficiency of the combination of information resources. The accounting subsystem of the enterprise management undergoes constant changes coming under influence of market realities, at the same time, being the only means to overcome instability of the enterprise through the construction of an efficient accounting and analytical management system. In turn, marketing and communication activities, as well as any other activity of the company, causes the formation of costs, which is basically a justified and economically viable phenomenon. For the purpose of their analysis and control, there is a need to use accounting data, the current methodology of which does not provide clear and timely information about the applied marketing communications and the costs associated with them, which can not fully meet the information needs of its users.

Acting as the sole tool for processing information about the business activities of the company, while satisfying the information needs of users of information, accounting is the basic information source at all levels of management decision making. The subsystem of accounting provides an opportunity for the company to respond to the influence of external factors and sustaining stability under destabilizing conditions. At the same time, the lack of information or its incorrect display or omission is present during the execution of all business processes, affecting the operating conditions of the enterprise, which contributes to the implementation of additional costs. In turn, the lack of transparent information is a fundamental problem of modern market relations, which prevents reliable identification and evaluation of significant factors of economic activity.

Such scholars as A. Arens, I. Bykowska, M. Bilyk, S. Holov, O. Vorobiova, V. Dal, A. James, V. Yefymenkov, L. Kindratska, M. Kuter, O. Lysiuk, J. Lanscold, Yu. Lebedeva, Ye. Mnykh, D. Norton, K. Nazarova, O. Petryk, O. Petrova, O. Plastun, M. Pushkar, T. Prytychenko, T. Tarasova, R. Shaw, A. Shipper and others have dedicated their attention to the study of problems associated with

the assessment of the quality of accounting information and its impact on the control and analytical processes of the enterprise

At the same time, under the conditions of doing business in an open economy, the formation of new issues caused by the expansion and complexity of business processes is expected, the earlier developed by the scientists recommendations need to be adapted to current market requests. The purpose of the article is to research and improve existing approaches to the assessment of the quality of accounting information, the use of which would enable users to obtain more qualitative, objective information, which, in turn, will increase the effectiveness of management decisions.

The value of information for its user directly depends on how its use will help in making important management decisions aimed at achieving the goal of the enterprise. Owning high-quality information helps its users and enterprise to perform tasks more efficiently. [1].

Accounting and analytical support, being an efficient information product, is a basic tool for building relationships between its owners and users. According to the arguments of L. Kindratska, O. Petryk and M. Kuter, the conflict of such relationships arises in relation to reliable and complete disclosure of information about the activity of the enterprise used for making managerial decisions [2, p.60]. The judgments of the above mentioned authors suggest that the information generated in the accounting system primarily reflects the interests of the owner and manager, which directly correspond to the specific methods of management and professional judgment of the persons responsible for submitting the financial statements of the enterprise.

Some scientists consider the problem of poor-quality information through the prism of the relations of certain economic entities in the markets, and see it as a threat to the market mechanism, financial security and the cause of the instability of the economic system as a whole [3]. Scientifically grounded is the position of scientists that information provided by accounting reduces the risk premium required by investors to offset losses from opportunist actions of managers [4]. In this approach, "opportunistic behavior" is equated with the notion of "information asymmetry." It is necessary to note that the issue of quality information exists in the accounting system, while the causes and consequences of its formation remain unnoticed by the economic community. At this stage of the study it is worth considering the approaches of scientists to what exactly they relate to information asymmetry at the enterprise (Table 1).

Considering the notion of asymmetry as a whole, one should pay attention to the fact that asymmetry is found everywhere, both in nature and in the economy, but information asymmetry itself is given a key role in ensuring the effective activity of the enterprise. On the one hand, information asymmetry is a product of the accounting system, and on the other hand, the second is a tool to overcome it.

Table 1. Approaches to the definition of information asymmetry in the enterprise

№ ser.	Source	Approache to the definition of information asymmetry
1.	V. Dal [5]	Asymmetry is defined as an unknown, unexplored, undercalculated, immesured, or non-descriptive, with all features.
2.	O. Perova [6, c. 128]	Emphasizes the economic features of asymmetry: the lack of information, or the low degree of predictability of the conditions of economic activity.
3.	Yu. Lebedieva [7, c.26]	A key characteristic of information asymmetry is determined as the superiority of one subject over the other in anything.
4.	V. Yefymenkov, O. Vorobiova [2, c.90]	It is believed that information asymmetry arises during the distortion at the stages of the generalization of informational resources, namely, at the stage of visualization in symbols and signs, knowledge of the facts of economic life in the primary accounting of financial reporting, which causes the misleading and falsifying of information.
5	Economic Encyclopedic Dictionary [9]	Information asymmetry is a situation in which one group of entrepreneurs, managers or buyers has the necessary information, and the other does not possess it.
6	O. Kryvosyha, O. Bazilinska [10]	Uneven distribution of information among market players for making purchasing and selling decisions, as well as management decisions.

The conducted empirical researches in this field testify that the process of formation of accounting information and bringing it to the target user has drawbacks. The main problems, within this, are the discrepancy of accounting

information, which is formed by employees of different levels and summarized by the chief accountant, accepted by criteria of its quality, as the controlling function of the chief accountant in any enterprise is significantly overstated; high risk of distortion of information in the places of its formation, transmission, distribution and storage; the lack of a systematic approach to processing an audit accounting support based on the organizational structure of a particular company.

According to the Law "On Accounting and Financial Reporting in Ukraine", the purpose of accounting and financial reporting is to provide users with complete, truthful and unbiased information about the financial position, performance and cash flow of the enterprise in order to make decisions. [11]. The purpose of accounting provides criteria for the quality of information, which generally sets the requirements for its subjects, at the initial stage to provide all the conditions for qualitative disclosure of information.

The accounting subsystem is an integral part of the information system of any enterprise, which is intended to present the state of its activities most fully and objectively. The account itself, in turn, provides an opportunity to trace a specific phenomenon in the historical framework, providing information on the course of events for different periods.

According to the results of O. Perova's research, the author notes that the main reason for the asymmetry of information is the risk of planning and making managerial decisions, which in principle exist at all stages of the life of any enterprise.

The above study gives reason to assert that, from the point of view of accounting, information asymmetry is one of the features of accounting and analytical support and arises due to insufficient or incomplete awareness of participants in business processes and hzs material nature (due to the risk of loss of part of their property). From this position, there is a reason to share the opinion of T. Tarasova, who proposes, to understand the informational accounting asymmetry as the lack of relevant information on decision-making by individual participants of economic processes, which has a material nature in relation to the distribution of the results of economic activity between users of accounting-analytical support [12, p.100].

The information asymmetry of internal users of information about the company's activities concerns a conflict of interest between owners and employees who are responsible for managing an enterprise. Administrative and management personnel are the social environment of the enterprise, where asym-



metry occurs when determining the object of investing in educational potential. External users are interested in increasing of their investment returns. Information asymmetry, in this case, arises at the stage of the emergence of the idea of concealing investment income, in order to reduce the amount of dividends for payments.

## 2. Criteria for assessing the quality of accounting information

In order to manage any enterprise, the necessary condition is the availability of systematic and qualitative information that we can divide into internal and external. Information based on accounting data is required in order to gain competitive advantage in the market, reduce risk, identify and prevent environmental changes, coordinate strategies, plans and tactics. [13, p. 64].

To make effective management decisions, managers need to be provided with complete and accurate information about the options for action, which is the task of the accountant. The accounting information used to make managerial decisions must correspond to the criteria given in Table 2.

Table 2. Criteria for recognition of accounting and analytical information

№ ser.	REQUIREMENTS	CHARACTERISTICS
1	1	2
2	Timeliness	It gives an opportunity to rationally and actively influence the course of financial and economic activity.
3	Accurecy	The information must reliably reflect the functioning process the system.All of its indicators should have unambiguous content that does not allow different interpretations.
4	Comparability	Information should be received in a timely manner by the consumer, moreover, before the described situation changes, otherwise it loses its meaning.
5	Completeness (sufficiency)	The amount of information must be minimal, but sufficient to assess the situation and make a decision at a certain level of management.

6	Utility (feasibility)	It provides that the information stream should not have data, indicators that are not needed to solve a specific problem or for the structural management. Information should be consistent with the main purpose for which it was prepared.
7	Accessibility	It is a need to submit information in a form that does not require further elaboration and does not complicate the decision-making process.
8	Profitability	It is confined to the preparation of the amount of information which should not cost more than its use.
9	Targeting	The information should be brought to the responsible executor and user.
10	Adequacy	The real reflection of reality, in which all significant and rejected non-essential features are present.
11	Adaptability	This is the ability of accounting information to respond to changes in the environment in order to meet the interests of users to make rational management decisions.
12	Relevance	The ability of information, through its change, to influence managerial decisions.

Source: [13 p. 125]

According to L. Savchenko's argumentation, the statement regarding the characterization of information that making management decisions based on unreliable accounting and information provision can lead to negative consequences is quite appropriate. But, in turn, a certain guarantor of reliability of accounting data can be its control [14, p. 52].

Professor Ye. Mnykh in his research substantiates that if an existing information base does not help to carry out qualitative financial analysis due to the lack or bias of the data, then necessary and sufficient information must be obtained in any way [15, p. 124].

In this case, the author emphasizes the importance of qualitative accounting information not only to meet the information requests of users, but also to provide other business processes of enterprises which are not possible without the provision of quality accounting information.

According to the results of the research, James Hall [16] convincingly characterizes the quality of accounting information based on such characteristics as relevancy, accuracy, timeliness and completeness. He argues that the accounting information produced by the accounting information system, according to its main purpose, is intended to serve as support for planning, monitoring and analysis.

In addition, according to the author's studies [16, p. 12], the qualitative accounting information has the following characteristics: (1) Relevance – the content of the report or document must be consistent with its objectives; (2) Timeliness – time for preparation or processing of information must be justified, and information must be timely; (3) Accuracy – information must be clear of material error; (4) Completeness – information must prove all that is necessary, clear and ambiguous; (5) Targeting – Information should be collected according to the needs of its users.

Schipper and Vincent's comparative studies provide grounds for arguing that the quality of accounting information must be secured in order to assist its users in making decisions that are beneficial to them [17, p.98]. From this position, according to Hans Cartihadi [18, p. 49] qualitative accounting information characteristics are its comprehensiveness, relevancy, reliability and comparability.

A similar conclusion regarding the quality of accounting information can be obtained by analyzing Porter and Norton's research [19, c.27], which argue that high quality information is accompanied by the following features: (1) relevance of information is useful for decision-making processes; information about the past can help predict the future; (2) The timing of the preparation of this information should be available when making decision; (3) Confident vision that the information is complete, neutral and error-free.

Summing up the views of the scientists, one can notice that one of the key issues of the activity of any enterprise is to ensure the quality of information on the basis of which management decisions are made, since all financial plans and predictions are based on accounting data, which is not always accurate and does not completely meet the above mentioned criteria.

In order to manage any enterprise, the necessary condition is the availability of systematic information that we can divide into internal and external. Information on the marketing and communication activities of an enterprise based on accounting data is necessary in order to gain competitive advantage in

the market, reduce risk, identify and prevent environmental changes, coordinate marketing strategies, plans and tactics.

Considering the significant amount of information flows within the enterprise environment, their systematization and integration of information systems of accounting and marketing play an important role in ensuring the quality of its accounting information. Any of the options for optimization of information flows at an enterprise within the framework of managing its marketing and communication activity, in any case, is aimed at solving the problems associated with the implementation of marketing communications (Table. 3).

The main tasks are provided through information support, taking into account the fact that the information provision of these tasks are conditionally divided into two subgroups: those based on accounting data and those that are not based on them.

The part of the information base, which seems to be unrelated to accounting data, is derived from them. Another part that is not the derivative of accounting data is the legislation of Ukraine, normative reference information, data of external marketing researches. For example, the task of marketing "development a marketing strategy for a brand" is not solved by using enterprise accounting data, but using the marketing research data. At the same time, further decision-making in relation to brand promotion and increase of activity, that will be reflected in the accounting data, are impossible without solving a marketing task.

Table 3. Tasks aimed at increasing the informatization of marketing

№ ser.	The task of marketing	Characteristics of the task	Information provision of marketing tasks
1	Making the managerial decision on the basis of analysis of market abilities	Achieved through market research and analysis	Reports of marketing agencies about fulfillment of research orders, official publications (including statistical compilations)
2	Selection of target market segments	On the basis of marketing analysis, decide exactly where and which commodity groups to implement	Data analysis conducted by the marketing department

3	Development of the marketing complex	Grouping goods by product groups, segmentation of the market, positioning of the product on the segment	Marketing department reports, Financial reporting data, information on the account 93 "Selling outlays"
4	Increasing the effectiveness of supportive marketing systems	Development of marketing information system, organization of planning and marketing control	Marketing plan, marketing reports of previous periods, financial statements
5	Distribution of marketing services by commodity groups	From the existing list of services, to determine which services to offer for which products	Financial reporting data, information on the accounts 92 "Administrative Expenses", 93 "Selling outlays"
6	Increasing the effectiveness of marketing activities	Comparison of costs and revenues from marketing activities	Financial reporting data, information on the accounts 92 "Administrative Expenses", 93 "Selling outlays", marketing reports
7	Control of good sales profitability	Analysis of commodity turnover and expenses for marketing services	Financial reporting data, information on the accounts 92 "Administrative Expenses", 93 "Selling outlays", marketing reports
8*	Development of brand marketing strategy	It is achieved by analyzing the market, determining the place of the company on the market and the goals of the product being promoted	Information data obtained on the basis of market research conducted personally, as well as by relevant enterprises engaged in market research and research of consumer behavior, on a contractual basis.

Source: [13, p.67] \* and supplemented by the author

Equally important task is solving the marketing task of selecting target market segments, which is not directly based on accounting or financial reporting, but is mediated, as marketers' reports, before being used for solving this problem, were made taking them into account. When defining the brand's

goals, the strategy for their achievement, it is important to spend the company's funds directly on the target audience of the brand, that is, the spending of each hryvnia should be economically justified and appropriate. Spending money for each contact with the audience should be based on data that confirm the fact that the funds are directed to the target audience, and not to the general population. Another subgroup of tasks is solved directly with the help of accounting data.

Accounting is the information base of the marketing and communication activities of any enterprise, but it is worth noting that not all of its data are needed by the marketer. In order to increase the profitability of realization a product, the marketer needs data on the remnants of goods, their income, turnover and the expenses on individual marketing services.

### **3. Proposals for improving the quality assessment of accounting information**

In turn, in the current conditions of automation of business processes, an assessment of the quality of information can be made from two positions: assess the reliability of automated accounting systems and the possibility of unauthorized changes in them (in this case, reliability depends on how much money enterprise owners are ready to invest in the development and modification of such systems); on the other hand, the reliability of the information can be evaluated by checking it with the help of criteria, which qualitative information should correspond to (that is, to be capable of satisfying the needs of consumers according to its purpose).

To a large extent, the quality of accounting information depends on the quality of the organization of the accounting information system, which is a set of resources such as people and equipment that can transform the financial data into information. In turn, the quality of the organization of the operation of this system depends on the quality of the system of internal control (SIC) of the enterprise, which is intended to provide an adequate level of confidence in the information. Arens convincingly argues that financial statements are unlikely to meet the accounting standards if the company has an unreliable system of internal control [20]. Taking into account the information on the interconnection between the quality of the accounting information and the SIC, we consider it necessary to suggest such hypotheses (Figure 1).

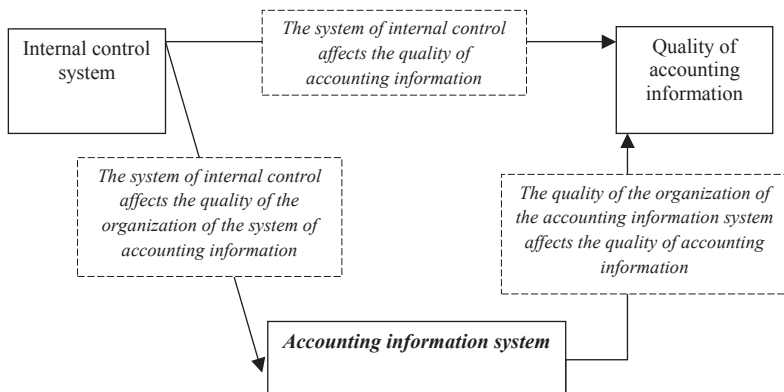


Figure 1. Theoretical model of hypotheses concerning the interconnection between the quality of accounting information and the company's SIC

Nevertheless, considering the commonly accepted criteria which qualitative information should correspond to, one should pay attention to the fact that auditors use an integrated approach to assess it, rather than checking each audit evidence for compliance with the 12th items given in Table 2. When examining the quality of accounting information, it is reasonable to consult the ISA that provides the assessment of audit, which largely depends on the quality of accounting information. According to the ISA, "The quality of the audit is a complex issue, there is no clear definition of the quality of an audit, nor an analysis of this concept" [19], we can use the same approach to assess the quality of accounting information, as it will be different for each user. Within this framework, we can only propose general approaches to its evaluation.

In evaluating the quality of accounting information internal audit deserves particular attention, as internal auditors know most of the information in comparison with external ones, which allows the first to process it operatively and influence internal processes. The external audit checks the retrospective information and only allows to state the fact whether the information is qualitative or not, which in general, will not affect the quality of the organization of processes at the enterprise. A key quality criterion for the information for its users is relevance, which in general, expresses the totality of all other criteria and is final in terms of targeted use of information. The need for any information arises from

the need for a decision, thus the criterion of relevance of information, based on the remaining criteria, directly allows the user to evaluate its quality.

Relevance means that accounting data must correspond to the specific information needs of users. One and the same information is of different value for various users and a large amount of information does not guarantee its usefulness, because the number does not prevail over its quality. Only information that has an impact on the manager's decision is relevant. At the same time, such information should be promptly transferred to him, as the time factor also influences the quality criterion of information. The accounting data should not contain errors, or biased estimates. Relevance of information is important, since the decision-making process at the enterprise and its possible further development depends on the criterion. Its value can be equated to the profession of surgeon, who will never operate until it is necessary, and the need in turn should be supported by reliable and complete information.

The reliability of the information affects its nature and source of income; reliability also depends on the circumstances under which these data were received. Based on this, in determining whether data are reliable for the purpose of developing analytical procedures in substance, the following is essential: (a) the source of available information. For example, information can be considered more reliable if it is obtained from independent sources outside the entity; For example, data for the enterprise as a whole may need to be supplemented to make them comparable with similar data from a business entity that manufactures and sells specialized products; (c) the nature and appropriateness of the information. For example, whether budgets were created faster as expected results than the goals to be achieved; (d) internal control over the preparation of information designed to ensure its completeness, accuracy and reliability. For example, measures of internal control over the preparation, consideration and execution of budgets [21].

At the present stage of the development of the economy, the improvement of the methods and management mechanisms of large economic entities is becoming increasingly important, and therefore it is not necessary to emphasize that satisfaction of the information needs of users about the activity of such structures is the main purpose of the accounting system, and audit in this system raises the reliability of such information, which ensures the efficiency of making management decisions by managers and owners [22. p. 186]. Taking into account the above information, we consider it expedient to develop a system



of quality factors for accounting information that describes the input factors, process factors and output that affect the quality of the enterprise accounting system (Figure. 2).

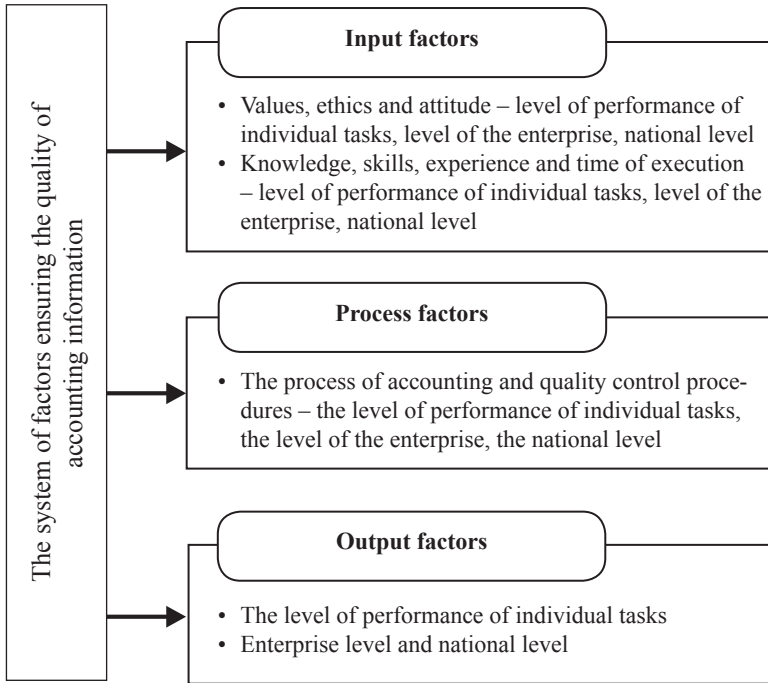


Figure. 2. The system of factors ensuring the quality of accounting information (systematized on the basis [21])

Any business process, including the accounting process, conducted in any form is doomed to be effective, under condition of compliance with the principles of its organization and realization, as well as compliance with the principles of professional ethics. Compliance with the principles is the basis of the formation of indicators, which in aggregate form the quality of accounting information. An example of quality indicators of its effectiveness is independence, credibility, objectivity, timeliness, responsibility, planning, transparency, etc. It is the qualitative indicators that make it difficult to calculate the integral efficiency indicator, since they do not have a quantitative expression.

Accountants who demonstrate relevant values, ethics and attitudes, as well as have sufficient knowledge, skills and experience, and the time allocated to them to perform their work, are involved in the preparation of qualitative information. An accountant is responsible for his work, as a result of which he is directly responsible for its quality, even when the preparation of primary documents was carried out by the counterparty, the responsibility passes to an accountant immediately after the receipt of such document.

In addition to responsibility for the tasks, he plays an important role in ensuring that the department demonstrates the values, ethics and attitudes necessary to maintain the relevant quality of the information they provide.

The key features are: recognition by the department that the work is carried out in the interests of the general public and the importance of adhering to ethical requirements; demonstration of objectivity and honesty by employees; independence of each employee; demonstration of professional competence and due diligence by a team. Corporate culture of an enterprise has an important impact on the values, ethics and attitudes of employees, since the environment in which they operate can have a significant impact on how they perform their duties.

