Mechanisms of interaction between competitiveness and innovation in modern international economic relations

Collective monograph edited by
M. Bezpartochnyi

ISMA University
Riga (Latvia) 2017

Konkurētspēju un inovāciju mijiedarbības mehānismi mūsdienu starptautiskajās ekonomikas attiecībās

Kolektīva monogrāfija
M. Bezpartochnyi zinātniskajā redakcijā

Informācijas sistēmu menedžmenta augstskola
Rīga (Latvija) 2017

UDK 339.137.2:330.341.1-043.5

Mechanisms of interaction between competitiveness and innovation in modern international economic relations: collective monograph / edited by M. Bezpartochnyi, in 4 Vol. / ISMA University. – Riga: «Landmark» SIA, 2017. – Vol. 3. – 248 p.

The authors of the book have come to the conclusion that it is necessary to effectively use the management approaches to regulate modern international economic relations, methodological tools for analyzing international competitiveness and innovation. Basic research focuses on assessing the effectiveness formation of competitive advantages, study of social capital and human potential, analysis of marketing environment and development of exhibition-fair activities, formation of real estate market, risk assessment, use of electronic instruments on the financial market. The research results have been implemented in the different models of financial potential management, use of crowdfunding, formation of a transport strategy, development of border regions, formation of a new industrial policy, introduction of innovations in building, health, agriculture, sector of high technologies, development of the Latvian-Ukrainian economic cooperation. The results of the study can be used in decision-making at the level of international business, ministries and departments that regulate international relations, ensuring security and overcoming risks. The results can also be used by students and young scientists in modern concepts of the formation of international economic relations in the context of ensuring the competitive advantages of actors and improving innovation policy.

Reviewers (international scientific editoral board):

Dr. Remigijus Kinderis – *PhD, Director Deputy for Strategic Development, Academic Council Chairman, Klaipeda State University of Applied Sciences, Lithuania*

Mariana Petrova – *PhD, Assoc. Prof., Director of Education Technologies Center, St. Cyril and St. Methodius University of Veliko Turnovo, Bulgaria*

The collective monograph is approved for publication at the meeting of the Scientific Council of the Information Systems Management University of *18th December 2017, Minutes No. 2-17*.

ISBN 978-9984-891-03-3

Contents

INTRODUCTION

Problems of innovation development, competitiveness of the national economy are one of key points in the macroeconomic level of developed countries, and they are very relevant in scientific and professional circles. For a better functioning of any economic entity, regardless of the level competitiveness can be considered as one of push for a significant increase in the technical-economic efficiency of organization.

Innovation is one of the key factors in improving the competitiveness of economy; they enable countries with innovative advantages to take the lead in global community. Today, becomes relevant the study of impact of innovations on the level of competitiveness the national economy. First of all, this is due to the fact that the domestic economy is focused on the improvement of production processes, and not on ensuring the competitiveness of goods. This goal is achieved only by those national economies with have high intensity of innovation activity. Consequently, competitiveness and innovation activities are interconnected.

In this context, increasing relevance of developing the theoretical and methodological aspects of the formation of mechanisms for the interaction between competitiveness and innovation to ensure the efficiency of functioning the individual economies in the world economic system, as well as scientific research on practical recommendations for development of business entities in modern international economic relations.

The purpose of writing this collective monograph is to form theoretical and methodological foundations and practical recommendations on the use of competitive advantages and innovative technologies in the development of international economic relations.

The object of the authors' research was the economic nature of changes in the world, the features and trends in the development of international economic relations, the generalization of world experience in the field of ensuring competitiveness and introducing innovations in various spheres of the national economy with the aim of developing international economic relations.

The subject of study was various aspects of the development of international economic relations; features, problems and prospects of European integration; the influence of international trends on the economies of individual countries; determination of directions for increasing international competitiveness, the formation of a theoretical and methodological basis for making practical decisions on the introduction of innovations by business entities of international economic relations in implementing the strategy of external economic development.

Chapter 1

ENSURING COMPETITIVENESS OF BUSINESS ENTITIES IN MODERN INTERNATIONAL ECONOMIC RELATIONS

Bogush Larysa
PhD in Economics, Senior Research Scientist
Ptoukha Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine (Kyiv, Ukraine)

SOCIAL CAPITAL AS A RESOURCE OF COMPETITIVENESS AND RENT FOR SUBJECTS OF INTERNATIONAL ECONOMIC RELATIONS

A type of rent, obtained in national economic complexes and the world economy, is the economic rent (or quasi-rent) defined by A. Marshall. This is a form of excess profit received by a business entity without additional entrepreneurial efforts at the expense of reducing the production cost comparing to other economic entities, that function in the corresponding sector of economic activity, as a result of reducing costs per output unit in the conditions of using a production factor (i.e., any of the elements necessary for products manufacturing, namely the means of production, materials and labor as purposeful activity), which proposal is absolutely inelastic in the long term [1, p. 345, 849, 1135; 2, p. 195]. Thus, the quasi-rent should be considered a part of the expenses saved by a certain producer due, for example, to the rational selection of personnel and organization of its work, optimization of managerial, technological, financial and marketing processes, involvement of other factors related to the reproductive application of human intelligence [3, p. 8-9, 133-134], as well as to the use of various quasi-competitive advantages stimulating the growth in demand for the corresponding goods and services.

The above-mentioned definition of the quasi-rent requires the study of such types of its rent-forming resources as:

– human capital as a basic component of social capital (in the main manifestations of its quality – levels of comprehensive education and

vocational qualification, on the one hand, intellectual, experience-accumulating and knowledge-generating abilities and skills, on the other hand). The share of human capital in the aggregate capital structure of the developed countries has already reached 70-75%; as a result, the growth in knowledge and education level nowadays determines up to 60% of their national income increase [4, p. 36; 5, p. 44];

– various economic and political conjunctures formed at the local, regional, national and interstate levels, including in the process of capitalizing the spectrum of intellectual, innovative, communicative, organizational, interface resources of the socium (not least under the influence of social processes and, in particular, social policy aimed at regulating and minimizing social risks and threats).

T. Schultz and G. Becker, founders of human capital theory created in the 50's of the XX century, treated it as the amount of knowledge, abilities and motivations in the society that affects the increase of production and income. Along with expenses for comprehensive and vocational education, these researchers have included to the "investments in people" spending on public health care, upbringing of children and other factors that should contribute to the growth of human productive power [6, p. 27-28]. In modern specialized studies, human capital is considered as: the cost reflection of the corresponding production factor (along with land, material and technical means – fixed and circulating capital) [7, p. 7-10]; intangible assets of the enterprise [4, p. 30-31]; component of its real [4, p. 31-32] or a part of non-physical capital (the latter is treated as the totality of personnel, scientific and innovative potential, including intellectual property and results of scientific research, as well as the good reputation of the company) [8, p. 319]; the national wealth component (namely, a group of intangible assets) [4, p. 35; 9, p. 26-32].

Taking into account the rent relations theory, human capital has all necessary attributes of the rent-forming resource. It doesn't affect the supply of production factors, determining their quality in quantitative amount (that is, as production resources – the personnel of the enterprise, material and financial means for the realization of its purposes); it can also be involved in property relations and serve as a property object. At the same time, due to the indivisibility of the carrier of human capital as both a person and an employee, it is precisely his abilities, level of education and qualification are to be assessed from the perspective of property relations. Consequently:

– human capital is the leading factor in the innovative development

of the economy in measuring the different quality of characteristics of labor as the purposeful activity;

– the mechanism for realizing the entrepreneur's rights to own, use and dispose of the professional, qualifying and intellectual potential of the employee is a hiring of a person, and (in the case of commercialization, production development and replication of intangible resources as the result of intellectual potential realization) – legal acts regulating copyright and related rights.

Since human resources are an indispensable production resource at any enterprise / institution, human capital belongs to the factors forming all types of rent income (primarily in their differential and monopolistic forms), which at the same time does not deny the existence of such independent economic phenomena as the two main types of quasi-rent – educational and creative (scientific and oeuvre). In the latter one, the form of realization of the ownership right to the rent-forming resources and their property status in the process of implementation into economic circulation (when rejecting and appropriating to the benefit of business entities) make it possible to define an intellectual quasi-rent. According to the fields of manifestation we can divide it's most significant technological (including innovative and information), organizational and managerial, commercial, financial and credit subtypes. These basic types of quasi-rent is directly associated with excess incomes of business entities, which are derived from the use of a part of the public stock of knowledge, abilities and motivations of higher quality personified by some highly educated and highly skilled workers.

At the same time, the educational quasi-rent is formed due to the work of employees with the best professional, educational and qualification level at certain enterprises and institutions, as well as in some technologically related sectors of the economic complex. The use of such labor provides rent income for these structural elements of social reproduction and, ultimately, stimulates the functioning (including increased attention to the effectiveness in staff policy) of the entire sector of high-tech and knowledge-intensive enterprises and economic activities, and positively influences the pace of implementation of the innovation model of social and economic development. The mechanism for optimization of the personnel potential of the enterprise / institution (and thus for creation and improvement of the prerequisites for the educational quasi-rent obtaining), that has been time-tested in the developed market economies, is recruiting. Initially, the term meant the selection of personnel for a particular enterprise (entrepreneur) by the

special personnel agencies within their base of those who applied for employment. During the last 2-3 decades, territorial offices of the governmental employment service in the countries with transitive economies have often performed similar functions.

Creative (scientific and oeuvre) quasi-rent is formed during commercialization of:

– specific results in fundamental and applied scientific, experimental and design research (ideas, discoveries, technical and technological developments and inventions, computer programs, databases, drawings, etc.), which can be registered as inventions and, due to the prospects for production development, are classified as an innovative technological resource, the use of which allows to establish the output and to increase the sales of the so-called science-intensive products, as well as to improve the trade turnover of other goods and services;

– the products of literary work in various fields of knowledge, as well as the entire range of products in the culture and arts sectors, which can be patented or protected by copyright and, as a result of replicating on an industrial scale, could obtain consumer value within individual, collective and common economic consumption (scientific and popular scientific works, textbooks and maps, educational and cultural programs and projects, fiction literature, painting, music, audiovisual and photographic works, other art objects, including those of folk and applied art, architectural projects, etc.).

Thus, the authors of scientific and technical innovations and developments, specialized works, projects, databases and programs in various fields of knowledge, literary fiction, other pieces of culture and arts, works of applied art, etc. create a seed capital in a certain sense, as they are providing the synthesis and progressive development of fundamental and applied scientific knowledge (in the first case), and satisfying cognitive, intellectual and aesthetic needs of the wide layers of consumers (in the second case). This initiates the processes of:

– the capitalization of scientific, experimental and design research results through the establishment and development of modern and new types of technics, as well as the mass diffusion of advanced technologies;

– the replication of literary, cultural, art, cartographic, etc. products of sufficiently high consumer value by light industry and polygraphic enterprises, print and electronic media, show business, film distribution and some other sectors of the entertainment industry.

The average annual growth rate of the intellectual property objects' world trade in has already reached 15% (for comparison, the growth rate of world industrial production does not exceed 5%) [10, p. 57].

The sphere of forming and receiving quasi-rent, obtained due to the use of intellectual, vocational and qualification potential of the labor force as a key resource of social reproduction at the industrial and postindustrial stages of development, can be identified with:

– all sectors of the economy – in a broad sense, in the historical and evolutionary dimension;

– primarily, the subjects of copyright and patent law, as well as business entities (enterprises, certain legal entities and individuals), which own licenses for an intellectual product or, having commercialized it earlier than other (in the case of technical and technological innovations), use these innovations on an industrial scale. It is a narrower dimension, determined by the level of solving the problems of production organization and management optimization.

There are no excess profits of economic entities using an innovative technological resource or producing modern and new technics during the period of their development and deployment of the corresponding economic activity; excess profits also disappear with the transformation of innovations into common, determining the publicly normal level of costs and prices for certain goods and services. The duration of the period of the rent income generation is equal to the time between the development of innovations and the period of their entry into the common economic (organizational and production) practice. The term of obtaining rent income by business entities using an intellectual product protected by copyright and have completed the initial phase of production development is determined by the time frame of the relevant license agreement. In order to reward the licensor (the owner of the patent, the author as the transferring party) for the result of his work, the right to dispose of which he assigns (for a certain period) to the licensee (the potential user as the receiving party), and (to a less extent) to compensate current and capital costs for the development of innovation, the license agreement may provide for one-time or prolonged payments. Royalties are paid within the terms stipulated by the parties or the entire period of sale of products made by using this copyright object (invention, technology, work, etc.). Since a part of the rent income received by the licensee from the economic use of the intellectual product (in most cases by transferring the agreed percentage of the aggregate price of sold goods and services to the licensor) is

redistributed through the royalties, the latter are actually the creative quasi-rent of its author.

Realization of the potential of intellectual property objects as a rent-generating resource depends on the pace and scale of their commercialization that in a market economy determine the financial, time and territorial scope for getting income from the sale / purchase of a specific license. Thus, a legal transfer of an intellectual product is considered only as a prerequisite for the emergence of rent relations, since the fact of formation and the amount of rent income become the result of a full adoption and rapid production development of the innovation by its user. The main incentive to acquire a license by innovatively active economic entities is not so much in the prospects of increasing the rent component of own revenues, as in near, financially more realistic and clearer savings in carrying out their own research and patenting of developments.

Economic activity of the use of products of scientific, experimental and design research, in the process of which creative (scientific) quasi-rent is formed and extracted, is subdivided into the following basic directions:

– production of innovative products, in particular technics, and the provision of innovative consumer services (rent income is a part of the profit from their sale, received by the economic entity – producer due to the highest competitiveness of this type of product / service in the market in the absence or insignificant supply of their counterparts, including those of worse quality);

– provision of core services by authors and developers of scientific and technical ideas at the design, preparatory and production stages of their implementation (the amount of quasi-rent as one-time or periodic payments is regulated by economic contracts for the conducting relevant work or license agreements, and is set in the fixed amounts of payments or percentages of market value of science-intensive products or the balance income of its producer).

A wide range of creative intellectual activity, areas of the innovation process and scientific and technical progress diversify the spheres of formation of rent incomes, allowing extracting, as mentioned above, such subtypes of creative quasi-rent:

– technological quasi-rent associated with the implementation, production adoption and operation of innovative (principally new or aimed at improving and ensuring diversity) technical and technological achievements that improve the efficiency and quality of core activities

of production of existing range or start production of new, including innovative products and services, by enterprises and institutions, technologically close sectors and branches of economy. It is the technological quasi-rent that is a most part of rent income received in the world economy from the use of natural and non-material resources in recent decades [3, p. 134, 136-137, 139-140]. The most significant subtypes of technological quasi-rent are innovative and information ones. The emergence of innovative quasi-rent is associated with the organization of production and trade turnover of science-intensive goods (for example, electronic – namely computer, communicative, office, etc. – technics). Information quasi-rent is formed in sectors of communications (including tele-, electronic communications) and mass media, software development and programming services, as well as in the functioning of stock exchanges and over-the-counter markets specializing in high-tech companies' shares;

– organizational and managerial quasi-rent associated with the use of more effective forms, instruments and methods of production organization and management by enterprises and institutions, technologically close sectors and branches. Innovations in the field of production organization can extend to the forms and methods of its institutionalization, specialization, cooperation, concentration and diversification, in the field of management – to the instruments and methods of managing production, marketing, scientific and technical, innovative and other types of economic activity. These innovations include new ideas and developments related to planning, programming and forecasting of economic activities up to integral innovative management and marketing concepts;

– trade quasi-rent related to the application of the newest forms of circulation of goods and services, and also to the improvement of the processes of their promotion with the help of logistics methods, innovative advertising, etc. In particular, this subtype of quasi-rent can be extracted in the process of: the creation and operation of networks of wide-profile and specialized super- and hypermarkets, large wholesale and small wholesale commodity markets; the organization of travelling sales, fast food enterprises, primarily network, as well as the spectrum of network enterprises of the hotel industry; selling on credit and on catalogs, including those distributed with periodicals, through sales agents and electronic networks;

– financial and credit quasi-rent (for quite a long time has already taken the second place in the rent income of the world economy [3,

p. 137]) associated with the use of modern forms and methods of consumer lending and insurance activities in the field of voluntary personal and corporate insurance by the relevant economic entities (banks, credit unions, insurance organizations). In particular, we are talking about: voluntary medical insurance for persons from occupational risk groups or risk on the basis of unhealthy lifestyle, presence or predisposition to severe chronic diseases; insurance of life, real estate and other property against natural disasters, especially in the areas of their distribution and high probability).

Summing up, it should be noted that the specificity of human capital as a rent-generating resource is manifested in the generation of additional prerequisites (resource, organizational and economic) and incentives to increase volumes and expand potential areas for extracting rent income in the process of its use, since the using of knowledge and abilities of the employee leads to a consistent accumulation of professional experience, and consequently – to a permanent increase in the aggregate of these rent-generating properties and activities to improve the environment for their implementation. The following features of the formation and functioning of the system of rental relations of the world economy are singled out:

– the prerequisites for the formation of the quasi-rent are largely created directly in the social sphere through the implementation of a set of actions along the main areas of social policy (these areas are the objectification and compliance with social guarantees, the optimization of territorial organization and the improvement of the quality of the living environment, the promotion of competitiveness, the realization of intellectual and vocational skills work force);

– along with the accumulation of knowledge and the development of the abilities of the individual in the pre-able and working periods of life (in the process of obtaining general secondary and vocational education, postgraduate education, advanced training or retraining, the acquisition of work experience, independent studies), an innate ability to study, master and generate knowledge, which also provides forming the adequate atmosphere for promoting an intellectual product on the scale of the entire scientific and production cycle of its development and commercialization has the importance for the quality of its intellectual, professional and scientific and innovative potentials. In this context, preservation of the achieved quality of information support for education, science and scientific services, culture, general and vocational and educational level of the population in the countries and

regions where the organization of production is organized, as well as the stimulation of the achievement of the innovative potential of subjects of international economic relations in the short term in them entrepreneurial activity at different stages of the scientific and production cycle are crucial for realizing an innovative potential of international economic relations subjects in the short run;

– an effective institutional form of implementation into the economic practice of the results of scientific research and development work is innovative firms and their clusters created on the basis of scientific research and higher educational institutions or working in close cooperation with them, which, using the qualified researchers trained in these institutions and, partly managers, are able to perform a sufficiently rapid implementation of developed or accepted scientific and technical ideas and innovations.

References

1. *Azrilijan, A.N. (Ed.). (1999). The big economic dictionary. Moscow: Institut novoj jekonomiki [in Russian].*
2. *Mochernyj, S.V. (Ed.). (2002). Economic encyclopedia. Vol. 3. Kyiv, Ternopil: Akademiia [in Ukrainian].*
3. *Jakovec, Ju.V. (2003). Rent, anti-rent, quasi-rent in the global civilizational dimension. Moscow: Akademkniga [in Russian].*
4. *Shums'ka, S.S. (2006). National capital of Ukraine: assessments and trends. – Economics and Forecasting, Vol. 4, pp. 23-37 [in Ukrainian].*
5. *Shhetinin, V. (2001). Human capital, and ambiguity of its interpretation. World Economy and International Relations, Vol. 12, pp. 42-49 [in Russian].*
6. *Semenov, A. (1995). Post-Tailor theory and theory of human capital. World Economy and International Relations, Vol. 9, pp. 20-36 [in Russian].*
7. *Panova, N.N. (2000). The essence of the capital as a management object (theory issues). Culture of the Black Sea Region People, Vol. 12, pp. 7-10 [in Russian].*
8. *Vidjapin, V.I., et al. (Ed.). (2000). Economic theory. Moscow: INFRA – M [in Russian].*
9. *Lavrent'eva, I.V. (2005). Complex analysis of the reproductive process efficiency in the region. – Regional Economy: Theory and Practice, Vol. 7, pp. 26-32 [in Russian].*
10. *Poplavs'ka, Zh., & Poplavs'kyj, V. (2007). Intellectual capital of knowledge economy. Bulletin of the National Academy of Sciences of Ukraine, Vol. 2, pp. 52-62 [in Ukrainian].*

Kubratska Larysa
PhD, Associate Professor, Dean of the Faculty of Management and Marketing
Kadyrus Iryna
PhD, Associate Professor, Senior Lecturer at Department of Marketing
Dnepropetrovsk State Agrarian-Economic University
(Dnipro, Ukraine)

ESTIMATION OF MARKETING ENVIRONMENT FOR AN INDUSTRIAL ENTERPRISE

Industrial manufacturing of building materials is the most important component in the construction field. The development of the latter takes place under the influence of two factors – raw materials and consumer, therefore the location depends on prevalence of at least one of them. Industry of building materials includes a large number of enterprises located in all regions of Ukraine. The biggest centers of the industry are Kyiv, Kharkiv, Odesa, Dnipro, Kruvyi Rih, Zaporizhzhia and so on.

Limited Liability Company "Spectr" is a modern high-tech manufacturing company which develops dynamically in the construction area. It is the leading manufacturer of ready-mixed concrete and cement-sand solutions in the Dnipropetrovsk region.

Activity of LLC "Spectr" is characterized by a complex approach to solving any tasks from manufacturing and supply of concrete, cement to making construction turn-key works. It became possible owing to the modernization of equipment, implementation of new technologies, complex computerization of manufacturing, enlargement of product range and a high-skilled engineer-technical staff.

One of the main conditions of efficient work of LLC "Spectr" is a clearly set strategy of behavior. The correctly chosen strategic policy of the enterprise not only helps to strengthen competitive positions on the market but also leads to the development trend in general. Unexpected changes in the environment require rapid and adequate reaction of the enterprise to support and strengthen competitiveness. It requires constant review of answers to such questions as: which is the type of the company development; in what direction the company should develop in future; which position the company plans to occupy at the market. Thus it is always necessary to carry out constant diagnostics of resources and capabilities of the enterprise. Hence the issue of analyzing the marketing

environment of the enterprise appears.

Economical subjects exist in so-called marketing environment – combination of active subjects and forces which are beyond our control, which happen outside the enterprise and the enterprise should consider them to develop its complexes of marketing. This environment is changeable and it provides certain limitations. Without an appropriate analysis, economical subjects may disrupt the existing social and cultural requirements and lose advantages in the competitive fight; they adapt badly to the market.

Marketing environment is a combination of objects which work outside the company and interrelations between them and the company, which influence the results of the marketing activity of the company in order to achieve the set goals [1]. Marketing environment of the enterprise contains two main components – micro-environment and macro-environment.

Macro-environment of an enterprise is reasonable to be analyzed by PEST analysis, which makes possible to determine the combination of factors of external influence on the activity of the enterprise.

With the help of the PEST analysis we can study and estimate the influence of economic, political, legal, demographic, scientific-technical, natural and social-cultural factors.

This method implies the selection form each group of most essential factors, which can provide significant influence on the activity of the enterprise. Each factor is graded by experts considering the following:

- value of each factor (total grade – 1.0);
- evaluating score (from 1 to 5);
- estimation (multiplication of values by evaluating score).

Such grading makes possible to determine which of the outside factors are more essential for the enterprise and therefore should be considered in greater detail (table 1.1).

Political-legal factors provide the most significant influence on the activity of an enterprise especially in the transitional economy which is the economy of Ukraine. Studying those factors should be focused on finding out the attitude of the government and legislative bodies to the development of one or another field of the national economy, what changes in legislation and legal regulation are possible due to passing new laws. The analysis shows that political-legal environment makes general negative impact on the activity of an enterprise.

While analyzing the influence of the economic environment on the business activity of enterprises it is necessary to pay attention to such

Table 1.1

PEST-analysis of factors of macro-environment in LLC "Spectr"

Factor	Value	Score	Evaluation
Political factors (P)			
Degree of the state influence on the field	0.12	3	0.36
Instability of the legal environment	0.11	1	0.11
Amendments to legal regulations	0.18	2	0.36
Level of investment	0.27	5	1.35
Intensification of tax pressure on manufacturers of building materials	0.32	4	1.28
Total	1.0	x	3.46
Economic factors (E)			
Demand and supply	0.26	5	1.30
Level of unemployment	0.17	2	0.34
Level of inflation	0.19	3	0.57
Level of prices and salary, their ratio	0.22	3	0.66
Competitiveness at the market and in the field	0.14	2	0.28
Total	1.0	x	3.15
Social-cultural factors (S)			
Demographic situation	0.21	4	0.84
Quality of life	0.40	5	2.00
Social traditions	0.11	1	0.11
Attitude to work activity	0.08	2	0.16
Social mobility	0.20	3	0.60
Total	1.0	x	3.71
Technological factors (T)			
Government policy in scientific-technical progress	0.27	4	1.08
Influence of technological innovations	0.41	2	0.82
Modernization of technological production	0.17	3	0.51
Scientific-technological regulation	0.26	1	0.26
Development of innovative technologies	0.12	2	0.36
Total	1.0	x	3.03

factors as: type of economy and economical processes; system of taxation and quality of economic legislation; government support of certain industries; conjuncture of the national market; size of the market

and rates of change; size and rates of growth of market segments according to interests of an enterprise; condition of the stock market; investment processes; bank interest rates; system of price-making and level of centralized regulation of prices and so on.

The most negative influence is made by factors: general level of economic development; system of taxation and quality of economic legislation; level of development of competitive relations.

Demographic factors determine characteristics of consumers, co-workers, partners, competitors. In the manufacturing sphere it is necessary to consider results of demographic factors and social environment especially in the field of structural changes. This social environment influences the formation of consumer preferences, which influence the direction and size of consumer demand i.e. the chance for the company to sell the goods.

Social-demographic situation makes double influence on the enterprise: on the one hand improved living conditions, educational level and income of population are undoubtedly positive factors but on the other hand the decrease in population in recent years has diminished the potential market.

Influence of scientific-technical factors can be seen in modernization of the technological equipment of the company, development of informational technologies, possibilities of implementing innovations into the manufacturing process, which would lead to a better quality of products and decreased cost price. A type of the influence of innovations on the activity of the enterprise is connected with the internal condition of the enterprise. So, a low level of modern equipment on the enterprise makes technological innovations in the field an essential negative factor and vice versa: a high level of technological equipment makes possible to employ managerial and informational innovations as a factor to increase competitiveness of the enterprise at the market.

An enterprise usually cannot influence the factors of external environment, but analysis of the latter is the main aspect while creating the strategic development of the company. Characteristics of the modern environment are studied considering most efficient application of positive factors, which create possibilities of work for the enterprise and avoidance of evident or potential threats for the efficient functioning and development.

Instead of this, the internal environment is inside the company therefore management can directly influence and change it. Among main components of the internal environment which should be analyzed

to form the strategy of further development are marketing, manufacturing, finances, human resources and innovations of the business organization [4].

Thus analysis of factors revealed that most positive influence on the activity of the construction sphere is directed at social regulation of the demographic situation, quality of life of people, social mobility and so on.

Political factors take the second place by the influence on the field; those factors are: level of investment, intensification of the taxation pressure on manufacturers of building materials, degree of the government's influence on the industry.

The least influence is provided by technological factors and factors of the economy, such as: level of inflation, level of prices and salaries and their ratio, improvement of technological manufacturing, level of unemployment and so on.

Hence the activity of LLC "Spectr" is influenced by a set of negative factors of the external environment but their influence on the condition of an enterprise is not critical.

Suppliers play a significant role in the industrial sector – companies and sole entities which provide the company with all necessary material resources. The price, quality of the products, conditions of supplies, delivery time of supplies, operating costs directly influence the price cost, and hence the profits and competitiveness of the company.

The issue is to choose the most beneficial supplier. In order to do this it is necessary to know the market in great detail and constantly process new information. For LLC "Spectr" the selection of suppliers is caused by optimal price, quality and possibility to get resources on time.

The suppliers of the company are: suppliers of equipment and service (German company FICT); supplier of cement (PJSC "HeidelbergCement Ukraine"); suppliers of consumables (OJSC "Servis", LLC "Budstroiservis", PE "Cherniak" and so on).

Department of Supply and Logistics has recently created the subdivision at the enterprise; this subdivision does not have sufficiently clear understanding of the set tasks and goals, as well as there is no program on decreasing the price of materials which are bought. Besides the latter cannot be properly controlled for quality control at arrival, there is no system of making claims against the supplier in case of defected good or raw materials. Considering the control of activity over this subdivision there is no system of collecting and analyzing data on amounts of supplies and control over installments of each supplying company.

Application of the rating system to grade possible supplying companies from the point of view of buying companies has become most popular in practical activity of enterprises. It can be achieved using two methods:

1st method – includes the simplified approach to estimation of potential suppliers by the rating scale according to the developed criteria. At that the following indicators are previously formed: criteria for estimating a supplier; rating scale (score grades and their content); values of each estimating criterion for suppliers and buyers.

Those indicators are placed into rating sheets which are made for all potential suppliers. The total ratings calculated in those sheets for each supplier are compared among themselves and based on it the selection of the most appropriate, reliable suppliers of raw materials and materials is made. The preference is granted to those supplying companies which get the highest score in the rating system.

2nd method implies a more complicated scheme for carrying out stage by stage rating estimation of suppliers by independently chosen motives, for example price, quality and provided service. The essence of the method is to estimate the value of each of those factors by experts with the help of the scale with a constant sum. At that the experts are people with expertise from different departments of the company [2].

Detailed analysis of the influence of suppliers on activity of the company has been made in table 1.2.

It can be seen from table 1.2 that the most positive influence on the business activity of an enterprise is provided by the following factors: importance of the supplied resources for the industry; number and concentration of suppliers in Dnipropetrovsk region; amount of losses for the supplier if the buyer is changed; degree of specialization of a buyer in buying raw materials.

The negative influence is made by the following factors: availability of the fields which use similar raw materials; amount of losses for the buyer if the supplier is changed.

However the data from the table testify to the fact that the negative influence of those factors could be neglected due to its insignificance.

The main consumers of products made by LLC “Spectr” are building companies which are located both inside the city and in the region. Considering the fact that a part of the financial income from which comes from physical entities is not significant, from the point of the target segment, attention is reasonable to be focused on building organizations.

Table 1.2

Influence of suppliers on activity of the enterprise

Factors of environment	Degree		Direction of influence	Level of importance for the company
	importance for the field	influence on the company		
Estimation of importance of certain resources for the field	3	3	+1	9
Price elasticity of resources	2	2	+1	4
Quantity and concentration of suppliers	3	3	+1	9
Possibilities of using resources-substitutes	1	2	+1	2
Availability of companies-suppliers of substitutes	2	2	+1	4
Availability of fields which use analogue resources	1	1	-1	-1
Estimation of conversion losses (change of suppliers)	2	1	-1	-2
Level of specialization of suppliers	2	2	+1	4
Size of costs for suppliers in case of change of buyers	3	2	+1	6
Level of specialization of a buyer in buying raw materials	3	2	+1	6

Essential influence on the activity of the organization is made by the following factors: a high level of dependence of a seller on a buyer; estimation of quality of service for customers; advertising policy of the company; promotion of sales and maintenance of the chain of

distribution for the goods.

Detailed analysis of macro- and micro-environment of LLC “Spectr” makes possible to draw conclusions concerning potential threats and possibilities, which should be considered by specialists of the company in their professional activity

At the moment it is reasonable to carry out SWOT analysis for LLC “Spectr”; it would give an opportunity to receive the general estimation of the strategic environment of the enterprise. The idea is the successful strategy should be built on the principle of joining internal opportunities of the company and external situation.

The card of SWOT analysis determines opportunities and threats for the enterprise, which appear during commercial activity as well as strengths and weaknesses. At that importance of each element is evaluated and general value for each parameter is calculated (by the expert method).

If the received estimation of the importance value is less than 2.5 points, the influence of this factor on the business activity of the enterprise is positive, if it is more than 2.5 points – negative. Opportunities and threats as well as strengths and weaknesses of the business activity of LLC “Spectr” are provided in table 1.3.

According to the results obtained from the SWOT analysis we can conclude that strengths and opportunities of the company provide rather positive influence on the commercial activity of the enterprise but weaknesses and threats may also influence negatively the business activity of the company unless the company timey reacts to their influence.

Based on SWOT analysis and profile of the internal environment at the enterprise, key factors of success are determined, their implementation creates pre-conditions for developing commercial activity of the enterprise and increase in competitiveness at the market. Besides it is necessary to carry out their estimation of their application in the business activity by a 5-point scale: 1 point – very low level of application of factors, 2 points – low level, 3 points – average, 4 points – above average, 5 points – high level. Key factors of success of LLC “Spectr” are provided in table 1.4.

It can be seen from the table that the following factors such as creation of favorable conditions for storing goods, prevalence of own assets over loans, recognition in business circles, optimal range of goods have a high level of application in the company; a low application rating includes the following factors: involvement of local suppliers and

Table 1.3

A card of SWOT analysis of the business activity of LLC "SPECTR"

Opportunities	Score	Threats	Score
1. Interaction with local authorities	0.8	1. Political factors	0.7
2. Advertising in the Internet	0.4	2. Economic situation in the country	0.8
3. Opportunities to sell some goods with the lowest price in the region	1.2	3. Global crisis in economy and devaluation of the national currency	1.1
		4. Competitiveness	0.9
TOTAL	2.4	TOTAL	3.5
Strengths	Score	Weaknesses	Score
1. Length of the company's work on the market	0.1 0.6	1. Resources of the company	0.7
		2. Service policy	0.7
2. High quality of goods	0.4	3. Staff	0.2
3. Loyalty of consumers	0.5	4. Unfavorable location of distribution warehouses	
4. Reliable suppliers			
5. Low labor intensity of production	0,3	5. Advertising	0.9 0.4
TOTAL	1.9	TOTAL	2.9

absence of function duplication in management of business activity management. The company has rather high internal organizational rating as well as a high point in recognition inside business circles.

To determine connections between opportunities, threats, strengths and weaknesses in the business activity of the company it is reasonable to make a generalizing matrix SWOT (table 1.5).

At that the biggest value in each of the fields "Strengths and Opportunities", "Strengths and Threats", "Weaknesses and Opportunities", "Weaknesses and Threats" is obtained by multiplication of corresponding factors which implies what type of strategic development of the commercial activity is most suitable for the company. This indicator also characterizes the level of marketing competence of the enterprise.

Considering the data obtained from the SWOT matrix, the studied company should apply more efforts to overcome weaknesses and to try to decrease the threats to the business activity.

Table 1.4

A list of key factors of success for LLC "Spectr"

Functional areas	List of key factors of success	Points
Commercial logistics	Computerization of information processes	4
	Mainly one-level distribution channel	4
	Involvement of local suppliers	2
	Efficient use of warehouses	4
	Creation of favorable conditions for storing goods	5
Organization of business activity management	Absence of function duplication in management of business activity management	1
	Reasonable building of commercial service	3
	Presence of work experience in the commercial activity	4
Marketing	Optimal range of goods	5
	Provision of additional services to customers	4
	Active advertisement policy	3
Finances	Independence of the company of external sources of financing	4
	Prevalence of own assets over loans	5
Commercial potential	Availability of competent commercial workers	4
	High level of application of moral and material methods for stimulating commercial workers	4
Rating of the company	Recognition in business circles	5
	Rather high internal organizational rating of the company	4

Table 1.5

Matrix of SWOT analysis of functioning of LLC "Spectr"

External environment / Internal environment	Opportunities	Threats
Strengths	4.6	6.7
Weaknesses	7.0	10.2

Increased demand for materials, amount and range of supply, economic attractiveness of the business, number of business entities and hence growth of competitiveness encourage producers of industrial goods to implement new strategies and programs, directed at increasing the level of competitiveness and retention of stable competitive position on them market. One of the most efficient ways of achieving it is orientation of the company on satisfaction of needs and demands of customers, practical application of marketing approaches and methods. There appears the need for implementing such an economic mechanism which includes more flexible application of modern marketing instruments, namely the application of those elements of marketing communication which are the most relevant for customers at the present stage [6].

Support of a high level of competitiveness in the industrial enterprise means that all resources of the company must be applied in such an efficient way that they would be more profitable than the company's main competitors. Therefore the management of the enterprise should know how to observe changes which happen in the business activity of the industrial enterprise and take appropriate actions in product, distribution and price policies.

References

1. *Balabanova L. (2004). Marketing: Textbook. – 2nd ed, Professional, Kiev.*
2. *Boychuk I.V. Marketing of the industrial enterprise. – available at: http://pidruchniki.com/1225071962422/marketing/marketing_promislovogo_pidpriyemstva (accessed 20 November 2017).*
3. *Bondarenko V.M. (2011). "Essence, structure and research of the marketing environment of the enterprise activity in agricultural companies". Collection of scientific works VNAU Series: Economic sciences No. 2 (53), Volume 3. – pp. 166-172.*
4. *Huseva M.N. (2012). Marketing in construction: tutorial/ Knizhnuy mir, Moscow.*
5. *Kadyrus I.H. (2017), "Research on the influence of marketing environment on activity of the agrarian enterprise", II International Scientific Conference Economy and Society: a Modern Foundation for Human Development: Conference Proceedings, Part II, June 23th, 2017. Leipzig, Germany: Baltija Publishing, pp. 28-31.*
6. *Kubratska L.M. (2017), "Formation of the competitiveness of the industrial enterprise", II International Scientific Conference Economy and Society: a Modern Foundation for Human Development:*

Conference Proceedings, Part II, June 23th, 2017. Leipzig, Germany: Baltija Publishing, pp. 31-34.

7. *Prib K.A. (2015), "Analysis of the environment while forming the strategy of development in the agricultural enterprise", available at: http://www.pu.if.ua/depart/Finances/resource/file/Збірник/2015-1/1.pdf (accessed 20 November 2017).*
8. *Yakymenko R.A., Pohrebniak A.Y. "Estimation of competitiveness of industrial enterprises", available at: http://probl-economy.kpi.ua/pdf/2013-23.pdf (accessed 20 November 2017).*

Kuvaieva Tetiana
Assistant Lecturer,
Department of Marketing
SHEI "National Mining University"
(Dnipro, Ukraine)

ASSESSMENT OF COMPETITIVE ADVANTAGES OF THE ENTERPRISE FUNCTIONING IN NETWORK STRUCTURES PARTNERSHIP TYPE

Over the past three decades issues of cooperation between enterprises through the forming of network structures have become relevant. Network structures can range from the usual form of interaction based on the concept of transactional marketing, to forming strong long-term relationships based on the concept of marketing partnerships [1, 2].

Today, as a result of rapid changes in the external environment, the globalization of market processes, the concept of marketing partnerships acquires special significance. Enterprises of Ukrainian industry began to recognize the advantages of partnership as a method of cooperation with other enterprises. Therefore they actively use the toolkit of partnerships marketing when interacting with other enterprises and also with various stakeholders.

Partnership as a form of interaction in the Ukrainian industry is inherent high-tech industries, including sub-sectors of the machine-building complex of Ukraine, producing electrical, electronic, optical equipment, as well as vehicles. For all industries of Ukraine two types of partnership are the most widespread: with foreign companies and with the participation of foreign investments. This is possible due to the participation of Ukraine in the world organization CEFTA, which

provides standardization and certification of products at the level of international standards [3]. Cooperation is carried out in the form of vertical and horizontal partnerships. A typical example of a vertical partnership is the production of Motor Sich's engines for the French corporation Iveco [4]. Strategic partnerships traditionally refer to more flexible forms of interaction, than, for example, merges and acquisitions.

In recent years, in the conditions of Ukraine's orientation to European standards, enterprises need to join forces not only to remain competitive on external, but also in the domestic markets. Within this tendency, enterprises strive to organize cooperation so that it was rather flexible, takes into account the interests of all partners, and also undergoes the necessary transformations in relations according to changes of external conditions. Objective tendencies of development of the markets make partnership more and more demanded in Ukraine as the strategy of interaction. Forming the partnership is the vital strategic task for increasing competitiveness. This situation requires the forming and constant correction of the corresponding strategy of each enterprise and partnership in general. Therefore, perspective activity of the Ukrainian enterprises in the international markets and especially European requires a comprehensive research on the rationality of using partnerships in other industries of Ukraine. Assessment of competitive advantages of the enterprise which is a participant of partnership has a particular importance. The understanding of rationality of such relations has to have evidential and settlement justification.

Within three last decades, scientists and experts in the field of marketing realized the need of a detail and comprehensive investigation of a phenomenon of partnership, particularly regarding cooperation like "supplier-producer-consumer ". The attention of scientists in research of this problem at first was concentrated on a concept of the competition [5, 6] and only recently the focus of research has displaced on the internal entity of partnership and its advantage to each participant [7, 8]. The modern business environment is changeable and, as a result, these changes determine the direction and rates of activity. It leads to the fact that the enterprises are forced to act in the field of core competences with simultaneous interaction with external potential partners based on the long-term relationships. The main competences which are successfully used by the enterprise in the market become competitive advantages. Forming competitive advantages in itself is rather difficult task, however their maintenance causes even greater difficulties. Therefore development of joint competitive advantage at interaction of

the enterprises provides the high level of its complexity and difficulty for market players to imitate it. It creates an additional barrier to entry and normal functioning of the competitor e on the market.

So, partnership is that key competence, both general and individualized for all participants of partnership. Such dual nature of partnership provides two-level protection in competition: the first level is an effective impact of such relations on internal activity of the enterprise, including production; the second level - creation of joint network structure with coordination of the activities of the partnership participants. At the same time, the first level follows from the formation of partnership, as a higher level of forming competitive advantage.

Therefore, we will consider in detail the organization of activity of the enterprise which is a participant of partnership, based on the concept of marketing of partnership relation and estimate competitive advantages of its production activity in comparison with other forms of interaction.

According to the feature of the organization of the marketing activity based on partnership [9], the enterprise - supplier determines the delivery period of single lot of products of the corresponding nomenclature position $T_{п\_п}$ and volume of such lots $\Delta_{п\_п}$ for the beginning of the contract, as well as the periods of revision of volumes of single lots - $T_{к\,\Delta п}$ that is terms of adjustment of size $\Delta_{п\_п}$. An adjustment occurs on the actual expenses of products by the consumer for the previous period $T_{к\,\Delta п}$. The maximum and minimum output of production is determined, respectively, by the minimum and maximum quantity of expenses of products at consumers, namely production is evenly distributed in time of each of the periods $T_{к\,\Delta п}$.

These quantities can be determined through an integrated indicator of the flow of costs for all the consumers-partners of the corresponding nomenclature item of production:

$$f_{\Sigma z}(t) = \Sigma z \quad e^{\Sigma z\ t}, \qquad (1.1)$$

where Σz – density of the integrated flow of expenses of product at partner - consumers.

The density of the integrated flow of partner - consumers can be determined as:

$$\Sigma z = \sum_{i=1}^{n} z_i = \frac{\sum_{i=1}^{n} Z_i}{T_Z} . \quad (1.2)$$

Then, with the probability, the fact that the integrated volume of expenses of production with a given probability $P_{з>Mmax}$ will be more M_{max} and with a given probability $P_{з<Mmin}$ will be less M_{min}, it is possible to predict the minimum and maximum output for the period $T_{к\,Дп}$.

The maximum output for the period $T_{к\,Дп}$ can be determined by search M_{max} though the natural number from zero on increase until the probability $P_{>Mmax}$ that is calculated by the formula:

$$P_{>Mmax} = 1 \sum_{i=0}^{Mmax} \frac{(\Sigma z \quad T_{к\,Дп})^i}{i!} \quad e^{\Sigma z \quad T_{к\,Дп}}, \quad (1.3)$$

will not become less $P_{з>Mmax}$, that is, while the inequality is satisfied:

$$P_{>Mmax} < P_{з>Mmax} . \quad (1.4)$$

Similarly, the minimum volume of production over a period $T_{к\,Дп}$ can be determined by search M_{min} through the natural series of numbers from zero on increase until the probability $P_{з<Mmin}$ that is calculated by the formula:

$$P_{<Mmin} = \sum_{i=0}^{Mmin} \frac{(\Sigma z \quad T_{к\,Дп})^i}{i!} \quad e^{\Sigma z \quad T_{к\,Дп}}, \quad (1.5)$$

does not become equal or more $P_{з<Mmin}$, that is, while the inequality is carried out s:

$$P_{<M\min} < P_{з<M\min} \ . \qquad (1.6)$$

The minimum and maximum production capacity with constant flexible partnerships - $V_{в\_сгп\ min}$ and $V_{в\_сгп\ max}$ accordingly – can be determined by the formulas:

$$V_{в\_сгп\ min} = M_{min} \ \frac{T_Z}{T_{к\Delta п}}, \qquad (1.7)$$

$$V_{в\_сгп\ max} = M_{max} \ \frac{T_Z}{T_{к\Delta п}} \ . \qquad (1.8)$$

The top limit of the maximum size of capacity of a warehouse at constant flexible partnership - $S_{сгп\,maxsup}$ - can theoretically be determined through the accumulation at the end of the delivery period of single lot of products corresponding nomenclature position of products $T_{п\_п}$ for all partner – consumers proceeding from the maximum demand M_{max} for the period $T_{к\Delta п}$:

$$S_{сгп\,maxsup} = M_{max} \ \frac{T_{п\_п}}{T_{к\Delta п}} \ , \qquad (1.9)$$

and the lower limit of the minimum size of capacity of a warehouse - $S_{сгп\,maxinf}$ - on the maximum party of delivery to the single consumer – the partner:

$$S_{сгп\,maxinf} = \inf_{i=1\cdots n_{п\_п}} \{\Delta_{п\_п(i)}\} \ , \qquad (1.10)$$

where $n_{п\_п}$ - the total number of partner – consumers.

Let's compare the competitive advantages of partnerships with other interaction strategies through the calculation of the main parameters of the involved production capacities of the enterprise-producer (partner). The numerical data of the initial parameters for the calculation are given in table 1.6. They are based on research [10-12].

Table 1.6

The initial data for the calculation of the main parameters of the involved production capacities and the warehouse for different interaction strategies

Parameter	Designation	Numerical value	Units of measure
Annual demand for the nomenclature position of the products of one consumer	Z	120	piece
The annual working time	T_Z	360	day
A batch of items to be delivered per transaction	$\Delta_т$	20	piece
Average production capacity of one line	$v_в$	360	piece / year
Period of production planning in the transactional form of marketing	$T_{П\_в}$	30	day
The period of supply of single lots of products for marketing based on partnerships	$T_{П\_П}$	15	day
The revision period for single lots	$T_{к\,\Delta П}$	90	day
The probability of risks that is accepted	$P_з$	0,1 (0,001)	%

The results of calculations for the above strategies are shown in table 1.7. As we see from the results of calculations, for the producer of products, the marketing strategy of flexible partnership with the allocation of an enterprise-integrator for the organization of production has significant competitive advantages over marketing strategy, based on transactions.

So, at the same predicted production outputs, at forming of the relations with consumers based on the marketing strategy of flexible partnership, fulfillment of the same volumes of orders demands booking of production capacities for their implementation in 2,5 ÷ 4 time less, and warehouse capacity - in 1,6 ÷ 6,7 times less, than at building relationships with consumers based on transaction marketing.

Table 1.7

Results of calculation of production capacities and warehouse for different integration strategies

Number of consumers	Forms of production organization	The maximum involved capacity		The predicted production outputs	Maximum capacity of a warehouse
		abs. pcs/year	comp.	pcs/ year	pcs
3	the organization of production - "under the order"	2160	6,0	360	60
	the organization of production - "work on a warehouse" with the subsequent formation of batches of products according to orders	1440	3,89		140
	the organization of production, based on the marketing strategy of partnership	484	1,34		21
5	the organization of production - "under the order"	2520	4,2	600	70
	the organization of production - "work on a warehouse" with the subsequent formation of batches of products according to orders	2160	6,0		200
	the organization of production, based on the marketing strategy of partnership	756	1,26		32
7	the organization of production - "under the order"	2520	3,0	840	70
	the organization of production - "work on a warehouse" with the subsequent formation of batches of products according to orders	2640	3,1		240
	the organization of production, based on the marketing strategy of partnership	1024	1,22		43

The main factors of this effect are a reduction of products quantity in the single delivered batches with the increase of the number of lots and medium-term production planning.

It should be noted that the identical values of the maximum power used for the organization of production "under the order" with the number of customers five and six is due to the fact that the maximum number of production lines that can be used to fulfill orders for the two cases is the same, but the probability of such state with five customers is less than with seven. In other words, with five customers, work at maximum production capacity continues less than with seven customers.

Thus, forming the sustainable partnerships for the producer of products which is a participant of partnership provides a competitive advantage, namely, a significant increase in the technical and economic indicators of its production. Such competitive advantages are quite significant for the company at the rapidly changing markets, both internal and external.

It should be noted that fluctuations in the production capacity of the producer of the products lead to the same fluctuations in the requirements for the respective products used in production. Then establishment of continuous partnership between the producer and the supplier is the same relevant task, as well as between the producer and the consumer. But without the existence of a partnership between the producer and the consumer, the forming of a stable partnership between the producer and the supplier has a limited sense because it does not provide a noticeable decrease in the fluctuations of the involved production capacities. Thus, the main task for the enterprise - integrator is the priority forming of partnership relations with the consumer of the products. Desire to reach competitive strategic advantage are the main incentive motive for development the ways of realization of partnership. Partnership should be considered as a set of enterprises that have not only common goals, but also close values for the forming competitive advantage.

So, as a result of research on the effectiveness of various forms of business interaction, it was proved that the forming of partnerships in the supplier-producer-consumer relationship provides significant competitive advantages over other forms of interaction. Since competitive advantages differ in the level of complexity of their copying, partnership is a high-level competence, that is difficult to simulate for other competitors due to its embeddedness. The deep influence of the partnership on the efficiency of the internal activities of

the participating enterprises ensures its effective functioning at the competitive markets and allows using this competence for the next stage of development of the competitive advantage. This process of developing and maintaining a competitive advantage in the form of partnerships is a dynamic process, prone to continuous improvement and renewal.

References

1. *Gila, E. Fruchter, Simon, P. Sigué Transactions vs. Relationships: What Should the Company Emphasize? [Electronic resource] - Access mode: https://www.biu.ac.il/soc/sb/papers/fruchter/2.pdf*
2. *Kuvaieva, T. (2017). Organizational forms of marketing activity of industrial enterprises in conditions of instability of the external environment. Scientific Economic Electronic Journal "Problems of Economics and Political Economy", NMetAU. Issue 1, pp.142-157.*
3. *Central European Free Trade Agreement [Electronic resource] - Access mode: https://cefta.int/ https://cefta.int/*
4. *Motor Sich JSC [Electronic resource] - Access mode: http://www.motorsich.com/rus/*
5. *Porter, M. E. (1985). The Competitive Advantage: Creating and Sustaining Superior Performance. NY, Free Press, p. 720.*
6. *Pietersen, W. Defining Competitive Advantage: How much more value do you deliver than your competitors? The European Business Review [Electronic resource] - Access mode: https://williepietersen.com/wp-content/uploads/pdf/TEBRSepOct2010_CompetitiveAdvantage.pdf*
7. *Morgan, Robert, M. and Shelby D. (1994). Hunt The Commitment-Trust Theory of Relationship Marketing. Journal of Marketing, 58 (3), pp. 20-38.*
8. *Kanagal, N. Role of Relationship Marketing in Competitive Marketing Strategy. Journal of Management and Marketing Research [Electronic resource] - Access mode: http://www.aabri.com/manuscripts/09204.pdf*
9. *Kuvaieva, T. (2017). Management of partnership relations of industrial enterprise. Economic space: collection of scientific works, No. 122, Dnipropetrovsk, PSACEA, pp. 104-117*
10. *Reshetilova, T., Kuvaieva, T. (2016). Interaction of mining engineering companies in supply channels. Economic Bulletin of the National Mining University, No. 6, (54), pp.123-132.*
11. *Production and sales of certain types of industrial products for 2014 [Electronic resource] - Access mode: http://www.ukrstat.gov.ua/*
12. *Statistical bulletin "Production of industrial products by different kinds in Ukraine" [Electronic resource] – Access mode: http://www.ukrstat.gov.ua/*

Matviichuk Lesia
PhD in Economics, Associate Professor
Chuniak Olga
Postgraduate Student
Department of Finance, Banking and Insurance
Khmelnytskyi National University (Khmelnytskyi, Ukraine)

ENTERPRISE'S FINANCIAL POTENTIAL MANAGEMENT UNDER THE CONDITIONS OF UKRAINE'S TRANSISTIVE ECONOMY

Development of national economy of Ukraine has faced numerous challenges. Structural transformations in Ukraine caused by its integrational ambitions, the long-lasting military conflict in the East of the country, introduction of trade restrictions by the Russian Federation (Russian embargo of Ukrainian goods and restrictions on goods transportation from Ukraine to the territory of the Republic of Kazakhstan and the Kyrgyz Republic through the territory of the Russian Federation), as well as unfavorable world prices on the key commodity markets of domestic exports together with tense world competition and rather slow economic development of the major trading partners have had a negative impact on its growth. Nevertheless, these negative external factors have been balanced by the expansion of domestic investments and consumer demand, the partial geographical reorientation of foreign trade, which ensured gradual growth of economic activity of the real sector of economy.

This situation has promoted top-priority tasks for the management of Ukrainian enterprises who have to create current and long-term opportunities in order to ensure an effective and sustainable development of economic entities, enhancing their financial potential and using advanced methods of enterprises' financial resources allocation based on the laws of a market economy.

A lot of foreign and Ukrainian scientists and economists (I. Blank, Y. Brighem, M. Bakanov, M. Yermoshenko, A. Kizim, V. Kovalev, N. Sorokina, A. Tishchenko, I. Fedorenko, O. Fedonin, A. Yakovleva, J.K. Van Horn and others) have paid their attention to this issue, bringing a significant contribution to the development of management paradigm of financial potential of enterprise. Despite the number of scientific achievements in the sphere of financial resources management of enterprise there are still issues related to the improvement of

methodological approaches which require further research.

Under the conditions of instability and unpredictability of country's market environment, each enterprise should assess its level of opportunities adequately and manage its resources rationally.

The term "potential" means sources, capabilities, resources and stocks that can be used to solve a specific task or achieve the goal. The potential of enterprise reflects the state of its internal environment, which is a certain system of properties, which reveals its external relations in holistic manifestations. The following properties of a company's potential are: integrity, complexity, structural properties, dynamism, transparency, inertia, elasticity, proportionality, stability, synergy, self-organization, adaptability, flexibility, optimality, sufficiency, innovative character of development, mobility, time limit, goal-orientation [1].

Financial potential is one of the most significant indicators of proper management decisions, and its growth shows efficiency of the implemented policy, competitiveness and sustainability of development not only of economic entities, but of the whole country. The more efficiently the enterprises operate and the more funds they accumulate in their activities, the bigger income they generate for the budget of a region, as well as to the state budget in the form of taxes, and fines. And this, in turn, raises the level of social security of the country [2].

Analyzing scientific resources we can figure out that management of financial potential of enterprise is considered to be:

- the main component of economic potential;
- an independent management object;
- financial resource of an enterprise.

In our opinion, it is unreasonable to consider financial potential of enterprise and economic one separately due to their complex and interrelated nature, since the concept of financial activity of enterprise and its financial potential are closely connected to the economic sphere.

Interpretation of financial potential of an enterprise as the dominant and determining component of its economic potential will ensure the most effective implementation of goals, taking into account certain peculiarities of each stage of enterprise development. It will also promote their further balanced and coordinated measures aimed at proper identification of new opportunities for enterprise.

It should be noted that in modern economic literature, scientists identify financial potential with financial resources of enterprise. However, these two concepts are not identical, although they are similar

in their nature and content. Financial resources can be considered as a component of financial potential.

The criterial aspects of financial potential in interpretation of Ukrainian and foreign scientists are represented in table 1.8.

Table 1.8

Scientific approaches to interpretation of the concept of "financial potential of anenterprise"

Financial potential	Author												
	E.Tereshchenko	V.Bykova, Yu. Rysnyansky	T. Paentko	T. Nazarova	N. Sorokina	T. Kuzenko, N. Sablina	Yu. Ushkarenko, M. Shulga	G. Kulish, V. Chepka	P. Fomin.	R. Tolpezhnikov.	A. Buryachenko	N. Levchenko	G. Kucher
Financial resources	+	+			+					+			
System of business relations			+										
Dynamic characteristics of enterprise				+									
Availability of financial resources for an enterprise and its own funds						+							
Enterprise's business capabilities							+					+	
Enterprise's business partnership(s)									+				
Ability to accumulate financial resources											+		
Social and economic relations													+

Sourse: systemized by the authors

The analysis of scientific literature shows us that there is no single approach to interpretation of the concept of "financial potential of an enterprise". The views of researchers concerning this aspect of theory vary significantly from rather narrow interpretation of the term from perspective of financial resources to a broader one which includes the overall potential of an enterprise.

Thus, the above-given analysis gives us reasons to outline the following features of financial potential:

- financial potential is a broader concept than financial resources of an enterprise;
- financial potential determines the financial capabilities of the company and their implementation under certain conditions;
- financial potential affects the financial stability and competitiveness of an enterprise;
- financial potential involves achievement of positive financial results [10];
- financial potential influences the manufacturing potential in terms of available financial resources and funds for implementing technological innovation;

financial potential influences managerial potential by providing stable financial position of an enterprise which results in a better strategic potential, ensuring business profitability as well as implementation of effective business strategies;

- financial potential influences market potential through financial opportunities for marketing research, ensuring flexible pricing policy, a significant market share, lower shipping costs and sales operations [8].

Financial potential, as an economic category, is a complex dynamic system whose elements are interrelated and interdependent. Each element of this system depends on the level of enterprise's activity, its market position and competitive capabilities. Financing system and structure, access to borrowed financial resources, efficiency of management system is also among essential factors.

Thus, financial potential is a general concept of financial science and reflects a special sphere of financial relations, whose specific social purpose is to ensure the fulfillment of its inherent functions.

Kucher G.V. in his research outlines the following functions of financial potential:

- distributive – provides allocation and redistribution of financial assets between entities of economic relations in accordance with demand, supply, needs, expediency, motivation, goals and development

strategy;

- reproductive – generates a sufficient amount of financial assets at the disposal of economic agents to ensure their financial and economic activity;

- controlling – provides control over the formation, accumulation, use and reproduction of financial assets of the subject of economic relations in accordance with the current regulatory framework, current and long-term priorities of its development;

- indicative – makes it possible to analyze financial situation, its prospective trends, possible risks, ability of an enterprise to provide a reproduction process for the fulfillment of tasks and goals [14].

In addition to these functions, it is considered reasonable to distinguish informative function which (based the level of financial potential of an enterprise) promotes making strategic management decisions not only by the management of the enterprise but also its counterparts.

Formation of financial potential of an enterprise depends on various external and internal factors that affect both the ratio of funding sources and the amount of funds that an enterprise can draw from one source or another. That is why distinguishing a subgroup of external and internal factors will facilitate their search, systematization and analysis, and will make it possible to avoid significant risks for the company, take appropriate measures to maintain financial security and provide efficiency of decision-making process aimed at creating an optimal capital structure and ensuring financial stability and profitability of the enterprise.

While analyzing external factors, it is reasonable to consider not only local ones, that is, those which arise at the level of interaction between enterprises of a certain region, but also those of meso-level (branch). At the same time, it is necessary to take into account the influence of factors of global economy. In order to facilitate the choice of funding sources and optimize the structure of capital, we need to fully consider the impact of external factors, which should be grouped and categorized according to the following criteria: political, regulatory, general economic and financial.

General economic factors belong to the most influential factors that determine capital structure formation. They reflect the level of economic development, market infrastructure and general economic and sectoral trends.

Political factors arise due to causes which are irrelevant to activities

and business strategies of an economic entity and are hardly predictable. However, due to the high influence potential on the formation of capital structure of an enterprise, they are almost the most important, as there is a direct relationship between the stability of political situation in the country, local economic development and international economic relations, which in essence affect the formation of financial and commodity markets, where enterprises sell their products to gain profits and to attract funds from external financing sources. Another group of factors that need to be taken into account while choosing financing sources are those of financial nature. These include monetary policy, tax policy, monetary policy, the state of financial market development, stability of banking system, development of insurance market and stability of local currency. Internal factors influencing the formation of capital structure can be classified into three main groups: financial, economic, manufacturing, technical and managerial. Financial and economic factors describe the efficiency of financial management system of an enterprise, its investment policy and the practice of forming, planning, distributing financial resources under conditions of uncertainty and risk. The manufacturing-technical set of factors include all he stages of company's life cycle; assets structure of an enterprise; the growth rate of enterprise's turnover; stability of turnover dynamics; operating cycle period; features of the manufacturing processes etc. Managerial factors characterize efficiency level of enterprise's management, forecasting system, strategic and current planning, monitoring and operational regulation. Managing financial potential of an enterprise is a complex process that involves making managerial decisions in order to optimize financial and cash flows, the ratio of costs and results, as well as increase the positive financial result in accordance with the chosen strategy. Management of financial potential is based on the definition of tactical and strategic objectives, which are to increase production output, minimize risks, ensure profitability of operations, financial equilibrium, solvency and financial stability of an enterprise [8].

The system for managing financial potential of a company is represented in fig. 1.1.

Management system of financial potential of an entity relies on principles, objectives, tasks, functions, methods, tools necessary for its implementation, information support for decision-making in respect to areas related to financial potential development.

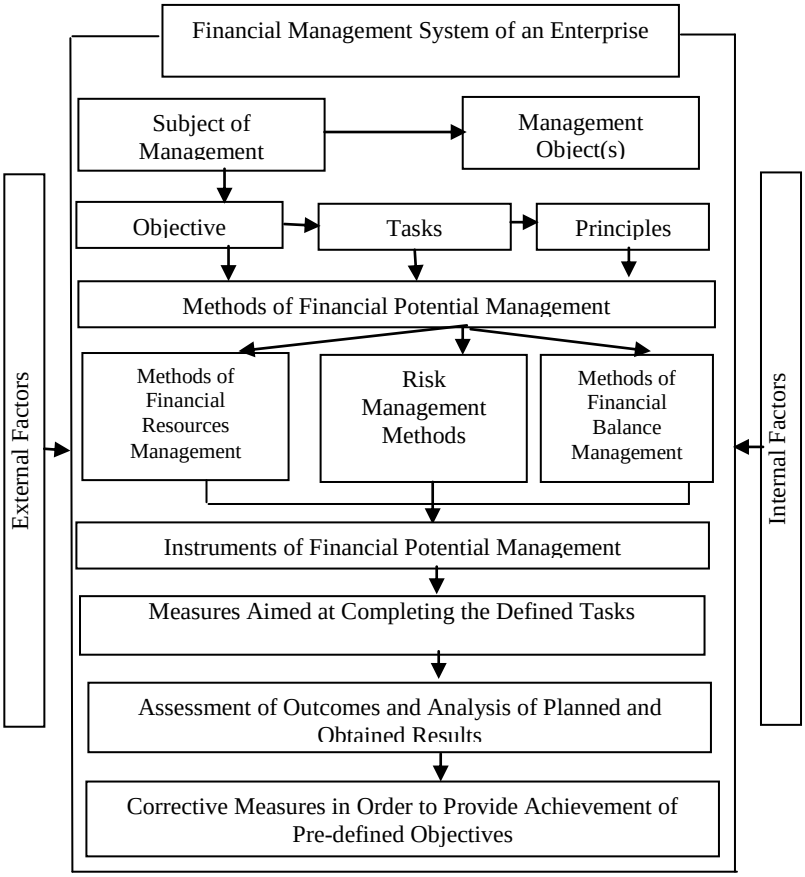


Figure 1.1. System of Enterprise's Financial Potential Management

Source: author's approach

The backbone factor in the financial potential management system of an enterprise is the effective application of financial market instruments. Its main function is to ensure cash flow from one economic entity to another. In particular, financial management must, while planning financial flows make use of all available tools including internal and external financing sources [11]. In addition, it is necessary to develop an effective financial risk management system for the enterprise, which will minimize company losses and increase its financial potential.

The capital management system of a machine-building enterprise comprises two independent but interconnected subsystems: a managing one and a subordinate one (fig. 1.2). The managing subsystem comprises all the personnel of an enterprise, its structural departments, which influence the object of management. The most important element of this subsystem is organizational management structure. Communication between the managing and the subordinate subsystems is carried out using information that is the basis for managerial decisions that are transferred from the managing subsystem to the subordinate to be implemented [15].

The main parameters of the system are input, process, output, feedback, and possible restrictions. A change as a result of a specific process is called an input. Output is the result or the final stage of the process. In the capital management system, the output will be the residual value and capital structure at the end of the system cycle. The main process converts the input into the output. This is the activity of management subject which provides funds circulation. The feedback compares the input and output model, distinguishes the differences, evaluates the nature of differences and affects decision-making process, which in essence influences the process of capital management in order to converge output and input.

Thus, the main task of improving quality of organizational aspects of Ukrainian enterprises is to create an effective system of enterprise's financial potential management, which is the main indicator of its sustainable development. The system of financial potential management with the help of economic methods, tools, principles, tasks, levers is designed to minimize the cost of capital and financial risk levels. Besides, it is aimed at forming an optimal capital structure, which will contribute to a more efficient allocation and application of financial resources; it will increase financial stability, and competitiveness of the enterprise. The introduction of the proposed system into practice of Ukrainian enterprises will not only improve the structure of economic resource management but also will facilitate the search for undisclosed potential reserves of the enterprise.

References

1. *Otenko, I. P., Malyarets, L. M. (2003). Mechanism of management of enterprise potential: scientific publication, Kharkiv Humanitarian and Environmental University, Kharkiv, 220 p.*

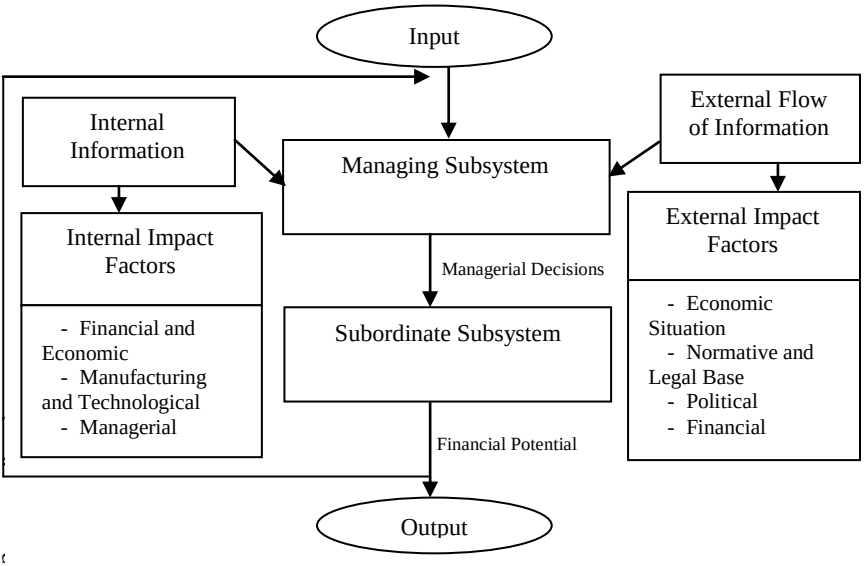


Figure 1.2 Interrelations between Managing and Subordinate Subsystems in General System of Financial Potential Management

Sourse: author's approach

2. *Kurina, O. V. (2014). Theoretical Aspects of Management of Financial Potential of Enterprises, Scientific Journal of the Academy of Municipal Management. Series: Economics, Vol. 1, pp. 161-171.*
3. *Tereshchenko, E. Yu. (2008). The economic essence of the financial potential of the enterprise, available at http://www.confcontact.com/2008dec/7_tereschenko.htm 2008 (accessed 27 November 2017)*
4. *Bykova, V. G., Rysnyansky, Yu. M. (2005). Financial and economic potential of enterprises of national importance - assessment and management, Finance of Ukraine, Vol. 6., pp. 56-61.*
5. *Paetko, T. V. (2006) Tax regulation in the context of forming the financial potential of the enterprise, Biznesinform, Vol. 9, pp. 96-98.*
6. *Nazarova, T. Yu. (2016). Management of financial potential of industrial enterprises on the principles of synergetic approach, Author's abstract. dis ... Candidate econ Sciences: special 08.00.04, Kharkiv Polytechnic Institute, National National Technical University, Kharkiv,21 p.*
7. *Sorokina, N. A. (2009). Financial potential of a commercial organization as an element of strategic management, Power and Management in the*

East of Russia, Vol. 1, pp. 57-66.
8. *Kuzenko, T. B., Sablin, N.V. (2015). Methodical approaches to management of financial potential of the enterprise, Current problems of the economy, Vol. 4, pp. 123-130.*
9. *Ushkarenko, Yu. V., Shulga, M. O. (2015). Identification of the concept of «financial potential» of food industry enterprises, available at: ophus.at.ua/publ/2015_10_30_kampodilsk/sekcija_section_3_2015_10_30/identifikacija_ponjatchja_finansovij_potencial_pidpriemstv_kharchovoji_promislovosti/104-1-0-1616 (accessed 25 November 2017)*
10. *Kulish, G. P., Chapka, V. V. (2017). Financial potential of the enterprise and its role in the conditions of instability of the economy, Ukrainian statistics, Vol. 1, pp. 29-35*
11. *Tolpezhnikov, R. O. (2013). Essence and method of estimation of financial potential of enterprise, Theoretical and practical aspects of economy and intellectual property, Issue 2 (1), pp. 277-282.*
12. *Buryachenko, A. E. (2013). Financial potential of regional development, Kyiv National Economic University, Kyiv, 342 p.*
13. *Levchenko, N. M. (2012). Financial potential of the enterprise: the essence and approaches to the diagnostics, Investments: practice and experience, Vol. 2, pp. 114-117.*
14. *Kucher, G. V. (2014). Financial potential as an economic category, Current problems of the economy, Vol. 9, pp. 46-52.*
15. *Shchink, G. V. (2005). The control system and its laws, Personnel, Vol. 10, pp. 62-67.*

Mazur Volodymyr
PhD in Economics, Associate Professor of the Department of International Business and Tourism
Horodetskyy Mykola
Postgraduate Student
Ternopil National Economic University (Ternopil, Ukraine)

MANAGEMENT OF INTERNATIONAL COMPETITIVE CAPACITY OF AN ENTERPRISE

Management of international competitiveness characterizing by a high level of complexity and indifference is necessary for Ukrainian enterprises to enter the foreign market under modern conditions. The

improvement of management of competitiveness of national enterprises leads to increase of export potential of a country that gives the possibility to support its constant development.