The key aspects of creating a corporate culture in which the quality of the prepared information will be appreciated include: establishing an appropriate "attitude from leaders", which, among other things, is aimed at guaranteeing the independence of the enterprise; stimulating the necessary personal characteristics through evaluation and reward systems that support the quality of work performed; financial aspects do not affect the actions and decisions that impair the quality of work. emphasizing the importance of providing staff with opportunities to continue professional development and providing them with access to high-quality technical support; supporting of the culture of consulting on complex issues by the enterprise; the existence of reliable decision-making systems for customer acceptance and continued cooperation with them.

National accounting activity has an important impact on the company's culture and values, ethics and attitude of team members. The key aspects are:

- Disclosure of ethical requirements that explain both the basic principles of ethics and applicable specific requirements.
- The activity of regulators, developers of national standards and professional accounting organizations in ensuring the clarity of ethical principles and the continued application of the relevant requirements.
- Exchange of information relevant for decision-making.

Chief accountant is responsible for the fact that his team has the necessary competence in order to prepare and publish qualitative information about the activities of the company. The key aspects under these conditions are: the presence of the necessary competence of the staff; Understanding of enterprise business features by the personnel; use of reasonable judgments by the personnel; active participation of the chief accountant in planning, supervising and verifying the work done; availability of sufficient experience of the staff who performs work. In this case, the work of such personnel is properly directed, guided and verified, and there is a reasonable degree of continuity of staff.

The policies and procedures of an enterprise affect the necessary knowledge and experience of the staff, as well as the time which they are provided with to perform the required work. The key aspects of such influence are:

- Sufficient time to deal with complex issues when they arise.
- Proper structuring of the team.
- Timely provision of appropriate practical preparation or training.
- Providing the chief accountant and staff with sufficient training in accounting and, if it is appropriate, concerning specialized issues within the branch.

National activities can affect the competence of accountants, where key aspects are:

- Existence of strict certification requirements.
- Clear definition of education requirements and ensuring that adequate resources are available for effective training.
- Existence of measures to familiarize auditors with current issues and ensure their preparation for new accounting requirements or requirements of normative acts. The correct positioning of the accounting profession to attract and retain individuals with the appropriate qualities.

Qualitative accounting includes accountants who apply strict compliance with the accounting process and procedures for controlling their quality, which meet the requirements of legislative and regulatory acts, as well as applicable standards.

The accounting should be conducted in accordance with national (international) standards. Sometimes, enterprise methodology, policies and procedures provide more specific guidance concerning, for example, who carries out specific actions regarding the requirements of internal counseling and documentation formats. However, accounting standards and enterprise methodology shape

its process, the way in which this process is applied in practice and is adapted to a specific task. Key aspects are:

- Observance of standards, current legislative and regulatory acts, as well as procedures for monitoring the quality of accounting at an enterprise by auditors.
- Appropriate use of information technology by employees.
- Existence of effective interaction with other persons related to the accounting at the enterprise.
- Establishment of appropriate mechanisms by management personnel to achieve the efficiency and effectiveness of the accounting process.

The accounting process is also influenced by the policy and procedures of the audit firm, where the key aspects that affect the quality of the audit are:

- Adaptation of audit methodology to new requirements of standards and results of internal quality control and external audit reviews.
- The methodological requirement for effective supervision and verification of their work.
- Methodological requirement for conducting relevant accounting documentation.
- Establishing strict quality control procedures with monitoring of the quality of accounting and the implementation of appropriate actions that logically emerge from this.
- If necessary, performance of effective quality control reviews.

National accounting activity can influence its process. International Ethics Standards Board for Accountants (IESBA) sets high-quality ethical standards for professional accountants through the development of a strict, internationally accepted Code of Ethics for Professional Accountants. International Accounting Education Standards Board (IAESB) develops and improves vocational education – including technical competence, professional skills, as well as the values, ethics and attitudes of professional accountants, establishing International Education Standards (IES). These standards are widely implemented at the national level. The main aspects are:

- Development of accounting standards and other standards that clearly set goals and corresponding applicable requirements.
- Examination of relevant characteristics of the quality of the accounting process by the bodies responsible for checking the accounting.
- Existence of effective systems for investigating allegations of mistakes, fraud and the use of disciplinary measures if it is necessary.

Based on the results of accounting at the enterprise, different related parties receive different conclusive results (output factors). Such factors are usually evaluated in terms of their usefulness and timeliness and are considered as aspects of quality accounting. They also can:

- Provide a wider understanding of the quality of accounting. For example, in the reports of the bodies that govern the accounting, deficiencies identified during inspections can be described;

- Directly affect the quality of accounting. For example, the responsibility for reporting on a particular issue, which may be the effectiveness of internal control, can lead to more rigorous work in this area.

Some related parties, especially management staff, those with the highest authority and some regulatory bodies, have a better understanding of the impact of input factors on the quality of accounting information and, as a result, can better evaluate it at least partially. Output factors on the side are:

- An accountant is an accounting statement for users of financial statements, accountant reports to those who have the highest authority, and to management staff, as well as reports to the financial control authorities.

- Enterprises are a financial report, that is subject to an audit and reports of those with the highest authority, including audit committees.

- Bodies that regulate audit activity – providing information on specific accounting issues.

Considering the level of enterprises and the national level, important role is played by audit reports, annual and other reports, as well as by regulators – providing a general view of the results of inspections.

Having considered the characteristics of the qualitative indicators of the efficiency of accounting information, we also propose to allocate quantitative indicators that can be divided into direct and indirect (Figure 3).

So, having considered the issue of accounting information assessment we have come to the conclusion that it should be relevant, timely and reliable in order to be able to meet the needs of its users. In turn, accounting serves as the basis of the information management system of the enterprise's MCA and its task is to provide timely and complete information about the market saturation of product groups, their competitiveness, pricing and other attributes of commercial activity.

National legislative and regulatory acts, as well as related parties of business entities often require external audit of some elements of financial information to provide users with confidence that credible information can be trusted, that is why the quality of information plays an important role in the audit process.

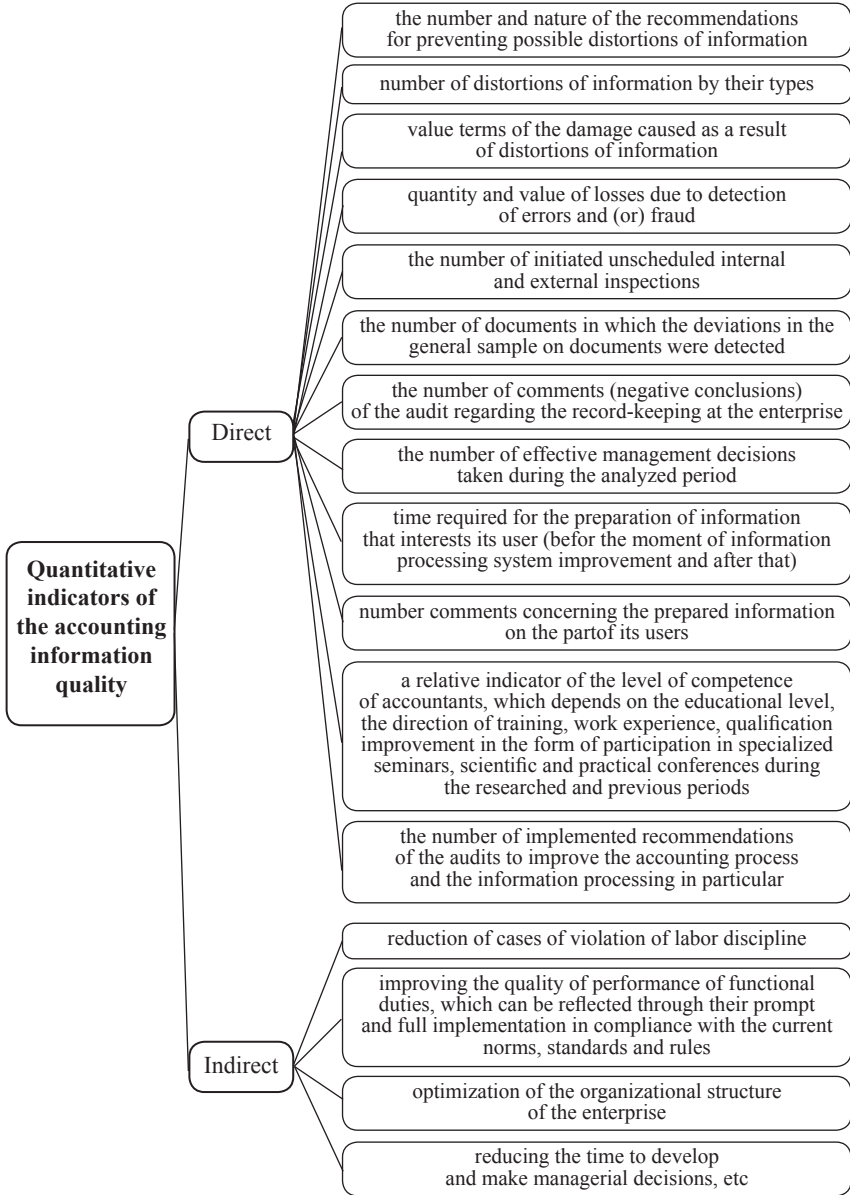


Figure. 3. The system of quantitative indicators for assessing the quality of accounting information

## Conclusion

In order to conduct an assessment of accounting information, it is expedient to introduce registers of accounting of the proposed indicators, which will promote the efficiency and quality of its implementation. The results of the study allowed to determine the system of quantitative and qualitative indicators of the quality of accounting information, which can be applied at the discretion of any enterprise. The better the quality of accounting information, the greater the likelihood of success in business, and this is largely due to the fact that accounting can be considered as a system for measuring information and communications systems for servicing the macro and microeconomic activity of the enterprise.

Direct indicators of the quality of accounting information are the results of the internal audit. These indicators are directly quantitative. Indirect indicators can include those indicators that have an indirect effect on the quality of information that is formed in the enterprise accounting system. The peculiarity of these indicators is that they can be both quantitative and qualitative. Having considered the above mentioned indicators, we can confirm the hypothesis that the system of internal control of an enterprise affects the quality of the organization of the information system of accounting and the quality of accounting information that is formed in it. Confirmation of these hypotheses are indicators, which can also serve as criteria for assessing the quality of the company's SIC.

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## **INFORMATION AND HYBRID WARFARE: PHENOMENOLOGY OF INTERSTATE COMPETITION**

### **Introduction**

As a result of the large-scale processes and trends that have taken place in recent decades under the conditions of globalization and information revolution, forms, methods, means and, accordingly, interpretation of national interests and national security are subjected to more or less noticeable metamorphoses. If throughout the previous history of mankind the main tool for the implementation of their support was armed power, then in the present conditions, along with it, other forms, methods and means become increasingly important. Increasing significance is accentuated by such components of soft power as economic, sanction, image, electronic, propaganda tools of ideological, information and cultural dominance. Against this backdrop, in recent years the military-political lexicon has rapidly entered the concept of "hybrid wars". It is not only firmly established in scientific and journalistic literature, but also in the media, but is also widely used in official documents that determine the behavior of states on the international scene.

The information category is also an informational war. Information wars are an integral part of political communication. At any time, the authorities assert themselves in a competitive struggle, which in a relatively peaceful political confrontation is related to the activity of "cultivating" their own image and "reducing" the image of the opponents. In a crisis period with any name: revolution, coup, rebellion, etc. – political communications become the format of acute information warfare. An audit of this kind of communication from the standpoint of political-economic discourse requires attention to the key actors and the volume of resources they have.

## **1. Information wars are an integral part of political communication**

Information war as a socio-philosophical problem began to be considered in the middle of the twentieth century. E. Toffler, F. Fukuyama, P. Lazarsfeld, G. Lasule, D. Claper, G. Pocheptsov addressed this topic.

The contribution of the latter is especially important, since it materializes only in purely scientific, but also in journalistic texts for the widest possible audience. G. G. Pocheptsov defines the information war as a communication technology of influence on the mass consciousness in order to change the cognitive structure in such a way as to influence changes in people's behavior.

The term "information war" was first used in 1967 by former director of the CIA, Alain Dales, in *The Secret Capitulation*. The next time the term appeared in an analytical report by the American researcher T. Ron for the company Boeing "Weapons and Information Warfare". According to the analyst, the information structure becomes the most important element of the economy on the one hand, and the most vulnerable target on the other. The relevant information support is the key to success in the hybrid war. As military analysts rightly emphasize, a hybrid threat is capable of leveling out the technological superiority of any army. Hezbollah received a psychological victory in 2006, as it is, and now. To shift the emphasis in the process of making a decision on the military plane to the ethical and moral, to make elect between the charter, law and morale, in the end, to discredit the enemy, whatever decision would be made – these are the key points that ensured the superiority of Hezbollah [14, c. 26].

The information war against Ukraine is aimed not only at the loosening of the situation within the state, but also to create a negative image of Ukraine in the world. The process started in 2005 during the first gas war. Ukraine was then successfully represented as a dishonest and at least doubtful gas transiter, despite the fact that for decades Ukraine has never torn off the supply of natural gas to Europe through its territory. Significantly, along with these allegations, Russia stressed the need to build gas pipelines, alternative to the Ukrainian system (North European gas pipeline in the Baltic Sea, the second thread of the Blue Stream in the Black Sea and expansion of the gas transmission system in Belarus, now owned by Gazprom). In addition, the accusations of gas theft were not supported by concrete facts.

Since then, Russia's position has changed little. Similarly, Ukraine did little to change its positioning in the world-wide alignment of forces. Although the

question of the need to intensify efforts to create a positive image of Ukraine has risen [15, p. 8].

However, the latest developments leave no doubt that the situation is now a variable and for the better. However, the prerequisites for such changes are not so much the efforts of the Ukrainian foreign ministry as objective circumstances.

One of the dangers for Ukraine is the lack of a clear information strategy. It threatens the formation of misconceptions about the nature of the conflict, the interests of the parties, and so on. There are many such examples in Ukrainian journalism. For example, the substitution of the notion of an ally and mercenary, together with the emphasis on the fact that the hybrid war is, in principle, not a new phenomenon, a comparison of the use of Russian and Ukrainian voluntary groups by Nazi Germany during the Second World War or even the hiring of barbarians for military service during the Roman Empire [16]. Such a view is the substitution of manning (mercenaries, militias) for the way of fighting and the use of existing military units (according to the rules of war, which is a sign of a regular army, which can not act outside the statute, or ignoring these rules, which is typical for modern times hybrid war, where for the aggressor there are no rules or norms). In addition, the hybrid war is not only the use of mercenaries, military without distinctive signs and terrorist groups. This is a complexity of activities, and mercenaries are just one aspect.

The specialist in information wars G. G. Pocheptsov rightly emphasizes in the last articles the fact of the expansion of the information war in all socially important spheres as an instrument of competition: "Information war became today in the center of politics, economy and military affairs. "Peaceful" use of this tool has long gone beyond its military use. Decision-making exists in all areas, and in the case of a competitive onecollision begins the struggle for one decision against the decisionsalternative "[1, p. 25].

In the political communications of the transit society, which includes Ukraine, the division of information, hybrid and psychological warfare ceases to be significant: in the active phase of political confrontation, the information system is organized in such a way that not only influence the thoughts, emotions and behavior of people, but also carry out on They have a strong psychological impact. "Discourse of Consolidation" and "Discourse of Dissociation" in the context of the information warfare are integrated into a general conglomerate of the "discourse of confrontational response", and this explosive integration is fixed in the multidirectional communications.

At the same time, the notion of information warfare can be defined as follows: information war between the two information systems are open and hidden purposeful information influences of systems on each other in order to obtain a certain gain in the material sphere. Where information system is a set of factors for the preservation, production and dissemination of data at the economic, political and social levels. In this case, it means that while the competitor eliminates the damage received, that is, occupied only by itself, the opposite side has an advantage. It is clear that such a war makes sense only for systems that consume for their lives the general limited material resources. In turn, the information influence is carried out with the use of information weapons, that is, such means, which allow using the manipulation of information to obtain the desired result. Thus, information weapons are primarily an algorithm.

One of the main forms of information use is image creation technology.

Information that influences the image of the country in one way or another is determined by the following parameters: the sources of information (newspaper, magazine, website, press agency, television channel, etc.) with their reputation; authorship of information (state, political or state leader, official, well-known personality in art, sports, show business); content of information; semantic or target orientation of information.

The image of Ukraine is formed in parallel with its independence in international relations. Before the revolutionary events of the late 2013 – early 2014, the following main characteristics of the image of Ukraine could be identified: the image of Ukraine has both positive and negative features; The reasons for negative evaluations of experts turned out to be more than positive. Among the negative ones are the opinions of bureaucracy, corruption and backward service, corruption scandals, conflicts in the gas sector, etc.; among positive assessments is Ukraine's orientation towards democratic change, the weight of natural resources, and the mental and behavioral characteristics of society [17, p. 172]. Now these tags can also be added to Euromaidan and the war with Russia.

The main directions of realization of the strategy of forming a positive political image, undoubtedly, must be based on internal resources and demonstrate the real achievements of Ukrainian society. Although a number of positive steps have been taken in the legislative regulation of the formation of the international image of Ukraine, a number of unresolved issues remain, in particular, the absence of a program for coordinating the information activities of state bodies in the field of creating a positive international image of Ukraine.

One of the key features of the modern world is the growing number of events that affect the very foundations of world development. Their magnitude and depth make the researchers of international relations review many theories and analytical tools. Using the concept of "turbulence" by well-known American political scientist J. Rosenau introduced in political science to characterize the state of affairs in world politics, it should be emphasized that the existing set of economic, social and political upheavals, in the conditions of "turbulence", leads to increased risks for foreign policy of states. Moreover, this is typical of the first point in terms of intergovernmental competition: in the geopolitical terms – for space, in the political – for power, in the economic – for resources. Does such a state justify the fact that modern world politics changes its fundamental laws and that future political and economic competition will be pursued with the help of excellent tools? The direct and unequivocal answer of today's researchers does not, however, emphasize the fact that hybrid and information wars will scale up and cause devastating effects comparable to the major regional / continental conflicts of the twentieth century.

The communicative technologies of formation of the international image of the state are based on activities aimed at protecting and promoting the interests of the state in the international arena, as well as informing the world community about the geopolitical, economic, geographic and other features of the state, the state of its development and achievements. The objects of the influence of foreign political communication technologies are world states, international and regional organizations, transnational corporations, leaders of countries and political decision makers, political and business elites of the world, as well as the world community.

## **2. The hybrid wars– realities of the present**

The hybrid war is not really an invention of the present. After all, combinations of information-psychological, economic and military confrontation have been used before. But the hybrid of the modern conflict is that the proportion of factors is fundamentally different. The use of tools and features of the information society is also much more powerful. Thus, an urgent obvious need is the formulation of an asymmetric, as well as a hybrid response to a hybrid threat, the key aspect of which is the information warfare.

In 2004, a multi-futures study was conducted at NATO's request to identify trends in international security developments in general and the wars in

particular. The final report also talked about a hybrid war. As stressed by retired Major-General Frank van Kapen, this term has many definitions. Further, it is true, however, that the issue is again reduced to a purely military dimension and the definition of a hybrid war as a blend of classical warfare with the use of irregular armed formations. Non-state combatants "can do things that the state itself can not do because any state is obliged to adhere to the Geneva Convention and the Hague Convention on the Law of Land War, the agreement with other countries. You can do all dirty work to shift to the shoulders of non-state formations "[10]. Psychological and informational aspects are also in the field of vision of the Native expert. So, he stresses that the world community is confronted with a real fact of aggression, with complete denial of its own aggressor. In the short run, this is a very winning tactic.

Hybrid forces successfully use technologically advanced systems in such a way that they operate on the brink of opportunity. Therefore, hybrid armed forces have an advantage over the traditional army, which operates strictly within the framework of the statute. Most important is the control over information flows. Conditional "West" is struck, how dense and "impressive" it is today. On the other hand, for the same conditional "west", this crisis is not related to Ukraine as such, but with the status quo crisis, established after the end of the Cold War [11].

General Philippe Bridlow, NATO Chief of Defense, at the NATO summit in Wales, even called him the most striking blitzkrieg, who had ever seen the history of information wars. Also, Bridlow noted that Russia's hybrid approach to war consists in trying to use all possible tools, to create a problem and to continue to pedal on it, including using military instruments [12].

The means of hybrid warfare are not generally new. Military history knows a lot of examples of asymmetric wars using nonlinear tactics and irregular armed formations that are more ancient counterparts of the modern hybrid war. One can recall Napoleon's war in Spain or the Vietnam War. Such wars are called compound. The essence of tactics has not changed, just methods have become more modern and applied in a comprehensive manner.

In fact, the classical example of the hybrid warfare is the Hezbollah War in Lebanon in 2006, using classical military actions, irregular armed formations and information methods of warfare, which, according to many experts, has led Israel to a strategic defeat. Another example of a hybrid war in which a powerful, powerful aggressor state negotiates with non-state actors – groups of

local people and militants – whose connection it formally completely denies is Russian sabotage activity in Ukraine in the spring of 2014. During the conflict, small groups of Russian servicemen organized and coordinated armed rebel detachments from the local population in eastern Ukraine, avoiding the direct introduction of their troops across the Ukrainian border, which allowed Russia to circumvent international law.

Undoubtedly, Russia had been preparing for war of this type for a long time. One of the evidence of this is the publication in February 2013 of the article by the head of the General Staff of the Russian Armed Forces and Deputy Minister of Defense Valery Gerasimov. The article was available on the Internet and already disassembled on the quotation [13].

Actually, Ukraine is perhaps the ideal battlefield for deploying hybrid hostilities. The preconditions of the hybrid war in Ukraine are as follows:

- the presence in Russia of a significant political layer, interested in the realization of their own imperial ambitions;

- Russia's desire to turn the world from a multipolar state to a bipolar one;

- absence of systemic economic reforms and political transformations in Ukraine, which turned it into an object of carrying out aggressive actions by Russia;

- Awareness of Russia's leadership of the threat that Ukraine will face for her;

- the dependence of a significant part of the EU on Russian energy supplies;

- The Kremlin's apparent desire, by conquering Ukraine, to break the will to resist not only the CIS countries, but also the Baltic republics and Poland.