If earlier, the entrance to the foreign market was only one of the stages of a strategic plan of the development, then nowadays, the necessity to support the requirements of international competitiveness is a the most important task for national enterprises.

The following scholars have investigated the issues of the management of competitive capacity of enterprises and their entrance to the foreign markets: H. Azoyev, I. Ansoff, Ye. Beltyukov, J. Zavadskyy, I. Dakhno, I. Dolzhanskyy, T. Melnyk, M. Porter, I. Sivachenko, H. Strokovych, H. Filyuk, O. Yankovyy and many other. They considerably widened the view of peculiarities of the management of international competitiveness but some its aspects should be more thoroughly investigated.

Intensification of strict competitive methods, increase of the quantity of participants under the conditions of market economy caused an objective need in the development and improvement of new approaches to the management of product marketability at Ukrainian enterprises entering foreign markets.

The successful activity of national enterprises at foreign markets is defined by their product marketability. The concept of competitiveness is very important in the development of Ukrainian economy in the direction of the creating of competitive surrounding and support of Ukrainian business competitiveness.

Competition is a contest between participants of market economy for better conditions of production, buying and selling. It is a center of gravity of all system of market economy, a type of relations between producers regarding to price making and the volumes of offer of goods in the market [8, p. 42].

Four main levels of competitiveness of an enterprise are suggested to be differentiated [6, p. 268]:

- the first level – managers try only to produce goods but they do not pay attention to consumers;
- the second level – managers want their production to meet standards approved by competitors;
- the third level – managers no longer pay attention to competitors' standards and they themselves become "trendsetters" in the sphere;
- the fourth level – success is assured by managers but not by production, and an enterprise becomes "a trendsetter" in the market.

Different scholars interpret the term "competitiveness" in different ways and it depends on their points of view (table 1.9).

Table 1.9

Definition of the concept "competitiveness" provided by academic economists

Author	Definition
Michael Porter [9, p. 231]	The condition of the country or a separate commodity producer in foreign and national markets caused by economic, social and political factors.
O. Maslyayeva [18]	The aggregate advantages and abilities of a subject comparing with similar ones at struggle to achieve the goal under the conditions of law action of some environment (system).
J. Zavadskyy [4, p. 139-140]	Possibility to be in open market and stay profitable for a long time.
R. Fatkhutdinov [11, p. 23]	The object property characterized by the degree of a real and potential satisfaction of a concrete need in comparison with similar objects in the given market.
S. Yaroshenko [13, p. 136]	The ability of an enterprise to operate under the conditions of market relations and get profit sufficient for scientific and technical improvement of production, stimulation of employees and support of the quality of production at a high level. Competitiveness of an enterprise comes to product marketability.
V. Dykan [3, p. 30]	Peculiar combination of object's characteristics defining its place in the hierarchical system of evaluation of objects similar to it.
H. Voronin [1, p. 18]	Diverse concept including not only qualitative and price parameters of industrial production but depends on the level of management, the management of finances and investment and innovation composite of an enterprise.

Competitiveness of an enterprise is a complex and diverse phenomenon, which should be investigated in detail. The analysis of the definitions of this category gave the possibility to distinguish the following features provided in the table 1.10 [5, p. 87].

Table 1.10

Classification of competitiveness

Features	Types of competitiveness
1.Territorial-geographical feature	· International · Internally-national · Regional
2. The level of competitive objects	· Spheres · Enterprises · Goods
3. Fixation during some time	· For some period · Current · Predicting

The concept of competitiveness is very important index showing the stability of an enterprise and goods, and the level of production sales in the market.

One of the criteria defining the enterprise activity in the world market is the level of its international competitiveness. International competitiveness should be understood as the achievement of a competitive enterprise in the contest in international market.

We provide the following process of the assessment of the competitiveness of an enterprise found in scientific literature, which we consider the most complete:

1) establishment of the production compliance with the applicable requirements;

2) foundation of the set of indices for the assessment of product marketability;

3) choice of standard for the comparison;

4) comparison of qualitative, economic and marketing indices for the assessment of product marketability;

5) analysis of possibilities of an enterprise concerning improvement of these coefficients;

6) calculation of an integral level of product marketability;

7) analysis of competitive advantages and drawbacks comparatively with competitors [12, p. 258].

The assessment of product marketability using comparison of the single parameter of analyzed production with the base of comparison should be made. The base of comparison can be the next: needs of consumers, the goods of competitors, similar product and other. In addition to that, differentiated, complex and mixed methods are used.

The most famous methods for assessment of competitiveness are matrix methods based on use of matrices (tables). They can not estimate the level of competitiveness of a company but they make the analysis of some aspects of business entity activity, the surrounding of functioning, define the position in the market and find the further directions of the development.

The following matrix methods are widely used: BKG Matrix, Ansoff Matrix, McKinsey Matrix, Competitive strategies Matrix, Porter Matrix, ADL Model, Thompson Matrix, Strickland Matrix, SWOT-analysis, SPACE-analysis, STEP-analysis and STEEPV-analysis.

Benchmarking method is used to define competitiveness of an enterprise. It is one of the most popular approaches used by companies all over the world.

Benchmarking is an art of revealing what other companies do better and what other enterprises study, improve and what methods they use [17].

Benchmarking is suggested as the way of assessment of strategies and goals of an enterprise comparing with top enterprises in the given sphere to support high and long-term positions in the market. The advantage of this method is that the coefficients of a standard company are taken as the base and example. However, there is a drawback in such method, an adequate assessment becomes impossible in case of inadequate information about competitors.

The investigation of competitiveness is the analysis of factors of competitiveness. It is the reasons (essential circumstances), which influence the level and character of competitiveness of an enterprise or define it [10, p. 114].

In general, scholars distinguish external and internal factors in the works written by I. Dolzhanskyy and T. Zahorodna (table 1.11) [2, p. 32]. It should be mentioned, that the factors of competitiveness function are not isolated from one another but systematically act that increase the influence of each factor on the activity of an enterprise.

The internal factors depend on the activity of an enterprise, the system of management, the state of resources, the system of strategic management etc. The given factors characterize internal surrounding of an enterprise and from the point of view of its competitiveness reveal the possibility of adaptation to the conditions of external environment. External factors do not depend on an enterprise and they are caused by the state of external environment. According to the sources of the origin, external factors are heterogeneous because they can be shown in the systems of different level. They are divided into:

Table 1.11

Classification of the factors of competitiveness

Factors of competitiveness	
Internal factors	External factors
Political state. Economic relations. Competitors. Production forces. Raw materials. Technical and technological level. Industrial management system. Plant concentration. Legislative base.	The system and methods of management of an enterprise. Technological level and production process. Long-term planning. Marketing concept. Innovation production.

– branch – they are mechanisms of internal branch regulation, the condition of demand, the level of branch competition;

– macroeconomic – it is market national economy, demand solvency, the level of the development of market infrastructure;

– factors of the world economy – international market situation, international labor division, currency rate, international agreements.

Therefore, an enterprise should be oriented on internal factors where it has a direct impact. However, to manage competitiveness, it is necessary to define correctly the existing factors of competitiveness to react in time on the results of their influence.

Taking into account the European experience of the complex management of competitiveness of an enterprise it is necessary to define that nowadays, European countries support the management of competitiveness at the stage of product development where the methods are created, which minimize the possibility of the appearance of an error at the stage of production.

Forming strategies of management of competitiveness of an enterprise is one of the most important and complex stages of strategic planning. In current market conditions, the search of such organizational and economic mechanisms of the development of the strategy of management of competitiveness, which support an effective development of a company in national market and give the entrance to international markets, is necessary.

LLC “Halychyna Tcukor” Company (Halychyna Sugar) was established in 1969. It is situated in Zbarazh, its address is 47300, Ternopil region, Zbarazh district, Zbarazh, Karmalyuk Square, 1.

This enterprise is a limited liability company, its authorized fund is distributed into shares, and the statute of an enterprise defines their margin.

As a result, for example, in 2015, 304 000 tons of sugar was produced by the plant that is in 23.3 thousands tons more than it was produced in 2009.

The season of sugar refining of 2010 was finished with high technical and economic coefficients. The average daily productivity of sugar beets is 113.5% in comparison with the plan. The coefficient of the use of production facility is 1.03. Sugar output is 11.73%.

In 2010, 15 564.9 tons of sugar was produced.

However in 2011, 300 000 tons of sugar beets was refined with its own and hired equipment. It will give the opportunity to support our region with this sweet product.

In March/2004, the enterprise became the prizewinner of All-Ukrainian contest in the product quality "100 the best products of Ukraine – 2003" for the qualitative production of white sugar.

In April/2004, the enterprise was rewarded with the Diploma of International Academic Rate of popularity "Golden Fortune".

The production of the enterprise – white sugar was recognized to be the best production according to the results of All-Ukrainian contest in product quality "100 the best goods of Ukraine – 2003" at the regional level and it was rewarded with the Diploma of finalist by Ternopil Regional State Administration.

A great experience in sugar industry skillfully combined with modern technologies and equipment, an effective use of raw materials and resources will develop and to be successful Zbarazh sugar plant in future.

During 2009, sugar refining was made at LLC "Sugar Plant Zbarazh", which was registered on May/25/2009 within the company "Agroholding Mriya".

Since 2010, LLC "Zbarazh Sugar Plant" has been refining the sugar in the team "Mriya".

Production facilities of an enterprise is 3 000 tons of sugar beets refined per a calendar day.

The main competitors of this enterprise in Ternopil region are: LLC "Buchach Tsukor", LLC "Kozova Tsukor", LLC "Lanivtsi Tsukor", LLC "Borshchiv Tsukor", LLC "Khorostkiv Tsukor" and other sugar plants in the region. Chortkiv plant is a leader. In 2016, only LLC "Company "Halychyna Tsukor" worked, that is why the main

competitors of the enterprise are all subjects of the given branch in Ukraine (fig. 1.3). The main competitors in the context of their shares in the market in 2014 were shown in Figure 1. Last year, LLC "Company "Halychyna Tsukor" was a member of a company "T-Tsukor" (T-Sugar).

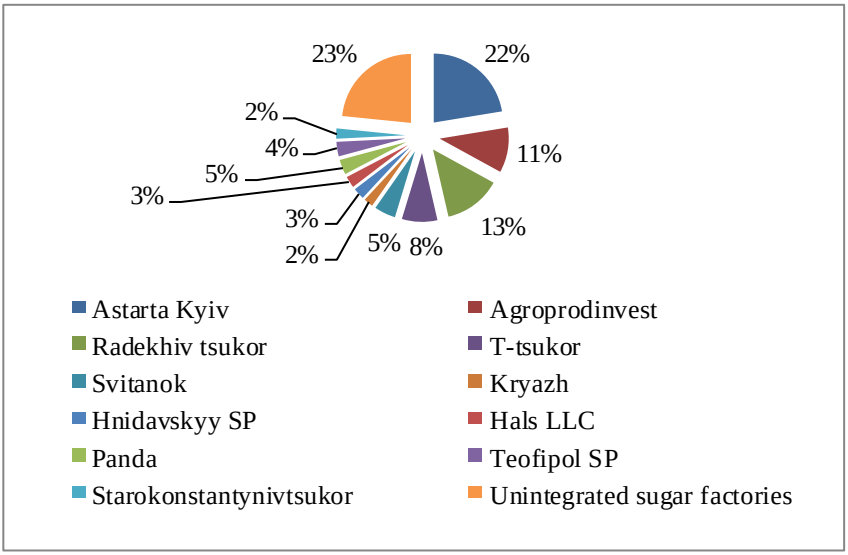


Figure 1.3. The structure of producers of sugar from sugar beets in 2014, thousands tons %

In fig. 1.3, the main competitors of T-tsukor were shown, to this group belong LLC "Company "Halychyna Tsukor". The main leading companies of the given branch are the following: "Astarta Kyiv" (22% in the market), Agroprodinvest (11% in the market) and "Radekhiv tsukor" (13% in the market). These companies have some plants. After the disorganization of the company "T-tsukor" the main competitors should be analyzed taking into consideration the produced sugar (fig. 1.4).

LLC "Company "Halychyna Tsukor" produced 43.004 thousand tons of sugar in 2015. It is on the 13 place among all plants in Ukraine. The leader is LLC PC "Zorya Podillya" (Haysyn), which was produced 104.05 thousand tons of sugar. Among other plants, high indices were shown by LLC "Radekhiv Tsukor" (Radekhiv production) – 102.273 thousand tons, private joint-stock company "PC Podillya" (Kryzhopil

sugar plant) – 90.705 thousand tons. In fig. 1.4, 18 the biggest producers of sugar were shown (75.4% of the total quantity of sugar in Ukraine).

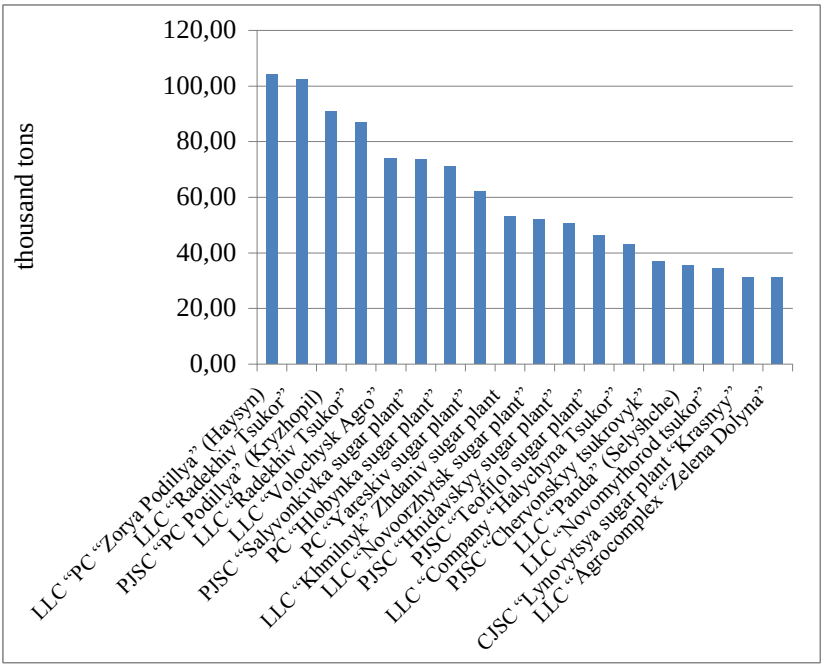


Figure 1.4. The biggest producers of sugar in Ukraine

However, investigation of this issue needs additional analysis because production facilities of each plant, the duration of production and the quantity of refined sugar beets are different. That is why, in Figure 3, the shown part of refined sugar in comparison with the total quantity of refined sugar beets was depicted. This index shows the productivity of an enterprise.

LLC "Company "Halychyna Tsukor" refined 304.84 thousand tons of sugar beets from which 43.004 thousand tons of sugar was refined. The part from the total quantity of the final production is 14.11%. The production process was 83.8 days. The most productive plants were private joint-stock company "Chervnonskyy tsukrovyk" – 15.86%, LLC "Radekhiv Tsukor" (Chortkiv production) – 15.78% and PC "Hlobynka sugar plant" – 15.72%.

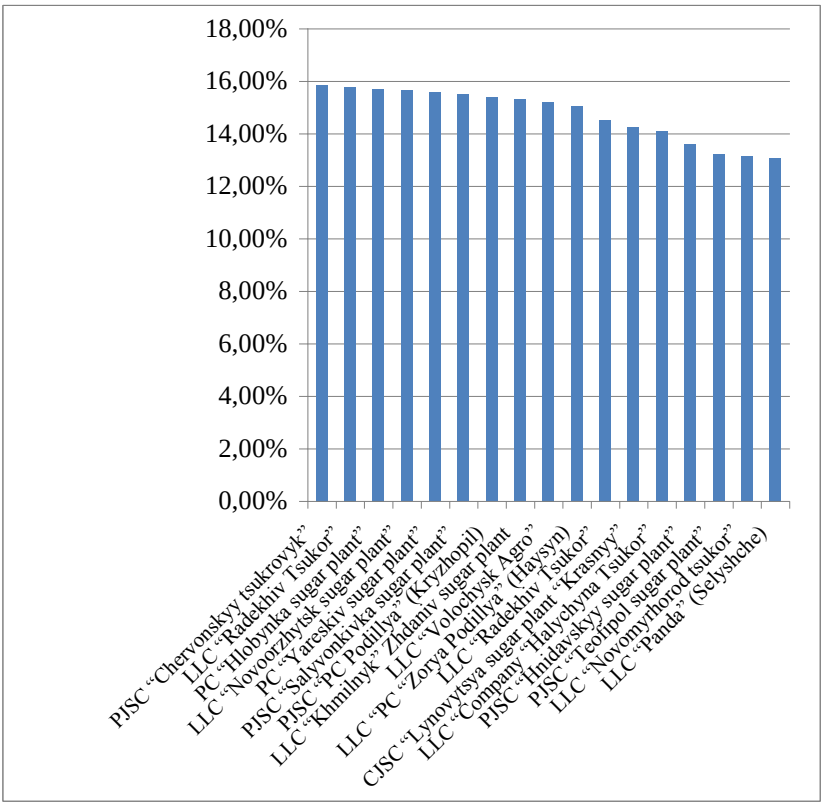


Figure 1.5. The part of produced sugar in the quantity of refined sugar beets

The profit from realization of production of LLC "Company "Halychyna Tsukor" was 470835 thousand hryvnyas in 2014. Gross income of the enterprise was 5239 thousand hryvnyas. Financial result of the plant from the operation is that the loss was 51085 thousand hryvnyas.

The main reasons of worsening of financial state of an enterprise are the following:

- price increase on material and technical means and energy resources (the situation is out of control but it influences the profit level);
- absence of motivation factors of support of normal labor productivity (unpaid wages);

- insufficient economic preparation of managers in new economic conditions (absence of economic reforms in the villages, economic control sticks are not used to increase production efficiency, sugar beets storage is decreased);

- insufficient marketing activity;

- unstable market price on realization of white sugar which is lower than cost price and other.

Possible ways out from the difficult financial situation:

1. Full economic reform including property and labor relations to develop business activity, which is one of acting key factors of increase of productivity and increase of efficiency of an enterprise activity on the base of rational use of available potential of labor resources and material and technical means of production.

2. Increase of the level of technical equipment of an enterprise, support of a gradual transition to progressive production methods that require additional financial costs but it supports increase of labor productivity and decrease of price of cost.

3. Support of rational development of cooperation and integration in interconnected branches of agro-industrial complex, creating cooperative and integrating systems and equal financial relations that create good economic conditions for an effective work of an enterprise.

The development of the strategy of management of competitive capacity of the enterprise requires assessment of its competitiveness. This process includes the following:

1) the main criteria of the assessment of competitive capacity of the enterprise. Evaluating category –"value of the enterprise as a business entity" is taken into account. To make a complex assessment of competitiveness of LLC "Company "Halychyna Tsukor", the assessment of internal current condition of the company that influences foreign economic activity should be made using questioning among the staff. 21 persons took part in this inquiry (table 1.12).

Analysis of internal current condition of the enterprise showed that planning, organization, motivation, monitoring and coordination were badly formed at the enterprise. Management of the enterprise is authoritarian because the control function got more points. Coordination was well organized at the enterprise.

The motivation function of management showed the worst result. Employees do routine work and they are not responsible for the result. The manager is responsible for the result. There is no corporate culture at the enterprise without a leader.

Table 1.12

Assessment of competitive capacity of LLC "Company "Halychyna Tsukor"

Criterion	Maximum	Assessment
1	2	3
1. Forecasting	20	11
1.1. Statement of goals and strategic tasks	4	2
1.2. Collection and analysis of information about clients and market	4	2
1.3. Detailing of business process	4	2
1.4. Collection and analysis of information about competitors and benchmark companies	4	2
1.5. Planning of resources	4	3
2. Management	20	11
2.1. Forming of organizational structure	4	3
2.2. Distribution of powers and setting of area of responsibility	4	2
2.3. Conditions for creating of an organization with self-education	4	2
2.4. Execution of the main process	4	3
2.5. Efficiency of the process of creating of new values for customers	4	1
3. Motivation	20	9
3.1. Leadership and corporate culture	4	1
3.2. Conditions for study and professional development	4	2
3.3. The level of workers' needs	4	3
3.4. Attraction of employees into the process of improvement	4	1
3.5. Satisfaction of employees with the results of their activity	4	2
4. Monitoring	20	12
4.1. Quality test system at each stage of business process	4	3
4.2. Criteria of the assessment of results	4	3
4.3. Measuring of the level of consumers' satisfaction	4	2
4.4. Rational use of resources	4	2

Table 1.12 (continued)

1	2	3
4.5. Correlation of results for the expected goals	4	2
5. Coordination	20	12
5.1. Combination and coordination of the first four functions	4	2
5.2. Establishment of internal mutual relations of an organization	4	3
5.3. The system of permission of conflicts	4	2
5.4. Current analysis of deviations: revision and correction of plans	4	2
5.5. Information management	4	3
Total assessment of management	100	55

Employees are not allowed to take part at taking decisions and their propositions are not discussed in order to improve the processes at the enterprise.

2) Aggregate index of competitive capacity of the enterprise got 55 points that is higher than a medium one. The scale of the development of management is used for assessment of the level of the development at the enterprise LLC "Company "Halychyna Tsukor" (table 1.13).

Therefore, the results of the investigations show that the level of the development of management of competitive capacity of LLC "Company "Halychyna Tsukor" is at the third level (55 points). In such a way, we can make the following conclusions: the system of management was formed at the given enterprise. The necessity in optimization of business processes and improvement of the equality should be made.

The analysis of the enterprise in particular, financial indicators showed the fall of net profit and the coefficients of profitability remain stable. The enterprise pays its attention at the sale of the main goods – white sugar. Marketing strategy is practically absent at the enterprise.

To assess of competitive capacity of the enterprise, it is necessary to define strong and weak points of the enterprise and its threats and possibilities. SWOT-analysis was used in making analysis (table 1.14).

Taking into consideration the data shown in table 1.14 made on the base of the created earlier SWOT-matrix we can define the main strategies of the activity of LLC "Company "Halychyna Tsukor".

The strategy S4O2 is the development of its own raw materials. The enterprise has a great amount of land where sugar beets can be grown. It will allow being less dependent on suppliers and save compensations.

Table 1.13

The levels of the development of management

Level	Assessment	Characteristic of the condition of management
1	(0-20)	Unsystematic management of the enterprise and the goal is not defined. Principles of management are should be reviewed.
2	(21-40)	Management has prospects for the development but possibilities are badly realized. Managers should define the goal and strategy of the enterprise.
3	(41-60)	The system of management was formed. There is the necessity in optimization of business processes and improvement of quality. The importance in consumer and personnel should be taken into consideration
4	(61-80)	Continuous improvement of the quality of management in most directions is made. Problematic areas should be improved using benchmarking and other strategies.
5	(81-100)	The system of management is perfect and maximal result was achieved in all directions.

The expenditures of raw materials and material equipment is about 85% of price cost of sugar because of which accounting of expenditures and monitoring of the used materials in the branch of sugar has a significant meaning. This indicator could be less if the raw material base was developed at the enterprise. The expenditures on buying the raw materials decreased and it decrease the price cost of sugar. The strategy of the development of raw material base will give the impulse of realization of the strategy of the decrease of expenditures. It will allow offering production with lower price than market price. In future, after market development, the enterprise can offer the optimal price that increases the enterprise profit.

The strategy S2T1 is orientation on the quality of production. Good quality of production will allow selling the goods at higher price than competitors sell. During currency fluctuations, competitive positions will not lose.

The strategy of orientation on the quality of production predicts implementation and supports of the system of management of product safety, which meets requirements ISO 22000:2005 “The system of

Table 1.14

SWOT-analysis of the enterprise LLC "Company "Halychyna Tsukor"

Strong points U=294	Weak points U=125
S1: High qualification of the staff - Z=7 P=8 V=56	W1: Insufficient own financial resources - Z=6 P=8 V=48
S2: High quality of production - Z=8 P=10 V=80	W2: Old material and technical equipment - Z=5 P=7 V=35
S3: Modernization of production - Z=5 P=8 V=40	W3: Law quality of roads - Z=4 P=5 V=20
S4: A great amount of land - Z=6 P=6 V=36	W4: Old management and old personnel - Z=4 P=4 V=16
S5: Comfortable geographical location - Z=5 P=6 V=30	W5: Absence of vacant places - Z=2 P=3 V=6
S6: Close location to a regional center - Z=4 P=4 V=16	
S7: Developed transport system - Z=4 P=5 V=20	
S8: A great experience of a job - Z=4 P=4 V=16	
Possibilities U=129	**Threats U=161**
O1: Modernization and technical re-equipment - Z=5 P=9 V=45	T1: Considerable currency fluctuations -Z=5 P=6 V=30
O2: Development of own raw materials - Z=6 P=7 V=42	T2: price increase on energy resources -Z=4 P=6 V=24
O3: Attraction of investments - Z=4 P=8 V=32	T3: Change of macroeconomic indicators -Z=5 P=7 V=35
O4: Joining the EU - Z=2 P=5 V=10	T4: Political instability -Z=5 P=6 V=30
	T5: Unfavorable investment climate - Z=6 P=7 V=42

where:

Z – assessment;

P – importance for us;

V – significance (Z×P).

management of product safety are requirements to organization of the chain of production and supply" and spreads on the production of white

sugar, molasses and residue. It is necessary to develop a complex approach to the quality management. This approach should have multi-purpose character of quality management and touch all stages of producing the goods.

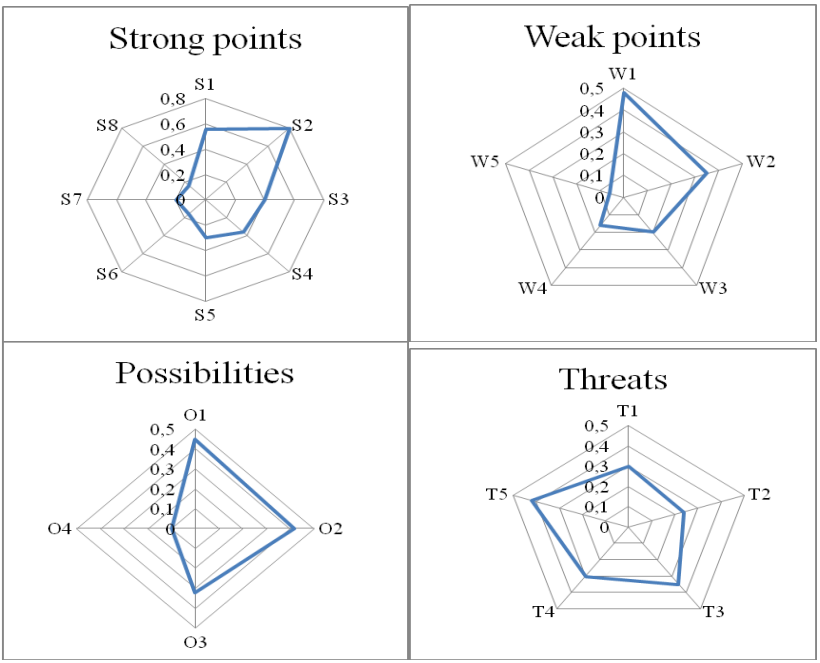


Figure 1.6. SWOT-analysis of LLC “Company “Halychyna Tsukor”

The enterprise should consider the problem of the choice of priority investors for their cooperation. Choosing an investor, managers should take into consideration the goals of the enterprise. In our opinion, German company Pfeifer & Langen is the best variant for attraction of investments. This company has been cooperating with Ukrainian enterprises for some years. In particular, the given company is a partner of LLC “Company “Halychyna Tsukor”, its production facilities are concentrated at Chortkiv and Radekhiv plants. In 2014, German company invested 200 million hryvnyas in modernization of production facilities of Chortkiv production. Nowadays, these plants have leading positions not only by quantity of production but also by effective production.

It should be mentioned that, in recent years, because of decrease of population and decrease of production of food industry, first of all confectionary industry, the volume of national market of sugar has a tendency to reduction. Nevertheless, foreign market remains attractive. In particular, the increase of export of Ukrainian sugar (fig. 1.7) and entrance of Ukrainian enterprises new sales markets (fig. 1.8).

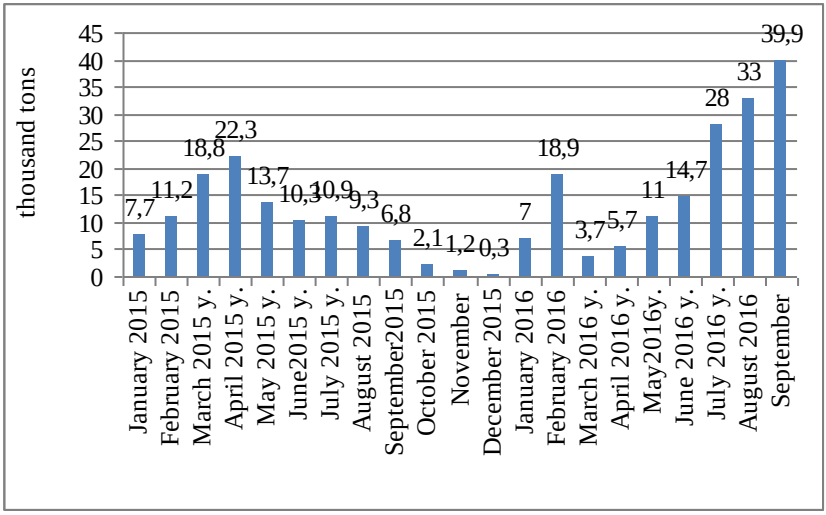


Figure 1.7. The volume of export of sugar during 2015-2016

During September/2016, Ukrainian producers of sugar exported 39.9 thousand tons of production that is the biggest month indicator during the last 5 years. In general, the tendency to increase of sugar export can be observed. In September/2016, it was exported the production almost in 6 times more than during this period last year.

The most amount of sugar was exported to Sri-Lanka (11.52 thousand tons), Georgia (6.43 thousand tons) and Azerbaijan (4.62 thousand tons). The considerable part of Ukrainian sugar was exported to Myanmar (4.24 thousand tons) and Tajikistan (2.28 thousand tons). The income of Ukrainian enterprises from export was $ 230. 4 million, what is in 5 times bigger than last year ($ 26.7 млн.). Romania is the biggest European exporter of Ukrainian sugar.

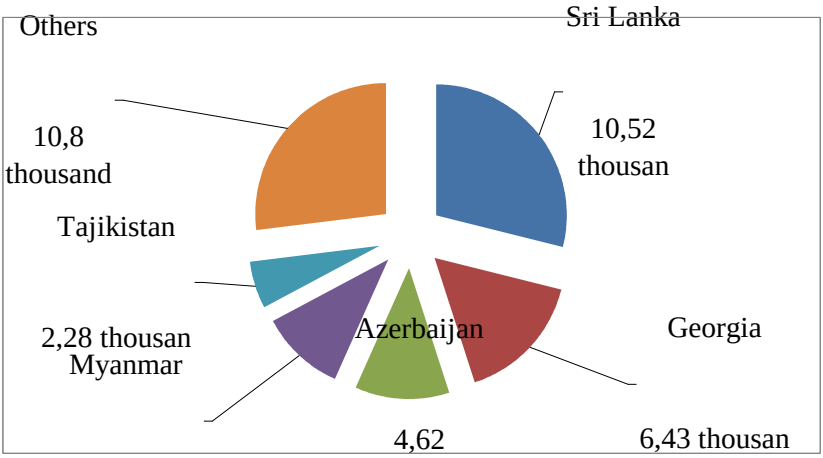


Figure 1.8. Importing countries of Ukrainian sugar during 2016

Last years, the geography of exported sugar changed greatly, it was caused by complicated relations between countries of CIS (in particular Russia) and after signing the Agreement about Association of Ukraine with EU. Besides usual countries of CIS, new countries like Sri-Lanka and Myanmar appeared. Ukrainian producers increase production of sugar that is in great demand in foreign market.

M. Yarchuk, the Head of the managing committee "Ukrtsukor", stated that since September/2015 till July/2015, 110 thousand tons – 6% from refined sugar was exported and it filled the export quota to EU during 2014-2015. In particular, 18.9 thousand tons (the quota was 20 thousand tons), the biggest amount was exported to Romania (almost 16.8 thousand tons). To Poland 1.15 thousand tons and sugar was exported to Great Britain, Bulgaria, Greece and Latvia [16].

The biggest export was made to Kirghizia (44.1 thousand tons), Kazakhstan (7.7. thousand tons), Moldova (6.58 thousand tons), Iran (4.32 thousand tons), Turkmenistan (4.5 thousand tons) and Georgia (3.86 thousand tons). 5.243 thousand tons of sugar was exported to Russia during that period [16].

Except sugar, other products were exported to foreign markets, they are:

– molasses. During 11 months, 12.2 thousand tons of molasses was exported to foreign markets. The main export markets were Poland (7.4 thousand tons) and Hungary (4.7 thousand tons). The volume of export

in November comparatively to that in October decreased in 26% on the base of the shrinkage of export to Poland;

– sugar confectionary production without cacao. 19 592.96 tons of this production was exported during eleven months this year and 15% was exported to Kazakhstan;

– sugar beet pulp. The export of this product during 11 months, it was 26.5 thousand tons which was exported to Poland [15].

For an enterprise LLC "Company "Halychyna Tsukor" the priority of importing countries are countries of the near Asia such as Azerbaijan, Georgia and Tajikistan. It was caused by the cooperation between Ukraine and these countries and the deficit of sugar at the markets of those countries. Geographical factor had a significant impact on it. The markets of Kazakhstan, Kirghizstan, Turkmenistan and Iran remain important for the enterprise.

1.6 million tons of sugar – the export quota was defined for national producer for the national market of Ukraine.

Almost 70% of sugar produced in the world is used for national public consumption. The level of sugar consumption in the main countries-producers fluctuates from 9 kg per year, in China, it is up to 59 kg per year and in Brazil, 20 kg is used per year [7, p.330-331]. In Ukraine, the production of sugar exceeds the consumption that gives the possibility to export this production abroad (fig. 1.9).

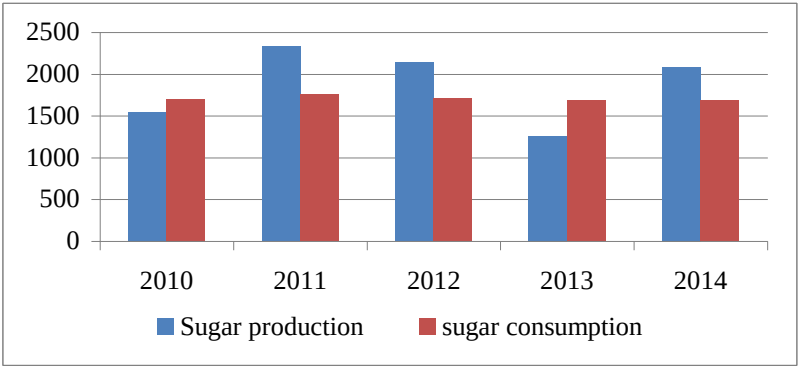


Figure 1.9. The volume of production and consumption of sugar in Ukraine

China, Indonesia, Japan, South Korea, Malaysia and other are the biggest importers of sugar. After the reform in sugar beet base, many

countries of the EU became countries-importers of sugar.