Russia uses a wide range of methods of hybrid warfare:

- "curved mirror" – distortion and alteration of facts and discourses;

- "legitimate exile" – the possibility of using the person of the former President Viktor Yanukovich for pressure and potentially questioning the legitimacy of the current government;

- "speculation in history" – obviously not a new instrument, the essence of which is to decode the discussion points of Ukrainian-Russian history;

- "Objection of the obvious" is aimed at preserving the person, creating the appearance of the absence of aggression;

- "carpet bombardment with misinformation" leads to an increase in panic moods, despair, the emergence of numerous divisions in the Ukrainian



society, which in the end should lead to destabilization of the situation within the country;

– "Dragging the West" – the attempts to create a pro-Russian coalition are multiplied by the active lobbying of Russia's current and former European politicians. It is also worth adding an active information company, which is aimed at creating a positive image of Russia in Europe;

– "Peacekeeping" is also aimed at creating the illusion of Moscow as a peaceful and unconfident party to the conflict. On the other hand, it must assure the presence of Russia's interests in the territory of Ukraine and the right to defend them;

– "economic grips" should have pushed Ukraine into an economic collapse. Depleted and objectively dependent on the Russian markets, the economy is now on the verge, however, there are positive trends.

Actually, all of these methods are components of the information warfare mosaic. Accordingly, an understanding of the triple dimension of wars: hybrid, informational and humanitarian, possible, for a qualitative understanding of the nature of political behavior in its competitive manifestations.

### **3. Transformation of forms of political behavior in modern conditions**

The study of the problem of the transformation of political behavior in the postmodern environment in various discourses has been taking place for a long time. Scientists consider the spectrum of various tangential variables that directly affect the identified transformation process and, in accordance with their own intelligence, aggregate a diverse set of the most important elements of this process. Thus, according to the opinion of the researcher M. Bathin, the virtual virtualization of life has a number of common features with the life of the period of the Middle Ages. First of all, virtuality is the very best of life, after all, this life comes out of the ordinary everyday routine and the game is playing. Secondly, the virtual world, as well as the carnival, contains hierarchical relations and reduces the static differences of the co-authorship. Third, as in the private world, the most important factor is the unanimity of the cohort, and the time of the man in the network is sometimes perceived as a certain number of people.

Thus, the emergence of the network contributed to the establishment of the new social agenda, by helping to closely communicate in a distant place, to pre-

serve the feeling of being present, which is not always realized through the trade in real life, and therefore relevant to the appearance of the information age.

As a result of the spontaneous development of the Internet, various contradictory judgments emerged from the current world of social conflict in the science groups. On the other hand, the existence of the Gromad networks brings about the real communication of the regime of the Alliance, which does not depend on the location of the cohorts. On the other hand, it is isolated from the outside world, the institute of the family collapses, which has a negative influence on the integrity of the mind in the real world.

In the 70's and 80's of the twentieth century, the German labor force, Carl Doych, responded to the information of a prominent place in the system of functionalization of the political system. According to the methodology within the political system, there are many information problems, which take into account the most important physical and neuro-associative interactions between political parties and between them and the state of affairs. Therefore, according to the long-term nature of political life, it depends on the functioning of the communicative mechanisms [2].

On the eve of the sixth day, the political commitment and activity of the party will be determined by the development of the international technical cooperation, and the traditional institutes of democracy will be modernized in a more informal institution – the network of internet democracy. The difference between them is that in addition to the common sense, even the most important thing for each other, it is also the ability of the self-representing to represent its interests and views, without intermediaries, to influence the rulings of the managerial solution.

Starting from 2004, according to the expert of the social service of the Center for the Advancement of Mykhailo Mishchenko, the media were relatively free and now cover the most violent events, the life of the politicians, including the failure to overcome their common abuses. The high level of awareness is that the media are influenced by the institution, which has a credible information and contributes to the development of a political process and the democrats of society [3].

Ukrainian researcher E. Klyuenko also notes the lack of a unanimous and conventional interpretation in the scientific environment of the very phenomenon of political participation. Experts emphasize that canonized term does not exist both in domestic science and in foreign. However, he also stresses that this

is a natural situation, because the dynamics of the development of information processes dictates the need for a continuous transformation of political participation, both in form and in essence [4, p.62].

For example, "Facebook", "Vkontakte", "Twitter" have long been used by politicians throughout the world as a valuable informational resource that promotes transparency and openness in politics. The brightest is Barack Obama, who in 2008 won the popularity of the network for the pre-election campaign, and the popular French Presidents Nicolas Sarkozy and Emmanuel Macron were featured in the Facebook. On the other hand, a large proportion of US political analysts believe that Donald Trump's victory in the presidential election should be due, first of all, to a well-conducted election campaign at Twitter.

Somewhat different influence on political behavior in the network is recorded in Ukraine. Maxim Savaniewski, a renowned medical expert, says that "the Ukrainian politicians do not stop to be open, come to the vibe, talk, not be afraid to hear what he reads. In Ukraine, in the near future, there are many politicians, mayors of many cities present on the Internet, but among them, it is likely that some 10-15 people can not talk to people in real time. Do not let them fail to leave you, they say your own position, they say that they are giving up and they are beaten. Closeness is the one that distinguishes our policy from the recurring "[5].

According to the author, the closed policy and obscurity of politicians provoke the emergence of the latest forms of protest, as a means of finding effective means of political behavior. Such instruments in the twenty-first century, in particular, became hacktivism and street art protest.

The street art protest is an original phenomenon of postmodern democracy, it actively absorbs all tendencies, contradictions and topical themes of everyday life by interpreting them with their own artistic means. Internet has played a role in popularizing and activating the street art of protest. In the 21st century, the opposition to the state, government structures and transnational corporations goes to a new level. The network as a way of communicating, organizing and recruiting activists – is becoming a new, virtual space, for generating protest activity. For example, representatives of the Russian street art of protest, focus on the problems of Russian reality, at the same time, Western activists react to global problems. All types of street art of protest are used in full, regardless of geographical location, and cultural and ethnic characteristics of activists. The street art protest, as the main idea, unites representatives of various social

groups, giving them the mechanisms for realizing their own potential, appealing to individuality and thus destroying the principle of the mass of traditional forms of protest, rejecting the "dissolution" of the individual in the crowd. The American street art protest, as a model with more publicity and material means for expressing its "I", goes into the category of political technologies that use the power structures.

Appearing from the masses, certain types of street-protest arts (flash mobs) return to it, in the form of political manipulation. The Arab Spring is a vivid example of the use of Internet technologies and new forms of street art of protest, which resulted in mass demonstrations. In Russia, street art in the political plane is not able to intensify the masses, but only provokes disputes between sympathizers and opponents of such actions that shock and cause dissatisfaction with the average citizen. At the same time there is a paradox – street art emerging as a counterculture, now becomes a culture, with its history, "gurus" and "icons," and the protest spirit is of a commercial character, as a way of existence of individuals and groups that gain popularity, are enriched. That is, there are two trends – strike-art protest, as counteracting the system and as a marketing and technological move in a global political and economic machine.

The phenomenon of Hacktivism is somewhat different both in terms of manifestation and in the method of influence, and therefore determines the transformation of political behavior other than the street art protest. Hacktivism is a combination of mass political protest with computer hacking. The second approach regards Hacktivism in the context of computer security, information warfare, and cyberterrorism. Hacktivism is a synthesis of social activity and hacking.

Hacking means the operation of computers with the help of a special "hacker" software. D. Denning highlights four types of Hacktivism, namely: virtual "sit-in strikes" and blockades; bombing e-mail; web hacking and computer hacking; computer viruses or worms [6, p.255]. A virtual sit-in strike (demonstration) or a virtual blockade is a kind of "virtual" execution of a physical strike or blockade. In both cases, the purpose is to draw attention to the actions of the protesters and the causes of these actions, by breaking the normal functioning of the network and blocking access to services.

Bombarding email. Sending thousands of emails to your inbox through automated tools can completely block your email account and make it impossible to receive mail. Web hacking and computer hacking. Weaknesses occur for

the disclosure of information that is closed from people. Computer viruses or worms. Both forms affect the computer and spread over computer networks.

For example, the official ban on the Government of Tunisia publishing the WikiLeaks site was the reason for the interference with government sites and direct participation in protest actions. Understanding the government's actions as a violation of the freedom of speech, "Anonymous" organized a large number of DOS attacks on government sites in Tunisia blocking them.

The next step of the hacktivists was to break the pages of Twitter and Facebook users to spread calls for the overthrow of power, which limits the rights and freedoms of citizens. A very strong reason for maintaining these protest actions was the extremely powerful influence of the Western powers that was carried on primarily through social networks, which eventually became one of the main means of a successful "revolution".

In recent years, the Ukrainian national hatch movement has become widespread. In the opinion of the author, the causes of the formation of this movement in our country were events on Independence Square, annexation by the Crimea, as well as the beginning of hostilities in the East of Ukraine. The most active hacktivism groups are: "Inform-Napalm", "Peacemaker", "Ukrainian Cyber Troops". Also, in the beginning of 2016, the Ukrainian Cyberalliance was created from representatives of different hatching groups. Go to Cyberalliance: Falcons Flame, Trinity, RUH8, Cyber Hunta. In essence, the establishment of Cyberalliance brought Ukrainian hacktivism to the level of the global network community. The goal of Ukrainian hacktivists to counter the information warfare of the Russian Federation by refuting information, and coverage of objective facts about events in Ukraine, and proof of the military presence of Russian troops in the east of the state.

It should be emphasized that hacktivism is one of the newest and most effective forms of protest that allows you to participate in expressing your disagreement with politics, to uphold your rights and freedoms, and also to avoid the victims among the protesters, since they defend their positions anonymously.

On the example of the street art of protest and hacktivism, we see an increasing transformational transformation in the content of political participation, which, especially in the context of protest-rebellious activity, becomes a virtual instrument of influence on the one hand, and anonymous irresponsibility – on the other.

With the name of the Internet, there is an overview of the openness of the media. In such a way, the place of the universal and objective entity, which is always the subject of the state, is shaken by other group centers of influence, which is based on the observation of the analogical groups of opinion-makers. M.Castells connects a certain phenomenon with the emergence of "the bulk of identities" that emanate from the nucleus of the postmodern society. The organizers are focused on two things: to confirm the results of the protesters on the protest ("protest for the sake of the protest") and to save their experience of the protest to attract some of the more than the same number of people. In this case, as in the past, in the prospect of bulldozing, the success of the impact of the impact on the political outcome, today's priority is the degree of brightness of news, its extravagance. In such a way, the current protest is evaluated mostly for the fact that they influence the testimony of a protestant and which, according to the presents a "protest for the sake of the protest."

Thus, the policy is based on the role played by the action of the action, which is the specificity of the postmodern and the reduction of the value of the motivational beginning of the political participation, with the approval of the game's co-op. Now, after the internet poker chatter, you'll see the appearance of the game matrix. The clearest adherence to the transformation of the political sphere in the realm is the active development of the artistic frameworks of political caricature, comic songs and anecdotes. At the same time, in the era of postmodern (e-democracy), the role and weight of such forms of political participation, which are neither deterministic nor result-oriented, are increasing. That is why it often leads to the spontaneity and lack of control of the information space. Political participation at the same time becomes a grotesque, casual and engaging character. All of the foregoing also allows for a forecast of the growth of transformations within the existing ones, and the emergence of new forms of incorporation into political communication in the near future, and the deepening of the changes in the very nature of political participation.

According to the researcher at Harvard University P.Norris, in the contemporary world, the rules of political plurality have changed. All of these actuaries are evolving to new ways of expressing their unhappiness in the broad spectrum of socio-political, economic problems. In his research, P.Norris, in his sixteenth issue, "The Prosecution of Political Activism," made it clear that "protest activism" is a distinct measure of political plurality [7, p.19]. At the same time, the development of the Internet does not contribute to the legitimization, democrati-

zation of political processes due to the adoption of any kind of political information for each cohort. The deepening crisis of legitimacy, which is being tracked throughout the world, is only deepening thanks to the global network. Consequently, policies on the Internet are stylistic and uncontrolled, which compromise the consuming materials, which exacerbate insubordination to politicians by conveying the phenomenon of "politics of the scandals".

## **Conclusions**

Thus, information and psychological influence is the purposeful production and dissemination of information for direct action (positive or negative) on the functioning and development of the information and psychological environment of society, the psyche and behavior of the population, the leadership of the country, servicemen. Information and psychological influence is carried out, mainly, on the emotional sphere of consciousness in order to reduce the degree of awareness and weakening of thinking. The process of accepting the object of information and psychological influence, directed on the emotional sphere of consciousness, is specific. In it only the perception and memory function, thinking is almost not carried out.

Accordingly, the mechanism of competition in the process of information and psychological impact is characterized by a sharply reduced level of awareness of the content of influence and benefits through changing the orientations, moods and desires of both small and large social groups.

To achieve the goal of informational and psychological influence in the hybrid warfare, all existing arsenal is used: manipulation, misinformation, intimidation, and spreading of rumors. Initiation of aggressive states of objects of influence. The main tools of information and psychological influence are the media: print, radio and television, the Internet.

Consequently, in post-Soviet political participation, the classical definition of war undergoes change, and the traditional way of war (the way of war is the actual way of fighting) is obsolete and does not meet the requirements of time.

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## **EVALUATION OF THREATS OCCURRENCE TO ECONOMIC SECURITY OF REGIONAL SYSTEM**

### **Introduction**

Considering the functioning of economic and social systems, we often can not talk about the definition of strict functional dependencies between their inputs, as the human factor has a great influence on the functioning of economic systems. As it is known, in market conditions, business entities are given more powers and freedoms compared with the administrative-command system. Thus, the decision making process on the micro level becomes less predictable, and the system itself on the micro level has a great variety. It should be noted that the interconnections and conditions of processes and phenomena in the economics do not allow unambiguously determine the set of inputs and outputs of the system. At the present stage, we can only talk about the trends of development, the main dependencies, directions and the strength of the connection between individual indicators, but not about the functional connection.

Thus, the state of a complex system can be defined as a set of indicators, which allows with a certain degree of probability talk about the behavior and possible reactions of the system to be internally and externally changed.

Since the reliability of the system implies the long-term functioning and the maximum interests satisfaction of all its participants, it is obvious that the reliability of the system is directly related to such a concept as the predictability of its behavior, as exactly predictability of behavior allows to prepare and carry out a set of preventive measures related to certain threats, and therefore to ensure the sustainable development and existence of the system, in other words its reliability.

Thus, in order to build true forecasts of development, it is necessary to allocate a set of indicators of economic development and threshold values for

each indicator. Achievement of threshold makes the behavior of the system unpredictable or chaotic, to be more exact, the state of the system (or any of its subsystems) becomes dynamically unstable.

## **1. Stability and reliability of regional system in the conditions of dynamic development**

We believe that the development of regional social and economic systems shall be considered on the basis of the indicators' dynamics, which is generated by the fundamental non-linearity of regional development. Records of dynamics allows to distinguish one option of development from another, one stage from the subsequent one or previous one.

Fundamental nonlinearity was already described in the times of M.D. Kondratjjev and Y. Schumpeter. It is impossible not to take into account the described laws of cyclicity in economics. Neglection of such knowledge will lead to uncontrolled system and loss of its stability as a result loss of economic security for both regional system and country as a whole.

After researching of M.D. Kondratjjev and Y. Schumpeter works comes a conclusion that innovations in economics are being introduced, as a rule, not after the consumer is spontaneously faced with new needs and a reorientation of production occurs but when the production itself accustoms the consumer to new needs.

It's necessary to note the important conclusion of Y. Schumpeter about the development of socialism and work of K. Marx. He was an opponent of the teachings of K. Marx's doctrines and considered them more similar to religious slogans, but nevertheless he admitted the fact that the time of the appearance of socialism was inevitable. Such prospects did not appeal to Y. Schumpeter, but he acknowledged them.

At the same time M. Weber pointed out that an attempt to introduce socialism in Russia (1918), taking into account the level of its economic development, is in fact a crime and it would end with a catastrophe. Y. Schumpeter supported him but noticed that this process is inevitable [1]. Hence, there must be emphasised that today Ukraine shall pay specific attention to these conclusions of the Austrian economist Y. Schumpeter and the German sociologist M. Weber.

After analyzing the doctrine of the Austrian economist Y. Schumpeter and the German sociologist M. Weber we can conclude that the vector of regional

development shall be sought in sustainably balanced social and economic development. First of all, we emphasize on the balanced social and economic development in the conditions of dynamic processes. Modern innovation theories explain the alternation of cycles of business activity by changing the technological patterns in social production. Technological pattern is characterized by the presence of a single technical level of productive forces and the overall scientific potential.

Modern acceleration of scientific and technical progress, reducing of the innovation period cause the occurrence of shorter duration economic cycles.

Having studied the existence of a dynamic development it was determined the existence of concepts of stability and reliability of the regional system. The next step of the research is to determine the synthesis of calculation procedures for the studying of internal interactions of production and consumption in order to predict the different states of regional systems and timely prevent unbalanced development.

In a number of publications of western and local experts are reviewed the problems of economic reliability of territories, let's have the examples.

Abalkin L.I. defines the economic security of the region as a combination of conditions and factors that ensure the region's independence its stability and resistance and also the ability to continuous recovery and self improvement [2].

Babecj I.Gh. indicates that the economic reliability of the region is a state of economy that enables to provide sustainable social and economic development and is based on the following principles: economic independence, stability and resistance of development, ability to self-development and progress [3, p. 14].

Ghumenjuk A.M. emphasizes that the economic security of the region is a state of economy which is characterized by the ability to self-survival and self-development in conditions of reforming, the presence of internal and external hazards and actions of hardly-predicted factors [4, p. 23].

Zhalilo Ya.A. defines the economic security of the region as the ability of the national economy to expand self-reproduction for balanced satisfaction of the needs of the country population, confrontation to the destabilizing influence of internal and external factors, ensuring competitiveness in the world economy system [5, p. 25].

Kysla T.M. says that the economic security of the region is the management of reproductive processes in the region, which is aimed to supporting the

established on scientifically justified criteria of safe mode of work and functioning of its separate elements [6].

Naydenov N.D., V.V. Krivorotov, Kalina A.V. determine the economic security of the region as a range of levels of economic and social indicators, within which the region is steadily developing over the long-term period; a complex of measures aimed to sustainable, stable development and improvement of the region's economy, that includes counteraction to external and internal threats (through the interaction of the industrial, social and natural spheres) [7; 8, p. 76].

Olijnyk V.M. determines the economic security of the region as the ability of the regional economy to function in the mode of expanded reproduction, that is, sustainable economic growth, provide acceptable living conditions and personal development for the majority of the population on maximum level [9].

Pasternak-Taranushenko Gh.A. indicates that the economic security of the region is a condition in which are provided the possibility of creating conditions for a productive life of the population, a perspective development of the economy in the future and the growth of the well-being of the inhabitants of the region [10].

Sukhorukov A.I., Kharazishvili Ju.M. insist that the economic security of the region is characterized by the degree of protection of the regional economy and economic interests of the territorial community from the destabilizing factors, achieved by the coordination of the interests of the region in the economic, social and environmental spheres, by the ability of the regional economic system to self-reproduction and rational utilization of the economic potential of the region while facing social and environmental requirements and restrictions [11, p. 218].

Chimitova A.B and Mikul'chinova E.A. indicate that the economic security of the region is a characteristic of the components of the national economic complex, in terms of its ability for progressive development on the path of sustainable growth of the well-being of all layers of the population, in conditions of social and economic sustainability, effective international cooperation (aimed to the effective resolution of internal and external problems, which create threats to the viability of the interests of society) [12, p. 54-55].

Murdoch C. indicates that the economic security of the region is the absence of a threat of changes in the volume and distribution of income and wealth; at the level of employment, inflation, access to the market, the supply of raw materials, etc. [13, p. 68].

Maull H. indicates that the economic security of the region is the absence of an acute threat to the minimum accepted level of basic values that the inhabitants of the region consider to be of prime importance [14, p. 5].

Let us make a concretization of the main provisions of the approaches for definition of "economic security of the region" (Table 1). After concretization of the main provisions of the approaches to the definition of "economic security of the region", it became evident that most researchers assume stable, sustainable development, expanded reproduction and protection of national (regional) interests.

Economics is the main activity of society and the fundamental economic basis of the region, because there is a connection of economic security with the economic growth of the region. Also, the researchers consider that the category "economic security of the regions" can be defined as the most important in ensuring of the national interests of the country [15, p. 5]. Consequently, under these conditions, it is possible to state the appearance and development of a new direction in economic theory which is the secure functioning of economic systems.

Table 1. Concretization of the main provisions of the approaches for the definition of "economic security of the region"

Author of the definition	Definition	Concretization of the main provisions of the approach, key words
1	2	3
Abalkin L.I.	"economic security of the region"	region's independence its stability and resistance
Babecj I.Gh.	"economic security of the region"	economic independence, stability and resistance of development, ability to self-development
Ghumenjuk A.M.	"economic security of the region"	ability to self-survival and self-development in conditions of reforming
Zhalilo Ya.A.	"economic security of the region"	ability of the national economy to expand self-reproduction
Kysla T.M.	"economic security of the region"	management of reproductive processes
Naydenov N.D., V.V. Krivorotov, Kalina A.V.	"economic security of the region"	sustainable, stable development

Olijnyk V.M.	"economic security of the region"	expanded reproduction, sustainable economic growth,
Pasternak-Taranushenko Gh.A.	"economic security of the region"	productive life of the population, a perspective development of the economy
Sukhorukov A.I., Kharazishvili Ju.M.	"economic security of the region"	of protection of the regional economy and economic interests of the territorial community from the destabilizing factors, ability to self-reproduction and rational utilization of the economic potential
Chimitova A.B and Mikul'chinova E.A.	"economic security of the region"	progressive development on the path of sustainable growth of the well-being
Murdoch C.	"economic security of the region"	absence of a threat of changes in the volume and distribution of income and wealth etc.
Maull H.	"economic security of the region"	absence of an acute threat to the minimum accepted level of basic values

Under the influence of market mechanisms, the state received a new function such as the protection of economic security. The problem is that market mechanisms have shown their inability to perform this function. Public authorities are able to anticipate and protect from the most important and major threats. However, more often the society is faced with the threats which have local character. Detection of such threats is performed quite effectively by local authorities. Similarly, the most effective way of preventing and eliminating the effects of local threats is by the state authorities of the regions.

Consequently, the region's economic security is prone to the impact of different external and internal factors that either hinder or contribute to security. Incorrect or untimely regulation of the influence factor leads to the change of the state of a regional system from a relatively controlled state into a new, uncontrolled one, in this case it is possible to bring a serious threat to economic security. Thus, any factor of influence, which is detected untimely, or it is not controlled, can become a threat.