Therefore, competitive surrounding of an enterprise is a complex economic category, which shows the interaction of some enterprises, a country, and factors of external and internal impact on the conditions of foreign economic activity. The structure of competitive surrounding includes the following: a state with its policy in the sphere of regulation competition; potential competitors entering the branch; consumers making pressure on an enterprise; consumers.

The assessment of competitive capacity of an enterprise shows the level of the development of management of competitiveness of LLC "Company "Halychyna Tsukor" is not high enough. That is why there is a necessity in optimization of business processes and improvement of quality. The importance of a consumer and personnel should be taken into consideration during the improvement of the system of management.

The investigation of competitive surrounding of the enterprise showed that the volume of sugar production is considerably bigger than the volume of consumption, that is why enter the foreign market of the enterprise is reasonable. Priority countries for cooperation are the following: Georgia, Azerbaijan, Tajikistan, Kazakhstan, Turkmenistan, Kirghizstan, Romania, Moldova and Sri-Lanka.

It should be emphasized that the enterprise re-equips every year. New technologies influenced both production and storage. Therefore, electronic scales are set up in packing department to support accurate packing of sugar. Strict system of accounting production was introduced.

However, we suggest that changes in production were insufficient because many different productions with different indicators of consumer characteristics appear in the world, and the production comparing with those ones does not satisfy modern needs of consumers. That is why, nowadays, qualitative characteristics of production are the main reasons.

According to the data taken from Table 1.15, we can make the next conclusions: sugar is white and friable in both producers. Its taste is sweet and without some smell. Nevertheless, the clearness of solution in LLC "Company "Halychyna Tsukor" is slightly muddy with insignificant sediment. However, the competitor's solution is clear. Therefore, the findings can be ranked at points showed in table 1.16.

Table 1.15

Comparative characteristic of white sugar produced by LLC "Company "Halychyna Tsukor" with its close competitors taking into account organoleptic indices

Coefficients	Producers	
	LLC "Company "Halychyna Tsukor"	LLC "Radekhiv Tsukor"
External appearance	Crystal powder	Crystal powder
Color	White	White
Friableness	Friable	Friable
Taste and smell	Sweet without any taste and smell in dry and water solution	Sweet without any taste and smell in dry and water solution
Clearness of solution	Sugar solution is slightly muddy, it has insignificant undissolved sediment and some admixtures	Sugar solution is clear, it has insignificant opalescence without undissolved sediment, mechanic or other admixtures

Table 1.16

Quality rating of white sugar produced by LLC "Company "Halychyna Tsukor" in comparison with the closest competitor taking into consideration organoleptic indices according to five-points rate

Coefficients	Producers	
	LLC "Company "Halychyna Tsukor"	LLC "Radekhiv Tsukor"
External appearance	4	5
Color	5	5
Friableness	4	5
Taste and smell	5	5
Clearness of solution	3	4
Total	21	24

Therefore, according to the results of the investigation of the quality of white sugar we can make the following conclusion that the sugar produced by LLC "Radekhiv Tsukor" meets all standards. The production of LLC "Company "Halychyna Tsukor" slightly compromises on quality. However, produced sugar by both competitors meets all standards for industrial processing.

Thus, nowadays, the activity connected with foreign economic activity entails many risks.

We will make a graph to reveal the degree of impact of factors on the activity of LLC "Company "Halychyna Tsukor" (fig. 1.10).

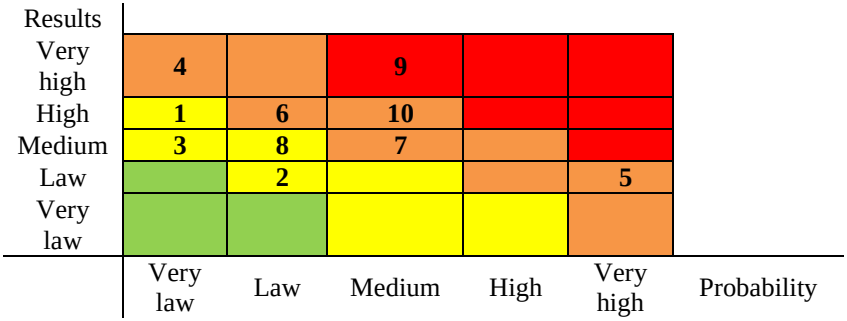


Figure 1.10. Graph of risks of foreign economic activity of LLC "Company "Halychyna Tsukor"

Therefore, the following risks are the most threatening for the enterprise:

– risks connected with customs regulations;

– risks connected with getting inadequate information about the market and competitors;

– ineffective marketing activity in foreign market.

To perform foreign economic activity, the enterprise should have the only strategic plan of the development to support the achievement of competitive advantages. The choice of the strategy needs a complex and systematic approach that is why, for its development the balanced system of coefficients was included that supports it in making strategic and tactical decisions and optimizing the use of internal resources of the enterprise for the development of competitive advantages.

The competitive strategy includes competitive strategy, product stewardship, marketing, production and personnel strategies. Competitive strategy supports the enterprise with competitive advantages by reducing expenditures. Product stewardship considers sugar packing for retail trade. Production strategy includes variety growth and differentiation of production. Marketing strategy supports stage-by-stage market entry with a gradual price increase up to market ones. Personnel strategy supports the enterprise with new specialists in the sphere of marketing and foreign economic activity.

References

1. *Voronin H.O. (2004), "About Competitiveness of Industrial Enterprises", Ekonomist [Economist], Moscow, no. 6, p.18.*
2. *Demyanchenko A.H. (2009), "Assessment of Effectiveness of Organizational Structure of Export Activity of an Enterprise", Mehanism rehulyuvannya ekonomiky [Mechanism of regulation of economy], no. 1, pp. 130-137.*
3. *Dykan V.L. (1995), Support of Competitiveness of an Enterprise, Manual, Osnova, Kharkiv, 158 p.*
4. *Zavadskyy J.S. (2006), Economic Vocabulary: Kondor, Kyiv, 356 p.*
5. *Yankovyy O.H. (Ed.) (2013), Competitiveness of an Enterprise: Assessment of the Level and Directions of Promotion: Monograph, Atlant, Odesa, 470 p.*
6. *Lehkyy V.I. (2015), "Stages of Assessment of Competitiveness of an Enterprise and Types of Strategies its Increase", Naukovo-informatsiynyy visnyk "Ekonomika" [Scientific and Information Messenger "Economy"], no. 11, pp. 267-273.*
7. *Melnyk T.M. (2007), International Trade under the Conditions of Intensification of Global Competition: Monograph, KNTEU, Kyiv, 396 p.*
8. *Dakhno I.I. (Ed.) (2006), Management of Foreign Economic Activity: Manual, Tsentr navchalnoyi literatury, Kyiv, 304 p.*
9. *Porter M. (2001), Competition, Izdatelskii Dom "Wilyams", Moscow, 495 p.*
10. *Stelmashchuk N.A. (2013), "Structure of Marketing Management of Competitiveness of Agrarian Producers", Innovatsiyna ekonomika. Naukovo-vyrobnychyy zhurnal [Innovation economy. Scientific and industrial journal], no. 8, pp. 11-117.*
11. *Fatkhutdinov R.A. (2000), Competitiveness: Economy, Strategy, Management, INFRA-M, Moscow, 311 p.*
12. *Shynkar S.M. (2011), "Analysis of Methods of Assessment of Competitiveness of an Enterprise", Ekonomichna stratehiya I perspectyvy rozvytku sfery torhivli ta posluh [Economic strategy and prospects of the development of trade and service sphere], no. 1, pp. 256-261.*
13. *Yaroshenko S.P. (1998), Reserves of Increase of Competitiveness of Meat Subdivision of Ukraine, Kozatskyy Val, Sumy, 249 p.*
14. *Maslyeyeva O.O. (2011), "Economic Concept of the Category "Competitiveness": Definition and Systematization", available at: http://www.economy.nayka.com.ua/?op=1&z=737.*
15. *Ukrainian Agrarian Confederation, available at: http://agroconf.org.*
16. *Ukrainian news (2015), available at:*

http://ukranews.com/ua/interview/1209-golova-pravlinnya-ukrcukru-yarchuk-do-4-veresnya-spravedlyva-cina-na-cukor-povynna-buty-ne-menshoyu-nizh-16-165-gryven/kg.

17. *Yatsura V.V. (2011) "Analysis of Methods of Assessment of Competitiveness of Enterprises", available at: http://www.nbuv.gov.ua/old_jrn/Soc_Gum/Vviem/ 2011_2/18.pdf*

Novakovska Iryna
Doctor of Economic Sciences
National Aviation University
Ishchenko Natalia
Graduate Student
Institute of Agroecology and Nature Management of NAAS
(Kyiv, Ukraine)

TRANSPORT STRATEGY OF UKRAINE IN THE CONTEXT OF EUROPEAN INTEGRATION

System of road is an integral part of the one transport system of Ukraine. For last years the composition of road threads (потоки) has been changing. Their chain is being expended, equipment is being been better. Chains of international and national transport`s corridor are being expended, road`s infrastructure is being upgraded. Process of national transport`s integration with European happens now. This concept is creating conditions for accelerated ecological, social-economic development of the country, strengthening economic safety, increase of chain road`s competitiveness for increase of transit traffic and development of tourism.

Land is the main territorial operational basis. Also land plays an important technological role in the field of road and road engineering also. Transformations in the road system of Ukraine predetermine significant changes in the composition of the roads of road transport and road transport.

Question of rational, effective using of land road transport and road ménage, its safety is one part ecological safety problem. So solution these problems is an obligation of our state according to Constitution of Ukraine (Article 16).

Problem of the development road complex of Ukraine needs an

essential arrangement on the modern innovation base. But achievement of positive results is not be able without account specific features formation of management system of this branch whole.

Complicated character of legal regulation land relations in the transport-road branch causes the relevance decision of the problem rational use these land, where legal ambushes demand further study and introduction into economic activity.

In this context, the question of the formation of an adequate legal and regulatory framework for the regulation of land relations in the field of road transport is of great importance. This statement proves that it is necessary to carry out in-depth analysis of the key aspects characterizing the movement towards ensuring the system integrity of the sector's functioning.

The reforms of recent years depend in particular of the implementation of the Ukraine-2020 Sustainable Development Strategy, the implementation of the Association Agreement between Ukraine and the EU, which provide for an in-depth and comprehensive free trade zone, indicate the external and internal priority of Ukraine in the development of transport. The further development and deepening of relations between Ukraine and the EU require the contribution of the transport sector to the implementation of the principles of political association and economic integration.

The chain roads of general using is 169,500 km long, with a density of 1000 km^2 of the territory – 281 km in the country. Ukraine ranks 30^{th} among the countries of the World by the length of motor roads and 11 – among the countries of Europe. At the same time, the length of motor roads per unit area in Ukraine is 0.3 km / km^2. This indicator is only higher than in Russia (0.06 m / km2) and tens of times lower than the average in central Europe. One Ukrainian has only 3.8 meters of highway, while in such countries as Sweden it reaches 61.6 meters, in France and Spain 15, the Czech Republic and Austria 12.2 and 12.9 respectively. The length of roads in Europe is shown in table 1.17 [3].

The development of world countries economy means that its character and intensity depends on the development of transport infrastructure. First of all, it concerns of the road infrastructure. Unfortunately Ukraine has roads in bad condition as a lot countries. At the same time, Ukraine lags behind in the development of public highways from the pace of the country’s motorization. The level of road safety is extremely unsatisfactory. For maintenance of roads there are very modest budgetary funds.

Table 1.17

The length of roads in Europe

No	Country	Area sq. km	Population, mln. man.	General length auto roads thous. km	Length roads per unit area km / km^2	Length road per person m / oz.
1	France	647685	65,1	1027,2	1,5	15
2	Russia	17075400	143,0	940,0	0,06	6,5
3	Spain	504645	45,2	681,3	1,7	15
4	Germany	357021	81.7	644,5	1,8	7,8
5	Sweden	449964	9,3	572,9	1,3	61,6
6	Italy	301230	60,4	487,7	1,6	8,1
7	Poland	312685	38,2	423,9	11,1	11,1
8	United Kingdom	244101	62,0	394,4	1,6	6,3
9	Turkey	780580	72,5	352,1	4,8	4,9
10	Romania	237500	21,5	198,8	0,8	9,2
11	***Ukraine***	***603628***	***45,8***	***169,5***	***0,3***	***3,7***
12	Hungary	93030	10,0	160,0	1,7	16
13	Belgium	32545	10,8	153,3	4,7	14,2
14	Nether-lands	41526	16,6	136,8	3,2	8,2
15	Czech Republic	78866	10,5	128,6	1,6	12,2
16	Greece	131940	11,3	117,5	0,9	10,4
17	Austria	83871	8,3	107,3	1,3	12,9

The development of Ukraine's transport links with European countries is insufficient. The network of public roads in Ukraine is formed to ensure the functioning of the national economy of the former USSR. Modern trends of development transit potential of Ukraine must provide of growth modern roads on all transport corridors that passes through the territory of Ukraine.

The technical standards of the roads of Ukraine do not respond the standards of the EU either in terms of quality or weight.

The technical standards of the roads must be given into line with EU requirements, it is necessary to amend the Rules for the carriage of

dangerous goods and the Rules for the carriage of heavy goods in accordance with the conventions of the United Nations Economic Commission for Europe and the EU directives.

Investments in the development of roads and the development of the industry are inadequate.

Reformation of state management branch system and formation of state politic in that branch, improving the efficiency of state control in road transport should be based on the best practices of the EU [4].

It is planned to streamline the authorities of the bodies that formulate, implement policies on road transport, exercise state control, as well as determine the functions of these bodies to ensure the new norms of legislation implemented in accordance with the Association Agreement.

The main focus is on the establishment of an effective state control body, Ukrainian automotive safety since this aspect is key to achieving the objectives of this Strategic Plan and the implementation of EU legislation.

The directions of management improvement have such parts:

1. Improvement of the system of admission and work in the market of motor transport services; creation of a system of confirmation of professional competence of managers (managers), specialists in the field of motor transport;

2. Improving the safety of transport processes, reducing the risks to life and health of people during the transportation of passengers and cargoes;

3. Improvement of the safety of motor transport is foreseen by achieving the following objectives: ensuring a systematic approach to traffic safety management taking into account the requirements of the international standard DSTU ISO 39001: 2015 "Road Safety Management System";

4. The introduction of energy-efficient and environmentally-friendly technologies will include the gradual introduction of mandatory EURO-5 environmental standards for vehicles and motor fuels, ensuring the possibility of identifying vehicles in terms of their compliance with environmental standards for the benefit of the market of carriers using more advanced vehicles.

On the basis of the requirements of the Association Agreement, the Ukraine 2020 Strategy for Sustainable Development, the Transport Strategy of Ukraine for the period up to 2020, the Concept for reforming the system of public administration of public roads and the

corresponding action plan, four strategic directions are identified, such as:

1. Formation of state politic to account of requirements association agreement, strategy and the best practice EU in the field of road transport for regulatory policy, transport safety, ecology, energy efficiency;

2. Ensuring accessibility and quality of transport services for all categories of passengers throughout the state, in particular for people with disabilities, improving the quality and safety of passenger and cargo transportation;

3. Increase of efficiency and competitiveness of the industry, creation of favorable business climate, promotion of efficiency of motor transport operators, structure of vehicles, application of modern transport technologies, implementation of transit potential of transport system;

4. Reforming the road manage and ensuring the development and maintenance of the road network in good condition [8].

The economy program of state target development of road transport, improvement the transport and operational condition of roads of general use to a length which will promote the effective functioning of the existing network of highways should ensure:

1. The gradual transition to the conclusion of long-term contracts (contracts) regarding the maintenance of roads of general use on the principle of maintenance of their operational status in accordance with regulations, norms and standards, which will promote the creation of a competitive environment in the market for maintenance of maintenance of roads;

2. Repairs of more than 24 thousand kilometers of public roads, primarily on approaches to large cities, roads with the highest intensity of traffic and access roads to the territories and objects of the natural reserve fund of national importance;

3. Construction and reconstruction of 1,5 thousand kilometers of public roads in accordance with the requirements brought to conformity with the modern standards of quality of construction and reconstruction of highways, with the corresponding road infrastructure, first of all, in the directions of international transport corridors;

4. Organization of the execution of road construction works in accordance with international standards "FIDIK" concerning designing, construction and acceptance into operation of roads, which will promote improvement of the mechanism for monitoring the quality of these

works, as well as the involvement in the control of Ukrainian Transport Inspectorate;

5. Construction of roundabouts of settlements with a total length of 148.5 km;

6. Installation of hardwood access to 94 rural settlements; increase of safety level of traffic, speed, comfort and efficiency of transportation of passengers and goods by motor transport; a gradual transition to the normative financing of the road sector in accordance with a scientifically grounded state-owned enterprise "State Road Research Institute named after MP Shulgin "volumes of road construction works;

7. Arrangement of ways of migration of animals for their preservation, formation of the ecological network and ensuring observance of the regime of protection and use of territories and objects of the nature reserve fund;

8. Unimpeded access of persons with disabilities and other less massive population groups to the objects of the road infrastructure (including by means of measures for lowering the on-board stone on roads (the edge of the roadway, the fortified sidewalk) at the intersections of pedestrian ways (sidewalks), installation on-board stones at the floor level of the public transport vehicle and the traffic signals on the traffic lights) [4].

In general development of transport potential system of Ukraine is considered in several aspects that are shown in fig. 1.11.

So potential development of transport system of Ukraine is to increase the quantitative and qualitative characteristics of the transport infrastructure, the position in the network of international transport corridors, interaction between different modes of transport.

The result of the development is the formation and functioning of an efficient competitive transport system capable of providing high-performance, high-tech and safe transport infrastructure, and high quality transport services.

The main directions of development of the transport sector of the Ukrainian economy for the period up to 2020 are:

1. The development of transport infrastructure and the modernization of rolling stock to ensure increased mobility of the population and accelerate the flow of goods;

2. Security and quality of transport services for the economy;

3. Ensuring accessibility and quality of transport services to the population;

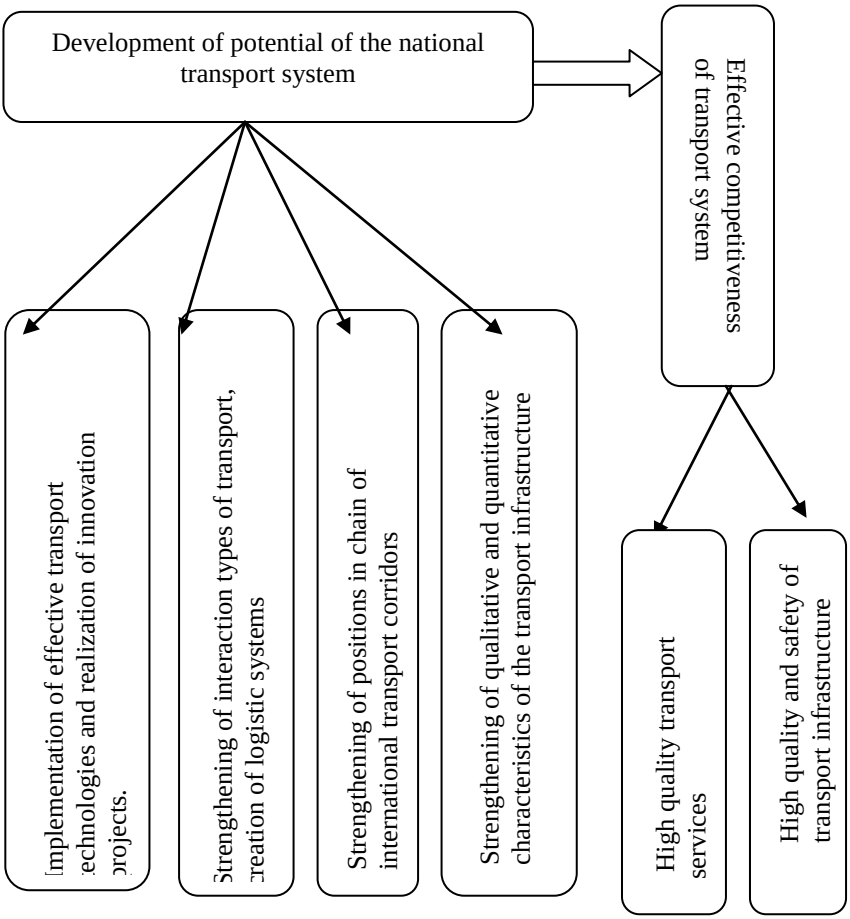


Figure. 1.11. Derections of development of the potential of the transport system of Ukraine [5]

4. Integration into the European Union and development of export of transport services;

5. Increasing the efficiency of public administration and developing a competitive environment;

6. Increase of environmentally friendly, energy efficiency of transport processes and safety of passenger and cargo transportation [6].

The main tasks of implementing the strategic goal of the development of the transport system are primarily possible under the

condition of adequate financial support and effective investment policy, the mechanism of implementation of which, in our opinion, should include the following areas:

1. Use of various sources of financing for the transport industry:

own funds of enterprises, investors, state budget, concessionaires, credit resources of commercial banks and international financial institutions;

2. Introduction of the mechanism of public-private partnership;

3. Investing in innovative development and technological modernization of transport;

4. Long-term privileged lending to resources and energy saving technologies and technologies;

5. Expanding the use of the principles of "user pays" and "polluter pays" when using the transport infrastructure.

Realization of the strategy of development of the transport system of Ukraine in the long-term perspective will ensure the transformation of transport into the system-forming branch of the national economy, which will develop at a faster pace.

Formation of a single transport space, regional and international integration of the national transport system will increase the efficiency of transport services, increase their export volumes and increase the level of use of transit potential. The transport system of the country will fully meet not only the basic needs of the national economy and the population, but will also meet the world standards of speed, timeliness, safety, environmentally friendly transportation and create conditions for more intensive innovation development of the country.

References

1. *Verkhovna Rada of Ukraine (2015) 548- 2015-n [Stratehichnyy plan rozvytku avtomobil'noho transportu ta dorozhn'oho.hospodarstva na period do 2020 roku] Resolution Strategic plan development of road transport and road. farms until 2020 Verkhovna Rada of Ukraine, Kiev, Ukraine*
2. *The Cabinet of Ministers of Ukraine (2013) 696-2013-n. Resolution On approval of the State Target Economic Program for the development of public roads for 2013-2018 The Cabinet of Ministers of Ukraine, Kiev, Ukraine*
3. *An international database of economic statistics about countries markets and companies (StatInfo.biz). [Online resource]: - Access mode: http://ru.worldstat.info/Europe/List_of_countries_by_Length_of_road_per_thousand_persons*

4. *Harmonization of the transport system of Ukraine with the requirements of the EU will promote economic growth: recommendations of the European Union and United Nations Development Program report (30/06/2010). // The Delegation of the European Union to Ukraine. [Online resource]: - Access mode: http://ec.europa.eu/*
5. *Savchuk O.V., Zakharova O.V. (2011), Strategic directions of potential development of the national system of Ukraine, Bulletin of the Mariupol State University series: Economics Issue 2.*
6. *State Agency of Motor Roads of Ukraine [Online resource]: http://www.ukravtodor.gov.ua/clients/ukrautodor.nsf*

Strishenets Olena
Doctor of Economic Sciences, Full Professor
Pavlov Kostyantyn
Doctoral, Candidate of Economic Sciences, Assistant Professor
Lesya Ukrainka Eastern European University (Lutsk, Ukraine)

CYCLICAL PROCESSES IN FORMING HOUSING PROPERTY MARKETS IN UKRAINE

The effective functioning of the real estate market is by far one of the most important priorities of the country, which predetermine the processes of formation of small and middle class in Ukraine. And the general development of property in its content is the main component of the needs of the population, which has an impact on the overall level of investment efforts, volumes of accumulation and consumption in the state.

Today, the issue of in-depth study of the stages of formation of the residential real estate market in Ukraine, as well as its economic, historical, and social characteristics, is relevant. After all, the actual situation of the housing market is rather unstable and is characterised by inability to self-regulate. It is known, that during the time of the centralised and planned economic system implemented by the Soviet Union, the state itself assumed responsibility for providing housing to the population. The state in the residential sector acted as the main investor in the construction industry, served as a developer and contractor, and most importantly – it was the owner of the vast majority

of residential properties.

The process of obtaining residential property by the population was carried out on a free basis through participation in the formed queues for residential real estate, which conversely was conditioned by the need to formulate clear rules for providing housing to the population [8]. In connection with the acute need for limiting the living space, its norm for one person was set, which was equal to almost 14 square metres.

During the times of the USSR, the state exercised the function of providing housing to the population, the formation of the real estate market in Ukraine began only in the nineties of the last century after the proclamation of Independence and when the process of market mechanisms implementation on its territory was launched. Ukraine, while in transition, was not able to make the necessary investment measures on its own. At that time, the problem faced by the state was the invention and implementation of an innovative model of the functioning of the housing sector, as well as the introduction of new financial and investment models for the provision of the construction industry.

Today, in Ukraine, the study of the process of emergence, formation and functioning of the real estate market is at initial level. In turn, as the analysis result of research materials and publications on the subject has proved, it is obvious, that certain achievements of leading domestic and foreign scientists have already been made in the direction of studying issues related to mortgage lending, assessment of residential real estate objects and price formation on them. The respective scholars are: A. Asaul, O. Hrytsenko, P. Yeshchenko, I. Malii, R. Mann, J. Mantsevich, K. Palyvoda, V. Pavlov, N. Pogoreltsev and others. At the same time, the study of the cyclical processes of formation and development of regional markets for residential real estate has not been carried out in full.

The formation of the legal basis for the realisation of real estate transactions commenced with the adoption of the Law of the Ukrainian SSR "On Property" 697-12 of 07.02.1991 [2]. Adoption of this draft law created the conditions by which citizens could own immovable property on legal grounds. As a result, there appeared such concepts as: market actors; functions of the real estate market; real estate market; the structure of the real estate market, etc. Next, on June 19, 1992, the Verkhovna Rada of Ukraine passed the Law "On Privatization of the State Housing Fund", which contributed to the creation and organisation of a new professional layer of qualified real estate market participants,

namely real estate companies and real estate agencies.

In order to regulate the relations of the real estate market in Ukraine, the following stage in the process of its formation was the establishment of legal principles, which allowed to finally creating the real estate market in our state. The following normative legal documents were adopted: Law of Ukraine "On Commodity Exchange" No. 1957-12 dated December 10, 1991. [5]; Family Code of Ukraine №2947-3 of 10.01.2002 [15]; Commercial Code of Ukraine No.436-4 of 16.01.2003 [1]; Civil Code of Ukraine No. 435-4 of 16.01.2003 [19].

In general, despite the adoption of the aforementioned legal acts, there was a need for adoption of a number of draft laws, as the level and rates of real estate market development remained low. This situation was caused by inflation, a decrease in household incomes, a reduction in gross domestic product, and an increase in unemployment rates in the country.

In order to characterise the situation in the residential real estate market, as well as based on indicators of the level of initial prices and their dynamics, the number of real estate transactions, price dynamics, the level of competition, probability and weight of risks, indicators of demand and supply, legislative provision, quality of the Real estate and real estate market relations with the financial market of the state, we have identified and grouped the following stages and stages of the formation of the residential real estate market in Ukraine (table 1.18, 1.19).

- 1991 – 1993 – this was the stage of formation of the residential real estate market in Ukraine. Prices for residential properties themselves, as well as the quality of the latter, were at the lowest possible level. This was especially noticeable as a result of their comparison with similar real estate objects in European countries.

At this stage of the real estate market, there was a one-time increase in the number of investment measures by the state in the field of construction. One of the main factors that had an impact on the real estate market was the development of entrepreneurship and significant migration processes both in the middle of the country and beyond. In practice, during this period, there was also markedly tangible rise in real estate prices, an increase of which was about 50-100% per year, which resulted in a steep increase in demand for them.

- 1993-1995 – since at the end of the previous period the maximum possible rates of increase in prices for real estate were noted, then at this stage there was their gradual decrease.

Table 1.18

The Cyclical Character of residential real estate markets formation in Ukraine: the first cycle [8; 9; 20]

MARKET CYCLES	FIRST CYCLE			
ESTABLISHMENT STAGE	I	II	III	IV
MARKET INDICATOR	1991-1993 ys.	1993-1995 ys.	1995-1998 ys.	1998-2000 ys.
Initial price rate	Maximally low	High	High	Low
Operations number	Extreme growth (huge)	Moderate growth (moderate)	Steady	Low
Price dynamics	High growth rates	Moderately high growth rates	Stabilisation and beginning price decrease	Price decrease
Demand and supply	Significant preponderance of demand over supply	Prevailing demand supply over demand	Prevailing demand supply over demand	Equilibrium of supply and demand
Legislative support	None	Insignificant	Partial	Partial
Quality	Low	Low	Acceptable	Acceptable
The level of competition	Low	Low	Moderate	High
Risk level	High	High	Moderate	Moderate
Interconnection of the real estate market with the financial market	None	Scarce	Scarce	Scarce
Phase of the cycle	Revival	Stagnation (crisis)	Revival	Stagnation (crisis)

At the same time, indicators of the growth rate of dynamics of real estate prices amounted to about 30-50%. The Law of Ukraine "On Privatisation of the State Housing Fund" came into force, the appearance of which contributed to the legalisation of the vast majority of transactions with real estate. In this period, the process of market formation continued [6].

- 1995-1998 – this time period was marked by a decrease in the growth rates of real estate prices compared to the previous period and by the general price stabilisation. This was partially due to the satisfaction of the population's demand for housing.

Unconditionally, the leading indicators of real estate prices were noted in the city of Kyiv. And then, as in the most expensive cities after the capital – Odesa and Lviv, prices were almost twice lower and

Table 1.19

Cycle of the formation of residential real estate markets in Ukraine: the second cycle [8,9,20]

MARKET CYCLES	SECOND CYCLE		THIRD CYCLE	
ESTABLISHMENT STAGE	V	VI	VII	VIII
MARKET INDICATOR	2001-2004 ys.	2004-2009 ys.	2010-2014 ys.	2014-2017 ys.
Initial price rate	High	High	Low	Low
Operations number	Moderate growth (moderate)	Extreme growth (huge)	Moderate growth (moderate)	Stable growth (stable)
Price dynamics	High growth rates	High growth rates	Prices decrease	Stabilisation
Demand and supply	Significant preponderance of demand over supply	Significant preponderance of demand over supply	Equilibrium of supply and demand	Equilibrium of supply and demand
Legislative support	Formed	Improvement	Improvement	Improvement
Quality	Developed	High	High	High
The level of competition	High	High	High	High
Risk level	Low	Low	High	Moderate
Interconnection of the real estate market with the financial market	Organisation of constant interaction	Constant interaction	Organisation of constant interaction	Organisation of constant interaction
Phase of the cycle	Peak (growth)	Decline	Revival	Revival

amounted to about 200-250 Dollars. USA. At the same time, the lowest real estate prices were in Kirovograd and amounted to about 100 US Dollars per square metre of total area.

Nowadays, the above mentioned level of prices is not high, reflecting the purchasing power of the population. We also note, that at that time there was hardly any lending to banks under various mortgage programs [18].

It should be noted, that due to the adoption of the Resolution of the Verkhovna Rada of Ukraine "On State Monopolisation of the Economy and the Development of Competition", the Decree of the President of Ukraine "On the Establishment of the Interdepartmental Commission on Demonopolisation of the Economy" and the Law of Ukraine "On Protection against Unfair Competition" there was a partial regulation of the competitive fundamentals of coexistence of the real estate market participants in Ukraine. [7; 13; 14].

- 1998-2000 – in this period, there was a sharp decline in prices for real estate, resulting in almost decreased by half number of transactions in the real estate market. This situation was caused by the inflationary processes that struck the market in the late 1999 and early 2000s, as the inflation rate and consequential devaluation of the national currency significantly exceeded market prices for real estate.

In general, as a result of crisis phenomena, the level of prices for real estate returned to the indicators of 1995, and as a consequence, the market was in a state of depressive stabilisation processes. All this conditioned in the future a significant recovery in demand for real estate, but thus an increase in the volumes of the market itself, because it was by such actions that people could protect their savings from inflation.

- 2001-2004 – as a result of the situation in the real estate market at the end of 1999, this period was marked by the onset of a new stage in the formation of the market – the beginning of a long-term growth of the market price for real estate. The constant increase in demand for real estate, as well as rising prices, contributed to the new stage of market development. At that time, an increase in the intensity of the development of the primary residential property market and the expansion of the market infrastructure boundaries was noted.

First of all, it is connected with the increase of the level of solvency of the population, the accelerated development of the market of primary residential real estate, the constant improvement of the legislative framework by state authorities, a tangible competitive game among professional market participants, and also, due to the adoption of the Law of Ukraine "On Mortgage" by the deployment of Ukrainian banks of a wide range of mortgage lending programs [4]. In addition, as a result of the disaster of 11 September 2001 in the United States of America, the public's concern about the reliability of the US currency was caused by a significant shift in capital towards the real estate market.

- 2004-2009 – as a consequence of positive changes in the country's economic processes, there was a significant increase in the indicators of demand from the population for real estate, which contributed significantly to the development of the construction industry and investment processes for its promotion. It should be noted that along with the increase in the volume of construction of real estate objects, their quality was also significantly improved. New methods and technologies of construction were introduced. Objects with a large area of apartments began to be built, and the houses themselves to be built on

a monolith-frame principle. Mansions, townhouses and club houses conspicuously came about in the market. Personalised residential complexes replaced single-dwelling houses.

This period, due to the high level of the population demand and the impact of various taxes, economic and political factors, was marked by a significant and steady increase in the level of prices for real estate. In 2006, the total indicator of the realised construction products amounted to 71.9 billion UAH, which is almost five times higher than the same indicator in 2000. There was also an increase in: the number of commissioned real estate objects and the level of investment in housing construction [18].

Later, the real estate market in the country was engulfed in collapse, because the opposite trends in their content were traced – namely, a constant expectation of a decrease in real estate prices, on the one hand, and also a further and endless increase of prices, on the other hand. A rise in competition between commercial banks in the mortgage lending market came about. Significant access to borrowed funds and a steady increase in prices for residential real estate determined its availability among other alternative investment attractive ways, which resulted in a significant increase in the level of speculative component in the market.

The following factors contributed to the growth of property prices: steadily rising land prices; constant inflationary processes in the state; the inability of the primary real estate market to expand exponentially; a large number of speculatively interested market participants; limited financial instruments to attract additional investment resources to the construction market and estate renovation [8].

It should also be noted, that even under the conditions of active increase of the volume of construction in the state, it was not possible to satisfy the demand for the real estate market, which at that time existed on the market. As the indicators of population security were about 20 square metres per person, while the figure in Europe was 46 square metres. In addition, a quarter of the Ukrainian population at that time lived in residential premises with a low level of technical conditions and unsatisfactory operational qualities.

In turn, the decline in the price level for real estate was facilitated by: the impossibility of financial institutions to satisfy financial investment market needs; psychological "fatigue" of consumers from constant increase in prices for real estate; low level of independent solvent demand in the market; the emergence of a large number of analytical studies with basically controversial results of research.