Taking into account the proposed interpretation of the term of the regional social and economic system, namely, "it is a determined system in the economic sphere of such elements as natural resources (natural element); enterprises (economic element); population (social element); ecological objects (ecologi-

cal element) and such a system in which are occurring the dynamic processes and which has natural resource specialization", we will demonstrate the general scheme of economic security of the regional system (Figure 1).

In the process of managing the development of regional social and economic systems, we must take into account that at the entrance to the management system we have different risks, hazards and uncertainty.

It is suggested to review regional social and economic system be considered as an interconnected functioning of the three subsystems: security systems; social system; ecological system. These subsystems are interconnected and are under the influence of external and internal threats. While performing managerial influence, we shall achieve such results as stability, resistance, independence of the system, as well as self-development and predictability of threats and to achieve an increase of the time gaps between crises. So, the security of the regional system can be represented as an integral indicator of the subsystems which are the part of it, namely:

- 1) security of the supporting system, which is the functioning of the management system and infrastructure system;
- 2) security of the social system, which is the functioning of social, political cultural, environment and education systems;
- 3) safety of the environmental system, which is represented by the system of environment and resources.



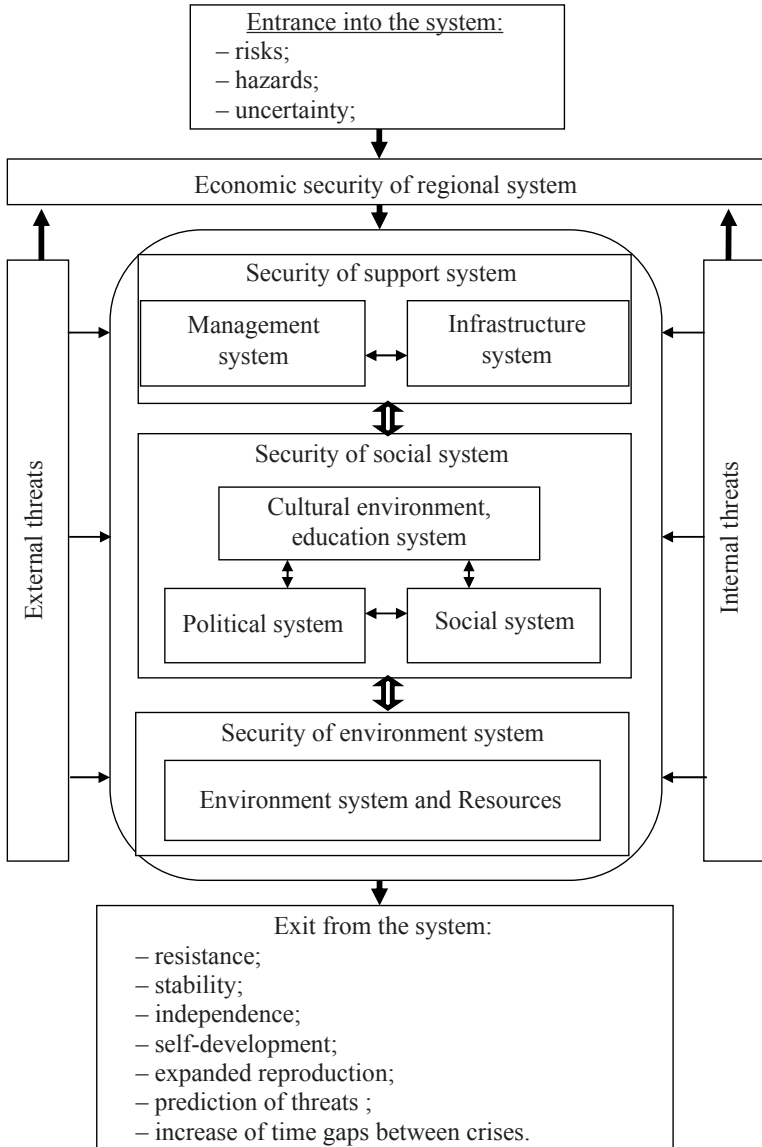


Figure 1. General scheme of economic security of regional system \*  
 \* developed by the author

## 2. Evaluation of threats occurrence to economic security of regional system

Ukraine has rather outdated system of resettlement and allocation of productive forces that was created for the project of Soviet industrialization. In such conditions, the infrastructure of the region as a support system is rather confusing. Outdated equipment which is rather worn out, significant material and energy consumption in the process of production, inefficient production location can become a threat for both national security and regional one, as part of the support system.

There was also an attempt to classify the research objects of regional social and economic systems and based on that it was proposed to describe such regional social and economic systems in general view as identical equality (by Chernjak Yu.I. and Ashby U.R.).

The multidimensional concept of the term "region" allows us to define the diversity of regional social and economic systems and classify them.

There are several ways in which RSES can be classified, here it is distinguished into four levels:

1. Regions (areas) – RSES 1.
2. Macroregions (and economic regions) – RSES 2.
3. Territorial and industrial complexes – RSES 3.
4. Euroregions – RSES 4.

In general terms, such regional social and economic systems can be described by the following identical equality (by Chernjak Yu.I. and Ashby U.R.) [16,17]:

$$\underset{def}{S} \equiv \langle Z, STR, TECH, COND, N \rangle, \quad (1)$$

where  $Z = \{Z_i\}$  – combination or structure of targets;

$STR = \{STR_i\}$  – combination of structures, which performs targets;

$TECH = \{TECH_i\}$  – combination of technologies, which performs the system;

$COND = \{COND_i\}$  – conditions of existence of the system, that is, the factors of external and internal influence;

$N$  – an observer, or a group of observers, that is, individuals who take and execute decisions, structure the targets, correct the structure, make choices of methods and means of modeling, and so on.

Taking into account these achievements, it is possible to provide a scheme of interrelation of theoretical and methodological principles for evaluation of the threats occurrence in the economic security of the regional system (Figure 2).

Thus, external threats for regional social and economic system of the first level (i.e. region-area) may be, first of all, other regional social and economic systems of other levels, as well as regional social and economic systems of the first level (i.e. other region-areas), directions of the development of national and world economy.

Internal threats may be the actions of participants of the internal environment of the regional system. The mechanism of interaction of these participants is well described with the abovementioned identical equality (by Chernjak Yu.I. and Ashby U.R.).

It represents the internal environment of the regional social and economic system as the interaction of the combination of economic interests, targets ( $Z = \{Z_i\}$ ), the combination of subjects, the structures that are performing the targets ( $STR = \{STR_i\}$ ), the combination of technologies that implement the system ( $TECH = \{TECH_i\}$ ), the conditions for the system existence  $COND = \{COND_i\}$  and actions of observers who take and execute decisions, structure targets, correct the structure, select the methods and means of modeling, and so on. (N).

It should be noted that this identical equality has a general view, it means that some elements of the combination can describe the RSES of the first level; others can describe the RSES of other levels. Some elements of the combination for one RSES can be positive factors of development, and for the another RSES they can be reviewed as threats. But, if to review the identical equality on the same level for a separate level of the RSES, we can obtain a comprehensive picture of threats formation of regional social and economic system. The description of possible elements of the abovementioned combinations is given in Table 2.

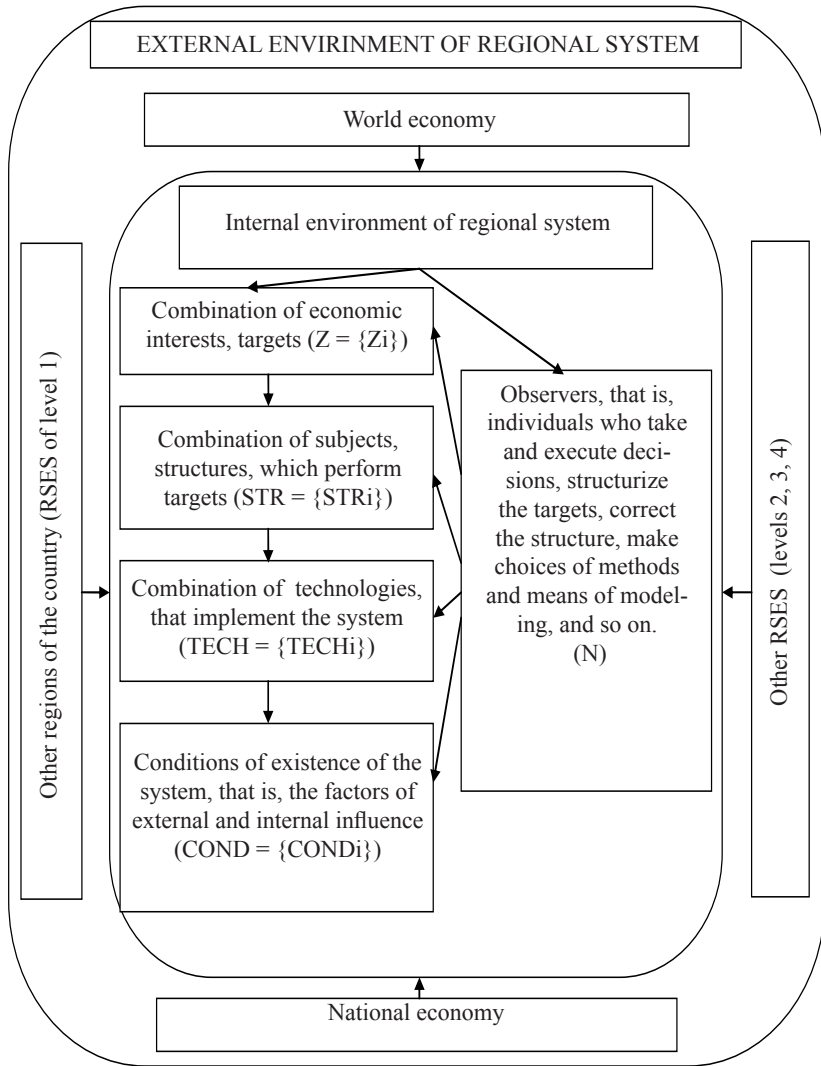


Figure 2. Scheme of the correlation of theoretical and methodological principles for evaluation the occurrence of threats in economic security of the regional system\*  
 \* developed by the author

Table 2. Combinations of equal identity (1), which describe regional social and economic system\*

Types of regional social and economic system	$Z = \{Z_i\}$ – combination or structure of targets	STR = {STR <sub>i</sub> } – combination of structures, which performs targets	TECH = {TECH <sub>i</sub> } – combination of technologies, which performs the system	COND = {COND <sub>i</sub> } – conditions of existence of the system, that is, the factors of external and internal influence	N – an observer, or a group of observers, that is, individuals who take and execute decisions, structure the targets, correct the structure, make choices of methods and means of modeling, and so on.
1	2	3	4	5	6
RSES of level – regions (areas)	<p>1. Decentralization.</p> <p>2. Regional economic development:</p> <ul style="list-style-type: none"> <li>- attraction of new types of business;</li> <li>- expansion of existing business;</li> <li>- development of small business;</li> <li>- development of the city center;</li> <li>- industrial development;</li> <li>- development of services;</li> <li>- increase of employment of the population of the region;</li> </ul> <p>3. Sustainable development of the region.</p>	<p>1. Regional state administrations;</p> <p>2. Bodies of local self-government;</p> <p>3. Territorial communities;</p> <p>4. Non-governmental and social organizations</p> <p>5. Public utilities and state enterprises;</p> <p>6. Business.</p>	Technological mode	<p>1. Natural and resources specialization;</p> <p>2. Development of infrastructure;</p> <p>3. Renewable energy and energy efficiency;</p> <p>4. Water supply; sewage, waste treatment;</p> <p>5. Geo-economic code of Ukraine;</p> <p>6. Influence of geopolitical regions;</p> <p>7. Innovation and investment climate.</p>	Human factor

1	2	3	4	5	6
<p>RSES of level 2 – macro-regions (and economic regions)</p>	<p>1. Macro-regional economic development: - effective location of industrial forces; - industrial development; - development of services; - raising the employment level of the population of the region RSES 1 2. Sustainable development of the RSES 1</p>	<p>1. Regional state administrations; 2. Bodies of local self-government; 3. Non-governmental and social organizations 4. Public utilities and state enterprises; 5. Business.</p>	<p>Technological mode</p>	<p>1. Natural and resources specialization; 2. Development of infrastructure; 3. Renewable energy and energy efficiency; 4. Water supply, sewage, waste treatment; 5. Geo-economic code of Ukraine; 6. Influence of geopolitical regions; 7. Innovation and investment climate.</p>	<p>Human factor</p>
<p>RSES of level 3 -inter-industry production complexes</p>	<p>1. Additional economic effect due to the use of general infrastructure, personnel base, power facilities, etc. 1. National economic development: - effective location of industrial forces; - industrial development; - development of services; - raising the employment level of the population of the region RSES 1 2. Sustainable development of the RSES 1</p>	<p>1. Regional state administrations; 2. Bodies of local self-government; 3. Public utilities and state enterprises; 4. Business</p>	<p>Technological mode</p>	<p>1. Natural and resources specialization; 2. Development of infrastructure; 3. Renewable energy and energy efficiency; 4. Water supply, sewage, waste treatment; 5. Geo-economic code of Ukraine; 6. Influence of geopolitical regions; 7. Innovation and investment climate.</p>	<p>Human factor</p>

1	RSES of level 4 – Euroregions	2	3	4	5	6
	<p>1. Decentralization.</p> <p>2. Regional economic development of RSES 1:</p> <ul style="list-style-type: none"> <li>- attraction of new types of business;</li> <li>- expansion of existing business;</li> <li>- development of small business;</li> <li>- development of the city center;</li> <li>- industrial development;</li> <li>- development of services;</li> <li>- increase of employment of the population of the region;</li> </ul> <p>3. Sustainable development of the region RSES 1.</p> <p>4. Activation of participation in the processes of European integration</p>	<p>1. Regional state administrations;</p> <p>2. Bodies of local self-government;</p> <p>3. Territorial communities;</p> <p>4. Non-governmental and social organizations</p> <p>5. Public utilities and state enterprises;</p> <p>6. Business.</p>	Technological mode	<p>1. Natural and resources specialization;</p> <p>2. Development of infrastructure;</p> <p>3. Renewable energy and energy efficiency;</p> <p>4. Water supply; sewage, waste treatment;</p> <p>5. Geo-economic code of Ukraine;</p> <p>6. Influence of geopolitical regions;</p> <p>7. Innovation and investment climate.</p>	Human factor	

\* developed by the author

Table 2 shows, for example, that the description of RSES 1 the following targets and objectives may be used:

1. Decentralization.
2. Regional economic development:
  - attraction of new types of business;
  - expansion of existing business;
  - development of small business;
  - development of the city center;
  - industrial development;
  - development of services;
  - increase of employment of the population of the region;
3. Sustainable development of the region.

The following structures can be reviewed as structures which are dealing with the performance of the targets on regional level:

1. Regional state administrations;
2. Bodies of local self-government;
3. Territorial communities;
4. Non-governmental and social organizations
5. Public utilities and state enterprises;
6. Business.

The level of technological structure at the regional level determines the technology that implements this system.

The conditions of existence of the region as a system are:

1. Natural and resources specialization;
2. Development of infrastructure;
3. Renewable energy and energy efficiency;
4. Water supply; sewage, waste treatment;
5. Geo-economic code of Ukraine;
6. Influence of geopolitical regions;
7. Innovation and investment climate.

And as the observer on the development of the region as a system certainly stands the population of the region with its needs. Similarly, we described in the Table 2 regional social and economic systems of other levels. All components of the defined combinations can be expressed and measured through statistical reports of the state statistical bodies of Ukraine. It will provide an opportunity in the current dynamic conditions of a rapid post-socialistic transformation of the Ukrainian



economy, to review the definition of "region" as a system that is set in a certain sphere and to identify the patterns of development of a flexible social and economic system of Ukraine, which has a non-linear character. Post-socialist transformations, to which modern Ukraine is inclined, bring many problems that are difficult to be described and solved on the basis of existing economic theories. Exactly the existence of transitivity conditions in the economy creates new conditions for finding new vectors of development and the creation of new systems that can effectively exist in new conditions.

## **Conclusions**

So, the majority of domestic and foreign researchers associate the concept of economic security with the achievement of sustainable dynamic development and effective economic development. It should also be noted that the common in wording of the leading economists is that they define economic security as a state of the protection of the economic interests of the subject (individual, enterprise, region, state) from both internal and external negative influences (threats).

But the concept of "economic security of the region" and "social and economic development" shall not be identified. A set of indicators for evaluation and the evaluation methodology itself can be similar in the studying of these two phenomena, but there is one significant difference. The social and economic development of the region is measured in comparison with other regions, as a rule through the ranking and averaging procedures. Economic security is measured by similar methods, but there shall be threshold values, exceeding which is considered to be critical for regional development. The method for determining these threshold values shall also be developed. At the moment, the National Institute for Strategic Studies is dealing with the issues of economic security in Ukraine. The development of an effective system of indicators of economic security is a complex theoretical and methodological problem [18].

Indicators and values of economic security are the parameters that give a general idea of the state of economic system. It is considered that this system of indicators is not the only one for all regional social and economic systems and, in addition to the established significant parameters, it shall assess the characteristic properties of regional economies and those areas in which there is a possibility of threats occurrence. The growth of disproportions in social and economic

development of different regions contributes to appearance and further strengthening of negative processes in the economic complex which affect the stability of the economy functioning and the sovereignty of the state.

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**SECTION IV.**

**STRATEGIES FOR DEVELOPMENT  
OF EURO-REGIONAL COOPERATION IN THE  
CONDITIONS OF INTEGRATION OF UKRAINE  
TO THE EUROPEAN UNION**

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**STRATEGIC PRIORITIES FOR THE SUSTAINABLE  
DEVELOPMENT OF THE SEA COASTAL ZONES'  
OBJECTS OF UKRAINE IN CONDITIONS  
OF REGIONAL EUROPEAN INTEGRATION**

**Introduction**

The importance of the research on ecologization of the objects of functioning at the port industrial zones of Ukraine is due to the low level of environmentalization of economic activity almost in all spheres of production, the growing degradation of natural resource potential, the aggravation of the environmental situation almost in all regions of Ukraine and the need to identify strategic development priorities in the context of regional Euro integration.

Today, many regions of Ukraine have become the area of environmental disaster. This fully applies to the coastal zone of the Black and Azov Seas, especially in the areas of large ports. The rate of environmental degradation in the coastal regions and at the individual parts of the coastal zone has reached scale that it can go beyond the boundaries of ecosystem sustainability. There are a significant number of emergencies annually because of the natural and man-made reasons [1, c.6]. This situation gives grounds to talk about the need of development proposals for defining the priorities for environmentalization of the investment sphere of sea coastal zone objects which functioning in marine port-industrial zones of Ukraine.

The peculiarity of the definition of ecological problems development for the port-industrial zones of the region is due, first of all, to the reformation of the maritime complex of Ukraine, the need for the active use modern forms of investment in the development of the port infrastructure. The seaport and industrial infrastructure into the port-industrial zones are a complex subsystem, which is in close relation with the economic, social and ecological sub-systems of the region and develops under the influence of external environment (globalization and ecologization of the economy, processes of integration, etc.) and internal environment (institutional environment of the region, level of competitiveness of the region, etc.). That's why the assessment of the competitiveness and efficiency of the operation the objects of the port industrial zones requires the definition not only its functional characteristics, but also its role in ensuring the ecological quality of transport and reloading operations of the objects of the port industrial zones and innovation-investment growth of the region. There is one common approach to the definition of the term of the nature of port-industrial zones in nowadays. We think that this term should be considered in two aspects. Firstly, *port-industrial zones* – is a form of territorial organization of the sea and adjacent coastal areas, interconnected and interdependent union of sea ports, industrial enterprises, seaside settlements, social and industrial infrastructure, which located in the coastal zone because of exploitation of land and sea resources, environmental, social -economic and foreign economic functions. Secondly, *port-industrial zones* are cluster associations of seaside settlements, adjacent port facilities and industrial infrastructure that operate within individual territories.

In modern conditions in Ukraine a special place should take the policy of approving it as an economically independent (sovereign) naval state. It is neces-

sary to clearly understand that, firstly, the role of the sea factor for Ukraine will increase every year, and in the future it will play a fateful meaning; secondly, the establishment of Ukraine as a naval state is primarily connected with the development of port-industrial zones. We consider that it is necessary to highlight that the state interests of Ukraine in the sustainable development of port industrial zones are determined by the geoeconomic and geostrategic significance of transport use and using of the resource potential of the Black and Azov Seas and other parts of the World Ocean. The maritime state interests of Ukraine in general means a combination of economic, political, environmental and other interests of the state. In this monograph was considered only some of the most relevant and problematic aspects of environmental interests in the context of ecologization of innovation-investment management systems for objects functioning in the port industrial zones of Ukraine.

## **1. The research of infrastructure and factors of investment growth of objects of the port industrial zones of the Ukrainian Black Sea region**

For this year Ukraine grew from 85th to 81st position in the Global Competitiveness Index (GCI), which is published annually by the World Economic Forum (WEF). The Global Competitiveness Index of the WEF includes 12 indicators of competitiveness and has been produced annually since 1979 on the basis of open information, and also taking into account the opinions of several thousands of experts from more than 100 countries around the world. One of the key criteria of the rating is the assessment of the competitiveness of the transport infrastructure.

The quality of Ukraine's port infrastructure is growing for the second year in a row, and the infrastructure of rail transport is decreasing. As for highways, we are among the top ten worst in the world, according to the Global Competitiveness Index published by the World Economic Forum. In terms of infrastructure quality, Ukraine has worsened its position by three points and has fallen from the 75th place to the 78th, with a score of 3.9 on a seven-point scale. As for the transport infrastructure in general, our country's position improved for this year – from 91st to 87th place with a rating of 3.2. By this indicator, Ukraine still loses Bulgaria (81th place, 3.3 points), Georgia (74th place, 3.5 points), Poland (59th place, 3.9 points), Russia (37 4.5 points) and Turkey (23rd, 5.0 points), but ahead of Romania (102th place; 3.0 points) and Moldova (111th place,

2.7 points). According to the report, the quality of Ukraine's port infrastructure is on the 93rd place, improving its rating by 0.1 points (up to 3.3) per year and rising to three positions in the list. The growth of the indicators by ports lasts for the third year in a row, but it is still low. For comparison, Russia is 66th in the ranking (4.2 points), Poland – 64th (4.2).