As a result of economic and social contradictions regarding the future of the real estate market in Ukraine, there was a decrease in the number of real estate transactions, as there was absolute confusion for all actors in the market. After that there was a "subsidence" of the market. Real estate prices have dropped almost twice, and incomes of the population by one third, which caused the first panic in the market. Mortgage lending programs were stopped, as borrowers became insolvent under existing loan agreements, and the volume of outstanding mortgage loans significantly exceeded the real value of purchased real estate. There was an instant decrease in demand for unfinished objects.

Therefore, the main reason that determined the situation on the market in this period was increased speculative interest in real estate. In addition, at that time there was an artificial restraint of competitive relations between construction organisations and the continuing complication of the process of drawing up land rights with its further development purpose.

- 2010-2014 – at the beginning of this phase, the state's economy was in a state of complete recession. The activity on the real estate market was at a negligible level, and market prices for real estate objects continued to decline. In the absolute absence of lending to financial institutions, the construction of new real estate objects was stopped, and real estate transactions took place mainly for the purpose of changing the place of residence, or improvement of living conditions of the population. However, over time, the authorities managed to reduce the discount rate of the National Bank and stabilise the national currency, which gave a new impetus to the shift in the financial sector in the country, with which, albeit not to a large extent, but bank lending programs were restored. This allowed resuming financing for the construction of unfinished real estate that had a rather high level of readiness, and eventually new potentially reliable construction projects. These measures to activate the construction industry allowed increasing the number of new housing in the market.

Thus, the changes that took place in the mortgage lending and project financing market generally contributed to the activation processes of the development of financial and investment activity in the construction industry of the state.

Gradually, the solvent demand of the population began its growth. It should be mentioned, that some kind of reorientation of the housing construction market of Ukraine towards the objects of the economic class took place, namely those with a reduced area. This allowed for a

significant increase in demand in the market, because by reducing the total area of ready-made objects, it was possible to reduce prices for them. Consequently, the real estate market began to rise, as evidenced by an increase in real estate volumes [8].

Moreover, a positive impact on the development of the market was made by the adoption of the Law of Ukraine "On Amending Certain Legislative Acts of Ukraine on Improvement and Simplification of the Procedure for State Registration of Land Plots and Real Property Rights to Real Estate" [3]. In accordance with its edition, the right to register the rights to real estate, in addition to the Technical Inventory Bureau, was received by notaries and Ukrainian State Register. The Resolution of the National Bank of Ukraine, which, to a certain extent, has a negative impact on the general situation in the real estate market, should also be mentioned. After all, in accordance with its content it is prohibited to carry out operations with the use of cash for an amount exceeding UAH 150 thousand. As a result, there is almost twofold reduction of real estate transactions in the secondary market [12].

Besides, in our opinion, the "weak movement" in the real estate market was influenced by the following factors: the constant expectation of "subsidence" of the course of the national currency; political instability; general economic situation in the state; the impoverishment of the middle and small classes in the state; reduction of loan programs for developers, as well as their expectations for market stabilisation.

- 2014-2017 – when analyzing the formation of the real estate market in this time period, the significant hryvnia depreciation relative to Euro and US dollar, which took place in early 2014, should be highlighted first. It was caused due to the transition to market conditions for the formation of the price of the national currency, the so-called "floating rate".

This factor significantly complicated the conditions for attracting additional investment funds to the real estate market. Although, even under such conditions, the market is experiencing recovery, as well as the gradual restoration of various credit programs by banks, which facilitates the real estate market in the state.

In general, studying the nature of any market, and especially the real estate market, particular attention should be paid to the cyclical nature of the recession and the rise of its main indicators. This is evidenced by the world-wide practice of market research. It is known, that in order to understand the maturity of the market, or the stage at which it is located, it is necessary to determine its cycle. In advanced economies and those

with the emerging real estate market, the cycle is about 8-9 years. The cycle length is normally a period of time, when the markets itself, as well as the whole economy of the state, are in the process of development [20].

The volume of the real estate market is reflected in demand and supply indicators, and the intensity of the relationship between them shows the vacancy rate. Meanwhile, the dynamics of the scale of the supply is marked by a "delayed effect" compared to market demand, since the latter is more flexible in line with the dynamics of market prices.

Pricing in the market for residential real estate is carried out in proportion to demand and inversely proportional to the supply. The change in the number of transactions with real estate objects to a certain degree characterises the phase of its actual market activity and entirely depends on demand indicators. Meanwhile, the time of the exposure indicator explicates the level of liquidity of the market, and has reverse connection with the change in demand (table 1.20).

Table 1.20

Market conditions for residential real estate: phases, periods, cycles

Indicators	Market Cycles			
	Ascent Period		Decline Period	
	Recovery Phase (Revival)	Expansion Phase	Contraction Phase	Recession Phase (Stagnation)
Demand amount	▲	▲	▼	▼
Supply amount	►	▲	▲	▼
Vacancy rate	▼	▼	▲	▲
Sales prices	►	▲	▼	▼
Rent	▲	▲	▼	►
Capitalisation rates	▲	►	▼	►
Number of transactions	▲	▲	▼	▼
Absorption rate	▲	▲	▼	▼
Exposure time	▼	▼	▲	▲

► – stabilising; ▲ – increase; ▼ – decrease.

Source:: formed by the author on the basis of the reference - [18]

Analysing the scale of the market as well as its activity and profitability makes it possible to identify the problems and features typical of the real estate market, as well as to make projected

calculations for its further development. Since 2010 Ukrainian real estate market has been in the third cycle of its existence, since the first cycle of the market comprised the period of 1991-2000 and lasted for 10 years.

During the first cycle, the real estate market "survived" its initial stage of formation, development and dynamic pricing, the process of redistribution of property, privatisation processes and the beginning of the formation of a regulatory and legal basis.

While staying in the second cycle of formation in the period of 2001-2009, which lasted for 9 years, the real estate market in Ukraine can be characterized by rapid development, intensive increase in prices for real estate objects, as well as high intensity of construction of new real estate objects.

Today, while the market is in the third cycle of its existence, there are stabilisation processes in the real estate market, a consistent increase in real estate in the secondary market, as well as a large number of construction sites that are actively erecting new real estate objects. All this testifies to the stabilisation course of the market development and its active revival.

In our opinion, today it is necessary to introduce a system of economic, financial, organisational and social processes that would allow balancing the volumes of demand and supply in the residential real estate market in Ukraine.

References

1. *Commercial Code of Ukraine No. 436-4 dated January 16, 2003. Retrieved from: http://zakon3.rada.gov.ua/laws/show/ru/436-15*
2. *Law of the RSFSR "On Property" 697-12. Retrieved from: http://zakon3.rada.gov.ua/laws/show/885-12*
3. *Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine on Improvement and Simplification of the Procedure for State Registration of Land Plots and Real Property Rights to Real Estate" of 04.07.2012 № 5037-VI. Retrieved from: http://zakon3.rada.gov.ua/laws/show/5037-17*
4. *Law of Ukraine "On Mortgage" dated 05.06.2003 No. 898-IV. Retrieved from: http://zakon2.rada.gov.ua/laws/show/898-15.*
5. *Law of Ukraine "On Commodity Exchanges" No. 1957-12 of 10.12.1991. Retrieved from: http://zakon3.rada.gov.ua/laws/show/1956-12.*
6. *Law of Ukraine "On Privatization of the State Housing Fund" dated June 19, 1992, No. 2482-XII. Retrieved from: http://zakon2.rada.gov.ua/laws/show/2482-12.*

7. *Law of Ukraine "On Protection against Unfair Competition" Verkhovna Rada of Ukraine; Law of 23.07.1996 No. 236/96. Retrieved from: http://search.ligazakon.ua/l_doc2.nsf/link1/Z960236.html.*
8. *Kovtun M. V. (2014). Formation and development of the housing market of Ukraine under conditions of market transformation. Scientific Bulletin of Uzhgorod University. Sir : Economics, 1, pp. 282-286.*
9. *Features of functioning of the real estate market. Retrieved from: http://www.fincharge.ru/soins-157-1.html.*
10. *Pavlov K.V. (2016) Influence of competitive relations in the regional real estate markets. Economic Journal of the East-European National University named after Lesia Ukrainka, 4(8), pp. 89-93.*
11. *Pavlov K.V. (2017). Regulation of investment and housing relations in Ukraine. Rivne: NUWM [in Ukrainian]*
12. *Resolution of the Board of the National Bank of Ukraine dated 06/06/2013 No. 210 "On the establishment of the maximum amount of cash settlements". Retrieved from: http://zakon3.rada.gov.ua/laws/show/z1109-13.*
13. *On the State Program of Demonopolization of the Economy and Development of Competition the Verkhovna Rada of Ukraine; Regulation No. 3757-XII dated December 21, 1993. Retrieved from: http://zakon3.rada.gov.ua/laws/show/3757-12.*
14. *On the Interdepartmental Commission on Demonopolization of the Economy President of Ukraine; Ordinance No. 247/95 dated March 21, 1995. Official Web portal of the Verkhovna Rada of Ukraine. Retrieved from: http://zakon3.rada.gov.ua/laws/show/247/95.*
15. *Family Code of Ukraine №2947-3 dated 10.01.2002; [Family Code of Ukraine №2947-3 of 10.01.2002]. Retrieved from: http://zakon0.rada.gov.ua/laws/show/ru/2947-14.*
16. *Strizenets O.M., L.V. Eliseyeva, Lischuk V.I., (2014). Economic theory. Lutsk: ENUA [in Ukrainian].*
17. *Strizenets O.M., Pavlov K.V. (2016) Features of competitive relations in the regional real estate markets. Naukovyy visnyk uzhhorods'koho universytetu. Seriya «Ekonomika». Zbirnyk naukovykh prats' 1 (47), pp. 35-38 [in Ukrainian].*
18. *Drapikovs'kiy O.I. & Ivanova I.B. (2012). Trends in the real estate market in Ukraine: realities and forecasts. 2007-2013. Kyiv: Art Economics [in Ukrainian]*
19. *Civil Code of Ukraine No. 435-4 dated January 16, 2003]. Retrieved from: http://zakon2.rada.gov.ua/laws/show/435-15.*
20. *Shokurova N. V. Stages of the development of the residential real estate market. Retrieved from: http://eprints.kname.edu.ua/32337/1/20.pdf*

Verkhoglyadova Natalya
Professor, Vice-Rector of Education and Academic Activity
Kononova Oleksandra
PhD. in Economic Science, Associate Professor, Docent of Accounting, Economics and Human Resources Management Department
Ivanytska Tetiana
PhD. in Economic Science, Associate Professor, Docent of Accounting, Economics and Human Resources Management Department
Prydniprovs'ka State Academy of Civil Engineering and Architecture (Dnipro, Ukraine)

ANALYSIS OF CONDITION, DEVELOPMENT AND SOLUTIONS DELIVERY OF THE MANAGEMENT DECISIONS EFFECTIVENESS OF A CONSTRUCTION COMPANY

The decision making stage is the most labor-intensive, since a lot of information work is carried out here: collection, registration and preparation of information; processing, receiving and transmitting information, etc. However, the most important, although less labour intensive, stage is the selection of a single solution. The main work at this stage is carried out by the decision-makers - to comprehend all the information collected and processed earlier and on its basis to make a choice. Therefore, the work of these people is characterized by great tension, emotional stress, responsibility.

At the stage of decision making, the following operations are performed:

- determination of admissible (acceptable) decisions;
- determination of effective decisions;
- choice of only one decision.

1. Definition of admissible (acceptable) decisions.

The operation of obtaining a set of admissible decisions from the initial set of alternative variants depending on the nature of the problem being solved and degree of information formalization can be performed by logical thinking or by using a formal apparatus.

Therefore, two approaches to the choice of feasible solutions are possible. The first approach is based on an informal "manual" choice of

the solution. Execution of restrictions is a necessary condition for choosing a single solution. Therefore, alternative solutions that do not satisfy this requirement are excluded from consideration already at the stage of decision-making.

The second approach is based on the use of formal methods in decision-making: computers, automated data processing systems, expert decision-making systems, economic and mathematical methods, and so on. It requires strict regulation of all data processing procedures, which does not allow combining the search for alternative solutions with their verification for compliance with restrictions. Therefore, the process of finding solutions, formulating constraints and establishing a correspondence between them is taken to an independent operation.

2. Determination of effective decisions.

A decision is called effective if there are no more preferable decisions from the point of view of the chosen criterion. Therefore, the restriction of the set of admissible decisions to a subset of effective solutions is realized on the basis of the choice and analysis of preferences. All effective solutions are incomparable, one can not say which one is preferable.

The main purpose of this operation is to select effective variants of decisions and not to miss unsuitable solutions from the point of view of effectiveness. Therefore, when solving this problem, it is necessary to apply the apparatus for estimating absolute and comparative economic efficiency

3. Choice the only one decision.

The choice of a single solution from the set of effective ones due to the incompatibility of the latter can only be carried out with the use of additional information that allows us to comprehensively assess the goals and indicators of their achievement.

In order to obtain a unique solution, in the absence of the criterion of optimality, detailed elaboration of each variant of the solution from a subset of effective solutions is given.

Such actions include the following:

1) more complete specification of all components of the solution: goals, limitations, options for action, taking into account the situation that has changed by the time the decision is taken, so that each option is a complete original ready-to-implement solution;

2) study the main directions, ways and means to achieve the set goals, as well as the available opportunities: labour, material, financial and other resources (scientific ideas, discoveries, inventions, time

factors), especially the need to preserve trade secrets ;

3) the possible options for interaction between units and executors involved in the implementation of the solution are explored;

4) the consequences of decisions implementation are evaluated. It is important to know not only the target, but also the side effects, which in their significance are sometimes no less important than the target results.

The choice of the best solution is carried out by a consistent evaluation of each of the proposed alternatives. It is determined how much each solution option ensures achievement of the organization's goal. This determines its effectiveness. Those, a decision are considered effective if it meets the requirements arising from the situation being decided and the organization's goals.

First, the solution must be effective, i.e. should most fully ensure the achievement of the organization's goal.

Secondly, the solution should be economical, i.e. should ensure that the goal is achieved at the lowest cost.

Third, the timeliness of the solution. It is not just about timely decision making, but also about the timeliness of achieving the goals. After all, when the problem is solved, events develop. It may happen that the pre-red idea (alternative) will become obsolete and lose its meaning in the future. She was good in the past

Fourth, the reasonableness of the solution. Performers must be convinced that the decision is justified. In this regard, one can not confuse the actual validity and its perception by the executors, their understanding of the arguments that prompt the manager to take this decision.

Fifthly, the solution must be realistic, it is impossible to accept unreal, abstract decisions. Such decisions cause vexation and dissociation of performers and are basically ineffective. The decision must be effective and correspond to the forces and means of the team that performs it.

In the achievement of the decisions effectiveness, a special role is played by the methods of verifying the decisions taken before executors. Bringing decisions to execution usually begins with the dismemberment of the alternative into group and individual tasks and the selection of performers. As a result, each employee receives a specific *task* of his own, which is directly dependent on his official duties and a number of other objective and subjective factors. It is believed that the ability to transfer tasks to performers is the main source of effectiveness of the

decision. In this connection, four main reasons for non-fulfilment of decisions:

1) if the decision was not clearly formulated by the manager;

2) if the decision was clearly and clearly formulated, however, the executive did not understand it well;

3) the decision was clearly formulated and the performer well understood it, but he did not have the necessary conditions and means for its implementation;

4) the decision was correctly formulated, the executor learned it and had all the necessary means for its implementation, but he did not have an internal agreement with the option offered by the manager. Executors in this case may have their own, more effective, in his opinion, a solution to this problem.

The foregoing shows that the effectiveness of the decision depends not only on its optimality, but also on the form of bringing to the executors (the formulation of decisions and personal qualities of managers and executors). Organizing the execution of decisions taken by the management of the organization as a specific managerial activity assumes that he keeps decisions in the field of vision, finds a way to influence them, manage them. The team "to start executing the decision" can not be given earlier than the manager will not have the confidence that all the links involved in the performance have correctly understood their tasks and have all the means for their implementation.

It should be borne in mind that in order for the performer's performance model to be executed in accordance with the initial idea of the manager, a number of requirements are put to it (to the model):

1. The completeness of the solution model describes its correspondence, on the one hand, to the manager's plan, his decision and tasks assigned to him, and, on the other hand, to the content, structure and conditions of performing activities. Ideal option would be such a completeness of the model, in which it will be so developed that even before the beginning of the work, the performer can imagine all the subtleties of the forthcoming activity.

2. The accuracy of the model is necessary because if the task is put in an abstract, in general form, then it is not fulfilled at all or is performed formally. The management system, in which the accuracy of the formation of operational models of the solution did not become law, essentially decays.

3. The depth of reflection of the original idea characterizes the operational model from the point of view of the entire dynamics of the

upcoming activity presented in it.

4. The stress resistance and strength of the model presupposes the ability of the performer to clearly realize the plan of action that has developed in his mind, in any difficult situations.

5. The flexibility of the model is a criterion that, as it were, contradicts all of the above. Obviously, an absolutely rigid, unchanging image can be acceptable in rigid and immutable a structure, which in nature and society there is not and can not be. The problem is to choose the optimal ratio between the stability (immobility) and the flexibility of the model.

6. The consistency of the solution model is due to the fact that the performer most often performs the decision alone. Therefore, his actions must be coordinated according to tasks, time, place, etc. with other performers.

7. Motivation of the decision model. It is known that an understanding of the solution and the assimilation of its ideal model do not fully ensure the proper mobilization of the forces of the performers, and therefore it is necessary to motivate the activity of the decision-makers. Impact on the motives that motivate performers to show activity, the internal need to perform tasks is the main reason for mobilizing the work collective to implement the decisions made by the management of the organization.

Decision-making is a largely subjective process, and in this case we are not talking about some rigid regulation of the actions of the head. It is impossible to establish a procedure suitable for all cases of decision-making. Therefore, here we can only talk about giving some general recommendations on the organization of the process of developing and implementing solutions. Studies of domestic and foreign scientists, as well as business executives dealing with problems of management decisions, indicate that the information base has the greatest impact on the effectiveness of decisions. It is the availability of valid and reliable information that allows us to assess the maturity of a particular economic problem, to correctly put and evaluate it and to choose adequate means of justifying the decision.

1. The identification of a problem requiring the adoption of an appropriate management decision is made on the basis of an analysis of the situation in the management object (situational analysis). A concrete situation is the aggregate of conditions that arise as a result of various kinds of internal and external influences that disrupt the normal functioning of the managed object. A critical situation is a situation that

requires immediate action to take decisions. The state of the problem situation in the fixed moment is determined by the objective of the situation (the desired state of the object), the problem (the ratio of the desired and the real state) and specific conditions (the state of material, financial, labour, information and other resources).

2. The problem situation is described in a meaningful way, and, if possible, by a set of quantitative characteristics. Description of the problem situation, the disclosure of the reasons for its emergence and development should end with a brief, meaningful formulation of the problem that must be solved.

3. Depending on the nature of the problem, the time is determined for its solution and the resources required for decision-making (experience and qualifications of decision-makers, necessary information, computing resources of computers, etc.).

The nature of the problem depends on the specific situation in which it arises and is resolved. Often even the same types of problems at different enterprises are solved differently. Therefore, it is very important to have information about decisions taken under specific conditions, which will allow not only accumulating data on the causes that gave rise to the problem, but also on the specifics of the rationale for the solution. Such information can be analyzed in appropriate databases on electronic media, which reflect in a strict logical sequence the results of the person's thinking activity, making decisions to find the best solution. It is like a ready-made product of work, especially if it is involved as an expert on the part of the work and serves as a basis for an objective assessment of competence.

In managing an enterprise, it is desirable to have ready-made solutions in the form of so-called "templates" for the most frequently encountered problems. Decisions are made on the basis of the analyzed information and allow the staff of the administrative apparatus to receive answers to questions:

For what reason and by whose fault did this situation arise?

What are the possible consequences of not adopting a decision?

Who should make a decision in this situation?

Which officials and structural units should be involved in order to eliminate the situation that has arisen?

What initial information is needed to resolve this situation?

What specific practical measures or actions should be taken to solve the problem?

Who is given the decision for execution, and who controls its

execution?

A plan is drawn up for the implementation of the decision, as a rule, in writing and is an attachment to the order or instruction (instruction) in which this decision is announced.

The structure and form of the implementation plan for the solution can be in the form of tables and network graphs.

Table form of the plan has the form of a table with the following requisites: the code of work; the content of the work; duration (term) of work; executor; who controls the implementation of the decision. The presentation of a plan for implementing a solution in the form of a table has several advantages. These include simplicity of compilation and adjustment, convenience of processing on computers, etc. However, this form has a significant drawback: it does not allow reflection of the connections between various works on the implementation of the solution and therefore can be applied in the implementation of relatively simple solutions.

The network graph allows eliminating this drawback. It gives an opportunity to experimentally "lose" one or another variant of the solution, to predict the achievement of the final and intermediate results envisaged by the decision.

The application of the network graphics, in addition to the above, allows us to present the implementation process of the solution in a visual form, analyze the interrelations between performers and works, make more efficient use of available resources by redistributing them, and organize effective monitoring over the implementation of the solution.

The network graph is a graphical representation of the solution implementation process, where all the operations necessary to achieve the final goal are shown in a certain technological sequence and interdependence.

The decision to performers can be brought in both written and oral form. However, in whatever form it has been given, it is always necessary to conduct explanatory work to bring the meaning and significance of the decision, the expected consequences of its implementation and non-fulfilment. In production management, the solution is often ineffective, if the specific features of the performers are not taken into account when preparing it. Therefore, the management decision is an impact, focused primarily on the mode of action of performers, and aimed at enhancing the activities of performers in achieving the goal. It is the active actions of performers that are a factor

in the effective implementation of the solution.

To effectively execute decisions, the following conditions must be created:

- awareness (the persons entrusted with the implementation of the decision must know the goals and features of the decision);
- eligibility (own capabilities and special funds provided to the executive should allow to implement all activities related to the implementation of this decision);
- motivation (harmonization of desires and interests of the performer with the purposes of the decision);
- the admissibility (the measures provided for by the decision should not violate the norms of law and morality).

The main purpose of the organization of execution is to eliminate various obstacles and the causes of their occurrence, resulting from inconsistencies in the actions of performers in the implementation of the solution.

Coherence of activities of all participants in the implementation of the decision is based on the balance of their rights and obligations, which should be established both on horizontal and vertical lines of communication in the organizational structure of management.

The condition for effective implementation of decisions is control over their implementation. There are many cases where good decisions are not made only because their implementation is not properly controlled, and the reason for this is not only the irresponsibility of the performers due to lack of control, but the fact that in the process of implementing the solution there are problems that require, in turn, new solutions.

They can be detected only through a well-established control system.

The control, properly organized at the implementation stage, allows:

- stimulate the work of performers without shortcomings;
- get satisfaction from a job well done;
- organize the training of performers;
- promptly eliminate the resulting inconsistencies and inconsistencies in the implementation process;
- take a decision on making changes to the earlier decision;
- evaluate the potential capabilities of the team and identify reserves and lost opportunities that can be used in subsequent decisions;
- analyse the current decision-making system and develop measures to improve it.

If at the control stage there is a need to make some changes to the solution, then there should not be an alternative to this process, since under the changed conditions the previous decision becomes not only inefficient, but turns into a factor disorganizing production. There are two possible actions: making necessary adjustments to the previously made decision, for example, including the missing work, transferring the timing or changing the distribution of resources, etc., while maintaining the ultimate goal of the solution; the adoption of a new solution coordinated with the new situation. The final stage of the implementation of the solution is to summarize the results of its implementation. This circumstance should become the most important principle of management.

The results should be submitted in any case, regardless of how the solution is implemented, whether the goals and objectives are met or they are not achieved at all.

Summing up the results is expedient in the form of meetings with a special agenda, or allocating this place to the press, visual agitation, etc.

In the process of summarizing it's necessary to:

- analyse all stages of the process of preparation, adoption and implementation of the solution;
- assess successes, consider the shortcomings identified in the work of the performers;
- fix the attention of workers on newly emerging problems.

The management cycle ends with a summary. At the same time, it serves as the beginning of a new cycle, since it creates the initial basis for new decisions.

Thus, the organization of execution of decisions is unthinkable without control. Control of execution of decisions is the final (final) stage of the management cycle. It takes the form of feedback, by means of which it is possible to obtain information on the implementation of the decision, to achieve the organization's goals.

With the help of the control, deviations from the tasks formulated in the decisions are revealed, but the reasons for these deviations are also determined. You can also select other functions that are solved with the help of performance control.

1. *Diagnostic function* - main, leading control function. Whoever checks, whatever tasks are put, in any case, first of all, we must first clearly imagine the true state of affairs, i.e. to diagnose.

2. Without *feedback functions,* to the incoming manager in the form of information on the progress of the tasks, he, in fact, releases

from the hands of the reins of government, is deprived of the opportunity to influence the course of work.

3. *Orientation control function* is manifested in the fact that those issues that are more often controlled by the manager, as if they themselves acquire a special significance in the minds of the performers, direct their efforts primarily to the object of the manager's increased attention. Questions that fall out of the field of view of the manager are not solved by the subordinates.

4. *Stimulating function* is close to the orienting function, but it does not coincide with it. If the orienting control function under the skilful direction keeps the field of view of the work, the stimulus is aimed at implementing and involving in the labour process all unused reserves, and, first of all, the reserves of the human factor.

5. *Correcting function* is associated with those refinements that are made to decisions based on control materials. Here there is a complex psychological situation: the head believes that he checks the work of the subordinate, in fact, the latter has already checked in practice the effectiveness of the decision of the head. In a word, control can already be said to have taken place, and according to the most reliable criterion - in accordance with the decision of practice.

6. *Pedagogical function.* Control, if it is organized skilfully, gives the performers strong motives for conscientious work.

In the practice of management of a construction enterprise, four main types of control can be applied:

1) preliminary type - precedes the adoption of the final decision. Its purpose is to give a deeper justification for the decision;

2) current type, with the help of which corrections are made to the process of implementing decisions taken;

3) subsequent - serves to test the effectiveness of decision-making;

4) pre-emptive, used in dynamic conditions to pre-empt negative factors by eliminating their precursors

Therefore, control is an objective necessity, since even the most optimal plans can not be implemented unless they are communicated to executors and their performance is not subject to objective and constant monitoring.

Chapter 2

JUSTIFICATION MECHANISMS FOR THE DEVELOPMENT OF INTERNATIONAL TRADE

Salun Maryna
Doctor of Economic Science, Professor, Economic and Law Department
Zaslavska Kateryna
PhD, Associate Professor, Management Department
Simon Kuznets Kharkiv National University of Economics
(Kharkiv, Ukraine)

THE PERSPECTIVES FOR LATVIAN-UKRAINIAN ECONOMIC COOPERATION

The mutual interest of the Baltic countries and Ukraine is based on the development of European integration processes, which imply deep social and economic reforms and institutional changes in Ukraine. It should be noted that there are no clear obstacles to the development of full-fledged, full-scale political and economic relations between countries. These relations are not overshadowed by negative factors of the past or the present, therefore the experience of the Baltic States in conducting of efficient and timely reforms is invaluable.

Considering the prospects for economic cooperation with the Baltic countries, first of all with Latvia, it is necessary to note the need to restore transit-transport, economic, energy, financial, trade and social cooperation between the countries for the increasing of their economic potential. Such cooperation can be implemented through simplification of business in the joint economic space, in common energy, logistics, and infrastructure projects that will contribute to the economic development of both countries.

In 2016 the trade turnover between Latvia and Ukraine has reached 35.12 million EUR. So Ukraine took the 7th place among partners of Latvia in foreign trade outside EU, and 25th place among partners of Latvia in foreign trade in general [2].

Latvian-Ukrainian economic cooperation has good potential for

development. The volume of trade in goods amounted to 180 300 000 USD [1]. Export decreased by 14.9% and import increased by 30.9%. The balance was positive for Ukraine (fig. 2.1).

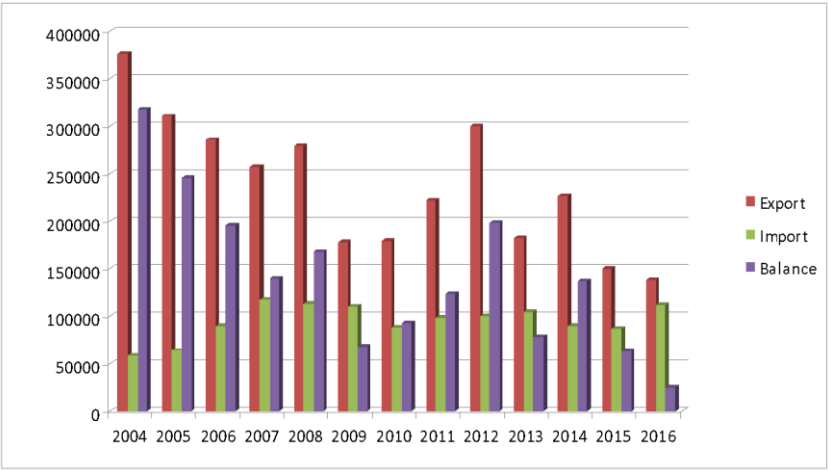


Figure 2.1. Foreign trade in goods between Ukraine and Latvia, in thousand USD

In the export structure of goods, the most significant for Ukraine were: mineral fuels, oils and products of their distillation (19,43 % of exports), clothing and textiles (8,01%) and finished products of grain (4,47%) (table 2.1).

In 2016 the main Latvian export goods to Ukraine were: pharmaceuticals, goods purchased in ports, alcoholic and non-alcoholic drinks (table 2.2).

The trade of services between Ukraine and Latvia has made 82700000 USD and decreased by 0.5% compared to last year [1]. The volume of Ukrainian exports of services to Latvia slightly decreased, while imports increased by 30.9%. Balance in trade in services over this period was positive for Ukraine (fig. 2.2).

The main export services in 2016 for Ukraine were: transport services, travel services, processing of material resources (table 2.3).

The main export services in 2016 for Latvia were transport services, travel services, repair and maintenance (table 2.4).

Table 2.1

Commodity structure of export from Ukraine to Latvia in 2016

Goods	Cost, in thousands USD	In % to 2015	In % to total volume
mineral fuels; oils and products of their distillation	26844,40	264,53	19,43
clothing and textiles	11071,09	86,01	8,01
finished products of grain	6174,67	104,51	4,47
railway locomotives	5941,21	165,64	4,30
furniture	5725,33	144,15	4,14
alcoholic and non-alcoholic beverages and vinegar	5107,33	155,27	3,70
electrical machines	5073,68	112,81	3,67
ferrous metals	4655,05	107,72	3,37
chemical products	4591,29	286,18	3,32
food	4318,76	219,25	3,13
nuclear reactors, boilers, machinery	4223,26	35,16	3,06
wood and wood products	4062,66	108,70	2,94

Thus, the most significant areas of trade and economic cooperation between Ukraine and Latvia are currently the following:

- in commodity trade – mineral fuels; oils and products of their distillation; chemical products; food; fats and oils of animal or vegetable origin; organic chemical compounds;
- in trade of services – travel and business services.

A promising area of cooperation can be collaboration in the formation of a common market of information products and services since both countries have significant competitive advantages in this area. Separate consideration should be given to the possibilities of business proceedings outsourcing, which covers execution of commercial and financial documentation, processing of offers, execution of insurance policies, execution of documents on claims, provision of remote services for a secretary, editor, etc.; as well as the creation of call-centres, the scope of which includes the following services: help desk, technical support, consulting, claims acceptance, marketing research, market research, advertising services [7].

Table 2.2

Commodity structure of export from Latvia to Ukraine in 2016

Goods	Cost, in thousands USD	In % to 2015	In % to total volume
pharmaceuticals	22913,3	118,6	20,4
goods purchased in ports	19441,5	87,0	17,3
alcoholic and non-alcoholic beverages and vinegar	11195,9	255,4	10,0
fats and oils of animal or vegetable origin	5455,3	2 125,6	4,9
organic chemical compounds	5432,0	184,5	4,8
fish and crustaceans	4338,2	121,6	3,9
tanning extracts	3920,1	151,7	3,5
products of meat and fish	3621,1	160,1	3,2
fabrics of synthetic or artificial	2840,4	85,7	2,5
land transport other than railway	2680,8	431,1	2,4
electrical machines	2563,0	141,0	2,3

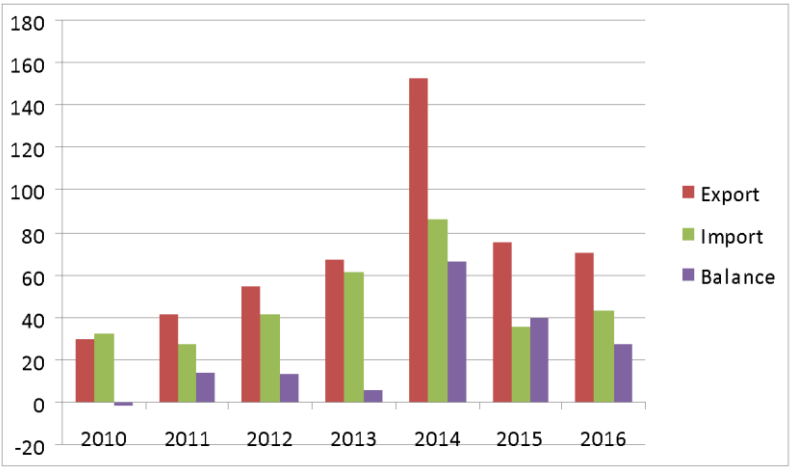


Figure 2.2. Foreign trade in services between Ukraine and Latvia, in thousand USD

Table 2.3

Structure of export of services from Ukraine to Latvia in 2016

	Volume, in thousands USD	In % to 2015	Share in % to total volume
Transport services	56699,5	94,0	80,3
Travel services	3851,3	469,7	5,5
Services for processing material resources	3319,5	123,1	4,7
Business services	2795,4	82,0	4,0
Services in the field of telecommunications, computer and information services	2660,4	97,8	3,8
Insurance services	552,8	54,1	0,8
Services in repair and maintenance, not included elsewhere	263,4	8,3	0,4
Services related to financial activities	168,9	16,8	0,2

Table 2.4

Structure of export of services from Latvia to Ukraine in 2016

Kind of services	Volume, in thousands USD	In % to 2015	Share in % to total volume
Transport services	14704,4	109,2	34,2
Travel services	13645,1	236,4	31,7
Services in repair and maintenance, not included elsewhere	5791,9	24868,4	13,5
Business services	4360,7	194,9	10,1
Services in the field of telecommunications, computer and information services	1927,9	95,4	4,5
Services related to financial activities	1728,4	16,3	4,0
Public and government services	587,4	82,8	1,4
Insurance services	165,4	18,3	0,4

It is in connection with the need for expansion of types and forms of trade and economic cooperation between Ukraine and Latvia. And it is

expedient to use such an instrument of doing business as an organization of foreign representative offices.

Each company works for profit and, for each owner, it is important to increase this profit. But often the domestic market is not enough, and that's why many entrepreneurs decide to enter the international market. Registration of foreign representative offices becomes a good step and a profitable business.

The Law of Ukraine "On foreign economic activity" [6] provides the following definition of the notion of representation of a foreign entity: a representative office of a foreign economic entity - establishment or person representing the interests of a foreign economic entity in Ukraine and has duly made by the appropriate authority.

The efficiency of establishment of foreign representative offices is confirmed by positive dynamics of their development in Ukraine (fig 2.3).

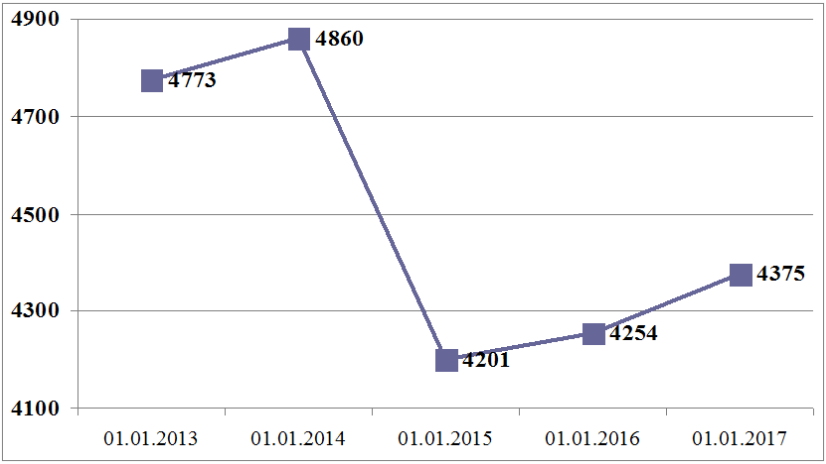


Figure 2.3 Dynamics of registration of foreign representative offices in Ukraine

When opening the representative office, you need to find out what the nature of the non-resident intends to carry out in Ukraine. Is it just for market research and for executive functions of the company non-resident in Ukraine, or for economic activity?

So it will bring the decision whether the representative office makes

a profit and would be therefore a taxpayer in Ukraine, what accounts need to be opened in banking institutions, and in general, the possibility of such business operations on the territory of Ukraine. Thus there is a division of representative offices to permanent (commercial) and non-profit.

The comparative characteristic of the types of representative offices (based on [5; 6]) is presented in table 2.5.

Table 2.5

The characteristics of non-profit and constant type of representative offices in Ukraine

The foreign representative office (non-commercial)/ (without the right to conduct economic activity)	The foreign representative office (permanent)/ (with the right to conduct economic activity)
The non-profit representative office is not a legal entity and does not perform any independent economic activity, acts on behalf of and by order of the foreign subject of economic activity	The constant representative office is a permanent place of business activity of non-resident in Ukraine
Taxation	
The main condition for the non-profit representative office is the presence of a bilateral Convention on the avoidance of double taxation between Ukraine and country of incorporation, as well as the certificate of residency	In the case of the economic activities on the territory of Ukraine is the representative office must be registered with the tax authority at its location and to obtain the status of the permanent establishment
Work of non-residents in foreign representative offices	
Foreign employees of representative offices of foreign subjects of economic activity shall be issued special service cards valid on the territory of Ukraine. Thus, foreign citizens have the right to be formally employed in the representation without a necessity to comply with such formalities as obtaining a work permit	

So, the advantages of foreign representative office are the following:

the ability to use the brand and name of the foreign company without license agreements;

the ability to direct control on activities, to carry out direct financing for the representation office;

obligations from transactions within the representative office create

liabilities for the parent company, in some cases much more attractive for contractors;

employees of representative offices acting on the basis of special service cards, which does not require as much formality, as obtaining permission to work.

Conclusions

The current state of trade and economic cooperation between Ukraine and Latvia in recent years is characterized by a significant decline in mutual trade in goods and services. Traditional foreign trade relations based on trade in goods (as mineral fuels, oils and products of their distillation, chemical products, food, fats and oils of animal or vegetable origin, organic chemical compounds and services (as travel and business services) need to be complemented by innovative component – the interaction on the creation and implementation of information products and services. The rapid development of this market requires the renewal of forms of foreign economic cooperation. It can be done through the transition from the establishment of traditional joint ventures and isolated branches to the creation of foreign representative offices of companies.

References

1. *Economic statistics. International economic activity and balance of payments, available at: http://www.ukrstat.gov.ua (accessed 12 October 2017).*
2. *Foreign trade of Latvia: Main commodities and trade partners 2016, available at:: http://www.csb.gov.lv/en/dati/e-publikacijas/foreign-trade-latvia-main-commodities-and-trade-partners-201604-only-latvian-460 (accessed 15 October 2017).*
3. *Information Economy Report 2015, available at: http://unctad.org/en/PublicationsLibrary/ier2015_en.pdf (accessed 11 August 2017).*
4. *Statistical publication. The activity of large, middle-size, small and micro-entrepreneurship entities, available at: http://www.ukrstat.gov.ua (accessed 17 August 2017).*
5. *The Commercial Code of Ukraine, Law on December 8, 2016, № 436-IV, available at: http://zakon4.rada.gov.ua/laws/show/436-15/ (accessed 11 September 2017).*
6. *The Law of Ukraine "On foreign economic activity", Law on April 16 , 1991, № 959-XII, available at: http://zakon0.rada.gov.ua/laws/ show/959-12 (accessed 05 September 2017)*

7. *Trade map – International Trade Statistics. Service: 9 - Telecommunications, computer, and information services, available at: http://www.trademap.org/tradestat/Country_SelService_TS.aspx?nvpm=1|||||||S09|1|3|1|2|2|1|2|1|1 (accessed 20 September 2017).*

Vdovichena Olga
PhD in Economic, Associate Professor
Chernivtsi Trade and Economic Institute of Kyiv National University of Trade and Economics
(Chernivtsi, Ukraine)

MANAGEMENT OF DEVELOPMENT OF EXHIBITION-FAIR ACTIVITIES OF BORDER REGIONS IN CONDITIONS OF INTERNATIONAL COOPERATION AND EUROPEAN INTEGRATION

Exhibition activity in modern conditions implements the functions of the main link of processes of exchange of goods and services not only at the state or national levels, but also in the regions, cities that take part in international cooperation. This is provided by the manifestation of specific features of exhibition activity, as one of the marketing tools (including regional ones). Such an instrument carries out functions such as informing about the state and trends of market development, the level of competition and the peculiarities of the application of competitive, innovative, logistic and price strategies; creating opportunities for direct dialogue between producers and consumers; holding professional conferences and discussions within exhibitions, establishing promising business contacts, which in aggregate is important for the formation of a positive image of cities and regions, especially those located in the border areas.

Consequently, the above problems and determines the ***relevance*** of this article, on the basis of which it is possible to formulate a general purpose.

The ***purpose*** of our research is to determine and analyze the results of development of the exhibition activity of regional enterprises, the impact of such activities on international relations, as well as research of issues related to the development and functioning of exhibition activities at the level of the country's economy, border and other geographical

regions.

To achieve this goal we distinguish the following ***tasks***: to research the value of exhibition activities for the socio-economic development of regions; to determine the peculiarities of functioning of this activity at the macro and microeconomic levels; to offer practical and perspective directions of development of international cooperation in the field of exhibition activity.

Based on these provisions, we will highlight the importance of exhibition activities for international cooperation as an ***object of research, the subject*** of which are factors that determine the effectiveness of interaction at different subregional levels, namely, special programs of economic and social development of regions, programs, which include provisions and concepts on maintenance, financing and development of exhibition activities at the local and regional levels.

In today's conditions of development of economic processes in the state, particular attention should be paid to structural changes at the regional level to provide an effective mechanism for interaction in problems of the development international cooperation, the expansion of the euro integration processes at the state and local levels.

The development international cooperation is a priority of the implementation of Neighborhood Policy in EU.

Today, international cooperation is carried out both at the interstate level, and at the level of territorial communities, their representative structures, local executive authorities. Such cooperation contributes to the social and economic convergence of the border regions and the creation of new opportunities for their development, including the development of economic, social, scientific-technical, environmental, cultural and other relations, exchange of experience.

Ukraine has a border with seven states, 19 of the 27 administrative-territorial units are frontier. On the territory of such border areas as Vinnytsia, Volyn, Zakarpattia, Ivano-Frankivsk, Lviv, Lugansk, Odessa, Sumy, Kharkiv, Chernivtsi, Chernihiv, Donetsk regions, created nine Euroregions – Bug, Verhniy Prut, Dniester, Dnipro, Carpathian, Lower Danube, Slobozhanschina, Donbass and Yaroslavna, five Euroregions created with the EU member states (Poland, Slovakia, Romania, Hungary). Within the framework of Euroregions cross-border cooperation has been in since 1993.

In the general development of the EU member states, a significant role is played by the sphere of regional development. For realization of

regional policy in the EU, one third of the consolidated budget is spent – 308 billion EUR for 2007-2013, of which 81.5 % is directed at measures to reduce territorial disparities, about 16 % to improve the competitiveness of the regions and 2.5 % – for European territorial cooperation [2].

In Ukraine, in the context of an acute shortage of investment resources in virtually all regions, there is a delimitation of the boundaries between the problems of the regional policy itself and issues of national economic development, including taking into account the interests of the regions in general.

Regarding certain regions of Ukraine, we can say that there is an increasing imbalance in the levels of development of regions Ukraine in various dimensions (center-periphery, east-west, urban-rural), the presence of territories that have been in deep depression for a long time, the need to solve concerning certain regional problems – restructuring of enterprises in the old industrial regions, increasing the efficiency of production in rural areas, assisting border areas, etc., require the implementation of a well-balanced regional field tics of the state. The experience of the EU states confirms the need for a realizing focused (selective) regional policy [4, p. 234].

Most of the issues of creating a business environment and economic infrastructure are solved here by regional or local administrations (or, ultimately, together with them). Government efforts focus on helping the most troubled areas.

This necessitates the formation of strategies for active self-sufficiency of the regions in Ukraine, increasing their competitiveness through deepening of those functions of the territory, the structure and specialization of the economy, for which there are the most favorable conditions. In this context, it is rather attractive to consider the practice in the West to develop and implement targeted integrated programs of development of territories that is a practical embodiment of theoretical and methodological ideas of economic and social geography (namely, the science of spatial patterns of development of society) regarding the complex development of the territory, taking into account social, economic and environmental conditions.

Insignificant influence on the socio-economic situation what has happened in the regions, in conditions of insufficient solvency of the domestic market, has external factors such as dependence on the situation of the relevant sector of the international market, unstable supply, lack of dynamics of energy prices, etc. The stable development

of regions also depends from the level of diversification of economic potential. At the same time, the weakness of the national economy is structural imbalance, industrial complex, its reformation, high level of energy- and capital-intensity of production. The highly specialized economic base of most regions is outdated, does not meet the modern requirements of a market economy, therefore, doesn't use all available potential. The economic activity of such regions is, as a rule, represented by several enterprises of one-two industries that produce intermediate and low-tech products. Accordingly, such enterprises have no financial means to modernize the production process in accordance with international requirements, which makes it impossible to process their effective development and attract additional capital invested. In addition, among the many factors those negatively influence on the competitiveness of regional enterprises, especially distinguish:

- ✓ unfavorable investment climate (in some cases, foreign investors can not even get acquainted with and explore the activities of enterprise);
- ✓ slow pace of economy modernization;
- ✓ underdeveloped production structure;
- ✓ financial and informational-communicative industries do not fulfill their role in the innovation activity of enterprises.

Transformation of market relations in Ukraine involves creating, first of all, optimal conditions for the efficient functioning of enterprises. To do this, there should be a highly developed market infrastructure that would promote of realization the economic potential of economic entities both in the domestic and foreign markets. One of the directions to achieve this goal is to restore and develop fairs and exhibitions infrastructure. In the development of this activity, everyone is interested, from producers, sellers, intermediaries to end-users of goods and services [5, p. 144].

It is the definition of exhibition activity can be represented as the activity of enterprises, which is aimed at organizing events and providing and receiving exhibition services. In addition, the exhibition activity is also in the case when the enterprise is a visitor or participates in exhibitions, including international ones.

Exhibition activity is a complex tool that allows simultaneously to advertising own products, to get acquainted with partners and competitors, to evaluate the current state of the market in parallel determining its own place on it, to establish new contact.

At the present stage of development of exhibition activities, it is

necessary to mention that the very concept of the exhibition in its development has long gone beyond its long-standing definition, which meant a demonstration of products of a certain category for professionals and a wide range of visitors. The process evolution of the exhibition business led to the development and improvement of terminology, resulting a number of new concepts appeared, definitions and interpretations related to the organization, carrying out and participation in exhibitions of enterprises and organizations.

Thus, in the exhibition terminology, within the framework of exhibition-fair measures are distinguished three types of definitions of the given activity: an exhibition and a fair. Therefore, under the exhibition event should be understood as a set of measures that are marketable, commercial nature, allowing the exhibitor to use all marketing tools in the process of presenting the results of their business activities. Exhibition events – this is not only an active leading channel of goods and services on the market and one of the main types of advancement of new technologies, scientific-technological achievements and production experience, but also a modern "viewing" platform.

The above definitions give us the opportunity to highlight an object of exhibition activity. The object of exhibition activity is the potential base of prospective clients, who are consumers of goods and services of enterprises in terms of cooperation within the exhibition environment.

The international standard ISO 25639-1 defines the exhibition as follows: "An exhibition is an event where displayed and distributed goods, services or information. The exhibition does not include bazaars". This definition is rather brief and can not adequately disclose the differences of the exhibition from other forms of activity.

Today in the worldwide observed of development of trade exhibitions and increasing their international significance. The exhibition was and remains one of the most effective types of advertising, although it is more expensive than other types of advertising and less operational. Exhibitions facilitate timely adaptation to market conditions, lead to the necessary business cooperation of the enterprise at all levels. This causes an increase the share of enterprise expenses for participation in exhibitions in the total share of advertising costs. Thus, according to foreign experts, the costs of USA companies on participating in exhibitions account for 18 % of the total amount of advertising costs, German companies spend on average 25 % of the total advertising budget.

The exhibition business in Ukraine remains highly fragmented: a

large number of exhibitions, especially in the regions are small and weak in professional terms, at the same time, the leaders of the exhibition market are very strong and active. Therefore, there is a gradual consolidation of the market – decline of nonprofessional organizers, strengthening of leaders, creation of alliances.

It is also worth noting that the exhibition activity can be considered at four levels. Micro- and macroeconomic level is ensured by the fact that from one side of the enterprises which participating in the exhibitions and using them us marketing tool, adapt your own activity to changing market conditions, search for the most effective forms of doing business, thus contributing to the development of the market as a whole, influencing the country's economic growth [6, p. 180-182].

Branch – exhibition activity itself is area of the economy, uniting enterprises that are professionally engaged of the organization of exhibitions and exhibition services.

Regional – since the exhibition activity involves the development of business tourism (participants and visitors to exhibitions from other cities and countries), it has a direct impact on the development of hotel, restaurant, tour, transport business [8, p. 118].

In addition, the exhibition serves as a special place for the exchange of information on the latest scientific-technical developments and innovations in virtually all branches of the national economy. International exhibitions, in turn, often carry large volumes of cultural information (depending on the cultural characteristics of the country where organized and held the exhibition) and actively use exhibitions as a foreign policy tool – to promote a particular country or region, which makes them a special tool in politics international cooperation and integration.

Particular attention should be paid to the fact that exhibitions are organized for the purpose of forming, maintaining and promoting the image of not only an individual enterprise, by conducting special exhibitions, but also by regions (if are talking about exhibitions of regional level) and the state as a whole (exhibitions of national, international and the world). Participation of the state in international exhibitions can consolidate the image of a reliable trading partner, deepen cooperation with foreign investors in various fields, intensify foreign economic activity and cross-border cooperation. That is why for many companies are the important fact of participation in the exhibition, because it is a means of maintaining the image and contact with the target audience. The exhibition helps maintain a positive relationship

with existing customers, as well as attracts new ones. The exhibition is not only an economically efficient means of product promotion, it provides a wide marketing communication with a range of real and potential customers, including foreign ones.

Considering that exhibition activity is important for the development of small and middle businesses (namely, it is strategically important for the development of individual regions), which is limited in its financial capacity to organize advertising activities for the promotion of its products and services on the market, it is effective tool a partner collaboration between the target markets of suppliers and potential investors.

Exhibitions are a traditional form of international economic cooperation, a recognized factor contributing to the progress of science and technology. They are a convenient place for meetings of business people from different countries of the world, where concluded a large business agreements, there is an exchange of experience and knowledge. Exhibitions allow a wide range of businessmen, specialists, representatives of scientific-research organizations and industrial enterprises to get acquainted with the best examples of technology of leading firms [7, pp. 99-103].

The high efficiency of exhibition activity determines its extraordinary importance also for the social-economic development of the border areas. An important factor what determining the prominent place of exhibition activity among the important tools of regional development is its impact on various market players (exhibitors, visitors, experts), individual industries, dynamics of development economy the city and regions, and the value of such activities is an important market mechanism for self-regulation and self-development of cities and regions of border areas.

If at the macroeconomic level exhibition activity: contributes to the development of international trade (both import and export); stimulates the innovation process; creates cooperative ties (in particular, interregional and international); provides attraction of investments; stimulates the development of the consumer market; contributes to the reduction of the technological chain of sales by establishing direct contacts between producers and consumers, manufacturers and retail trade, etc. (which leads to a decrease in prices), then at the microeconomic level exhibition activity ensures the development of advertising, sales of goods and services, manages the relations of producers with consumers, ensures feedback to markets of

transboundary territories, etc.

Of course, in order to achieve the best results on the implementation, realization and development of exhibition policy in the border areas, both at the state and at the regional level, necessary to coherent, coordinated work and mutual assistance of the main parts of the process activity. In this case, we are talking about participants as an integral part of effective work, namely:

1. Administrative bodies that regulate, carry out of control and financing the exhibition activity of the regions.
2. Organizers – commercial structures for which the activities related to the organization and conduct of exhibitions are the main or auxiliary, specialized associations, chambers of commerce and industry for which such activity is a priority area of work.
3. Participants (residents and non-residents) – are the primary source of reporting information on the results and effectiveness of exhibition events held in the border regions.

Thus, for the maintenance and development of exhibition activities administrative bodies are being created, every year developed and approved of special programs of economic and social development of regions, programs, which include provisions and concepts at maintenance, financing and development of exhibition activities at local and regional levels.

These programs clearly identify the main problems at the regional and local levels, which currently include:

– absence of a permanent place of conducting exhibition-fairs and presentation-image events in the region;

– low economic efficiency of participation of regional enterprises in presentation-exhibition events of all levels;

– insignificant financial maintenance and provision of organizational-preparatory, material-technical measures for the consolidated participation of regional enterprises as part of the complex exhibit of the region, presentation and exhibition-fairs events of national and international levels;

– low activity of participation of enterprises and organizations of region in interregional, national and international specialized exhibitions and fairs, including abroad (lack of a readable mechanism for financial maintenance of these measures from state and local budgets);

– high payment for the services of nationalwide and national exhibition-fairs and presentations, which are held on the initiative of the government and other central executive authorities.

Also, the main tasks set by the city administration and the region for the implementation of a progressive regional cross-border policy are to development of presentation and exhibition-fair activity in the region and increase its economic efficiency by:

– activation and procuring of participation of the region in resonant presentation and exhibition-fairs in order to obtain relevant professional experience in organizing and conducting similar events on the territory of the region;

– promoting the achievements of the region and the image among other cross-border regions of Ukraine, participants of the presentation, exhibitions-fairs events of the international and national levels that can act as potential investors of perspective business projects of the region;

– activating the participation of enterprises and organizations of the region in regional, interregional, international and national presentation and exhibition-fairs events;

– implementation of qualitative and quantitative selection of regional enterprises and organizations for their involvement in consolidated participation in the complex exhibit of the region at exhibitions and fairs of the international and national levels;

– establishment of effective partnerships with enterprises in the region and regions of neighboring countries;

– presentations of investment-innovative proposals and projects on image exhibition-fairs events of regional, national and international importance;

– increasing the influence of exhibition activities on the scientific-technical and technological renewal of regional production;

– strengthening the material-technical base of the development of presentation and exhibition-fair activity;

– facilitating the creation of a regional exhibition center that would meet modern requirements by studying the experience of the functioning of modern exhibition centers in other regions of Ukraine and the border areas of neighboring countries, namely, Romania, Moldova and Poland;

– preparation of conceptual foundations for justification of expediency in the region of the said center and its prospects functioning;

– initiation carrying out on competitive bases of selection the best design-projects, construction of an exhibition center;

– involvement to cooperation of local self-government bodies for the joint decision of issues related to the creation and function of the said center in the region;

– study the intentions and conditions of leading regional enterprises

regarding the possibility of investing their financial resources in the creation and function of an exhibition center.

Usually, developing and implementing perspective plans, must first need be focused on the planned, that is, the expected result that can be achieved, namely:

– activation of participation of business entities of the region in resonant presentation and exhibition events;

– acquiring relevant professional experience in organizing and conducting at a high level of similar events on the territory of the region;

– popularization of achievements of the region and its image among other regions of Ukraine, participants of presentation and exhibition events of the international and national levels;

– output of local producers on interregional and international markets sale of the product own production in conditions of international cooperation;

– strengthening the material-technical base for the carrying out exhibitions;

– accumulation of interregional resources of exhibition equipment for collective use;

– prospective planning and participation in the construction of regional exhibition complexes.

Since the main source of information is an enterprise that directly participates in the exhibition, and seeks a professional approach to the organization of exhibition activities, it is natural – the higher the level of preparation, the better the economic results from the carrying out of such an event gets the enterprise.

Therefore, in order to increase the effectiveness of exhibition activity in the border region, in our opinion, the company-participant needs to create his own department of exhibition and advertising activities, whose tasks will be: organization of exhibition activities of the enterprise; organization of thematic conferences, seminars, business meetings; realization of promotions, presentations, development of advertising campaign, realization marketing research; organization and holding of press-conferences; development and publication of informational, reference, advertising and other materials related to the organization of events by the exhibition department; develop of the artistic design of the exhibition exposition; search of potential partners for realization of various forms of business cooperation, including foreign economic.

Successful use of information obtained at the exhibition can offset

the excess costs of the exhibition.

Also, it should be noted that for the effective implementation of the exhibition policy of the frontier region, it is necessary to develop a program of coordinating actions of local governments, the territorial chamber of commerce, business and exhibition structures. Adoption and approval of such a program will significantly accelerate the development of the exhibition activity of the region and its effectiveness, as well as will allow the efforts to develop a set of measures for state coordination and maintenance of exhibition activities in order to promote the development of economy of the region and the output of local producers on the foreign markets, that is, the development of international cooperation.

The purpose of such a program is to develop activities aimed at creating conditions and forming mechanisms that ensure:

– increase of the efficiency of sales products of local producers and filling the domestic and foreign markets of high-quality goods of regional production;

– forming a positive image of the region at the international, interregional and regional levels, attracting the attention of business structures in Ukraine and abroad to the investment potential of the region,

– creation of favorable conditions for the development of exhibition business, preparation and approval of the necessary package of regulatory documents for regulating this process.

To achieve this goal, the following tasks need to be addressed:

– organization and coordination of activities of executive authorities and local self-government, territorial chamber of commerce and industry, business and exhibition structures in the organization and conduct of priority exhibition events;

– providing state maintenance and stimulating the participation of regional producers in exhibitions events which conducted in the territorial region and beyond – as one of the directions of expansion of markets sales for local products;

– preparation and production of advertising-informational materials for goods and services in the region;

– organization of the training system of exhibition personnel;

– informational providing of exhibition activity, using modern means of communication;

– development of material-technical base of exhibition activity.

Measures of development of exhibition activities in the region are

systematized for the main directions of maintenance and development of this activity. State maintenance of exhibition activities can be implemented in organizational, informational and financial forms.

Organizational maintenance from the administration of the region is:

– to ensure the participation of local producers in exhibition events what have priority importance for the economy of individual industries and the region as a whole from the point of view of promoting the production of enterprises in the region to domestic and foreign markets;

– in the preparation and holding of exhibitions-presentations of the region that demonstrate achievements in the fields of economy, science and culture, which are most important in terms of trade-political and economic interests of the region.

Organizational providing of exhibition events is carried out as follows: assistance from the administration of the region in attracting local producers to participation in exhibitions; provision of methodological assistance by the Commission (Coordinating Council) of the region to the exhibition-fair activity in order to coordinate the activities of all its participants, increase the level of the event, granting him the status of state maintenance.

Information maintenance includes:

– provision of regional commodity producers – potential exhibitors – information on a wide range of issues representing of practical interest, including the placement of information on the official website of the region administration and the use of Internet and mass media;

– deployment of information campaigns in the mass media about the future participation in exhibitions-presentations of the region, involvement to future event of attention potential Ukrainian and foreign partners.

Financial maintenance can be identified: in the form of partial financing of the participation of regional enterprises in exhibition events and financial providing for the modernization, reconstruction of the material-technical base of exhibition activities. The maintenance mentioned above is carried out within the limits of the funds provided for in the regional budget within the framework of the program, as well as at the expense of the attracted financial resources of sponsors of the exhibition activity.

Public financial maintenance is focused, first of all, on international, interregional exhibitions what have of priority importance for the region's economy, as well as those that forming a positive image of the region. Implementation of such a program is foreseen at the expense of

the regional budget, own means of enterprises-participant of exhibition events and sponsorship. The result of the implementation of this program should be the steady growth of demand on the products and services of the enterprises in region, increase in sales volumes, growth of real incomes of enterprises and financial revenues in budgets of different levels.

Participation in international and interregional forums, congresses, exhibitions and carrying out events on the territorial region will be promote the strengthening and development of interregional and international business ties, that is, the development of international cooperation. A complete list of factors necessary for the successful development of international exhibition activities within a region includes: geographical location of the region; presence of exhibition areas that meet international standards; developed warehousing and modern transport infrastructure; providing of exhibition activity by state or regional authorities; coordination and self-regulation of exhibition activity by professional associations; availability of skilled personnel, free access to educational resources; understanding the importance of the exhibition industry as an effective marketing tool, local business; possibility of comfortable business tourism in the region, namely availability of hotels, developed transport network, entertainment industry, etc.

Conducting the whole complex of measures for forming the image of the region at the international, interregional and regional cross-border levels, along with improving the competitiveness of products, will strengthen the status of local commodity producers as full members of trade, expand the position on the regional, national and world markets.

At the same time, it is also impossible to ignore a number of other factors and organizational-legal deficiencies that negatively affect and constrain the development of international cooperation, in particular:

- ✓ low level of development the border transport infrastructure, in particular, highways to the points of entry through the state border, bridges and ferry crossings;
- ✓ slow pace of implementation of modern methods of control at the points of entry through the state border;
- ✓ legislative and institutional constraints to development of small and meddle businesses (including exhibitions) in the border regions of Ukraine;
- ✓ absence in common with other states of a system for the prevention of natural disasters and emergency protection, as well as the

rational use of natural resources;

- ✓ low level of use of tourism potential of border regions and cultural heritage;
- ✓ declarative nature of common priorities of interstate cooperation, imperfect mechanism of joint planning and limited tools for implementing with neighboring states of joint projects of international cooperation;
- ✓ difference between the rules and procedures for the preparation and financing projects of international cooperation;
- ✓ low activity of participants of international cooperation at the level of areas and territorial communities;
- ✓ inconsistency of the throughput of checkpoints across the state border to the needs for the development of international cooperation;
- ✓ unequal access of Ukrainian participants to financial resources in the framework of implementation from the country-members EU of Border Cooperation Programs and the European Union Strategy for the Danube Region;
- ✓ insufficient amount of donor providing of projects international cooperation in the Eastern and Central regions of Ukraine, which creates unequal conditions and leads to a low level of awareness about the development of international cooperation.

In the border regions there are many common goals whose needs to be used by subjects of international cooperation of neighboring countries to adopt a united approach and coordinated joint actions, in particular for the development and functioning of transport and energy infrastructure. It is also necessary to solve together the individual problems arising from the financial and economic crisis, in particular overcoming economic inequality and unemployment, balancing labor and post-conflict migration, increasing the level of business activity and employment of population of the border regions.

In order to intensify efforts aimed at achieving these goals, the state develops and implements development programs. The main tasks of such programs in the direction of promoting economic and social development of the border regions of Ukraine and international cooperation are:

- ✓ elimination of infrastructure barriers, development of transport, energy, industrial and social infrastructure of the border regions of Ukraine; promotion implementation of joint business (including exhibition) activities in the border regions of Ukraine in the sphere of small and medium business;

✓ creation of conditions for the development of cooperation and competition in the sphere of small and meddle businesses (including exhibitions); creation and maintenance of functioning of production clusters, associations of Euro regional cooperation;

✓ activization of foreign economic activity in the border regions of Ukraine;

✓ coverage of issues regarding investment needs and opportunities in the border regions of Ukraine on international forums, seminars, conferences, exhibitions, fairs, etc., as well as in mass media;

✓ ensuring the development of cooperation in the field of education, science and health, establishing contacts between scientific-research (scientific-technical) institutions;

✓ cultural and historical heritage of the border regions of Ukraine;

✓ promoting the deepening of economic, social, scientific-technical, ecological, cultural and other relations between territorial communities, their representative bodies, local executive authorities, territorial communities and relevant bodies of other states, ensuring the development of inter-municipal cooperation and the connections of small and meddle cities the border regions of Ukraine with other subjects of international cooperation;

✓ develop of common with neighboring countries of strategic and program documents of development of international cooperation;

✓ creation of conditions for the implementation of common with the neighboring states of international cooperation projects (programs);

✓ common efforts to deepen cooperation in the framework of Euroregions and expand the scope of such cooperation;

✓ enhancement of interaction between participants of international cooperation in the field of international and business tourism;

✓ facilitate the unification of efforts of international cooperation actors to solve common with neighboring countries problems of the border regions of Ukraine and implement European integration activities at the regional level;

✓ providing of organization and holding of forums, business-meetings, presentations, exhibition-fairs events, round table meetings, etc. within the framework of concluded international agreements for cooperation between Ukraine and the administrative-territorial units of other countries, including neighboring states;

✓ holding on the territory of Ukraine the international specialized seminars, conferences, exhibitions and fairs, as well as cultural and educational measures aimed at the development of international

cooperation.

The fulfillment of these tasks will enable to ensure a dynamic balanced development of the country as a whole, bring of the level life to European standards and create conditions for strengthening economic activity in all regions of the country, which will facilitate the gradual easing of interregional imbalances, reduce the risks of formation of depressed territories and protect society from significant the costs on restoring the proper conditions of their life. In turn, the development of interregional economic relations and international cooperation will ensure an increase in the role of regions in foreign economic cooperation, their active participation in the activities of international organizations, which will be based on economic, trade, scientific-technical, information, cultural cooperation.

Under such conditions interregional economic integration requires the implementation of an appropriate state policy, develop of measures that will promote mutually beneficial cooperation of the regions, development of the domestic market and access to the external market.

Development of interregional cooperation in Ukraine is possible, first of all, with providing to make appropriate efforts by the participants of this process, as well as the necessary state maintenance through the introduction of a mechanism for mutually beneficial cooperation of the border areas and development of cross-border cooperation on a new basis as a factor contributing to integration Ukraine into the European Union. It is necessary objectively evaluated the economic potential of each region and to identify the mutual interests located in them of the economic entities and administrative-territorial units, as well as to involve in the integration process not only central executive bodies, and also regions, local governments, territorial communities.

References

1. *Concept of development the exhibition and fair activity: Resolution of the Cabinet Ministers of Ukraine dated 22.08.2007 No. 1065. Governmental Courier, 2007, Vol. 162.*
2. *State Program for Development of Cross-Border Cooperation for 2016-2020: Decree of the Cabinet Ministers of Ukraine dated 23 August 2016, No. 554.*
3. *Resolution of the Cabinet Ministers of Ukraine dated 06 August 2014, No. 385 "On Approval of the State Strategy for Regional Development for the Period till 2020".*
4. *Vdovichena O.G. (2015) Prospects for development of exhibition and fair activity in conditions of economic instability: a regional dimension.*

Actual problems of the economy, Vol. (163), pp. 232-243.

5. *Vdovichena O.G., Vdovichen A.A. (2016) Potential of exhibition and fair activity in overcoming regional disproportions: monograph. Chernivtsi, Chernivtsi Trade and Economic Institute of KNUTE, 288 p.*
6. *Vdovichena O.G. (2014) The Influence of Exhibition Activities on Regional Development in Terms of International Cooperation. KATEGORIE I TEORIE ECONOMICZNE ORAZ POLITYKA GOSPODARCZA. Katowice, UNIVERSYNET EKONOMIKCZNY, Vol. 176, pp. 179-188.*
7. *Vdovichena O.G. (2012) Influence of modern global economic disproportions is on position of Ukraine in ratings of competitiveness. GOSPODARKA i FINANSE. Zarzadzanie kryzysowe jako element polityki spoleczno-ekonomicznej. Zeszyt 2. Kielce, WYZSZA SZKOLA EKONOMII TURYSTYKI i NAUK SPOLECZNYCH w KIELCACH, pp. 97-105.*
8. *Pekar V.O. (2009) Basis of exhibition activity. HEI "Institute advertising", Higher School of Exhibitions Management. Kyiv, Euroindex, 348 p.*
9. *Kotler Philip (2005) Marketing locations. Attraction of investments, enterprises, residents and tourists to cities, communes, regions and European countries. St. Petersburg, Stockholm School of Economics, 382 p.*

Chapter 3

USE OF INNOVATIONS IN THE INTERNATIONAL FINANCIAL MARKET

Bashynska Iryna
PhD in Economics,
Associate Professor,
Department of Accounting,
Analysis and Audit
Odessa National Polytechnic University
(Odessa, Ukraine)

THE OVERVIEW-ANALYTICAL DOCUMENT OF EXISTING DOMESTIC AND MODERN WORLD-WIDE METHODS FOR IDENTIFYING RISK, ITS ESTIMATION AND MINIMIZATION OF NEGATIVE INFLUENCE

Unbalance, uncertainty, multicriteria are typical signs of a market economy that is always accompanied by risks. Entrepreneurship and risk are organically interconnected phenomena in a market economy [1].

In most works of these scientists, some aspects of the essence of identifying the risk, its estimation and minimization of negative influence are investigated.

The purpose of this work is to combine the experience of leading scientists in the field of detection, risk assessment and minimization of its negative impact on the construction of a unified methodology, which will be based on the latest research by leading foreign scientists, but, in turn, take into account the features of the domestic economy, existing subjective and objective problems.

Most foreign and domestic scholars tend to the Standard AS/NZS Risk Management Standard 4360:1999

According to this standard it is necessary:

– establish the context of risk;

– identify and analyze risk factors;

– assess the likelihood and consequences of the risk factors;

– to develop measures of influence on risks;

– monitor and share information about the risk management process.

Various approaches have been proposed in the foreign literature to try to meet the challenges of complex system risk analysis. Some of the

most interesting are two theories [2]:

– Functional Resonance Accident Model/Functional Resonance Analysis Method (FRAM);

– System Theoretic Accident Model and Processes (STAMP).

The key elements of *FRAM* used for risk analysis are [3]:

1. Identify and describe essential system functions

2. Assess variability for each function

3. Assess how the variability of multiple functions can be coupled and lead to non-linear outcomes (what is referred to as functional resonance).