The quality of Ukrainian railways continues to decline. If in 2014 its rating was 4.31, in 2015 – 4.2, in 2016-4.0, then now – 3.9. If compared this rates with last year we can conclude that our country has fallen to three positions, and now occupies 37th place. For comparison, Kazakhstan is 32th (4.1 points), Latvia – 29th (4.2), Russia – 23rd (4.5), Azerbaijan – 20th (4th, 7). Lines below Ukraine occupy Georgia – 39th place (3.8) and Poland – 45th (3.6). The highest rates in the railway sector in Switzerland (6.6 points), Japan (6.6) and Hong Kong (6.3). The top ten also included Singapore, France, the Netherlands, South Korea, Finland, Germany and the United States [2].

It should be noted that the country is included to the indicative maps of the European transport network TEN-T as a positive aspect of Ukraine's development. It is a great success and a big challenge. It means that Ukraine's transport infrastructure as soon as possible should become the one together with the EU infrastructure and develop in a harmonious combination. The speed, quality, safety of multimodal transportation should be provided according to the European standards. For investors and international partners it is a powerful signal that Ukraine's infrastructure is developing, has a European future, and it is possible and necessary to invest in it. The Trans-European Transport Network (TEN-T) project provides the creation of a new transport system in the territory of the EU by 2030, which will combine 94 sea and river ports, 38 international airports and about 15 thousand kilometers of high-speed railroads. The project provides the development of nine transport corridors of the Baltic – Adriatic, the North Sea – the Baltic, the Mediterranean corridor, the Middle Eastern Corridor, Scandinavia – the Mediterranean Sea, the Rhine – Alpes, the Atlantic Corridor, the North Sea – the Mediterranean Sea and the Rhine – the Danube. The decision to distribute TEN-T to neighboring EU countries, including Ukraine, was adopted in Rotterdam on June 21, 2016.

The Mediterranean corridor (from the Iberian Peninsula to the Hungarian-Ukrainian border) and the Rhine-Danube Corridor (via the waterways of Main and the Danube, with a branch from Munich to Prague, Zhilina, Kosice to the Ukrainian border) pass through the territory of Ukraine. It should be noted

the stable volume of processing of domestic ports. Thus, for 9 months of 2017, domestic seaports processed more than 98 million tons of cargo, which is by 1.3% more than the previous period. The cargo turnover of Ukrainian seaports in January-September 2017, according to operational data of the State Enterprise "Administration of Seaports of Ukraine", grew by 1.3% compared to the same period last year. In total, 98,005 million tons were processed through ports. Growth of traffic during the reporting period amounted 1,3 million tons.

Marine activities of Ukraine are based on a wide infrastructure system of sea ports. This system includes 19 seaports, which functioning in a complex with 12 river and fishing ports. We think it necessary to highlighted that the infrastructure of the sea-economic complex of Ukraine include 100 shipping companies serving the entire freight traffic in the land-sea-land system, 9 ship-building and 6 ship repair factories, 18 enterprises of marine engineering and instrument making, 30 research and project-constructing institutes. It should be noted that the current trends in the development of objects of the port industrial zones are controversial. Thus, according to the Administration of Sea Ports of Ukraine (ASPU) [3] for three quarters in a row Ukrainian ports are increasing indicators of cargo. So, the growth by the results of the first quarter of 2017 amounted to 2.5%, in the first half of the year – 5%. According to the management of the Administration of Sea Ports of Ukraine peak periods of load ports in general have been successful. Growth trends are expected to continue to increase. The Administration of Sea Ports of Ukraine on the beginning of the year presented a program of priority actions for the current year and perspective projects for the development of the port infrastructure. It is needed for the country's seaports could meet the needs of shippers in qualitative and timely aspects. During the reporting period it was provided dredging of channels and the water area of the port of Odessa, ports "Pivdennyi", "Olvia", "Chornomorsk" and Mykolaiv. The reconstruction of the dock in Odessa port was started. The completing of the program will allow increase the capacity of Ukrainian ports, which will affect the further growth of cargo handling rates.

State port operators included into the infrastructure of the Ministry of Infrastructure compared to the same period last year reduced turnover by 5.7% to 24.917 million tons in January-September 2017. Their share in total transshipment decreased to 25.4% against 31.1% a year earlier. The share of private port operators continues to grow. Today they process 74.5% of the total freight traffic passing through Ukrainian ports. The share of private companies operat-



ing at their own berths is growing up to 35.1% in 2017, against 29.1% in 2016. Operators of private ownership for 9 months of 2017 processed in total 73.065 million tons of cargo, including 34.406 million tons at own docks. Growth of traffic flows in all directions. The exception was only cabotage traffic, which decreased by 71%, to 1,148 million tons. The main reason is the reorientation of cargo flows of ore to the railway after the restoration of the area called "Kamish-Zorya – Volnovaha" [4].

The largest growths of indicators are notice in the structure of import – by 17.3%, to 13.929 million tons. As before, the volume of coal that comes from abroad is increasing in imports. This is a perspective and strategic direction because it is connected with ensuring the energy independence of the country. The transit of coal amounted to 3.796 million tons, which is 42.3% more than in the same period last year. The port "Pivdennyi" processed 3.257 million tons (+ 37.7%) of coal. The import of petroleum products showed essential positive dynamics. In particular, its volume amounted to 575 thousand tons. It is 29,1% more than in 2016. Transshipment of the export cargoes was increased by 2.3%, to 74.387 million tons. In absolute numbers the growth was almost 1.7 million tons. In the export structure the largest volume was traditionally transshipped of grain (29,018 million tons, + 11,2%) and ore cargoes (15,546 million tons, -10,4%), products of the mining and metallurgical complex (10,110 million tons, -19,1%) and vegetable oils (4,010 million tons, + 35,1%) retain their positions [5].

Transshipment of transit cargo increased a little by 4.2%, to 8.541 million tons. The basis of the transit are: coal (3.244 million tons, + 112.3%), chemical goods (1.929 million tons, -29.3%) and ore (798 thousand tons, -31.6%). Transshipment growth was noted for almost all types of cargo. The aggregate volume of processing of bulk cargoes increased by 3.8% and amounted 8,233 million tons. The largest share of cargo flow was on vegetable oil – 4.239 million tons (+ 32%), chemical goods – 1.878 million tons (-29%), petroleum products – 1,315 million tons (-21,9%), oil – 754,1 thousand t. (growth almost 2.5 times) [4].

The total volume of processing of dry cargo reached 71,085 million tons, which is by 5,1% higher than last year's indicators for the same period. 73.2% of the volume of all dry cargo falls on the handling of grain and ore. Thus, grain cargoes were processed 30.726 million tons (+ 12.1%), ore – 21.279 million tons (-18.3%). Transshipment of coal was increased by 67.6%, to 7.253 million tons; the volume of handling of construction cargoes increased by 42.4%,

to 4.179 million tons. The flow of tare- artificial goods is reduced. It decreased by 11.5%, to 18.686 million tons. The basis of tare-artificial cargoes is ferrous metals, which accounts for more than half of the total volume – 56.4%. In total ferrous metals in ports exceeded 10.540 million tons (-18.4%). Unfortunately, today because of the gamin situation of the market, metallurgical goods, as chemical ones too, do not show positive dynamics. In the segment of tare-artificial cargoes increase the volume of handling of food cargoes (201.3 thousand tons, + 152.9%), heavy trucks (905.8 thousand tons, + 7.8%), cars and agricultural machinery (39.6 thousand tons, +53.3)

The largest development in the marine coastal zone of the Ukrainian Black Sea region, in particular Odessa region, has recently gained the enterprises of the oil and fat industry. Vegetable oil processing is one of the few areas of port transshipment in Ukraine, which shows rapid growth in recent years, despite the crisis. From 2008 till 2016 this transshipment in seaports has increased in 3 times – from 1562, 1 thousand tons to 4709, 9 thousand tons (in these volumes the export amounted to 93%). In 2017 is forecasting increasing transshipment of vegetable oil and fats and expect it will reach 5500 thousand tons.

Of particular importance for the entire foreign trade of the country is the growth of exports of sunflower oil mostly through seaports. According to the State Fiscal Service of Ukraine, in 2016 more than 4.8 million tons of this oil was dispatched abroad for a total amount of \$ 3.7 billion, representing more than 10% of the total volume of Ukrainian exports. The basic preconditions for such successes were laid in 1998, when it was possible to enter an export duty on sunflower seeds. This created the conditions for the transition from the export of raw materials – sunflower – for the production of food and feed. After this step of the government were created 35 new oil enterprises Ukraine and the country was the world's leading exporter of sunflower oil according to the «UkrOliyaProm» Association.

A number of such large industries were created in the immediate vicinity of the country's maritime ports. For example, in 2008 in the seaport "Chornomorsk" was built «Ilyichevsk oil-and-vegetable plant». In 2013, near the port "Pivdenny" was created a plant for processing oilseeds company Delta Wilmar CIS. In June 2016, the opening ceremony of the Bunge-Ukraine production and handling complex, part of the transnational corporation Bunge, was held in the Nikolayev Sea Port. The complex consists of an oil-extraction plant, a terminal for handling vegetable oil and a grain terminal. And in July 2016, the largest oil

extraction plant in Ukraine «Allseeds» was opened near the port "Pivdennyi". Dispatch of oil is carried out from the terminal of the group "TIS" [5,6].

The first condition for the growth of oil exports is an increase of the oil-seeds production. In 2016, according to APK-Inform, the production of the main types of oilseeds in Ukraine at the primary-earning weight was more than 19 million tons. At the same time, 13.6 million tons of sunflower seeds and 4.28 million tons of soybeans were harvested, rape – 1.1 million tons. The increase of the harvest provided a record production of sunflower, which exceeded the previous year by 22%. The main tasks of the industry, according to the definition of specialists, in the coming years are in the expansion of the raw material base, assortment and depth of processing of products, markets. For example, Ukraine produces only 600 thousand tons of refined sunflower oil, which is about 10% of the total volume of oil. By this indicator, the country is in fourth place in the world (the first place – in Turkey). Ukrainian producers should focus more on this segment of the market despite such efforts lead to additional costs. Opportunities for the export of domestic oil-fat products today are related to the needs of China and India. These countries have become the main importers of Ukrainian sunflower oil in recent years (purchasing respectively 30% and 14% of the volumes of export of this product from Ukraine). The main buyers of oil beside India and China are such EU countries as Spain, Holland, Italy – according to APK-Inform. The supply of Ukrainian oil to Africa, Iran and Iraq is growing.

Among the most significant conflict and crisis problems that restrain the sustainable innovation-investment development of marine coastal zones can be highlighted: the imbalance of the activity of structural elements (objects) of the port-industrial zones is due to the lack of a programmatic-targeted approach to the development of ports, naval fleets, objects of the port industry and recreation and other elements of the port-industrial zones; low efficiency of innovative-investment plans and programs implementation for the development of objects of port-industrial zones. It is conditioned by imperfection of administrative decisions concerning their realization, especially in crisis conditions; low efficiency of financial, economic, commercial and operational activities, as well as activities related to ensuring ecological, technogenic and new types of safety of development of port industrial zones. It is conditioned by the imperfection of legislative provision and organization of management of the sea of economic activity.

The current dynamic situation is due to a significant upgrade of science and scientific directions in the system of interaction between economy, society

and nature. In this research through the prism of scientific approaches to the economic-ecological safety of the sea industry was determined the author's vision of the systematization of existing economic and environmental imbalances in the development of the port industrial zones of Ukraine and on the basis of implementation into the domestic legislation of international experience have been proposed recommendations on improving the environmental management system ' objects of operation of port-industrial zones.

## **2. Institutional imbalance of the management process of environmental innovation-investment system for the functioning of objects of sea zones**

The causal and consequential basis of the problem of the need to improve the environmental management system of the port industrial zones of Ukraine is:

- intensive anthropogenic change in the natural and resource potential of territories and marine waters because of not always environmentally reasonable location of industrial, transport, communal and other objects, including dangerous for the population and the environment;

- extensive (inefficient) use of natural resources (intensive production) due to the low level of technological development;

- consumerizing attitude to natural resources and ecological systems, domination of departmental and current interests before long-term;

- the saturation of the coastal areas of Ukraine, especially in certain regions, with environmentally dangerous objects;

- ongoing practice of evaluating investment projects and making decisions on location of dangerous economic systems and objects without a comprehensive assessment its impact to environmental and taking into account factors and predictions of natural and man-made risks;

- incompleting of the legal basis of marine nature management both in terms of content and structure (including the not clear duties, powers and responsibilities of power structures of different levels of the hierarchy and individuals for making decisions on the location and operation of dangerous objects, measures for responding to situations related to the resource-ecological danger);

- imperfection of the system of state ecological regulation, including economic instruments of marine nature management and nature protection activities, mechanisms for preventing and reducing the amount of damage, stimulating the reduction of environmental pollution and specific indicators of resource

consumption, mechanisms of environmental insurance, financing of environmentally-oriented investment projects;

– imperfection of the organization of the rapid response in the case of emergency resource-environmental situations of natural and man-made nature.

This condition is stipulated by the negative trends of the systemic nature at the state level regarding the reform of the maritime industry in general, including it's about:

1) unsolved issues of port complexes ownership and coastal objects of the port industry. The dominance of state property because of the lack of investments does not allow effectively updating the navigable parks of ports and carrying out infrastructure works. The maritime industry needs the reorganization of the ownership system and the transfer of part of the infrastructural port facilities to private investors;

2) preserving the problems of technological lag in provision of basic port operations, because of outdated port complexes, inconsistency of the capacity of the infrastructure of sea ports of Ukraine to international standards;

3) maintenance of high tariff rates for container transportation services at sea ports of Ukraine;

4) unresolved issues of economic- environmental security. In particular, there are not enough port facilities for the storage and processing of environmentally dangerous goods in the port infrastructure system;

5) preservation of low ecological quality of the internal transport network, limited speed of transit traffic [7, c.29-30].

On the basis of analysis of the existing practice domestic coastal zones functioning we can highlight that there is a diversification of port services that extend beyond the port itself (its internal and external water area) and cover a large number of coastal and other economic operations of the transport chain. These factors, on the one hand, become a cause of the participants of the transport process unification for getting a greater economic effect from the joint activity, on the other hand, stimulate the introduction of innovations in the organizational and technological process of functioning of the port economy. At the same time, there are a number of factors that negatively affect to the ecological quality of service in the maritime trade ports of Ukraine, among them are particularly important following structural imbalances:

1) The absence of a single integrated environmental program for the development of the marine industry of Ukraine and its separate components.

In recent years, a number of decisions aimed at developing the maritime industry were adopted: the decision of the National Security and Defense Council on May 16, 2008 "On Measures to Ensure the Development of Ukraine as a Marine State"; Concept of the draft Law of Ukraine "On Maritime Policy of Ukraine"; Maritime Doctrine of Ukraine for the period up to 2035; Comprehensive Program for the Establishment of Ukraine as a Transit State in 2002 – 2010; Seaport Development Strategy for the period up to 2015; Law of Ukraine "On Sea Ports of Ukraine" and others. At the same time, the specified regulatory framework is mainly fragmentary, and various regulatory documents cover only certain aspects of the development of the industry that are not interrelated and do not take into account the ecological characteristics of regional development.

A number of laws have been approved in Ukraine that regulate the strategic priorities of the development of the innovation and investment sector of industrial and transport areas of the coastal zones, in particular public-private partnership. These are the laws of Ukraine "On Public-Private Partnership" and "On the Sea Ports of Ukraine". At the same time, domestic legislation still does not define such new forms of organization of management as a "cluster" in general and an "ecological cluster" in particular, there is no legislative regulation of the types, forms, peculiarities of the creation and operation of clusters. As a positive point, it should be noted that according to the decree of the Cabinet of Ministers of July 11, 2013 "On Approval of the Strategy for the Development of Seaports of Ukraine for the Period up to 2038", the direction of establishing a network of clusters was identified as one of the priorities. The basis for forming state policy in the field of clusterization still not working because of not approved the draft regulatory and legal aspects. In particular, there is a project "Concept of Creation of Clusters in Ukraine", developed by the Ministry of Economy of Ukraine in 2008.

2) The different departmental subordination of enterprises and institutions engaged in activities in the maritime sector leads to inconsistencies in management decisions, the lack of coordination of state environmental and innovation-investment policies on the development of the maritime complex and the optimization of its infrastructure.

State seaports and shipping companies are subordinated to the Ministry of Infrastructure; the fishing complex and the Black Sea fishing port – under the jurisdiction of the Ministry of Agrarian Policy and Food; Educational institutions that train specialists in the maritime industry are subject to the Ministry of

Education and Science. The question of the formation of environmental policy is the prerogative of the Ministry of Ecology and Natural Resources.

3) Lack of system ecological informational and methodological support of economic entities, whose activities are related to the regional seaside complex, lack of training of specialists of high qualification in environmental specialties;

It should be noted that specialized universities do not train specialists in the field of "Environmental Logistics", "Environmental Innovation and Investment Management". Specialists get the necessary knowledge at non-specialized higher educational establishments and at trainings, which significantly reduces their level of professional training.

4) Low level of investment in ecological innovations in the sea of the country's economic complex, inadequate level of interaction of the sea of the economic complex with educational and scientific institutions, depreciation of the main production assets, outdated technologies used in transportation and handling of goods, determine the low ecological quality of transport and overload services.

In the marine industry, innovations are primarily related to the restructuring and reorganization of the sector management system according to the Law of Ukraine "On Sea Ports of Ukraine", which came into force in June 2013 and with the implementation of large investment projects for the development of the infrastructure of seaports. With the adoption of this Law, it was created legal conditions for the modernization of the management system of the maritime industry, separation of state and economic functions in ports, delegation of functions of state property management, which would not be included in the statutory funds of joint-stock companies created in the process of privatization to local executive authorities. On this organizational and legal basis it will be forming Ukrainian ports as modern business entities that can compete with ports of neighboring countries: Turkey, Romania, and Russia. Competitiveness of port industrial zones is conditioned by the characteristics of the loading complex, the quality and specialization of cargoes.

Let's look at the directions on which the maritime industry should develop. According to Article 7 of the Law of Ukraine "On Sea Ports of Ukraine," the basis for planning the development of the port industry is the Strategy for the Development of Seaports of Ukraine for 25 years, which includes short-term (for five years), medium-term (for 10 years) and long-term (for 25 years) development plans. The basis of the Strategy for the development of seaports

of Ukraine for 25 years is the plans for the development of seaports and maritime terminals, forecasts of cargo flows, tasks, main directions and sources of financing for the Strategy implementation, and other basic parameters of development. The strategy of development of seaports of Ukraine for 25 years should be based on the basic principles of the state policy in the field of transport and take into account plans of development of other transport sectors of Ukraine.

According to the decree of the Cabinet of Ministers of July 11, 2013 "On Approval of the Strategy for the Development of Seaports of Ukraine for the Period until 2038" [8] special attention is paid to the development of a methodical basis for the operation of the port infrastructure facilities in accordance with the above-mentioned Strategy. The purpose of this Strategy is:

- ensuring integrated development and increasing the competitiveness of the port industry;
- ensuring proper maintenance, efficient management and use of strategic objects of port infrastructure;
- long-term involvement of private investment for the development of port infrastructure;
- creating of the cluster network;
- ensuring the safety of navigation, life and health of people and seaport economic activities, the safe operation of objects of port infrastructure;
- creation of conditions for conducting business in the seaport, equal access to services provided at the seaport;
- ensuring supervision (control) of safety at sea;
- provision of logistical and technological development of the port industry and training of personnel;
- revention of environmental pollution, compliance with the requirements for the use and protection of water objects within the territory and seaport water area;
- ensuring environmental safety in accordance with international standards.

The main objectives of the Strategy are:

- Increasing the competitiveness of the port industry by improving the efficiency, quality and speed of cargo handling;
- modernization and development of objects of the port infrastructure of general use, in particular automobile and railway access roads;



- ensuring effective state regulation of specialized services provided at the seaport by natural monopolies and services whose fee is included in the port dues;
- improvement of the system of document circulation, simplification of permitting procedures, reduction of the processing time of goods;
- creation of conditions for the development of fair competition between domestic seaports;
- ensuring equal and competitive conditions for conducting business and receiving services at the seaport;
- providing technological development of the port industry and training specialists in the port industry through:
  - implementation of modern technologies of loading and unloading works;
  - improvement of the training base for specialists study in the port industry;
  - creating of the cluster network by defining a list of seaports and cluster types;
  - expanding the list of services provided in seaports;
  - attracting private investments for the development of seaports, the transfer of port enterprises and parts of the port infrastructure, in particular, to concession;
  - active participation in international organizations in order to create conditions for the cross-border transportation of goods;
  - bringing the standards of sea ports into line with European ones;
  - interaction with seaports of the Black Sea countries (development and implementation of programs for attracting cargo flows, etc.);
  - creation of favorable conditions for attracting private investments for development of port infrastructure objects;
  - provision of state guarantees and protection of investors' rights;
  - modernization and upgrading of the port and auxiliary fleet;
  - ensuring the effective functioning of the monitoring system for surface water in the territorial waters of Ukraine, optimizing the regulation of the movement of ships, efficient and timely search and rescue at sea;
  - ensuring the development of a vessel traffic control system;
  - provision of development of the information system of the port community, informatization of technological processes in seaports;
  - improvement of the procedure for registration of cargoes, vehicles and passenger transportation;
  - conclusion of interstate agreements on search and rescue at sea;

- buying and renewal of emergency rescue equipment;
- ensuring the effective functioning and development of systems for technical and information security of navigation;
- development of training programs for marine port workers for the maintenance of new technological complexes;
- raising the level of personnel potential, updating and improving the training and methodological and software and technical base for the training of port industry specialists;
- support of educational institutions for specialists in the port industry;
- increasing the level of labor protection;
- ensuring proper sanitary and living conditions in seaports;
- ensuring the use of social infrastructure objects of the port industry for the intended purpose;
- introduction of EU standards for work with dangerous goods;
- bringing the standards of ecological safety of the operation of seaports in line with international ones.

It should be noted that the infrastructure of Ukraine's seaports must reach a new level of development that will provide a forward-looking development to meet the needs of the economy and society; will provide improvement of the system of ensuring the safety of human life and preventing extraordinary events of anthropogenic nature at sea and in adjacent territories; will be based on modern, safe for human and environment technologies of working; provide equal opportunities for the activity of the transport process of all forms of ownership; will allow more full use of the transit potential of the country; will help accelerate the integration of Ukraine's transport system into world and European transport systems. In its turn, the environmental component of the company's development strategy should set the goals of the innovation activity of the maritime trading ports and determine the means of their achievement and the sources of these funds.

The priority objectives of the environmental component of the development strategy of port-industrial zones, in particular, should be: the creation of marine ecological clusters; improvement of the ecological quality of the transshipment process and port services; the identification of the environmental component of the cost of overloading goods and the provision of port services; improvement of technical level and efficiency of use of main production assets; intensification of loading and unloading by improving the organization and technology of

overload; optimization of energy use by introducing energy-saving technologies and application of non-traditional energy sources; ensuring the safety of navigation in the port water area and in approach to it; increase of efficiency of labor resources use; provision of environmental safety of the reloading process.

These problems require the search for new forms of integration of financial, industrial and intellectual capital in order to create significant environmental and competitive advantages of the functioning of the sea of the economic complex of Ukraine. World practice shows that clusters, which provide informal voluntary association of enterprises and organizations, have great potential for increasing the competitiveness of domestic business entities both on the domestic and foreign markets.

In order to ensure sustainable development of maritime activities in general and port-industrial activities in particular, we are proposing the construction within the boundaries of Ukraine of marine ecological clusters. Generalized world experience, we note that the following definition meets the most modern requirements of the economy: the marine ecological cluster is a territorially-sectoral voluntary informal association (association) of enterprises and organizations of port activity and adjacent seas of economic sectors that, when implementing the ecological regional strategy of the seagoing complex closely cooperate with scientific, educational, financial, consulting and other economic structures, local authorities with the aim Increasing the level of ecological quality of economic activity and competitiveness of all participants of the association and economic growth of the coastal region.

From our point of view, the ecological marine clusters proposed to be built in Ukraine should include environmental infrastructural objects of the port industry; Mining Complex; dredging; development of marine hydrocarbon resources; marine recreational activities; dumping of waste and dredging waste; financial and scientific- educational institutions which activity is aimed to ecologization of activities in port-industrial zones.

## **Conclusion**

The coastal zone of Ukraine has unique and rich natural resource potential, a high level of development and diversification of productive forces, a powerful marine infrastructure, which plays a huge socio-economic, geopolitical and defense importance. It should be considered within the framework of a specially

established status as a national heritage, as the object of integrated management of sustainable development.

The formation of an integrated management system for sustainable development of port industrial zones in Ukraine should be organically connected: with the structural reorganization of Ukraine directed at increasing the socio-economic, economic-ecological efficiency of the use of priority natural resources of the coastal zones for Ukraine; reforming the system of public administration and local municipality on the basis of efforts integration of state and regional authorities, entrepreneurs, public organizations and the population.

Among the most important problems in the formation of an efficient system of economic sphere ecologization of the port industrial zones should include: a scientifically grounded organization of relations between territorial and sectoral subjects of nature management which operating within the port industrial zones; the formation of a special regulatory framework for economic activity in the coastal zone of the Black and Azov Seas, based on the new legislative acts of Ukraine, the development of which should be carried out in a relatively short time.

Development and realization of the main directions of the national maritime policy formation taking into account the priority of creating the integrated management system of the Ukrainian sector of the coastal zone of the Black and Azov Seas and will promote the approval of Ukraine as a maritime state, strengthening its state independence, strengthening its international authority.

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## **STRATEGIES OF INSURANCE BUSINESS MANAGEMENT OF UKRAINE'S INTEGRATION INTO THE EUROPEAN UNION**

### **Introduction**

The insurance market of Ukraine is an important link in the financial system, but in the current situation the level of its development does not meet the needs of the national economy in general and the expectations of individual consumers of insurance services. The main problems hindering the development of the insurance market in Ukraine are low incomes, low level of insurance culture, lower level of insurance payments by companies, failure of certain insurers to fulfill their obligations, impossibility of returning of insurance reserves deposited on deposit accounts of banking institutions in conditions of their mass withdrawal from the market.

Therefore, strategic management of the insurance business involves finding ways to increase its efficiency and strengthen the competitive position of the insurance company. The strengthening of integration processes in the world and the presence on the domestic insurance market of subsidiaries of foreign financial groups makes it necessary to take into account the foreign experience of strategic management of insurance business. The financial strategies of leading insurance groups cover a wide range of activities (insurance, asset management, banking) and are aimed primarily at capturing profitable strategic financial positions [1].

In the conditions of the signing by Ukraine of the Association Agreement with the EU, the study of European experience in regulating the insurance market is relevant. Eurointegration does not expand only international cooperation, but also provides an opportunity to create a system of international financial se-

curity, to activate the creation of a full-fledged insurance market as an important attribute of a market economy.

The attraction of foreign capital to the insurance market promotes its dynamic development, improvement of management, development of modern technologies, development of new types of insurance services and products. Ensuring a stable functioning of the insurance market is possible under conditions of further strengthening and improvement of financial potential, liquidity, solvency and competitiveness on the basis of sustainable development of insurers.

Issues of the development of insurance markets in the world are at the center of attention of foreign scientists, such as D. Brennan, M. Green, C. Klein, P. Kongstvedt, M. Morrisey, L. Norris, R. Pukala. Actual problems of the development of the domestic insurance market are studied by such domestic scientists as L. Alekseenko, P. Balasanov, N. Baldich, V. Vygovska, N. Vnukova, A. Voronkova, O. Gamankova, I. Horyslavska, A. Dytiar, N. Dobosh, O. Zhuravka, D. Zagorsk, O. Zaletov, G. Ilchenko, Yu. Kapkov, O. Kozmenko, T. Kosov, V. Lagutin, N. Lipovska, M. Movchan, T. Motashko, S. Navrotsky, V. Nechiporenko, S. Onyshko, K. Pavliuk, V. Plisa, L. Rybalchenko, S. Ruban, V. Rudik, T. Sinitsina, N. Suprun, T. Tatarina, K. Tretiak, S. Fedenko, L. Chizh, A. Sholoyko, O. Yazvinska and so on.

Highly appreciating the scientific achievements of the above-mentioned authors, the development of the problems of forming a model of the domestic insurance market and its development, taking into account the conditions of Ukraine's integration into the European Union, should be considered insufficient.

The aim of the study is to improve approaches to the development and implementation of insurance business management strategies based on strengthening its competitiveness.

According to the goal, the following tasks need to be solved like to define strategies of Ukrainian insurance business in the context of global and European trends; to substantiate a new approach to the development of the strategy of insurance business management in accordance with the conditions of Ukraine's integration into the European Union; offer new strategies for managing the insurance business.

## **1. Development of the Ukrainian insurance market and its financial mechanisms**

The insurance market is one of the defining segments of the modern financial market. This is due to the fact that the insurance market is capable not only of forming influence on the protection of economic activities of various economic entities in the financial and economic sphere, but also to protect against the occurrence of various risk-making factors affecting the life of all members of society [2].

Given the risk character of the functioning of any enterprise and the less risky life of each person. There is an urgent need to prevent and compensate for damage caused by natural disasters and accidents. Without its satisfaction, it is impossible to ensure the continuity of the production process of material goods, to maintain an adequate standard of living for people.

In this regard, relations in the society are objective and in their totality form the content of the economic category "insurance protection". The essence of insurance protection is the accumulation and spending of monetary and other resources for the implementation of measures to prevent, overcome or reduce the negative impact of risks and reimbursement of losses associated with them.

The Insurance Institute effectively promotes business development and solving social problems through the mechanism of insurance protection of property interests of legal entities and individuals.

Insurance is an important factor in economic security at the macro and at the micro level, since it provides an opportunity to provide compensation for losses in case of occurrence of negative events defined as insurance cases. In addition, insurance reserves are a powerful investment source, and insurance companies are active subjects of investment activity and financial market.

At the same time, the insurance sector in Ukraine fulfills its socio-economic functions only partially, while insurance companies in the vast majority operate with low efficiency, especially as investors and financial intermediaries [2].

Domestic conditions of the activities of insurers are significantly complicated by the military situation and the political crisis, a significant reduction in economic processes, a surge in social tension, a sharp drop in the hryvnia and a decrease in income of the population. The results of the study indicate deterioration of the situation in the insurance sector as a general indicator of the activities of insurance companies, as well as their financial results.



The insurance market of Ukraine has undergone several stages of development:

Stage 1 (1990 – 1993). This period was characterized by the lack of state regulation of insurance activities and the rapid growth of the number of insurance companies in disorderly legislation, which were engaged in making money on inflation, did not fulfill its obligations to customers in terms of their own funds and thus undermined the trust of citizens in insurance companies.

Stage 2 (1993-1996). It characterized by the adoption in 1993 of the Decree of the Cabinet of Ministers of Ukraine "On Insurance" and the creation of the Committee for Supervision of Insurance Activities [3], which has significantly increased the financial discipline of insurers.

Stage 3 (1996-2001). This phase began in connection with the adoption of the Law of Ukraine "On Insurance" [3], which established a system for monitoring the level of solvency of insurers and the procedure for calculating reserves, strengthening the rules governing insurance supervision, streamlined the types of compulsory insurance.

The 4th stage (2001-2008) was marked by the adoption of the Program for the development of the insurance market of Ukraine for 2001-2004. In 2005, the Law of Ukraine "On Insurance" was amended in order to increase the requirements for the minimum size of the statutory fund of insurers (10 million EUR for insurers for life insurance and 1 million EUR for insurers engaged in insurance other than life insurance. During this phase, the number of insurance companies increased from 328 to 469, or by 43%.

Gross insurance premiums during 2006-2008 increased from 13.8 billion UAH. up to 24.0 billion UAH (in 1,74 times), gross insurance payments were from UAH 2,6 bln. to 7.1 billion UAH (2.71 times), insurance reserves were from 6.0 billion UAH. up to 10.9 billion UAH (1.81 times), total assets were from 24.0 billion UAH. to UAH 41.9 bln. (1.75 times).

Stage 5 (2009-2013) was characterized by a negative impact on the insurance market of the global financial crisis of 2009, which affected the substantial reduction of gross insurance premiums and payments. In 2010-2013, there was a post-crisis recovery of the insurance market with a historical maximum of gross insurance premiums in the amount of 28.7 billion UAH. at the end of the period. During this period, the number of insurance companies decreased to 407, or 13.2%.

Stage 6 (2014 – current time). It has related to the beginning of military aggression, a sharp devaluation of the hryvnia and the signing of the Association Agreement between Ukraine, on the one hand, and the European Union.

The issue is the ratification of the EU Directives [4] on the path to the formation of a common insurance market. At this stage, the tendency continued to reduce the number of insurance companies, which dated on October 1, 2016, there are 323. [5]

State regulation of insurance activity in Ukraine is carried out by state bodies of legislative, executive and judicial power, and institutional and legal regulation – associations of insurers formed in accordance with Article 13 of the Law of Ukraine "On Insurance", which include: League of Insurance Organizations of Ukraine, Motor (Transport) Insurance Bureau of Ukraine, Aviation Insurance Bureau, Marine Insurance Bureau, Nuclear Insurance Pool.

The further development of the insurance market should contribute to [6,7,8]: to protect the interests of the population, business entities and the state from possible social, man-made, financial and other risks; strengthening of trust of insurers, first of all the population, to insurers and insurance intermediaries; development of entrepreneurial activity and stabilization of the economy; attraction of long-term financial resources, which are formed in the field of insurance, for investments in the economy of Ukraine; development of financial services markets (including the stock market); integration of Ukraine's insurance market into international and regional financial services markets.

The economic organizations of the insurance market are insurance and reinsurance companies, mutual insurance companies, insurance agents and brokers, information and analytical structures (rating agencies, independent actuarial centers, etc.).

The need to reduce the costs associated with the conclusion of an insurance contract and its subsequent service, has created a need for organizations engaged in valuation activities at the request of insurance companies and surveyor, emergency commissars, adjuster.

The main task of the formal institutions of the insurance market is to improve the regulatory framework in the direction of bringing to European standards, increase the requirements for financial stability of insurance companies and improve the system for monitoring compliance with them. The informal institution of the insurance market that needs to be eradicated is the use of insurance to optimize the taxation of business entities (circuit insurance) [9, 10, 11].

Investigating institutions that define the framework and the course of specific processes is a necessary condition for the transformation of the economic paradigm. Institutes, however, understand this widely enough because they have historically arisen and evolve in an evolutionary way. The current crisis has shown that national commodity and financial markets, physical capital markets and labor markets have lost the status of sustainability and the dynamics of development trends. It also fully applies to the insurance market of Ukraine, which is the most capitalized among other non-bank financial markets, but not institutionalized [12].

The insurance market is a protective barrier that contributes to the formation of sustainable economic dynamics of the country's development, society, and various sectors of the national economy, which in general raises overall economic security. Each country has its own institutional features, which affect the economic development and construction of commodity and financial markets, including insurance.

In accordance with the Law of Ukraine "On Insurance" insurers are recognized financial institutions that are created in the form of joint stock companies, full partnerships or partnerships with additional liability, as well as received in the prescribed manner a license for the implementation of insurance activities. Insurers are recognized legal entities and able citizens who have entered into insurance contracts with insurers.

Conceptual bases of improvement of the institutional model of the insurance market of Ukraine and financial mechanisms of its development are shown on Figure 1.

Speaking with a relatively independent link, part of macroeconomics, the insurance market in the process of its formation was affected by a wide range of economic, institutional, institutional and other factors. The functioning of an insurance company and its economic ability depend on the chosen strategy and timely financial management.

This requires the use of flexible mathematical tools and information technologies that mediate the achievement of strategic financial goals. However, as evidenced by the achievements of modern economic theory, in the study of financial phenomena and processes, it is necessary to consider not only objective but also subjective factors. Therefore, the adaptation to the theory and practice of the insurance business of the theory of behavioral finance, whose content is the study of the influence of psychological factors on the financial relations of economic actors, deserves attention.

The activity of an insurance company as an economic entity in a market environment is characterized by considerable specificity, because insurers take part in both insurance and financial and investment activities [13].

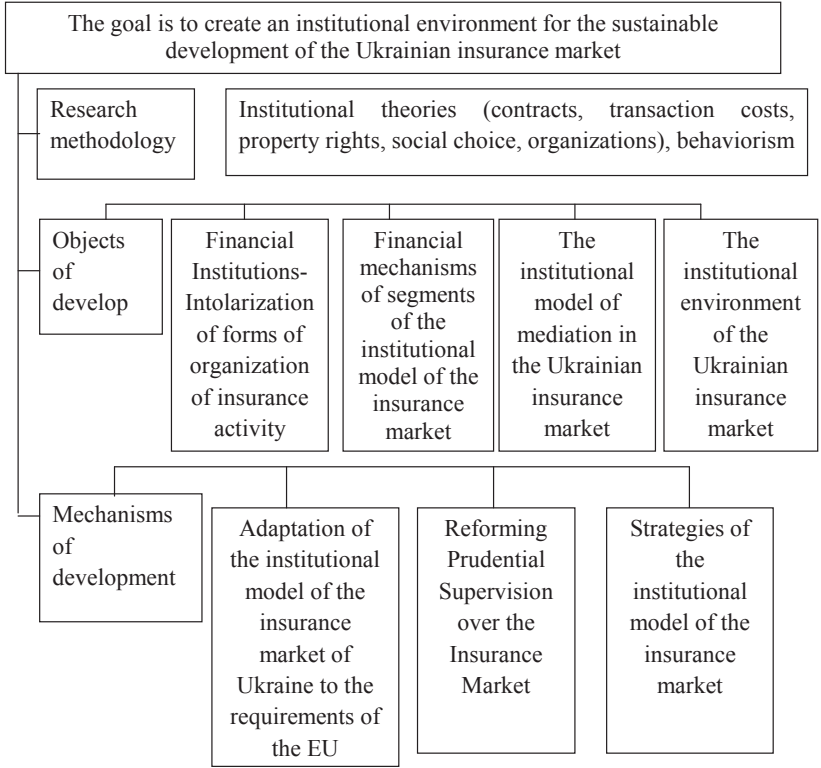


Figure 1. Conceptual bases of improvement of financial mechanisms of institutional development of the insurance market of Ukraine  
 Source: own development

The purpose of these conceptual foundations is to create an institutional environment for the sustainable development of the Ukrainian insurance market [14]. The methodology of the research is based on institutional theories (contracts, transaction costs, property rights, social choice, organizations), behaviorism.

## **2. Development of the insurance business management strategy and its adaptation to the requirements of the European Union**

The Euro-Atlantic foreign policy vector of our country determines the conceptual framework for the development of the national economy of the national economy in general, the financial market and its insurance segment.

Eurointegration is an objective process of gradual approximation and interpenetration of close ones in terms of development of countries and the formation of a common political, economic, trade, financial and currency space on this basis.

On the one hand The Association Agreement between Ukraine and, on the other hand the European Union defines a list of insurance and insurance-related services [15]: direct insurance (in particular, joint venture), include life insurance and other insurance; reinsurance and retrocession; insurance mediation, in particular brokerage and agency services; services that are auxiliary to insurance, such as advisory services, actuarial services, risk assessment services and claim settlement services. Therefore, the question of the influence of the decision on Euro-integration on the prospects of the Ukrainian insurance market needs to be discussed.

The Coalition Agreement [15] and the Government Action Program [16] identified prospects for the development of the insurance market related to health insurance, cheaper insurance payments (premiums) under insurance contracts for crops against the risk of death, the creation of a special insurance body and export financing in the form of export – credit agency that will promote the expansion of Ukrainian exporters to foreign markets, bringing the legislation on the regulation of insurance companies in accordance with the EU directives.

Financial services insurance and reinsurance are the generally strong economic sphere sector of the European Communities, which perform the essential macro task is a significant source of investment solving many social problems, thus. [17]

In modern conditions the internationalization of the world economy is increasing every year reinsurance services role as a global redistribution of risk in space and time, there are processes of convergence reinsurance markets around the world and unification of the rules on them.

The domestic insurance market, although it plays a role in Ukraine's financial system, with a number of objective and subjective reasons for today is

underdeveloped. One of the prerequisites for its successful operation is the efficient combination of insurance and reinsurance. Therefore, an in-depth study of their nature will promote the development of relationships between the subjects of the insurance market. Problems of the functioning of the world, European and domestic insurance markets are discussed in the writings of many scientists.

The global financial crisis has shown that insurance companies are not able to adequately assess the risks associated with financial instruments, solvency of counterparties, investments. In turn, this necessitates the development of new rules for international regulation of the insurance market, new methods for overseeing insurance groups, financial conglomerates, assessing their financial sustainability, and the adoption of such rules by all major players in the world insurance market through convergence of national laws of states in this area of activity [18].

The manifestation of the globalization processes in the insurance market is the spread of foreign capital to the national insurance markets [19].

The arrival of foreign investors in the Ukrainian insurance market may have both a negative and a positive effect on the development of national insurers.

The liberalization of trade in insurance services contributed to exit of Ukrainian insurers into foreign markets, but the export of insurance services in Ukraine is significantly inferior to the level of integration of insurance markets in most European countries.

The Association Agreement between Ukraine and the EU provides for the necessary efforts to ensure the implementation of the international standards of regulation and supervision in the field of financial services "Basic Principles of Insurance" IAIS [20]. Taking into account the importance of the international reinsurance market in ensuring the financial stability of the insurance market and the existence of a number of risks inherent in reinsurance, in many countries of the world there are certain requirements for reinsurance, which range from, for example, formal and individual measures of influence (Latvia, Lithuania, Ireland, the Netherlands) to a wide range of intervention tools (Great Britain, Sweden, Canada, USA, Russia, Kazakhstan).

Today in the EU, a discussion is being held on establishing common approaches to regulating the activities of reinsurers market, which, according to the IAIS, would help to strengthen the financial stability of insurance companies, to increase the efficiency of the requirements of supervisory authorities and the ef-

iciency of the reinsurance market, to reduce the costs of market participants and bodies of supervision, improvement of transparency and openness of the market of reinsurance services, reducing the degree of credit risk of insurers.

Among other things, it is proposed to adopt unified procedures, which will then be implemented and implemented by all reinsurance companies registered in the EU member states. The main tasks of IAIS:

- ensuring better supervision of insurance activities both at the country-specific level and internationally, in order to maintain effective, legitimate, reliable and stable insurance markets for assisting and protecting insured persons;
- unification of efforts to develop practical standards for insurance supervision, to be defined by IAIS members and used by them during their activities;
- maintaining relations with other institutions engaged in a similar type of activity;
- providing mutual support in order to preserve the integrity of the markets;
- exchange of important information and experience for the further development of domestic insurance markets.

IAIS activities include development of international principles, standards and insurance management; providing support and studying documents related to insurance supervision; organization of conferences and seminars for insurance supervisors.

The key principles of insurance contain the necessary principles for the effective operation of the insurance supervisory system, in particular:

- should act as the main reference point for supervisors in all jurisdictions;
- may be supplemented depending on the special conditions and features of the insurance markets;
- should assist supervisors in performing their functions in the insurance market.

The supervisors themselves must determine the extent to which they adhere to the principles in their jurisdiction. The supervisors must report their own assessment of the most important of them to the IAIS. For this purpose, the Association has developed a methodology for the principles that determines the full criteria for each principle that can be used to assess its compliance.

Key principles of insurance.

Principle № 1: The supervisor's activities should be organized in such way that they have the opportunity to fulfill their main task – to provide support to efficient, legitimate, reliable and stable insurance markets, to provide assistance

and protection to insured persons. He must always carry out this task in accordance with the key principles of insurance.

Principle № 2: Licensing. Legal entities wishing to engage in insurance activities in the domestic market must obtain a corresponding license. The supervisor should assess the ability of the owners, the competence of directors and top management managers, the strength of the business plan, which may include an approximate financial statement, the master plan and the planned solvency level.

Principle № 3: Changes in management. The supervisor should take into account changes in the management of insurance companies that are residents of that country by setting clear requirements for changes in management. They may be similar or the same to licensing requirements.

Principle № 4: Corporate Governance. Standards should determine the role and responsibilities of the insurance company's board.

Principle № 5: Internal control measures. The supervisor should be able to monitor the internal control of the insurance company's management bodies and to require that control be strengthened if necessary; require the management of the insurance company to provide appropriate reasonable control and quantitative standards for managing investment and liquidity.

Principle № 6: Assets. Standards should be established in accordance with the assets of insurance companies regarding limitation in the amount that may be presented as a financial instrument, property or debtors; requirements for the value of assets included in the financial statements; asset storage; ratio of assets and insurance liabilities; liquidity

Principle № 7: Debt. The supervisor should establish standards for the insurance company at insurance claims and standards for insurance reserves; Amounts of loans to cover claims on insurance premiums that are subject to reinsurance under reinsurance contracts with this reinsurer.