4. Identify countermeasures *STPA* analysis has the following structure (based on Leveson [4], and Leveson et al. [5]):

1. Identify the accidents to be considered, the system level hazards, safety constraints and functional requirements.

2. Create a model of the functional control structure for the system in question.

3. Identify the potential unsafe control actions (unsafe control of the system).

4. Determine how each potentially hazardous control action from step 3 could occur, i.e. the scenarios leading to unsafe control.

Methods of identifying of risk

Each individual risk should be analyzed from the point of view of how it affects the company. The management of the company should identify the company's goals and the most important risks that prevent them from achieving through the following measures, methods and techniques:

– working meetings and interviews;

– brain storm;

– questionnaires;

– a graphic representation of cost-creation processes, including the definition and representation of business processes and cost-creation chains, as well as external and internal factors affecting them;

– comparison with other organizations;

– discussion with management [6].

There are many methods, each of which helps to obtain information on the characteristics of individual risks inherent in certain activities. Therefore, it is advisable to use a set of methods to solve a task.

Some methods are based on the analysis of statistical, financial, managerial and other accounting documents of the enterprise, others

require direct inspection of sources of danger. There are methods that are more suitable for post-event than for pre-existing situations. Some risk detection methods are based on quantitative analysis, while others use only qualitative approaches. However, all of them are aimed at one – to identify and describe the risks that exist in the organization.

So, to the basic methods of obtaining the source information:

– standardized questionnaire;

– consideration and analysis of primary documents of management and financial reporting;

– analysis of quarterly and annual financial statements;

– drawing up and analyzing the chart of the organizational structure of the enterprise;

– compilation and analysis of the technological flows of production processes;

– inspection visits to production units;

– consultations of specialists in a certain technical field [7];

– examination of documentation by specialized consulting firms;

– SWOT analysis (external threats and opportunities).

Table 3.1 and fig. 3.1 show an example of the identification of risk by NNEGC "Energoatom" [8].

Methods of estimation of risk

As soon as risk factors are identified, the possible consequences of these events and the probability that they will occur will be assessed. At the planning stage, it is necessary to decide in advance how to assess the implications and probability (ie, what scale to use).

Consequences. An assessment of the potential consequences of a particular event may be hampered by the fact that the consequences vary widely, or the event itself occurs several times over a period of time.

Such difficulties should be taken into account and developed in an appropriate way that takes them into account: for example, consider the worst case scenario over, let's say, 12 months.

An assessment of the impact of an event on an organization should take into account the financial implications, the impact on organizational sustainability and the goals of the company, the impact on the political and regional situation of the organization (on an example of Odessa cable plant: fig. 3.2 – 3.4) [9].

In general, the probability of an event is estimated, not taking into account the measures that the company can take in order to reduce this probability.

Table 3.1

An example of risk identification by NNEGC "Energoatom"

No.	The type of risk	Description of risk	Consequences	Probability	Losses
1	2	3	4	5	6
1	Financial risks	The fall of the hryvnia exchange rate	Increase in the cost of nuclear fuel in national currency	High	Medium
2	Credit risks	Low level of payments	High level of loans	Medium	High
3	Financial risks	High inflation	Increased costs for equipment and services due to higher prices	Medium	Mediu m
4	Strategic risks	Fuel shortage for nuclear power plants	Loss of marketable products. Reduced Company Income	Medium	High
5	Strategic risks	No prolongation of the operation of NPPs in the project period.	Loss of generating capacity. Loss of marketable products. Reduced revenue for the company. Increased costs due to decommissioning	Low	High
6	Strategic risks	Fuel shortage for nuclear power plants	Loss of marketable products. Reduced Company Income	Medium	High
7	Strategic risks	Non-fulfillment of 3 packages – Corporatization.	Political dependence on the ruling power. Slow development or its absence; Low investment attractiveness of the Company.	High	Medium

Table 3.1 (continued)

1	2	3	4	5	6
8	Strategic risks	Change the course of the company	Change the development vector of the Company. Loss of development rates	High	Low
9	Operational risks	Low wages for highly skilled personnel	Outflow of personnel	Medium	Medium
10	Technogenic risks	Decrease in production due to hardware failure affects load, personnel errors	Loss of marketable products. Reduced Company Income	High	Medium
11	Strategic risks	The degradation of the education system	Economic losses of the Company	High	High
12	Financial risks	Reduced creditworthiness.	The impossibility to pay on time and in full its obligations.	Medium	Medium
…	Strategic risks	Long-term process of coordination of investment projects of the Company	Lowering your investment performance	High	Medium
25	Other risks	Reduced living standards in satellite cities	Demotivation of personnel. Staff outflow with critical competencies	Medium	Medium

In the pure form, the probability is estimated, taking into account that all possible measures will be taken to avoid the risk or reduce its likelihood.

Target approach means that certain risk factors are set for probabilities that reflect the company's management's view. If the net probability and target differ, then it is worth looking at the risk profile.

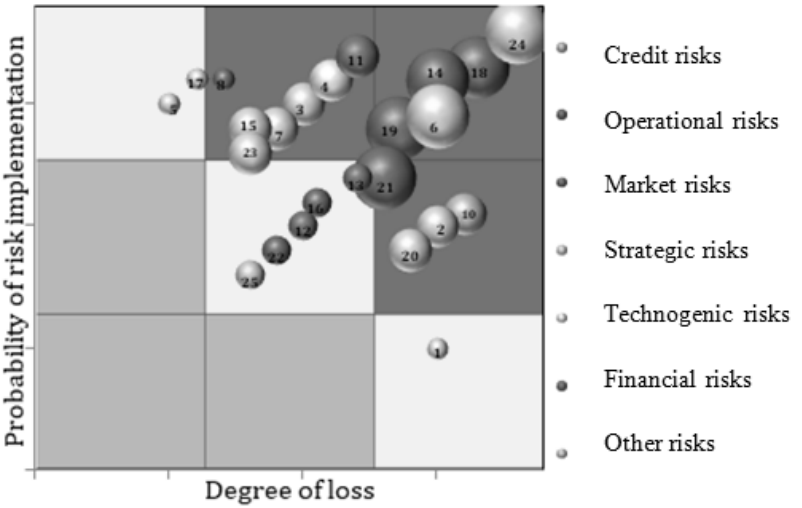


Figure 3.1. Map risks based on the results of the identification and evaluation

RISK PASSPORT № PR-02/FinDir
(an identification number)

Name of risk **Operational risks**

Division **Financial Director**
(the unit that identified the risk)

The risk owner **The financial director …**
(position, surname, initials, signature)

Responsible person **…**
(responsible supplier of information on risk, surname, initials, signature)

Sources of risk

Number	Name
1	Unforeseen losses of the enterprise due to technical errors and failures, deliberate and accidental errors of personnel.

The passport was made by **Financial Director** **…**
(position, surname, initials, signature)

Figure 3.2. Illustration of risk passport, which uses the leading enterprise of the production of communication cables in Ukraine and one of the leading cable plants in the CIS countries – Odessa cable plant (page 1)

EVALUATION OF RISK SOURCES

Source of risk number № 1

Name of source of risk: **Unforeseen losses of the enterprise due to technical errors and failures, deliberate and accidental errors of personnel.**

Evaluation of risk sources Date of evaluation **August 21, 2017.**

Probability of occurrence *(Pq)*, point				
1	**2**	**3**	**4**	**5**
Weakly probable	Little probable	Probable	Very likely	Almost possible

The magnitude of the loss (*Iq*), point				
1	**2**	**3**	**4**	**5**
Minimum	Low	Medium	High	maximal

Risk index ($R=P_q \cdot I_q$) 3 point (s)

Degree of impact of the source of risk				
1 ≤ R ≤4	**5 ≤ R ≤ 8**	**9 ≤ R ≤ 10**	12 ≤ **R ≤ 16**	**20 ≤ R ≤ 25**
Ignorable	Slight	Moderate	Essential	Critical

Level of source of risk		
1 ≤ R ≤4	**5 ≤ R ≤ 10**	**12 ≤ R ≤ 25**
Acceptable	Justified	Unacceptable

Treatment of the source of risk based on the evaluation results

Decrease	Adoption	Avoid	Transfer	Other

Figure 3.3. Illustration of risk passport (page 2a)

Measures for managing the source of risk

Name of event	Responsible	Timing	Resources
1. Carrying out of personnel training in the part of working with primary data and evidence of the achieved results (records), as well as for ensuring interchangeability	Financial Director Responsible person	According to the training plan	–
2. Testing of staff	Financial Director	1 time per year	
3. Assessment of the competence of staff	Financial Director	1 time per year	

Monitoring results Monitoring date **November 30, 2017.**

Probability of occurrence *(Pq)*, point				
1	**2**	**3**	**4**	**5**
Weakly probable	Little probable	Probable	Very likely	Almost possible

The magnitude of the loss (*Iq*), point				
1	**2**	**3**	**4**	**5**
Minimum	Low	Medium	High	maximal

Risk index ($R=P_q \cdot I_q$) 2 point (s)

Degree of impact of the source of risk				
1 ≤ R ≤4	**5 ≤ R ≤ 8**	**9 ≤ R ≤ 10**	12 ≤ **R ≤ 16**	**20 ≤ R ≤ 25**
Ignorable	Slight	Moderate	Essential	Critical

Level of source of risk		
1 ≤ R ≤4	**5 ≤ R ≤ 10**	**12 ≤ R ≤ 25**
Acceptable	Justified	Unacceptable

Treatment of the source of risk based on monitoring results

Decrease	Adoption	Avoid	Transfer	Other

Figure 3.4. Illustration of risk passport (page 2b)

Methods of minimization of risks negative influence

The most common methods of risk management to minimize its impact are [6; 7]:

– avoiding or rejecting risks;
– taking risks for yourself;
– prevention of damage;
– reduction of losses;
– insurance;
– self-insurance;
– transfer of risks (other than insurance).

Avoiding or rejecting risks – the choice of an alternative with the lowest risk level. Refusal to implement a project or enter a new market.

Taking risks for yourself – coverage of losses due to the company's own financial resources. This can be about planned risk taking and unplanned. In the latter case, the risk manager is uncertain whether there is any kind of risk at all or he could not detect it.

Prevention of damage – carrying out measures aimed at reducing their probability.

Reduction of losses – impact on risk by reducing the likelihood of risk realization and / or reducing negative consequences in case of future risk.

Insurance – reducing the participation of the firm itself in compensating the damage by transferring it (insured) to the insurance company (insurer) of liability.

Self-insurance – creation of own insurance funds intended to cover losses, such as funds of insurance and reinsurance companies.

Transfer of risks (other than insurance) – transfer or partial transfer of risk to the other party, allowing to reduce the negative impact on the achievement of the company's objectives. It should be borne in mind that reputation risk cannot always be transferred.

Methods of transferring risk are different from insurance. This group includes hedging, leasing, guarantee.

Hedge – is an investment to reduce the risk of adverse price movements in an asset. Normally, a hedge consists of taking an offsetting position in a related security, such as a futures contract [10].

The lease allows the lessee to transfer the risk of becoming an outdated property leased to its owner. An example of a risk transfer method other than insurance is also the so-called guarantee agreement.

Conclusion

The main goal of risk management is to eliminate or minimize its negative impact on the results of the enterprise's economic activity, based on forecasting a risk event and implementing risk management measures.

It is important that risk management is an integral part of the processes of continuous planning and business management. The strategy of an enterprise should identify the main risks, their possible impact on the activities of the enterprise, the probability of occurrence of risks and appropriate management tools.

References

1. *Bashynska I. (2017) Risk Management. Lecture course: textbook // Bashynska I., Filyppova S. – Kharkiv: publishing house "Disa Plus", 2017. – 101 p.*
2. *Bjerga Torbjørn, Aven Terje, Zio Enrico (2016). Uncertainty treatment in risk analysis of complex systems: The cases of STAMP and FRAM. Reliability Engineering and System Safety 156 (2016), pp. 203–209.*
3. *Hollnagel E. (2012) FRAM: The functional resonance analysis method: modelling complex socio-technical systems. Farnham: Ashgate Publishing Ltd.*
4. *Leveson N. (2011) Engineering as aferworld: systems thinking applied to safety. Cambridge: TheMITPress.*
5. *Leveson N.G., Dulac N., Barrett B., Carroll J.,Cutcher-Gershenfeld J., Friedenthal S. (2005) Risk Analysis of NASA Independent Technical Authority. Cambridge, MA:MIT.*
6. *Starostina A.O., Kravchenko V.A. (2004) Risk Management: Theory and Practice: Teaching. manual - K .: IPC "Publishing House" Polytechnic", - 200 p.*
7. *Bashynska I.O. (2015) Using the method of expert evaluation in economic calculations. // Aktual'ni Problemy Ekonomiky=Actual Problems in Economics, 7 (169), pp. 408-412.*
8. *Official site of NNEGC "Energoatom". Available at: http://www.energoatom.kiev.ua*
9. *Official site of Odessa cable plant. Available at: http://www.odeskabel.com/main-eng/*
10. *Investopedia. Available at: https://www.investopedia.com/terms/h/hedge*

Hryhoruk Pavlo
Doctor of Sciences in Economics, Professor, Head of the Department of Automated Systems and Modeling in Economics
Prystupa Lyudmila
PhD, Associate Professor Department of Finance, Banking and Insurance
Khmelnytskyi National University
(Khmelnytskyi, Ukraine)

CROWDFUNDING AS AN INNOVATIVE TECHNOLOGY FOR FINANCING AND PROMOTING BUSINESS PROJECTS

The intensification of the impact of globalization processes on economic systems and the pace of development of information technologies, the comprehensive distribution of social networks, make use of innovative approaches to financing projects that are based not on state guarantees or statutory capital, but on public participation. These challenges are exacerbated for social ventures, which are driven by the ambiguous and sometimes dichotomous goal to achieve a double bottom line: to balance social and for-profit goals.

Thus, in today's environment, the fastest and most effective way to solve the problems of finding resources for starting and developing projects isn't cheap credit resources or lobbying interests in power, is self-financing.

The innovation technology to raise funds from a significant number of investors – internet users related to social networks, to financing and popularization various projects is crowdfunding.

Crowdfunding defined as "funding from the world on a string", "social bank", "collective purse", "popular finance", "people's clubbing."

Crowdfunding – a technology of social financing through the Internet, form of social investment that they carry persons that are not institutional investors, such as government, business, investment funds, venture capital, business angels and others. The main actors are the social finance people for whom making money in certain projects (production, innovation, cultural etc.) occupation is temporary and additional to the main types of economic activity.

Funding in this case through specialized Internet platform to help create the most complete description of the project or funding requirements. For more informative and motivating potential investors are placed investments in the form of photos, links to videos, documents (business plan, etc.) And notes required amount for financing, the period for which the money involved, the proposed percentage of income. With the social nature of the project, with donations usually indicates that the non-repayable financial assistance. There is a practice of presenting projects in such popular portals social networks, mailing information to potentially interested groups.

Based on the study and systematization of information [1; 2; 3, etc.], the differences from traditional forms of crowdfunding to raise funds to financing the projects include:

– Multisubject (mass): funds attracted a huge number of people ("Becker" donor ") that are social investors – subjects of collective funding through crowdfunding Internet platform;

– Microfinance: attracting and implementing social mikro investments because people can invest even small amounts of money to various projects;

– Global finance space: crowdfunding overcomes the inherent limitation of traditional forms of financing, such as those associated with the location of the investor and innovator, the level of national and international financial markets; As the financial infrastructure that provides cash flows, national regulation of the financial sector, corporate management and others;

– Networked arrangement of funding: public funds involved by establishing relationships investors and developers in social networks;

– Savings on intermediaries "reduced the number of hierarchical links through direct connection of people with money to people who need them" [2], that a social bank, which accumulates and uses the financial resources of the population;

– Saving transaction costs: project developer and potential investors, crowdfunding using technology to minimize costs compared to the use of other funding mechanisms offered by the financial market;

– A form of venture financing, as minor amounts of social investments, risks crowdfunding is not large. However, along with the presentation of creative projects to copyright kraudfandynhovyh platforms may also happen fraud ("Fake projects").

Depending on the purpose of developers (authors) projects are the following crowdfunding:

– social crowdfunding: projects aimed at solving specific social problems. However, a non-profit social crowdfunding model is not a charity, because social investors can benefit from or participate in project financing, or usually funds will be returned at the project implementation;

– business crowdfunding: entrepreneurial projects with innovation orientation associated with the introduction of innovations for profit;

– innovative crowdfunding, crowdfunding or ideas projects aimed at developing new products, technologies and so on. Innovative crowdfunding is possible not only in industrial or scientific, but also social, cultural and other spheres;

– cultural (creative) crowdfunding: projects aimed at financial support for activities in the field of culture and art;

– political crowdfunding: projects related to the activities of political groups, parties and monitoring the effectiveness of political and legal measures and so on.

The conducted researches allow to define such types of crowdfunding: donation, lending and equity crowdfunding.

In the donation crowdfunding model, the founder receives money from a crowd without any tangible return for that contribution. In the pure donation model, no rewards at all are offered to contributors. The funds received are essentially a grant given for a specific purpose, but without the expectation of a specific return to the funder. Donation crowdfunding is more popular for projects with smaller funding goals; globally, 90% of donation crowdfunding campaigns raised less than 10 000 USD [4]. Lending crowdfunding, often referred to as peer-to-business (P2B) or peer-to-peer (P2P) crowdfunding, raises money with the expectation that founders will repay supporters. Lending crowdfunding is the largest crowdfunding type by funding volume [4] and takes one of three forms: the pre-sales model, the traditional lending model, and the forgivable loan. The pre-sales model offers the finished product in return for the contributor's pledge; the contribution amount requested from each crowd member is determined by an assessment of the fair market value of the product. The traditional lending agreement uses standard terms where loans are repaid with interest determined precampaign launch. The forgivable loan repays contributions only if and when the project begins to generate revenue or profit. With both the traditional and forgivable loan, crowdfunding projects are assessed according to their risk levels – either by the platform itself or by a third-party evaluator. Lenders choose the level of risk they are prepared to

accept and support projects accordingly. Equity crowdfunding, also referred to as investment crowdfunding, the venture raises money from a crowd in exchange for an ownership stake in the firm. That is, investors are offered equity or bond-like shares. Investor led equity crowdfunding typically involves accredited investors, such as venture capitalists, angel investors, or sector specialists who negotiate with the founder on funding terms. These projects are then promoted to accredited investors via platforms that are often subscription only [5].

But it is necessary to focus on the last type of crowdfunding. For example, in Ukraine underdevelopment in the legislative framework in this area, it will be considered a criminal offense, as under the current procedure at national level the issue of shares, sale of uncertain individuals online is unacceptable. In the US, occupying the largest share to mobilize financial resources through crowdfunding currently accepted are only two relevant law (Jobs act) to consolidate and settlement mechanism of investment (share) crowdfunding. But successful experience in Finland, France, Australia, where for many years crowdfunding is permitted, indicates the possibility of attracting significant investment framework for the creation of start-up capital is based on it.

Crowdfunding campaigns provide producers with a number of benefits, beyond the strict financial gains, among them:

– Profile – a compelling project can raise a producer's profile and provide a boost to their reputation;

– Marketing – project initiators can show there is an audience and market for their project. In the case of an unsuccessful campaign, it provides good market feedback;

– Audience engagement – crowd funding creates a forum where project initiators can engage with their audiences. Audience can engage in the production process by following progress through updates from the creators and sharing feedback via comment features on the project's crowdfunding page;

– Feedback – offering pre-release access to content or the opportunity to beta-test content to project backers as a part of the funding incentives provides the project initiators with instant access to good market testing feedback.

There are also financial benefits to the creator. For one, crowdfunding allows creators to attain low-cost capital. With crowdfunding, creators can find funders from around the world, sell both their product and equity, and benefit from increased information

flow.

Proponents also identify a potential outcome of crowdfunding as an exponential increase in available venture capital. Proponents also cite that a benefit for companies receiving crowdfunding support is that they retain control of their operations, as voting rights are not conveyed along with ownership when crowdfunding.

Crowdfunding also comes with a number of potential risks or barriers. For the creator, as well as the investor, as a rule crowdfunding contains high levels of risk, uncertainty, and information asymmetry. They include:

– Reputation – failure to meet campaign goals or to generate interest results in a public failure. Reaching financial goals and successfully gathering substantial public support but being unable to deliver on a project for some reason can severely negatively impact one's reputation;

– IP protection – many Interactive Digital Media developers and content producers are reluctant to publicly announce the details of a project before production due to concerns about idea theft and protecting their IP from plagiarism.Creators who engage in crowdfunding are required to release their product to the public in early stages of funding and development, exposing themselves to the risk of copy by competitors;

– Donor exhaustion – there is a risk that if the same network of supporters is reached out to multiple times, that network will eventually cease to supply necessary support;

– Public fear of abuse – concern among supporters that without a regulatory framework, the likelihood of a scam or an abuse of funds is high. The concern may become a barrier to public engagement.

Equity crowdfunding is revolutionary because it can dramatically open up access to both investors and entrepreneurs.

Passing through crowdedging technology, a novice entrepreneur acquires not only money, but also invaluable experience in the production, promotion, sale and support of his goods (services). PR-agencies or producers' centers help to pass through these stages more effectively.

Components of the implementation of successful projects using the mechanism of crowdfunding in the modern business environment are:

1. Preparation of the plan, including campaign objectives, the strategy of its implementation, budget and resources.

2. Forming a working group. The team should be as involved

specialists (they will do the work before, during and after the campaign), and the founders, who will seek to develop business.

3. Development of multimedia content for channels using popular, attracting the attention of users of social networks, the use of e-mail marketing campaigns, publishing blog posts, presenting some videos.

4. Inspire customers by providing information about the campaign, its objectives, the allocation of the benefits of the project, its novelty.

5. Confusion of trust to clients through own attitude and deeds, because investors have the right to know what their money will be spent on.

4. Inspire customers by providing information about the campaign, its objectives, the allocation of the benefits of the project, its novelty.

5. Confusion of trust to clients through their attitude and deeds, because investors have the right to know what their money will be spent on.

6. Readiness for experiments, provides for using new techniques, technologies, mechanisms in the production and communication fields.

7. Readiness for changes due to the high dynamic of the external and internal environment of the project.

8. Involvement of interested audience by means of popularization in social networks, e-mail, public relations, public speeches.

9. Drafting of the budget taking into account planned and unplanned expenses.

10. Fidelity to the promoted idea, which allows you to create and improve your business reputation.

The active using of crowdfunding in the international financial market can be attributed to the creation of the first professional crowdfunding Companies Kickstarter and IndieGoGo in 2008-2009. Currently, there are dozens of such companies, and the crowdfunding Platforms operate in various areas of financing in the following countries: USA, Canada, Israel, France, Sweden, Belgium, Germany and others. It should be noted that the specialization of the platforms subsequently led to the emergence of resources that accept exclusively technological projects: Technofunding (United Kingdom, 2013), Innobus (Russia, 2013). Many similar platforms have been launched recently and have a fairly modest set of projects. However, the largest players are the universal platforms, with which mainly technical projects are funded.

Typological created all crowdfunding platforms can be divided into two types depending on the order of fundraising:

– based on conception TRS – Guarantee limit (the principle of "all or nothing"), that is, if the project does not gather useful declared amount, then he does not get anything, and people who previously allocated money on it, they will not be written off from the accounts;

– is another option when returning to small individual investors is problematic, and in meeting even half of the original amount due to the sponsors have the opportunity to get them, minus the platform.

Beginning in 2013, the global market of crowdfunding is developing very active. If in 2012 its finance volume amounted to 2,7 billion USD in the United States, in 2013, it has been increased by almost 2,3 times and reached a mark of 6,1 billion USD; in 2015 the market volume amounted to 34,4 billion USD.

According to the World Bank's forecast, by 2025 the global market for crude fangding will reach 96 billion USD. However, the common trend indicates that this will happen much earlier. In addition, according to the World Bank, only a third of projects funded by crowdfunding is non-profit. In 2015, according to Forbes, funding for projects under the crowdfunding scheme exceeded the investment of business angels (private venture capital investors), and tends to outperform venture capital in the long run.

According to statistics, the most active regions for the application of crowdfunding technology are North America (48%), Asia (29%) and Europe (18%) [6].

The most powerful crowdfunding projects were launched on the platform Kickstarter. According to the Kickstarter official website [7] as of November 2017, 382 531 projects were launched on the site, totaling 3,426 billion USD. Of these, 135 784 projects, or 56%, were successfully funded for a total of 3.02 billion USD. The financing was carried out by 13 963 355 backers, of which 4 505 926 (32,26%) repeat backers. Most successfully funded projects raise less than 10 000 USD, but a growing number have reached six, seven, and even eight figures: less than 1000 USD – 16 703, from 1000 USD to 9999 USD – 75 788, from 10 000 USD to 19 999 – 19 593 projects.

For example, creating intelligent clock Pebble Time supported 78 471 person what was collected over 20,3 mln. USD (about 1 mln USD per hour), for the design cooler bag Coolest Cooler attracted 13 mln. USD, and for the game console Ouya backers did not regret 8 590 000 USD [7].

The most actively financed were games, design and technology projects (739,54 mln. USD, 722,23 mln. USD, 693,83 mln. USD

respectively). Among them 94 technological and 92 games projects, were funded for more than 1 mln. USD.

The largest Ukrainian ideas-projects (startups) that have been financed and popularized via crowdfunding became LaMetric (collected 370 thousands USD.), Petcube (251 thousands USD) and flash iBlazr (156 thousands USD).

A striking example is not only for the study of demand for products, but the determination of the direct expediency of expanding business and the development of the international market is the young Ukrainian company "Ukrainian Gears" (UGEARS), which developing and implementing unique three-dimensional mechanisms and designs. So, "UGEARS" on the crowdfunding platform Kickstarter, from January 2016 to July 2017, successfully carried out four companies to raise funds, steadily gaining popularity and expanding investment volumes. In particular, the fourth project "UGEARS Hurdy-Gurdy: unique mechanical musical model" were supported by 2 954 people (709 new backers and 2245 Returning Backers from more than 10 countries) at summary on 288 326 USD.

However, there are few representatives of domestic projects at Kickstarter, in particular due to the combination of withdrawal facilities and the language barrier.

For financing in small volumes or if the project is of local value, it is more expedient to use the national analogues of the crowdfunding platforms.

The first poll in Ukraine for the collective financing was "Jointfunds", created in 2012 on a platform of social innovations "Big Idea". During the period of functioning there were involved 12,59 million UAH from 25 810 persons successfully implemented 201 projects, the most famous of which is the Public TV, Film Rover, action Make Ukraine clean, picnic Glory Art Frolova [8]. However, only recently began to submit commercial application projects not only create some social capital to society, but also provide an opportunity to generate revenue.

In February 2013 created the second Ukrainian crowdfunding platform "Na – Starte", where 90% of the projects were commercial, but only about 15% of which – successful implemented (at about 4 million UAH) [9].

The greatest impact of the latest projects on the site was reached to finance the creation film by famous ukrainian comedian, thereby attracted 3,7 million UAH (124% of the required amount). This result is

the maximum for the domestic crowdfunding platforms.

In summary, it can be argued that crowdfunding – an innovative financial service, the main idea is based on the cooperation in the form of the collective funding of different kinds of projects to achieve set objectives, implemented through capital formation, which comes in small amounts from a large not previously known number of people on the basis of open competition using Internet technologies.

Crowdfunding today demonstrates and establishes the philosophy of business that works on the principle of "do it together". It may be a true test of a new instrument for the project, determining the target audience, learning preferences and wishes of potential customers.

Considering all the facts and trends of modern business technologies, crowdfunding in the short term, with appropriate legislative provision rightly converted from the financial experiment to successful working technology.

References

1. *Belleflamme, P., Lambert, T., & Schwienbacher, A. (2010). Crowdfunding: An industrial organization perspective. Retrieved from http://economix.fr/pdf/workshops/ 2010_dbm/Belleflamme_al.pdf*
2. *Howe J. (2012) Crowdsourcing. Collective intelligence as a tool for business development / tr. from English. – Moscow: Alpina Publisher, 231 p..*
3. *Millard, C. (2016). Startup or scale up – Successful equity crowdfunding campaigns. Retrieved November 11, 2017 from https://fundwise.me/en/blog/startup-or-scale-successful-equity-crowdfunding-campaigns*
4. *NCFA. (2012). Crowdfunding. Retrieved November 10, 2017, from http://ncfacanada.org/crowdfunding/*
5. *Wagner, E.T. (2014. Equity crowdfunding 101: Is it right for your startup? Retrieved November 11, 2017, from http:// www.forbes.com/sites/ericwagner/2014/03/18/equity crowdfunding-101-is-it-right-for-your-startup/*
6. *Massolution. (2015). 2015CF The crowdfunding industry report. Retrieved November 11, 2017, from http:// crowdexpert.com/crowdfunding-industry-statistics/*
7. *Kickstarter. The international crowdfunding website. Retrieved November 12, 2017, from https://www. kickstarter.com/*
8. *"Big Idea" The ukrainian crowdfunding website. Retrieved November 12, 2017, from https://biggggidea.com/pages/siterules/*
9. *"Na – Starte" The ukrainian crowdfunding website. Retrieved November 12, 2017, from https://na-starte.com*

Iaroshevska Oksana
Cand. Sci. (Econ.), Associate Professor of Economics Department
Classic Private University (Zaporizhzhia, Ukraine)

CAPITAL FORMATION THROUGH OPTIMIZATION MODELING OF FINANCIAL MARKET ELECTRONIC INSTRUMENTS

In the age of economic globalization national business entities have to be self-sustainable and provide finance for their business activities. Financial market as one of the most important economic instruments is becoming a promising source of providing additional capital for business operation and development. It is financial market where cash flow takes place while letting economic entities accumulate money and then use it both effectively and productively. It contributes to economic growth and well-being of the entire population of the country. Therefore, it is now topical to research into financial market instruments and interaction between financial market segments as this market development is a characteristic indicator of the national economic development.

While forming capital, business entities adopt alternative ways to attract and accumulate financial resources. As of today, one of these alternative recent and increasingly popular tools is cryptocurrency ('virtual currencies'). This kind of currencies appeared as a result of growth of technologies and a boom in IT sphere, including the Internet. Use of networking technologies ensures easier access to digital currencies which can flexibly respond to any changes in financial markets. Cryptocurrency is a convenient form of immediate – electronic – transactions and a promising type of investment as for the past six months the cost of Bitcoin has increased by 150%. Thus, given the fast pace of economy globalization and impressive functionality of cryptocurrencies, this area of research proves justified and relevant.

A substantial number of scientific works is devoted to issues of financial market work and development. Thus, in his work [1] Nikitenko O. K. analyzed financial market components and reviewed existing approaches to identifying financial market segments. Hnativ O. A. examined the state of the national financial market and analyzed financial policy as to its regulation and management [2]. Shkolnyk I. O. looked into the role of financial intermediaries in the

process of forming the national model of financial market [3]. Nykolyshyn I. Y. and Ziziak N. V. studied the basics of financial market functioning, its development factors and role in mobilization and allocation of financial resources [4]. Works of Lookianov V. S. [5], Zheliuk T. and Brechko O. [6] focus on the history of cryptocurrencies. Yatsik T. V. worked to improve theoretical and methodological bases of cryptocurrency financial accounting [7]. Vasylchak S. V. in his research [8] analyzed peculiarities of cryptocurrency functioning in global payment systems. While giving credit to our national scholars' research activities, it should be noted that certain issues have not received proper attention in the scientific framework, including the use of cryptocurrencies in the process of capital formation by businesses in financial markets.

The objective of this paper is to improve capital formation through optimization simulation of electronic tools in financial markets.

In today's market, domestic businesses face the problem of inefficient formation and use of financial resources. In the process of forming financial resources of an enterprise the main sources are represented by internal and raised funds. It should be noted that apart from cash enterprise financial resources include various kinds of securities and currencies as well. Diversity of sources and conditions of forming financial capital ensures better development potential and increase in additional raised funds. Use of financial market mechanisms provide new opportunities for entrepreneurs to build up their capital. But Ukrainian financial market is relatively young and in many respects its development was determined by the transfer from the administrative and command economy to the market one. During the short period the state managed to develop its own tactics, policy and way of doing business in the global financial market, but its progress in the sphere is detained by a number of factors. The biggest problem is immaturity of Ukrainian exchange market and securities market. It is the segment that prevents the country from developing in the proper direction. But in spite of the current problems in the financial market there emerged new instruments such as “cryptocurrency” and “bitcoin”. It is worth mentioning that they appeared largely due to the rapid growth of knowledge economy, which is based on innovative technologies, intellectual capital, informatization and spread of electronic technologies.

A cryptocurrency is a virtual digital asset protected through cryptography, designed on the basis of innovative information technologies and unregulated by any government. The first, most

widespread and expensive cryptocurrency is the so-called Bitcoin. All in all, according to the data in [9] there are 953 kinds of cryptocurrencies and the total market size is US $ 99,795,021,395. Table 3.2 shows top ten cryptocurrencies with the maximum market capitalization.

Table 3.2

Cryptocurrency market capitalization

Name	Market capitalization, $	Price, $	Supply	Volume (24 h)
Bitcoin	$42,067,810,269	$2560.53	16,429,337 BTC	$936,203,000
Ethereum	$24,866,402,858	$267.25	93,045,822 ETH	$803,109,000
Ripple	$9,821,013,432	$0.25648	38,291,387,790 XRP	$75,873,300
Litecoin	$2,708,328,750	$52.23	51,851,707 LTC	$1,067,040,000
Ethereum Classic	$1,655,277,383	$17.75	93,256,640 ETC	$69,646,200
NEM	$1,578,852,000	$0.175428	8,999,999,999 XEM	$6,113,270
Dash	$1,436,927,628	$193.97	7,407,798 DASH	$61,627,800
IOTA	$1,069,343,670	$0.384721	2,779,530,283 MIOTA	$4,006,490
Monero	$687,526,078	$46.66	14,734,807 XMR	$17,238,000
BitShares	$600,199,182	$0.231149	2,596,590,000 BTS	$61,589,900

Source: compiled by the author based on [9]

According to [8], today cryptocurrency is more reliable than gold; since there is no unified cent to regulate cryptocurrency circulation and it is impossible to alter the existing algorithm its maximum quantity is limited, which does not allow any space for inflation. For the past year cryptocurrency price growth rate has been impressive (fig. 3.5; 3.6).

If we look at fig. 3.5, 3.6, we can conclude that by July, 2017 Bitcoin price increased from $ 674.68 to $ 2544.64, that is by 3.7 times. Ethereum shows even higher growth rate, having increased from $ 10.03 to $ 279.84 (by almost 28 times). A significant growth of the cryptocurrencies under study has been evident in the past six months. The tendency is in line with the spike in the popularity of cryptocurrencies in the world, which is primarily due to the expansion and sophistication of the information infrastructure of the Internet. However, Bitcoin has always been (and still is) the most widespread cryptocurrency in the market, which is confirmed by the data in fig. 3.7.