Principle № 8: Capital adequacy and solvency. The capital requirements of insurance companies should relate to the minimum level of capital or deposits that the company must achieve. Capital adequacy requirements should include data on the size, complexity and business risks of an insurance company.

Principle № 9: Derivative and off-balance-sheet transactions. The supervisor should be able to put forward requirements for the use of financial instruments that are not included in the financial statements of an insurance company in terms of using derivatives and off-balance sheet transactions.



Principle № 10: Reinsurance. Insurance companies use reinsurance as a means of enforcing their insurance obligations. The supervisor should be able to assess the level of security and adequacy of reinsurance. Insurance companies must evaluate the financial capabilities of their reinsurers, thus defining the level of interaction with them.

Principle № 11: Market Management. The supervisor must ensure that insurers and insurance intermediaries use the necessary knowledge, skills and honesty in dealing with insured persons.

Principle № 12: Financial Reporting. For supervisors are important to receive the necessary information in order to form a correct idea of the strength of financial transactions carried out by an insurance company resident. This necessary information is contained in the financial and statistical reports that are regularly filled up. These data are backed up by information provided by specific requests from the inspectors of the actuarial oversight body and external auditors.

Principle № 13: On-site inspections. The supervisor should be able: to review affairs of the insurance company, to receive any information from the insurance company, whether this information is mandatory for all insurance companies, or specific for the given insurance company.

Principle № 14: Sanctions. The supervisor should have the right to assist insurance companies in resolving issues relating to the identification of licenses. Legislation should establish a number of powers of the supervisory authority, which may include the right to restrict the business activity of the insurance company, for example, by refusing the insurance company a permit for a new type of activity; the right to terminate the activity of an insurance company if its activities are not financially reliable, the withdrawal of a license or the implementation of preventive measures, if the insurance company violates the law.

Principle № 15: Business Transactions Abroad. Insurance companies tend to expand their field of activity outside their country by opening new branches and representative offices.

Principle № 16: Coordination and interaction. The supervisors maintain interconnection with information on the activities of insurance companies that carry out it in more than one jurisdiction. To exchange the necessary information between supervisors. It is necessary to develop an effective communicative system.

Principle № 17: Confidentiality. All supervisors must comply with official secrecy with regard to the information they receive as a result of supervision.

The supervisor is required to maintain the confidentiality of information that it has received from other supervisors. This information may be disclosed only in cases provided for by law and / or subject to the need to file it in court.

An order of the National Commission, which carries out state regulation in the field of financial services markets, has been approved [20]:

- a plan for the implementation of the provisions of Directive 2002/92 / EU of the European Parliament and the Council dated on 9 December 2002 on insurance mediation;

- a plan for the implementation of the provisions of Directive 2009/103 / EU dated on 16 September 2009 on insurance against civil liability in respect of the use of motor vehicles and the enforcement of obligations to insure against such liability (codified version).

In order to bring Ukrainian legislation in line with the requirements of the above-mentioned EU Directives, the National Commission, which is carrying out state regulation in the field of financial services markets, has developed proposals for amending the Law of Ukraine "On compulsory insurance of civil liability of owners of land vehicles", and registered in Draft Law of Ukraine "On Insurance" of the Verkhovna Rada of Ukraine. No. 1797-1 dated on 06.02.2015 [21].

The project proposes to solve the following problems:

- defining the classification of industries and types of insurance in accordance with the recommendation of the First Council Directive 73/239/EU;

- registration of insurers exclusively in the form of a joint-stock company and the introduction of a new procedure for their registration;

- the creation of an institution of professional reinsurers and the allocation of reinsurance in this regard separately among other types of insurance for which a license is required to be made;

- establishment of the procedure for disclosure by insurers to ensure reliable protection of insured persons and the introduction of prudential supervision over insurance activities;

- establishment of solvency requirements that take into account the quality of the assets of the insurer, its management system and information disclosure;

- determining the conditions of access to activities of non-resident insurers on the territory of Ukraine;

- Granting permission to carry out cross-border insurance in cases established by the legislation of Ukraine;

- the establishment of requirements for the owners of significant participation and the procedure for acquiring substantial participation in the insurer;
- definition of the procedure of regulation of mediation activity in the territory of Ukraine in accordance with the EU legislation;
- definition of the legal status of actuaries, auditors in the field of insurance;
- provision of the possibility of introducing a self-regulation institute for insurers, etc.

Work is underway to prepare for the implementation of Directive 2009/138 / EC of the European Parliament and the Council dated on 25 November 2009 on the taking up and pursuit of the business of insurance and reinsurance (Solvency II). This is a fundamental review of the capital adequacy regime in the field of insurance of the European Union.

The main objective is to create common European capital requirements and risk management standards that will be applied instead of Solvency I. Solvency II covers all insurance and reinsurance companies with gross revenues of the insurer of more than 5 million euros or technical reserves of more than 25 million euros.

Establishing more stringent requirements for capital adequacy and risk management will reduce the insurer's insolvency risks, consumer losses and market destabilization. Solvency II provides an opportunity to improve insurers' solvency requirements by: introducing a system based on accounting of risk factors (risk management); the use of an integrated approach to the formation of insurance reserves and capital requirements; use of internal models of capital management of the insurer; minimize the risk exposure by diversifying them.

One of the tasks of the economic integration of the EU countries is the formation of a single insurance market aimed at ensuring the free promotion of insurance services, capital and insurance brokers, which contributes to the development of competition and increase the efficiency of insurers in the single economic space.

### **3. Adaptation of Solvency II standards for the functioning of the insurance business of Ukraine**

The implementation of the EU Solvency II Directive can impose conditions to the activities of insurers and reinsurers, namely coordinates solvency and their capital adequacy. An analysis of these requirements will allow for participants to build their own model of successful activity in the insurance sector, which will facilitate not only the fulfillment of its obligations to clients, but also the quality management of risks for the insurance company.

By creating an internal model, the insurance company must have appropriate risk management processes, as well as appropriate procedures for managing the model for efficient use and further development. In particular, the adoption of an internal model requires the fulfillment of a number of criteria set out in the EU Directive.

Solvency II reflects not only the financial position of the insurance company and there is a unified program which insurers compliance with the requirements of the insurers about control and among other things, covers issues related to the obtaining of a license to operate, management mechanisms, reporting to the control authorities, the scope informing the public, assessing the risk management system, solvency and creating technical insurance reserves.

The concept of the Solvency II structure is based on the provisions used in the banking sector and developed by the Basel Committee. The New Basel II financial agreement (Basel II) has been adapted to the specifics of the insurance market and it is based on three platforms, under which: base № 1 is regulatory requirements for capital, equipment and assets; base № 2 is qualitative standards which are the part of a wide-ranging supervisory process (qualitative internal risk management analysis); base № 3 is a mandatory informatization of insurance and reinsurance institutions (transparency) in order to strengthen discipline in the market. In Europe, the Solvency II (pillars) implementations in full swing at all three levels such as quantitative, qualitative requirements and market discipline (Table 1).

Table 1. Group of requirements for Solvency II

Financial requirements	Control and supervision	Market discipline
<ul style="list-style-type: none"> <li>- valuation of assets and liabilities;</li> <li>- approach to calculating the cost of capital;</li> <li>- technical reserves;</li> <li>- The Minimum Capital Requirement (MCR);</li> <li>- The Solvency Capital Requirement (SCR);</li> <li>- standard and internal models;</li> <li>- correlation and diversification</li> </ul>	<ul style="list-style-type: none"> <li>- The Supervisory Review Process (SRP);</li> <li>- Own Risk and Solvency Assessment (<i>ORSA</i>);</li> <li>- risk management system;</li> <li>- equity;</li> <li>- additional capital (add-on);</li> <li>- supervision over groups</li> </ul>	<ul style="list-style-type: none"> <li>- transparency;</li> <li>- information is public;</li> <li>- information about the risk management system (external and internal);</li> <li>- information for shareholders;</li> <li>- reputation risks;</li> <li>- the factor of competition</li> </ul>

Source: built according to [23]

Research of the Component I has shown that insurance companies have a compulsory availability of sufficient financial resources. They quantify their own capital, technical reserves and capital requirements in the context of determining the actual and regulatory solvency margin. The insurance company must determine the amount of own funds, which will keep its solvency, depending on exposure to the risk.

The next component of Solvency II is the availability of adequate governance and review of the supervisory process. I mean, it provides for an effective risk management system and promising risk identification through its own risk and solvency assessment, insurance and reinsurance companies about supervision of compliance with the EU Directive and the identification of organizational or financial weaknesses which can increase the risk level for insured persons. Appointment of insurance supervision: risk testing identified by insurance companies; inspection of insurance companies with special, higher risk profiles; increasing the level of harmonization of instruments and methods of oversight between countries; verification of the correctness of the solvency limits calculated on the basis of risks; stress testing, scenario modeling; construction of internal risk assessment models.

Since 2011, a new structure of regulatory and supervisory bodies has entered into force in the European Union, based on two main principles: macroprudential supervision is based on the analysis of macroeconomic indicators in order to maintain the stability of the financial system of the European Union as a whole and reducing systemic risks; microprudential supervision is regulated the activities of financial institutions on an individual basis. The third component of Solvency II includes requirements for reporting and disclosure. The directive requires from insurance companies to increase the amount of public information that use can a wide range of consumers. Besides the additional information which should be disclosed to regulators, investors, financial analysts and other stakeholders. CEIOPS plans to develop a consistent reporting concept throughout the European Union. There is no doubt that this requirement will increase the level of discipline of insurance companies and the level of responsibility to consumers of insurance services.

Solvency II offers a fundamentally new concept for regulating the activities of insurance organizations, based on the principles of prudential supervision and risk accounting that a financial institution encounters in the course of its activities.

The introduction of Solvency II provides an opportunity to improve insurers' solvency requirements by introducing a system based on accounting of risk factors (risk management), the use of an integrated approach to the formation of insurance reserves and capital requirements, use of internal models of capital management of the insurer and minimize the risk exposure by diversifying them.

The change to Solvency II standards is the transition to an economically justified and risk-based supervisory model, with its main objectives: supporting the interests of the insured person and protecting the consumer of insurance services; the development of new standards of work for insurance supervision, based on risk assessment and it is not targeted, like today, exclusively on "quantitative" indicators; expanding the risk area of economic standards and insurance companies introducing to risk management system and risk management; creation of a "single legal field" in the insurance market of the European Economic Community; provision of "transparency" of the main insurance risks; bringing the insurance market in line with new international developments in accordance with international financial reporting standards (IFRS).

## Conclusion

1. In the context of the signing of the Association Agreement between Ukraine and the EU, cooperation in the field of insurance should be based on the following principles: activity of the supervisory authority, licensing, changes in management, corporate governance, internal control measures, assets, arrears, capital adequacy and solvency, derivatives and offsets balancing operations, re-insurance, market management, financial reporting, on-site inspections, sanctions, business operations abroad, coordination and interaction, confidentiality.

2. Ratification of the Risk Management Directive, called Solvency II, will have a mixed impact on the Ukrainian insurance market. The following should be considered as positive. It is minimizing the probability of insolvency among insurance companies, increasing the level of trust for them from insurers and insureds; reducing the cost of insurance products and increasing their attractiveness for consumers; developing competition, ensuring market transparency and improving the quality of insurance services, attracting professional actuaries to risk modeling. Negative consequences are expected the complication of the activity of insurance companies with a low level of capitalization and with limited access to sources of financial resources, reduction of the number of operating insurance companies; lack of attractive financial instruments for investing. However, overcoming these effects is a prerequisite for the construction of a domestic insurance market of a new quality.

3. An analysis of the legal framework of the EU states that the European Community today has developed a standard for regulating the insurance market in the following areas like insurance services, insurance mediation, insurance supervision, consumer protection, liquidation of insurance companies and their solvency. Prudential supervision on the insurance markets of the European Union is carried out at two levels. The first level is macroeconomic which purpose to maintain the stability of the financial system and reduce systemic risks. The second is microeconomic which can regulate the activity of insurance companies on an individual basis.

4. The basis for the further development of the Ukrainian insurance market is the introduction of Solvency II international standards and a change in the solvency model and risk management that goes beyond traditional methods and analysis tools, as the new approach requires that insurance companies focus on more advanced risk analysis and capital assessment methods. The use of inter-

nal models for risk and capital assessment will require insurance companies to use increased analytical resources. The Directive introduces new requirements regarding the type and quality of data, as well as the reporting of management information about the strategy, results, risk and structure of the firm.

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## **THE STRATEGY OF GREEN ENTERPRISE DEVELOPMENT UNDER CONDITIONS OF UKRAINE'S INTEGRATION INTO EUROPEAN UNION**

### **Introduction**

The problem of recycling and utilization of industrial waste, as well as the return of its own products to the enterprise in the event of its service expiration or inapplicability of use under conditions of Ukraine's integration into the EU, is directly related to the problem of introducing EU standards for the ecological economy. This process comprises storage, transportation, recycling and disposal of products. In the conditions of Ukraine's integration into the EU, this has led to the development of a new direction, i.e. green enterprise, which covers green marketing, management, logistics, etc. The works of O.M. Alimov, O.F. Balatskyi, M.I. Bublyk, L.S. Gryniv, O.E. Kuzmin, V.V. Mykytenko, O.I. Maslak, L.G. Melnyk and others are devoted to the problems of sustainable development concept formation and improvement, and the search for effective mechanisms of the ecological economy. The theoretical and methodological foundation for the formation of a balanced relationship between human and nature, which provide the vital needs of both present and future generations of mankind for survival in the environment, has been formed by the founders of the green economy, namely B.V. Burkinskyi, T.P. Galushkina, S. Podolynskyi, M. Rudenko and others.

The objective is to find ways to form a green enterprise, to develop a method of choosing strategies for developing a green economy policy in the context

of implementing the ecological economy foundations. The object of research is green entrepreneurship, which minimizes the amount of economic activity waste in the national economy.

The set tasks are: 1) to study the theoretical foundations of the ecological economy formation by implementing the policy of green economy in the national economy development strategy; 2) to analyze statistical data on the volumes of economic activity waste in the national economy, its status and structure; 3) to develop a method of choosing strategies for the ecological economy development aimed at implementing green enterprise by estimating the waste volumes depending on its category, hazard classes, etc.

## **1. Theoretical forms of environmental economics**

The environmental economics was launched in 1992 in Rio de Janeiro, where a key foundation of the theory of sustainable development for the 21st century was laid. In 2010, the United Nations Economic Commission for Europe (UNECE) approved the Europe 2020 Strategy, which aims at providing and directing the EU economy to address key challenges for the future: sustainable growth, resource conservation improvement, and population ageing reduction. Elements of competitiveness of the European economy have identified innovation and "green" growth. The combination of these elements formed the policy of the "green" economy, which is considered a key link on the way to develop the environmental economics. There are several official definitions of environmental economics in the world that have been formed in the United Nations [5]. According to the United Nations Environmental Program [9], the "green" economy "aims at increasing the welfare of the population, effectively utilizing natural resources and, at the same time, reducing environmental risks".

The "green" economy is a focused state policy and an integral part of the national strategy for sustainable development. It is built on the principles of ecologically safe development within a single ecological and economic space. Best practices in the "green" economy have been a success in the world community. It acquired indications of the innovative model of community development and the "green" growth of government initiatives.

Administration of government, according to its functions [7], is intended to: 1) develop a system of assessment and priority implementation of ecosystem services; 2) creation of "green" jobs, development of a new "green" employment

policy; 3) the formation of market mechanisms that contribute to the growth of the national economy competitiveness and its sustainable development.

According to the authors [6], the policy of "green" economy in Ukraine will allow to improve mechanisms for overcoming the anthropogenic losses, namely to implement the following initiatives: 1) to improve national legislation with the corresponding ecological legislation of the EU; 2) to provide constitutional guarantees of citizens' environmental rights; 3) to create an ecological information network for the relevant environmental protection institutions; 4) the targeted use of environmental protection articles in the state and local budgets; 5) creation of the Ecological Audit Chamber of Ukraine; 6) improvement of the national and state standards of the series ISO 19011 and 14000 and the national regulations of the environmental management and audit system, corresponding to the European EMAS Regulation; 7) environmental insurance in accordance with the policy of the "green" economy; 8) administrative support for environmental entrepreneurship; 9) financing of scientific researches and innovations in the field of "green" economy; 10) introduction of training courses in higher educational establishments on the development of green enterprise and environmentally friendly production, etc.

Technogenic waste is a specific product with specific demand. It separates the market of man-made waste into the market economy sector, which requires a marketing and logistics system of the national level. Logistics theory argues that the market for man-made waste is a system where the waste is a commodity that moves between the producer and the consumer, combining the financial and information flows that serve the process.

Solid waste, industrial emissions, discharges and by-product interactions, as well as innovative ("green") technologies to reuse, reduce, and recycle, etc. (3R – reducing, reusing, recycling) of consumed goods and packaging materials become elements of logistics.

The concept of "green" economy is a component of the environmental economics, environmentally friendly economy development. It meets the principles of state regulation of man-caused losses. The purpose of the ecological economy is to minimize the impact of economic activity on society, nature and the global, national or regional economy.

The goals of the "green" economy in the United Nations Green Economy Initiative [20] program are as follows: new jobs; production combined with lower consumption of natural resources; reduction of emissions, discharges, and waste.

The basis of the "green" economy [1] is: 1) the space is limited and it can not be expanded continuously; 2) resources are limited and meet the growing need; 3) everything is interconnected. This substantiates the application of green entrepreneurship to the problems of state regulation of anthropogenic losses at the level of national economy. The main goal is to form green entrepreneurship in the national economy of each state.

GHG emissions trading is realized through the implementation of emission reduction commitments by developed countries. Similarly, it is possible to establish trade in utilization units between enterprises in the domestic market. The parties will be able to buy the right to pollution in those agents, the technological losses of which are less than the level established for them. Technogenic auctions will be the instrument of utilization units sale. This makes it possible to propose a concept of technogenic reflection, in which some agents (producers) will be able to purposefully influence other agents (utilizers). This will improve the engagement of green businesses.

From the point of view of the organization theory, in addition to the main goal of maximizing profits, each enterprise also faces goals related to further development: renewal of fixed assets, increase of internal investment potential, reduction of energy consumption, etc. That is, there is a need to reduce the internal and external losses of economic activity. It also requires the search for an instrument to regulate technogenic damage. In the world there are examples of recycling logistics introduction to the mechanism of state regulation of man-caused losses. Modern enterprises use waste-free, environmentally friendly production technologies. For example, there are manufacturing enterprises in Silesia (Poland) [16], processing [17] and shopping centers [18] in the UK. In Poland, industrial waste is used by six companies that process waste, and they outsource their management to specialized bodies in the Silesia region [16]. Two companies function with complex wastes, as well as with utility subsidiaries in the province of Silesia. The activities of these waste recycling companies are limited by principles and rules of law that are difficult to coordinate.

The problem of the Ukrainian economy is low competitiveness, inefficient use of the natural resource potential of the national economy. An increased impact of economic activity on nature and population can lead to dangerous manifestations in the production and social tension processes formation throughout the country. The solution to this problem requires reforming state regulation mechanism of production processes on innovative basis, which are the source

of anthropogenic losses, in conjunction with the processes of nature use, which include consumption, reproduction of natural resources and discharge of man-made waste (in particular emissions and discharges) into natural environment. The largest pollutant of air and water basins and the generator of solid waste is production and transport. Therefore, the problems of developing innovative forms and methods of state regulation of technogenic losses throughout the national economy, which would take into account the peculiarities of the formation of man-made waste in each type of economic activity and its recycling into secondary resources flows and processed by-products, become especially acute. It is this innovative approach that can be implemented through logistics and marketing.

The study of modern experience in the regulation of anthropogenic losses from environmental pollution by emissions, discharges and waste leads to formulating this research objectives: formation of marketing principles methodological foundations of anthropogenic losses state regulation in the national economy; economical justification of a "green" national logistics system introduction feasibility in order to minimize man-caused losses while managing the resources and their respective informational and financial flows in the national economy, as well as developing a concept of logistics system at the national level within the framework of a green economy policy.

The problem of technogenic losses state regulation in the national economy needs to be solved, as is researched in works [21-22], in four interrelated directions: 1) consumption of natural resources and their recovery; 2) waste products discharge into environment and its recycling (waste disposal); 3) environment protection from pollution; 4) normative-legal support, standardization and licensing of economic activity, which causes technogenic damage and losses. The main purposes of technogenic losses state regulation in the national economy comprise creating and ensuring appropriate conditions for reducing levels of natural resources consumption, reducing the generated emissions, discharges and waste volume, caused by economic activity, as well as people's quality of living improvement. It defines the main directions of technogenic losses state regulation improvement in the national economy: 1) formation of an investive and innovative environment for the implementation of "green" technologies aimed at reducing the natural resources consumption and man-made waste formation; 2) development and introduction of innovative forms and methods of national economy management in order to reduce the flow of pol-

lutants into the environment; 3) optimization of natural resource management processes with minimization of technogenic losses during the resource flow and its corresponding (informational, financial, etc.) flows management; 4) the formation of a "green" national logistics system, which envisages the improvement of existing subsystems of eco-management, eco-monitoring and eco-auditing.

Green entrepreneurship combines both the state policy and environmental protection. The concept of green enterprise is related to the concept of ecological economy, based on strategies for promoting products with the use of environmental requirements. "Green entrepreneurship" first appeared as part of a wide-ranging corporate strategy [21-22] along with a traditional business system and thus, it requires understanding the processes of state policy, management and regulation.

Green entrepreneurship is also related to industrial ecology issue: some firms can use sustainable development principles, but can not actively promote products on this basis. The reason for this is companies, who have witnessed how the media and environmental groups criticized their work, because of enterprises' harm to the environment.

Green enterprises are forced to increase environmental requirements for the promotion of their products, in particular, life cycle analysis, use of materials and resource flows. Thus, green entrepreneurship affects the construction of a business strategy and public policy. It requires adopting system solutions that create conditions for reducing the impact on the natural environment. However, the management system effectiveness is difficult to quantify if they are not accompanied by performance measures. Thus, having statistical performance indicators, the state can check the impact of entrepreneurship on the environment and encourage them to implement green enterprise.

Government green enterprise measures are also aimed at consumers. For example, European governments require suppliers to make their organization's representatives to be present for management and audit systems (EMAS) certification of their products. Based on the Charter (1992), the following variants of work with the goods are provided in cases: 1) Continue product life due to partial repair; 2) Major repairs; 3) Recycling – creating a new product based on the old; 4) A reusable product that can be used several times; 5) Products can be processed and converted into raw materials for the production of the same product; 6) Dispose of – even if the product uses less raw material or less waste.



The market and non-market environments affect each other. Thus, companies must adopt a comprehensive approach to their markets and non-market strategies. For example, in adopting a "green" marketing policy, firms may face problems such as the gap between consumers' attitudes and actual consumer behavior and their reluctance to pay for environmentally friendly products. This may be partly skepticism of consumers in terms of environmental requirements. Therefore, environmental requirements need to be improved in the legislation so that consumers feel justified in raising prices through the implementation of green technologies. Or vice versa, when consumers can put social pressure on the product to be "green".

Of course, if green products were cheaper than other products, their prices would be less problematic for consumers. The foregoing raises two issues relating to consumers' benefits and costs: firstly, whether consumers consider the "green" product of a company as a motivating factor; and secondly, to what extent the "green product" creates social benefits, but does not impose personal costs.

Managers should ensure that their products are competitive, that is, "greener". However, when competition is not a sufficient factor and all businesses abuse in terms of waste and product quality, and consumers do not care about the environmental friendliness of the product, the state must play its role. The managerial task is to adhere to environmental laws in order to stay away from troubles with regulators and avoid negative reviews in the press.

Consequently, the term "green" indicates to product purity [12], which means the quality of the product. For example, "green" in advertising means no negative impact on society. Green entrepreneurship is a topical issue for researching and building business strategies. The task of "green" start-ups is to protect the environment. Modern marketing has created many problems. The growth of marketing activity has led to rapid economic growth, mass production using advanced technologies, comfortable and luxurious living, the style of fierce competition, the use of harmful to health marketing tactics and methods of attracting customers, exaggeration in advertising, liberalization and globalization of transnational companies' creation, retail trade and distribution of giant TNCs, etc., which created many problems. Shops, specialized stores, shopping malls are filled with useful and unnecessary needed products. All these factors threaten the well-being of people and ecological balance. Particular attention should be paid to giant plants, which became the source of various con-

taminants. The production, consumption and utilization of many products have a negative impact on the environment.

Excessive pollution caused climate change. Nature begins to behave in unnatural ways (in the form of global warming, torrential rains and other natural disasters such as frequent earthquakes and tsunamis, cyclones, epidemics, etc.). Economic growth through production and consumption threatens peaceful life of the human on earth. Green entrepreneurship is an attempt to protect the welfare of consumers and environment by producing, consuming and utilizing an environmentally friendly product.

Thus, green entrepreneurship is a philosophy promoting the production and sale of environmentally-friendly products with environmental protection. Green entrepreneurship includes several types of activities. It encourages producing of clean products in "clean" technologies, energy conservation, environmental protection, minimal use of natural resources, and wider use of natural products.

## **2. Analysis of existing trends in development of green enterprises in the national households**

Scientific literature on environmental production (green entrepreneurship) is based on public and social marketing research. Using social research, we mean that organizations (governments, enterprises and non-profit organizations) need to identify the needs of target markets and satisfy them in such a way as to increase the welfare of society. Social marketing focuses on development and implementation of programs that increase acceptability of social ideas, or practices in target groups [6-7]. Traditionally, economists have focused on individual needs. That is why green entrepreneurship [13] has gained popularity. There are five main reasons why one needs to implement green entrepreneurship strategies: 1) Opportunities and competitive advantages; 2) Social responsibility of the enterprise; 3) State pressure; 4) Competitive pressure; 5) The cost of the goods is substantiated; The new approach in trading environmental goods and services creates a conceptual framework of the green market, green product design, and green logistics. The goals of green enterprise implementation are: 1) Eliminate the concept of waste; 2) Inventing the product concept; 3) Protection of the environment; 4) Removal of modification of the product; 5) Changes in production processes; 6) Changing the packaging; 7) Change of advertising.

The problems of introducing green business are: a) increasing the number of consumers' needs and promoting environmentally friendly products; b) spreading confusion among consumers about the concept of "green" product. Therefore, in order to provide consumer confidence, marketers of "green" products need to pursue a transparent policy and refrain from violating any laws or regulations related to products or business.

In order to expand the market for environmentally friendly products, it is necessary to implement green enterprise strategies able to increase the enterprise productivity. One also needs to implement state-level strategies in order to create a favorable environment for the implementation of green entrepreneurship. These strategies can be implemented as follows:

1. Product differentiation: it is the first effort to use the "green" marketing practices. There is a wide range of markets where eco-efficiency will allow the product to become competitive. After all, a product with poor environmental performance may become a target for new replacements, and as a result, the organization will improve its position on the market.

2. Consumer positioning: an organization can develop environmental products to encourage customers to inform them of the importance of environmental support.

3. Bio-packaging design: this means that bio-packaging needs to be designed in such a way that it influences the buyer's decision making. Therefore, manufacturers need to introduce new standards for packaging products.

4. The strategy of "green" marketing goods: identification of ecological needs of the customer and development of the corresponding product. It includes guarantees that products meet or exceed consumers' expectations. Thus, you can charge a higher price for highlighting eco-products.

5. "Green" Marketing Widespread Strategy: It's very important to welcome customers' support in this strategy. Enterprises need to interact with recycling services, or offer their customers the services of handling processed products.

6. Product life-cycle analysis: the strategy is aimed at ensuring that the product does not cause harm to owners at all stages of life.

The strategy of waste management is popular in the strategies of "green" marketing, especially when it comes to raw materials. In order to get their commitment to the state and society, waste treatment and disposal systems are being improved.

The concept of [3] "waste" covers almost all objects. That is, the owner intends, or is obliged to get rid of produced or consumed things, substances, and materials devoid of consumer properties to their owner. This underscores the benefits and prospects of reversible logistics.

For example, the legislation of the EU states the "waste" in detail. According to the document [10], waste is solid or liquid substances, but it does not include waste water (related to water resources management). The mark of waste in an international document is the result of an economic activity or a human being that is not suitable for the intended purpose, in the place and time where they arise. This allows considering ordinary rubbish and dirt as waste, which is separated from some liquid. The world uses the concept of "waste management", which is aimed at stimulating scientific and technological progress and technological structure. The key characteristics of the structure comprise a set of mechanisms, methods and technologies aimed not at reducing the volume of pollution, but at complete recovery or disposal. The decree determines the level of management of household and industrial waste. It should be noted that industrial waste is more aggressive to the environment, society and the economy.

The main processes of modern waste management are: 1) Ways to streamline production and consumption; 2) Development of products from used materials and processed raw materials; 3) Separate waste collection; 4) Either waste recycling in whole or in part, or waste materials, substances or energy and their use utilization; 5) Disposal, recycling of waste substances or materials during production to obtain new substances or materials for other purposes; 6) Waste placement in specialized areas. The best way to control waste is to prevent it at the production and consumption stage, but the most common is the disposal (dumping) of waste: one distinguishes domestic waste, industrial waste from electrical and electronic equipment, cars that have been decommissioned, hazardous waste and other wastes, including sediment (pollution) sewage, construction waste, medical and veterinary waste.

An example of the application of waste management in green enterprise is the project of technological modernization of the enterprise for the purpose of energy saving and implementation of the system of utilization of organic waste of sugar production at PJSC "Rise-Maksymko" (Yaseniivtsi village, Lviv region). Due to this, the total reduction of CO<sub>2</sub> emissions to 4,740,548 tons took place in the period from January 01, 2008 to December 31, 2012. There is another project to reduce CO<sub>2</sub> emissions in the amount of 434 533 tons from the col-

lection and disposal of methane at the landfill of solid household waste in Lviv. Similarly, it is necessary to create a market for waste, a market for other pollutants, the raw material of which will be waste, and the product will be clean air, water, land, secondary resources, and materials. Thus, summing up the analysis of green business strategies and reducing the technogenic load, one should turn attention to the usual waste (household, municipal, household) connected with human economic activity and is the result of consumption of products already made. However, waste products cause more damage to the environment, society and economy than domestic waste (exponentially), and they are a significant component of anthropogenic losses of enterprises. To implement the strategies of "green" marketing, it is necessary to adjust the interaction of the state and customers (clients) with the enterprises, especially those inducing environmentally polluted zones creation.

### **3. Selection method of environmental economic development strategies for green enterprise implementation**

The consequences of human activity are the loss of non-renewable natural resources, deterioration of the renewable resources condition, hazardous waste accumulation and labor force quality reduction, in particular its loss. The problem of optimizing material, financial and time resources has a marketing component. This requires searching an effective system that will enable full and objective management of resource flows to form a green enterprise. Technogenic load and its impact on the environment and society will be eliminated.

There arises a need to optimize material, financial, human and time resources. Creating green entrepreneurship and implementing a green economy policy will help solve this problem. The task of the system is to manage the flow of resources, so that the technogenic load and its impact on the environment and society are eliminated or reduced to the minimum possible. It is recommended to form such systems in accordance with the composition and structure of the technogenic influence main factors in the national economy. The baseline data to conduct an analysis of the impact of economic activity on the environment were the statistical databases of the State Statistics Service of Ukraine [2], which are presented in tables 3.1-3.3 below.

Let's consider in detail the existing material, resource, information flows and opportunities for managing them within the limits of "green" marketing

strategies. Normal quantitative data on emissions, discharges and waste, and their dynamics do not allow assessing the essence of destructive effects of production, so the structure of environmental payments and investments in environmental activities in 2016, which are listed in Table 1., shall be analyzed. The cost of protection and rational use of natural resources in the areas of environmental expenditure in 2016 indicates a high level of capital investment and current expenses. Information and telecommunications, professional, scientific and technical activities, activities in the field of administrative and auxiliary services, as well as art, sports, entertainment and recreation, do not create such an industrial burden for the environment and society as emissions, discharges and waste.

Table 1. Costs of protection and rational use of natural resources in the areas of environmental expenditures in 2016

Types of expenses	Total	Including		
		Capital Investments		Current costs
		Total	Of these, for major repairs	
Capital investment and current expenses	21925579,9	7959853,9	640783	13965726
Protection of atmospheric air and climate change issue	3153766,4	1915129,7	261531,9	1238636,7
Cleaning of return water	6733710,7	1122149,3	184697,8	5611561,4
Waste management	6200941	783965,4	97802,3	5416975,6
Protection and rehabilitation of soil, underground and surface waters	1324662,6	359925,6	90505,9	964737
Noise and vibrational effects reduction	13159,1	9928,6	1853,8	3230,5
Preservation of biodiversity and habitat	369934,6	11490,9	866,1	358443,7
Radiation Safety	3866567,9	3745055,5	331,4	121512,4
Research works on environmental protection	59108,7	6208	–	52900,7
Other directions of nature protection activity	203728,9	6000,9	3193,8	197728

However, this is not entirely correct, since any type of economic activity related to information and telecommunications can not exist without the production and supply of electricity, mining and processing industries, etc. At the state level, we see that we are dealing with material, resource, information flows, which should be regulated by the state on the basis of modern logistics knowledge. This is one of the principles of the "green" economy.

Thus, Japan established a national logistics system operating on the green entrepreneurship principles and managing the entire society as the one that completely recycles secondary raw materials. Such a logistics system is called the Junkan-Gata Society, which means "an environmentally viable society", as described by Hashimoto in [15]. Its characteristic feature is the management of material flows and information about them. This concept involves not a normal material cycle in the national economy, but material cycles in the socioeconomic system aimed at protecting the cycles that exist in nature and society, and also monitoring the effectiveness of government policy and environmental measures to improve their material efficiency.

The most famous industrial project for the national green logistics system development in the context of introducing green enterprise is production organization in the Danish industrial city of Caloundborg [11], which is based on the use of by-products of interaction between related sectors of the economy. The research of the industrialized regions of North Carolina (Raleigh, Durham and Chapel Hill, USA), conducted in [18], found that the potential for the interaction of byproducts is still poorly understood and may be more significant than one imagines. From the list of 343 objects, programs for preventing pollution using the geographic information system were drawn up. The geoinformation system was used to compare different resource requirements and existence of by-products that could be used. As a result, potential partners were identified which exchanged 49 different by-products, including: acetone, carbon, dehumidifier, hydrochloric acid, methanol, packaging, plastic bags, sawdust, sodium hydroxide, wood ash, wood sawdust, etc. For some by-products, it is necessary to further develop and install certain technologies for their inclusion in the technological processes of production: copper, diskettes, fiberglass, paints, plastics, wire, etc.

Practical introducing of technogenic losses state regulation and logistic approaches will help making effective management decisions regarding the management of resource and information flows during the planning and development of the national economy, modernization of its types of economic activity

and reconstruction of industrial facilities that constitute a potential technogenic threat to the environment and society. The proposed concept of a national logistics system will increase the efficiency of all resource and information flows in the national economy and reduce technogenic damage through the organization of effective environmental management, where the policy of green economy will contribute to this process. Table 2 presents the structure of waste generation and utilization by category of materials in 2016.



Table 2. Waste formation and utilization by category of materials in 2016 \*

Types of substances	Formed	Recycled	Burned total	Incl. for the purpose of		Removed to specially assigned places or objects
				getting energy	thermal processing	
Total	354803	109119	944,6	873,6	71	203765,4
Used solvents	1,4	0,2	0	0	0	0
Waste acids, alkalis or salts	428,3	64,8	4,6	-	4,6	357,4
Oils used	20,2	10,2	0,4	0,3	0,1	0,1
Chemical waste	1006	9,6	2,2	0,1	2,1	970
Industrial waste sediment	3567,2	866,5	0,4	0,1	0,3	839,6
Sludges and liquid waste	791,2	59,6	-	-	-	743,9
Waste from medical care and biological	1,1	0,4	0,5	0	0,5	0
Waste of ferrous metals	4179,5	3807,7	0	0	0	728,2
Non-ferrous metal waste	31,3	6,2	-	-	-	386,9
Mixed wastes of ferrous and non-ferrous metals	27,1	4,1	-	-	-	16,4
Glass waste	23,5	1,8	0	-	0	0,3
Paper and cardboard waste	234,2	27,5	0,2	0,1	0,1	7,7
Rubber waste	25,3	4,7	0,1	0,1	0	1
Plastic waste	43,7	39,4	2,6	0	2,6	1,5

Wood waste	813,3	37,3	349,4	323	26,4	21,4
Textile waste	10	1	1,1	1	0,1	1,4
Wastes containing polychlorinated phenylene	0,4	0	-	-	-	-
Inappropriate equipment	12,2	0,3	0,4	0,4	0	0,2
Inappropriate means of transport	4,6	0	0	0	0	-
Waste batteries and batteries	6,3	30,9	0	0	0	-
Animal waste and mixed food waste	954,2	485,6	2,1	0,3	1,8	42,6
Waste of vegetable origin	9061,4	3020,4	396,9	370,8	26,1	18
Animal excrement, urine and manure	4037,2	3082	0	0	0	106,4
Household and similar wastes	7125,7	3,8	152,8	149	3,8	5893,8
Mixed and non-differentiated materials	7574	1367,8	2,2	0	2,2	4678,1
Sorting remnants	116,4	141,4	0,2	0,2	-	18,4
Ordinary sediment	567,3	83,4	-	0	-	1743,9
Mineral waste from construction and demolition of objects	1397,7	262	26,7	26,7	-	700
Other mineral waste	212719,9	34946,5	1,7	1,5	0,2	151520,7
Combustion waste	14018,7	5747,8	-	-	-	7496,9
Soil waste	397,8	80,8	0	0	-	243,5
Empty rock from dredging works	55737,7	42102,6	0	0	-	10218,1
Hardened, stabilized or glazed waste	29868,2	12822,7	0,1	0	0,1	17009

\* Excluding the temporarily occupied territory of the Autonomous Republic of Crimea.

It is clear that the concept of industrial waste does not reflect fully technogenic damage caused by enterprises' economic activities, therefore, one shall use the division of waste by the source of its starting point (origin) and introduce a collective (complex) concept of technogenic waste, which are proposed to define as emissions to the atmosphere, discharges in water basins, environmental pollution, liquid and solid industrial waste, business waste and enterprise's waste products, the dynamics of which is given in Table. 3.

Table 3. I-III Danger Classes Waste (thousand.t.)\*

Category	2013	2014	2015	2016
Formed	1659,8	1434,5	1368,1	919,1
Recycled	642,4	597,5	541,4	439
Burned	16,5	15,6	14	15,1
Deleted	306,3	138,5	146,7	103
Total waste at waste disposal sites	16236,3	15157,9	14324,8	12641,6

\* Excluding the temporarily occupied territory of the Autonomous Republic of Crimea.

Based on the data of tables 1-3, using the matrix method, a matrix was constructed to select the strategies for introducing green entrepreneurship in the waste market for each type of waste, where the share of wastes was separated by axes relative to the amount of generated waste (axis x), as well as the share of accumulated waste relative to the total waste amount (y axis).

This allowed formulating a method for choosing green economy strategies, where supportive strategies of green enterprise introduction are applied the first quadrant, motivating strategies are in the second quadrant, restraining strategies are used in the third quadrant, and reorganization strategies for the green enterprise implementation with a critical state are applied in the fourth quadrant.

In Figure 3.1, the letters indicate the following types of waste, respectively: A – Used solvents; B – Waste acids, alkalis or salts; C – Waste oils; D – Chemical waste; E – Industrial discharge; F – Sludges and liquid waste treatment facilities; G – Medical and biological waste; H – Ferrous metals waste; I – Non-ferrous metal waste; J – Mixed waste of ferrous and non-ferrous metals;

K – Glass waste; L – Paper and cardboard waste; M – Rubber waste N – Plastic waste O – Wood waste; P – Textile waste; Q – Waste containing polychlorinated phenylene; R – Inappropriate equipment; S – Inappropriate means of transport; T – Batteries and accumulators waste; U – Animal waste and mixed food waste; V – Waste of vegetable origin; W – Animal excrement, urine and manure; X – Household and similar wastes; Y – Mixed and non-differentiated materials; Z – Sorting remnants; A1 – Ordinary precipitate; B1 – Construction and demolition of objects mineral waste; C1 – Other mineral wastes D1 – Combustion waste; E1 – Soil waste; F1 – Empty rock from dredging; G1 – Hardened, stabilized or glazed waste; mineral waste formed after processing. Figure 1 shows an increased matrix of selection of the given green enterprise strategies.

The method of choosing strategies for the development of the ecological economy is designed to introduce green enterprise based on the estimation of waste volumes depending on its category, hazard classes, etc. The essence of the method is that on the basis of the analysis and evaluation of different categories waste volumes, a matrix for "accumulated – destroyed waste volume" quadrant evaluation was constructed, where the choice of the strategy for green economy development is based on the principles of sustainable development – reducing the destructive impact of production on the environment by minimizing the amount of accumulated and destroyed techgenic waste.

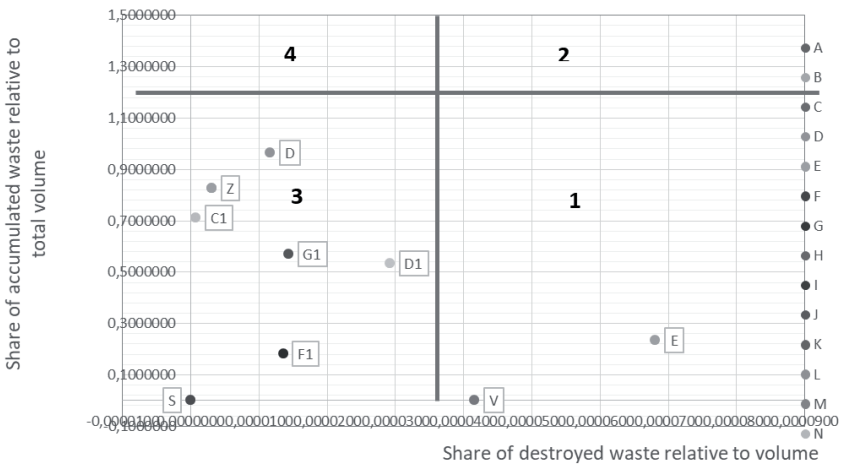


Figure 1. The matrix "accumulated – destroyed waste volume" for each type of waste

It is recommended to apply supporting strategies for the introduction of green enterprise in the first quadrant of the matrix, the "accumulated – destroyed waste volume" (Fig. 3.1, Block 1), where there is a high proportion of destroyed waste and a low proportion of generated waste, aimed at further expansion of this type of economic activity with a minimal impact of production on the environment. In the second quadrant of the "accumulated – destroyed waste volume" matrix (Figure 1, block 2), where there is a high proportion of destroyed waste and a high proportion of generated waste, it is recommended to apply motivating strategies for the introduction of green business, aimed at motivating the reduction of waste output during production. Constraining strategies of green enterprise implementation are applied in the third quadrant of the matrix (Figure 1, block 3), aimed at curbing the accumulation of waste. Reorganizing strategies for green enterprise implementation are used in the fourth quadrant (Figure 1, block 4) with a critical state of high waste accumulation and low waste disposal, aimed at full reorganization of existing production and introduction of the latest production technologies.

## **Conclusions**

One of the main tasks of a green economy policy is the operation of any enterprise with minimal cost of production or service provision. Each enterprise uses a particular resource within a certain quantity. However, the resource is not always used as efficiently as possible or without harm to the environment.

Therefore, this research paper has fulfilled the task to develop a method for choosing strategies of the ecological economy development in order to implement green enterprise by assessing the amounts of generated and accumulated waste depending on their category, classes of hazards, etc., and also the theoretical principles of the ecological economy formation through the implementation of the green economy policy in the strategy of the national economy development.

The development of green enterprise and the need for its implementation in modern strategies for the development of the national economy have been established in this work. Also, statistical data on the volumes of economic activity waste in the national economy, their state and statistics structure have been analyzed, which allowed to substantiate the strategies of the green type. In order to implement the aforementioned, a method for choosing strategies for the de-

velopment of the ecological economy with a view to introducing green entrepreneurship has been developed.

The novelty of the work lies in the application of the "accumulated – destroyed waste volume" matrix for different categories of waste, where each quadrant corresponds to a certain strategy for the development of the green economy. The choice of green enterprise strategies according to the location of waste types in a given quadrant has been substantiated in the research paper. Thus, in the first quadrant, supportive strategies for the implementation of green marketing are applied, motivating strategies are used in the second quadrant, restrain strategies are used in the third quadrant, and reorganization strategies with a critical state are applied in the fourth quadrant. Each firm can use a matrix to choose its development strategy.

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