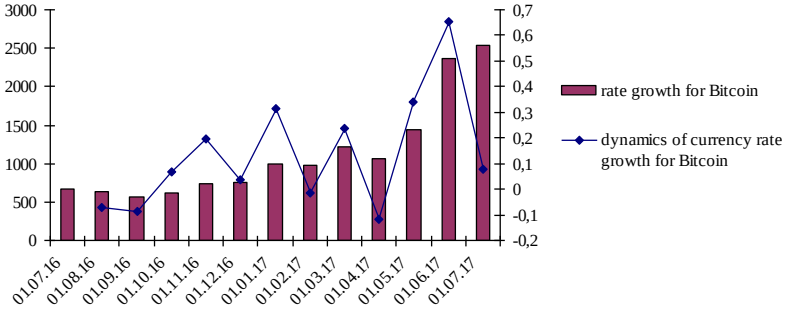


Figure 3.5. Dynamics of currency rate growth for Bitcoin from July, 2016 to July, 2017

Source: compiled by the author based on [9]

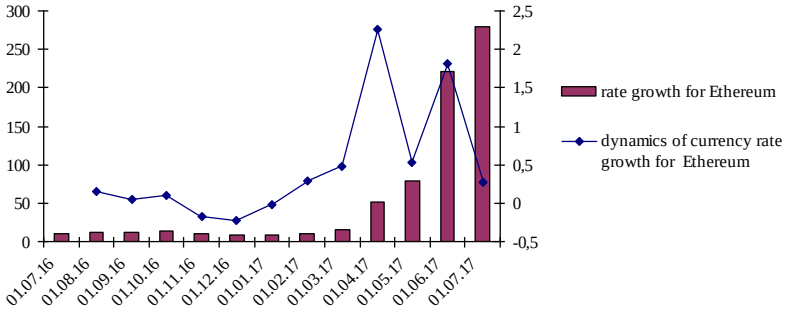


Figure 3.6. Dynamics of currency rate growth for Ethereum from July, 2016 to July, 2017

Source: compiled by the author based on [9]

The above mentioned gives reasons to conclude that the financial market structure we are used to – including such segments as lending market, money and bond market – has undergone radical changes. Therefore we find it appropriate to identify an additional structural element, the market of electronic tools and services of the financial market, which could largely compensate for the shortcomings of the existing ones and promises rapid future growth.

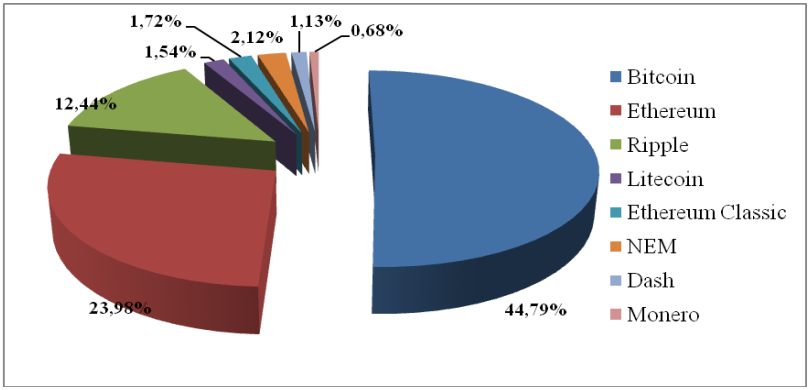


Figure 3.7. Structure of cryptocurrencies with top market capitalization

Source: compiled by the author based on [9]

These days' businesses face numerous difficulties, which is primarily due to the currency volatility brought in by various crisis developments in the economy. And since cryptocurrencies – as it has already been mentioned – are not subject to inflation, today entrepreneurs find them increasingly attractive to invest into. That is why, based on the analysis undertaken, the author offers a new algorithm of businesses' capital formation based on the new instrument of stock market, namely on the cryptocurrency package formation (fig. 3.8).

As fig. 3.7 shows, the algorithm we offer includes three main stages. The first stage involves statistical analysis of the financial market dynamics. Then, based on the results of this analysis, instruments are analyzed and assessed in terms of their profitability.

During the third stage an instrument package (in our case – cryptocurrency package) is formed and then, based on optimization modeling, the instrument that best satisfies the requirements is selected.

A cryptocurrency return rate is estimated on the basis of the results shown by the analysis of their price growth rate and their market share. According to the results of the analysis, 10–12 of the most profitable cryptocurrencies are selected and then by expertise, using the method developed by T. Saaty [10], their return rate is estimated. After that, a currency package is formed with the help of optimization model (3.2) and several options for a business to invest its financial resources are worked out.

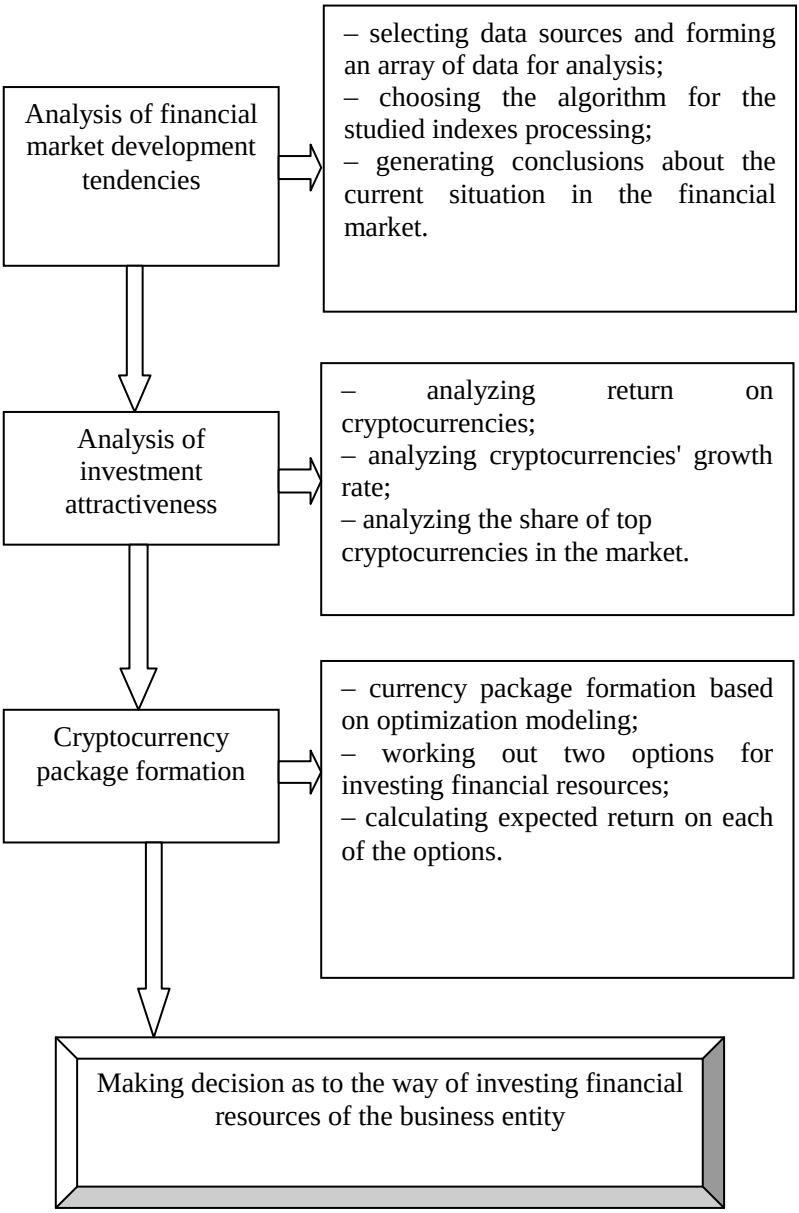


Figure 3.8. Algorithm of cryptocurrency investment package formation

Source: designed by the author

The optimization model of cryptocurrency package formation is built around the idea of finding an investment package structure that would be optimal under the given conditions for the business to ensure maximum return. Thus, the target function is the following:

$$D(x) = \sum_{i=1}^{n} u_i \cdot x_i \cdot w_i \to \max , \quad (3.1)$$

where u_i is the return rate of the *i*-th cryptocurrency at the moment of buying; x_i is the amount (or share) of financial resources to buy the *i*-th cryptocurrency; w_i is the share of the i-th cryptocurrency in the investment package.

Basic model constraints: the sum of cryptocurrency package (percentage) must equal 100%, that is $\sum_{i=1}^{n} w_i = 1$; the number of cryptocurrencies cannot be negative, therefore $w_i \geq 0$; the amount of financial resources invested into the cryptocurrency package must not exceed the planned amount set to purchase currency, that is $\sum_{i=1}^{n} x_i = X(1)$ and cannot be negative $x_i \geq 0$, the return rate of the *i*-th currency must be higher than the inflation rate $u_i \geq I_{I\Phi}$; any investment package is aimed at maximizing revenue AND minimizing the risks involved, so $R_p \to \min$ therefore it seems worth adding the constraint of the acceptable risk level $R_p \leq R_{\partial on}$.

In this case the task is reduced to choosing a cryptocurrency package structure that ensures that the risk level is under the given (critical) limit and the return rate of the package is the highest possible. The risk is calculated as a standard deviation value [11].

Thus, the mathematical model of cryptocurrency package formation is like this:

$$D(x) = \sum_{i=1}^{n} u_i \cdot x_i \cdot w_i \to \max \quad (3.2)$$

$$\begin{cases} \sum_{i=1}^{n} w_i = 1 \\ \sum_{i=1}^{n} x_i = X(1) \\ u_i \geq I_{I\Phi} \\ R_p \leq R_{\partial on} \\ w_i \geq 0 \\ x_i \geq 0 \end{cases} \tag{3.3}$$

When we do model 1 (3.2), we find out several possible cryptocurrency packages and then with the help of model 2 (3.5) we can understand which of the packages should be used to maximize future revenues.

The initial value (at time *t*) of the *n*-th cryptocurrency package is p_i, and the future value with the probability p_j (j = 1,…, k) will be γ_i . It is necessary to choose the package that can ensure the maximum revenue from selling them in the following period of time, that is at time *t+1*, *t+2*, …, *t+n*. Then the model can be written as the following:

$$D(V_{Pj}) = \sum_{i=1}^{n} w_i \cdot (\gamma_i - p_i) \rightarrow \max , \tag{3.4}$$

$$NPV(V_{Pj}) \rightarrow \max \tag{3.5}$$

$$IRR > i \ (discounting\ rate) \tag{3.6}$$

where $D(V_{Pj})$ is the return rate of the *j*-th cryptocurrency package; $NPV(V_{Pj})$ is the net present value of the *j*-th cryptocurrency package; p_i is the exchange rate (price) of the *i*-the cryptocurrency at the moment of buying; γ_i is the future value of the *i*-th cryptocurrency; *IRR* is the internal rate of return.

Now we can use the suggested algorithm of cryptocurrency package

formation for a practical case (see fig. 3.8). According to the financial expert research results, the average annual discounting rate is 15%. As we can see from the analysis of the cryptocurrency growth rate during the past year the average increase for the formed packages is 25%. The business under investigation is planning to spend $ 125,000 to buy cryptocurrency.

Working with the optimization model presented above we received three cryptocurrency packages. The value and number of the cryptocurrencies in each package are shown in table 3.3.

Table 3.3

Data on the formed cryptocurrency packages

Aspect	Package 1	Package 2	Package 3
Cryptocurrency package value at the moment of buying, $	3092.3	4667.26	4365.15
Number of cryptocurrencies in the package	482.0	119.0	129.0

Source: calculated by the author

Now we can calculate the return rate, net present value and internal rate of return for the formed packages (table 3.4).

Table 3.4

Calculation results

Options for investment	Term of investment	Cash flow	Return on investment	NVP (net present value)	IRR per month (internal rate of return)
Package 1	1 year	1,863,105.6	1,738,105.6	1,442,237.7	23.10%
	2 years	2,328,882.0	2,203,882.0	1,562,617.3	12.41%
Package 2	1 year	694,254.93	569,254.9	460,027.6	14.1%
	2 years	867,818.66	742,818.7	504,885	8.1%
Package 3	1 year	703,880.43	578,880.4375	59,955.799	4.4%
	2 years	879,850.54	754,850.5469	513,537.176	8.1%

Source: calculated by the author

Thus, based on the results of the calculations, we can conclude that under the given conditions the business can receive the maximum return on the first way of investing financial resources (fig. 3.9). The presented algorithm of capital formation is based on the investment package of cryptocurrencies, which allows business to use the new instruments of the financial market in their activity.

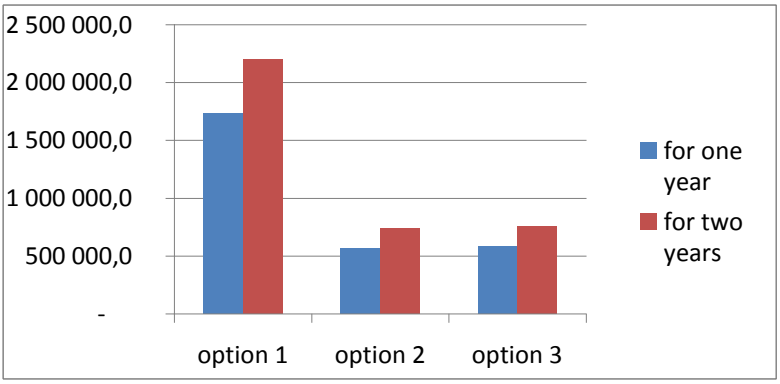


Figure 3.9. Rate of return for the formed cryptocurrency packages

Source: designed by the author

Conclusions. Under the current economic conditions it is increasingly important for businesses to form the necessary amount of financial capital which is of paramount importance for any business development and functioning. To succeed in this task, business must effectively manage their financial resources, in particular ensure their competent formation and usage. It is the use of cryptocurrency market that allows present day businesses to take advantage of the new sources to attract and form financial resources.

References

1. *Nikitenko, O.K., "Elements and structure of the Ukrainian financial market", available at: http://economics.opu.ua/files/archive /2013/No2/241-251.pdf.*
2. *Gnatov, O. (2014), 'The financial market of Ukraine: the current state and directions of development' Problems and prospects of development of the banking system of Ukraine, No .40, pp. 82-89.*
3. *Schoolboy, I. (2008), 'Financial Market of Ukraine: Current Status and Prospects', Sumy: GDP "Mriya-1" LTD., 348 p.*
4. *Nikolyshyn, I.Yu., Zizyak, N.V., 'The role and significance of the financial market in the financial system of Ukraine' Young scientist,, No. 7 (10), pp. 53-55.*
5. *Lukyanov, V. C., 'The Origin of the Cryptographic Market in the Information-Network Paradigm', Alternative Problems of Economics, No. 8 (158), pp. 436 - 441.*
6. *Zhyluk, T., Brechko, O., 'Use of cryptology on the rocks of payments:*

new opportunities for national economies' Bulletin of the Ternopil National Economic University, No. 3, pp. 50 - 60.
7. *Jacyk, T., 'The method of financial accounting crying as a special type of electronic money' Young Scientist, No. 2 (42), pp. 349 - 354.*
8. *Vasilchak, S.V., Kunitskaya-Ilyash, M.V., Dubin M.P., 'The use of cryptography in modern economic systems in Ukraine: prospects and risks' Scientific Bulletin of LNUWMBT named after S.Z. Gzhitskogo, , Vol. 19, No. 76, pp. 19-25.*
9. *Crypto Currency Market Capitalizations (2017), available at: http://coinmarketcap.com.*
10. *Trunova O., 'Application of the Saati method in making managerial decisions', available at: file:///C:/Users/%D0%92%D0%B8% D1%82%D0%B0/Downloads/VchdpuP_2013_1_108_34.pdf.*
11. *Primostka, A., (2015) Agent-oriented modeling of investment activity of banks in the stock market: dissertation, Kyiv, 212 p.*

Yevtushenko Nataliia
Ph.D. in Economics, Associate Professor
Malyshko Vitalina
Ph.D. in Economics, Associate Professor
Tsaruk Anna
Senior Lecturer
Puchko Anna
Senior Lecturer
Department of Finance, Banking and Insurance
SHEE «Pereyaslav-Khmelnitskiy GPU name of Grigory Skovoroda»
(Pereyaslav-Khmelnitskiy, Ukraine)

A NEW INDUSTRIAL POLICY AIMED AT GLOBALISATION

Globalization as one of the defining characteristics of the modern global economy put before the governments of many countries the problem of search of new forms and methods of adaptation of the economic environment to changes in key factors of competitiveness of the national economy. Thus, maintaining competitiveness in the long term, there is a deep Association of financial and industrial capital, the formation of production and sales and production and innovation

networks and increasing attention to the mechanisms of industrial policy. However, intensification of integration processes, which is manifested in the formation of a unified global supply chain, sharpens for Ukraine the problem of access to the basic benefits of globalization – the possibility of using advanced knowledge and technologies for the development of the national economy due to significant technological lag of the domestic industrial sector. Ensuring national competitiveness and the orientation of the national economy on a long-term growth requires new principles to develop an acceptable model of economic development. Delay and errors in this direction will not only lead to a permanent crisis shocks, but also to weaken the position of Ukraine in the protection of national economic interests and economic security.

The transformation agenda targets modern economic policy became widespread in the scientific literature as a result of rethinking the effects of financial and economic crisis on the development of developed economies. For example, in the US at the beginning of the global financial crisis Harvard scientists tried to prove the inadvisability of creating a «knowledge economy» through the transfer of production to other countries, given the concurrent loss of engineers and scientists in the field of basic research, as along with industries in other countries use and knowledge. In foreign research space began to appear the works to extend to all sectors of the economy information and communication technologies in the context of justification of a new stage of development of the industry caused by the new industrial revolution. In developed countries, it becomes the basis of developing high-tech production of goods and services, the transition from the machine to the robotic manufacturing, manufacturing services, where the goods have not replaced, and integrates with system services, the shift from mass production of standard products to meet the individual consumer needs, develop a global network of value creation for the cluster type. The phenomenon of formation of «new economy» is associated with the production of information with the aim of improving productivity and the spread of inter-sectoral division of labour on a global scale. Therefore, true understanding of the essence innovative processes which underlie modern patterns of development of the leading economies in the world, focused on the desire to get a monopoly on the development of technologies and their place in the whole social-economic system becomes crucial. The total social result of this innovation is positive thanks to the mechanism of diffusion of innovations, which makes the close relationship between scientific, technical, industrial and

investment activities and demonstrates the need to consider innovation as a complex of actions of economic entities related to the comprehensive development of material production, its technical re-equipment based on new technologies. So, from our point of view, industrial and innovative development can be described as a process of structural improvement of the national economy, which is achieved mainly through the practical use of new knowledge, radically new advanced technologies, the transition to the production of high-tech products, advanced organizational and managerial solutions in innovative activities. That is the industrial basis continues to be the fundamental material basis of the modern development of high-tech processes, such pioneering innovations as advanced technologies, biotechnology and nanotechnology. Therefore, the movement to a postindustrial society, which provides a rapid increase in the information component of national production in comparison with industrial and is accompanied by de-industrialization of the economy, should be considered from the standpoint of economic security.

Considering the influence of innovation and industrial development for the economic security requires the development of appropriate methodological support [1, 2, 3].

The calculation of the level of innovative-industrial development is proposed in the following algorithm:

The first stage focuses on identifying those indicators that sufficiently reflect the overall progress and quality of innovation processes in economy and their investment support. The basic set of indicators integral index is the sum total of the indicators characterizing the investment-innovative component of economic security, complemented by indicators, which allow to take into account modern world tendencies of innovative development influence on economic processes.

On the basis of summarizing the main indicators for assessing investment in innovation security the second step defines the economically achievable minimum and maximum values of the indicators, their lower and upper thresholds.

Through a study of the integral indicator of the level of innovative-industrial development, we can state that Ukraine's economy for the past 17 years, according to the calculated index is almost in the area is absolutely unstable state. There is a tendency to increase the level of danger of the state. The deterioration of security due to increased negative symptoms in the majority of components that have not reached

their threshold values. Of particular concern are the indicators of analysis of the asymmetry of the technological structure of foreign trade, in particular the decrease in the share of high tech exports in total industrial exports, and the deterioration of the coverage ratio of technology import export. Given that these trends are observed against the background of reduction of the level of development (use) of fixed capital investment as % of GDP and a decrease in value added in the processing industry, requires significant changes in state regulation of these processes in the direction of concentrating investments in innovative directions.

The study of the innovation and investment processes proves that the greatest danger for Ukraine represent its internal threats. The origins of such external threats as the increase in external debt, reduction of exports of finished products, while the growth of imports over the same groups due to the low efficiency of the economy, the weak competitiveness of the processing industry, that is, are internal. This means that the combination of the main motives of enterprises' activities and the goals of economic security require systemic coherence with the overall directions of economic policy of the state.

Given that the policy objective of industrial-innovative development of the economy determined the creation of conditions for effective interaction between key participants of innovation process, and encourage the local development of integrated corporate structures to optimize the proportions of the development of sectors and regions in terms of increasing influence of globalization processes and for combining internal and external growth sources in compliance with the requirements of economic security and priorities improve the quality of life of the population. Therefore, the key idea of policy formulation and implementation of industrial-innovative development of the economy is to ensure the maximization of benefits from globalization and minimize the risks from its influence on domestic investment and innovation environment.

Preventive actions to implement policy measures for innovation and industrial development is that because of its focus on security, the economy, the authorities will not wait for the results of innovation and investment activities, and relate to them. Therefore, in deciding the application of stimulating or restrictive measures in the state regulation to rely on prepared packages of proposals and conditions regarding the use of investment resources in well-defined directions. It should be noted that in terms of industrial-innovative development of the national economy,

preventive-type stimulant strategy effects on the intensification of innovation and industrial processes is the most appropriate in the system of state regulation in Ukraine.

To concretize the goals and objectives of the industrial policy of the economy focused on industrial and innovative development will build a tree of goals of forming such a policy the purpose of the tree policy of industrial-innovative development of the economy, reflects the different directions of the authorities to achieve certain goals, some of its blocks are vzaimopomoschi, the implementation of which is logically interconnected.

So, the first direction – a policy of internal promotion is subject to the maximum use of the advantages of foreign participants in strengthening the technological base of development of national industrial production, the establishment of interaction in the economy of foreign participants in the innovation process. This direction involves the reaction of economic activities to the challenges of globalization, the protagonists of which are foreign investors. The main function of this policy is to protect national interests against undesirable effects of globalization. the second direction – policy external constraints – focused on solving a very important task: the formation and active development of domestic integration structures in the economy and development of investment infrastructure capable of ensuring their functioning. The main function of this area of policy implementation is the formation of institutional conditions for the integration of the economy in the overall global architecture through education institutions able to compete with foreign technology leaders in the domestic and global markets to bring economic development for the technological parameters to their level. The most acute problem, which requires the formation and implementation of appropriate system interventions is the interaction between the main participants of the innovation process with the aim of achieving not only a sufficient concentration of investments in high-tech activities, but also to prevent possible negative consequences of technological backwardness of the economic structure. We believe that implementation of the proposed priority actions of the new industrial policy along with the development strategies of the state's influence on the intensification of innovation and industrial processes contribute to maximize the benefits and minimize the risks for Ukraine from cooperation with the global economic environment.

Today Ukraine significantly lags behind developed countries in the world. Judging by most indicators, in terms of GDP it ranks 39th place

in the world and GDP per capita – 131 [4].

The last figure in Ukraine almost 5 times less than the average in the European Union, whose member would like to become our country. If you do not take drastic measures this gap can be fatal for the economy and for independence. Global and national challenges require accelerated economic growth and accelerated modernization, not only domestic industry but also the entire Ukrainian society. The Central point of the economic reforms Ukraine should be the creation and implementation of new industrial policy, the key element of which is the innovative development of the processing industry on the basis of domestic and foreign scientific-technological and personnel potentials [5, p. 10].

In March 2010, approved a new European strategy for economic development «Europe 2020: strategy for smart, sustainable and inclusive growth». The European Commission has developed 5 main areas of activity that are guided by European States: employment, research and innovation, climate change and energy, education, the fight against poverty. The EU gained the necessary tools to manage this new economic order, namely: domestic market, budget, business, foreign policy and Economic and Monetary Union.

Among the factors strengthening the economy and the main directions of activities of «Europe 2020» scroll direction «smart growth – an economy based on knowledge and innovation». «Smart growth» means the increase in the interaction of scientific knowledge, research and innovation with economic growth and development of the EU. This factor strengthening the economy includes improving the quality of education, improving the quality of research, support the dissemination of innovative technologies and knowledge in the EU, increasing access to information and communication technologies and ensuring that innovative technologies will be used to achieve global social goals.

The direction of «Industrial policy globalization» involves the development of common principles to support entrepreneurs, to encourage industry to successfully migrate anticipate problems and changes. At the EU level industrial policy is aimed at the development and implementation of the following measures: creation of favorable conditions for support and development of strong, competitive and diversified industrial base in Europe, the development of horizontal measures in support of industrial policies that improve the business environment for business, especially for small and medium enterprises, promoting the use of technological and production processes, reduce

energy consumption.

The EU sees the European Internal market of the 21st century stronger, expanded and advanced, which is necessary for economic growth and development of the labour market. Currently we have the trend of nationalization of the economies of the EU. Only the vigilance of the European Commission and the sense of responsibility that developed in the member States of the EU has helped to prevent disintegration, which could well happen in a crisis period [6].

In the ranking of global competitiveness 2011-2010. (GCI), Ukraine was ranked 89th place (3,90 points) among 139 countries. According to a study by the international NGO Transparency International on level of corruption, Ukraine in 2012, took 144 places among 176 countries. Ukraine continues to move backwards in search of a place between Congo and Papua New Guinea. Policy statements of the leaders of the country concerning the entry of Ukraine up to 2020 in the twenty largest economies in the world is not taken seriously, because with 37th place (two years ago to 33) in terms of GDP it is necessary to «jump» from 17 countries: Hong Kong, Austria, Venezuela, Sweden, Philippines, Nigeria, Belgium, Malaysia, Colombia, Pakistan, Egypt, South Africa, Thailand, Saudi Arabia, Argentina, Netherlands, and Poland. Projected (2020.) values of indicators European innovation scoreboard Ukraine formulated without justification [7, p. 183-184]. A developed country can be only developed industry. Conducting research about the industrial potential of Ukraine, it can be argued, there is a tendency to minimize. A Ukrainian manufacturer of products, with some exceptions, is not competitive. In the total volume of industrial production by 4.8% had signs of innovation. Its share in the world market of science-intensive products is only 0,05-0,1% . GDP growth through the introduction of new technologies in Ukraine is 0.7%. In developed countries this figure reaches 60% to 90%. The output of the third technological way is 58%, fourth – 38%, fifth – only 4% [8].

On the path of innovative development the obstacles are of a political, organizational, financial, and legal nature. Somehow, among 16 ministries as a result of recent structural changes in Nicolina in Europe, the Ukrainian government had designated the Ministry of industrial policy. It became the legal successor of the State Agency for management of state corporate rights and property in the composition (among 26 other departments) of the Ministry of economic development and trade. For comparison the names of the ministries responsible for industrial development in the countries that determine the economic

development in the world economy. In Russia, India, Turkey, Mexico is the Ministry of industry and trade of Belarus – Ministry of industry, Kazakhstan – Ministry of industry and new technologies in the UK – the Department for business, innovation and skills, in Germany the Ministry of Economics and technology, France – Ministry of economy, Finance and industry, Japan – Ministry of economy and industry of Brazil – Ministry of development, industry and foreign trade in China the Ministry of science and technology, state Committee for Affairs of defense science, technology and industry.

The status indicators of the innovation potential in Ukraine are the structural changes in the economy. The share of industry in GNP over the period 1985-2007 decreased from 41,4 to 31.0% of the share of engineering products and metals decreased from 30.5% to 13.4%. The concept of development of industrial complex of Ukraine for the period until 2017, intended to create the institutional, infrastructural and economic principles of structural-innovative changes. But significant change does not occur [9, 10]. Ukraine is pursuing a policy of economic cooperation with the 217 countries in the world. The main strategic partners of Ukraine are: Russia, EU, USA. This «three winners», in our view, include: neighboring countries of the CIS, BRICS. By 2006, Ukrainian exports exceeded imports. Now the situation is the opposite. A negative balance in conducting export-import operations indicates their activation is clearly not in favor of Ukraine: 2007: -7,2, 2008: down 13.5 2009: -5,7, 2010: minus 9.3, 2011: of-6,7, 2012: -9,0 billion. USA. Even worse is the situation in foreign trade in goods (2012: -14,2 billion. USA).

Strategic goal of Ukraine is the EU. The explanations of such intentions are the geographical, historical and economic in nature. The level of Ukraine's relations with Europe of the XXI century analyze the difference between the volume of export and import: 2001: + $ 0.7 billion, 2002: +0.7; 2003: +0.9; 2004: +1.5; 2005: -1,9; 2006: -4.1; 2007: -8.3; 2008: -10.7; 2009: -5.9; 2010: -6.1; 2011: -7.8; 2012: -9.3 billion dollars [11].

Ukraine continues to be a raw materials appendage of Europe. She also serves as a capacious sales market of the European producers, moreover, both industrial and agricultural.

First, Ukraine must continue to stabilize the political situation, the atmosphere of mutual understanding in society. In part, this issue has been resolved, because the built vertical of power. The sequel should be the implementation of the principle of responsibility for the charged business.

Secondly, it is time to develop a unified national development strategy, supported by a system of plans, programs, and projects in the presence of a well-functioning organizational control mechanism. Russia has moved to a 3-year horizon when adopting the budget. EU introduces 7-annual budgeting. Ukraine continues to operate on an annual budget.

Thirdly, to unite the community great things can purify atmosphere of morality. Now the moral values in the country nullified by the planting of a stranger not even of culture, and lack of culture, neglect of the norms of morality.

Fourth, a serious adjustment is needed by the education system. Russia has the «intention to grow» three universities to TOP-100 rating.

Fifth, the economic potential of developed countries («G-7», «E-7») builds on the achievements of NTP. A continuation of this is the production of goods competitive in domestic and world markets. Need to revive respect for the work, to the working man, the engineer, the Creator of innovations.

Sixth, the strategy of innovative development of the state requires a balanced financial policy. Funds should be channeled primarily into the development. Thoroughly need to deal with the issues of public-private partnerships in addressing key economic problems.

Seventh, Ukraine should more clearly define in the system's interests on the external market. Political decisions should be correlated with economic activities.

References

1. *Sukhorukov, A. (2005). Formation of domestic transnational structures in the context of the innovative security of Ukraine. Strategic panorama. No. 4. pp. 104-112.*
2. *Economic security of the state and integration of its services: monograph (2007). Kiev: Knowledge Of Ukraine. 392 p.*
3. *The Global Innovation Index [Electronic resource]. Mode of access: http://www.globalinnovationindex.org/content.aspx?page= framework.*
4. *Central Intelligence Agency. The World Factbook Mode of access: https://www.cia.gov/library/publications/the-world-factbook /geos/up.html#top.*
5. *Geyets, V.M. (2014). Institutional conditioning of innovative processes in the industrial development of Ukraine. Economy of Ukraine. No. 12. pp. 4-19.*
6. *Arabei, E. (2010). The New European strategy «Europe 2020». [Electronic resource]. Mode of access: http://eulaw.ru /content/ 307.*
7. *The strategy of innovative development of Ukraine for 2010-2020 in*

conditions of globalization challenges (2009). Kiev: Parliamentary publishing house, 632 p.

8. *Herasymchuk, V.G. (2013). From the strategy of innovative development to the deindustrialization of the economy? [Electronic resource]. Mode of access: http://irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe?C21COM=2&I21DBN=UJRN&P21DBN=UJRN&IMAGE_FILE_DOWNLOAD=1&Image_file_name=PDF/evntukpi_2013_10_75.pdf.*
9. *Strategic management of national economic development: monograph: in 2 vol. (2013). Donetsk: «SHEE» DonNTU, Vol. 1. 338 p.*
10. *Strategic directions of development of the national economy in the post-crisis period (2013). Lviv: SPOLOM, 272 p.*
11. *Trade between Ukraine and the EU [Electronic resource]. Mode of access: http://www.ukraine-eu.mfa.gov.ua/eu/ua/30989.htm.*

Chapter 4

MECHANISMS FOR ENSURING COMPETITIVENESS IN THE INTERNATIONAL LABOR MARKET AND PERSONNEL MANAGEMENT

Melnyk Tetyana
Doctor of Economics, Professor,
Head of the Chair of International Economic Relations
Kyiv National University of Trade and Economics
Losheniuk Oksana
Assistant, Chair of Economic Cybernetics and International Economic Relations
Chernivtsi Trade and Economics Institute of Kyiv National University of Trade and Economics
(Kyiv, Chernivtsi, Ukraine)

IMPROVEMENT OF THE SYSTEM OF REFORMING THE INSTITUTIONAL COMPONENT AT ALL LEVELS OF REGULATION OF INTERNATIONAL LABOR MIGRATION

The multifaceted influence of the international labor movement on the development of countries that are participants in the migration process necessitates the regulation of external labor migration.

In modern practice, control over human resources flows is carried out not only within the framework of migration policy at the supranational (interstate), but also at the national (state) level.

Each country follows its own directions and objectives of migration policy, the choice of regulatory instruments and the definition of the necessary measures. However, since the inalienable condition for the functioning of a democratic society is compliance with the relevant legal norms and standards enshrined in the documents of international organizations, regulation of international labor migration is carried out in the first place in accordance with the norms of international law. This is due to the signing of various international agreements and the activities of special international organizations.

Currently, at the international level, in the sphere of international migration management, there are no single rules for migration cooperation, which serve as an imperative for all participants. Existing international legal norms refer to some aspects of the migration policy of the states dealing with refugee issues, adherence to the basic rights of migrants, including non-discriminatory legislation, liability for the organization of illegal traffic, etc. There are no universal mechanisms for managing labor migration or counteracting illegal movement.

Due to the lack of a single coordination center that regulates the actions of states in the sphere of migration in the international arena, in the near future, balanced regulation of international labor migrants in the world is not possible.

In the absence of a coordinating center strengthens the role of international organizations as independent members. These include the UN, the International Organization for Migration, the International Labor Organization, and many others. An active discussion of international migration issues is taking place within the framework of the Global Forum on Migration and Development, the Global Commission on International Migration, and the Dialogue on International Migration.

It should be noted that the main issues in the sphere of migration management between the states are regulated by classical methods - through the conclusion of bilateral and multilateral intergovernmental agreements. Thus, in the framework of bilateral agreements, the main norms and administrative regulations concerning the grounds and conditions for the acquisition of citizenship by the contracting parties are established. Within the framework of multilateral agreements, the issues of labor migration are regulated, measures to counteract illegal migration and trafficking in human beings are being developed. A rather new type of migration management is the conclusion of bilateral readmission agreements - reverse migration, which is more humane and, according to experts, more effective way to remove unwanted migrants, if compared it with deportation and deportation.

Consequently, we consider it necessary to extend the powers of the International Organization for Migration on the coordination of international migration policy. Additional tasks of this organization should be as follows:

– development of a balanced mechanism for regulating international labor migration;

– creation of a single information center on the international labor

market;

– establishment of a department of assistance in legal employment of labor migrants in the specialty;

– development of recommendations on migration policy tools (emigration quotas, benefits, etc.) for the countries of the world.

In our opinion, international organizations should be more involved in regulating the entry and exit of migrant workers. This approach will lead to rational workforce placement in the world and a reduction in unemployment.

In particular, we consider it expedient for the International Organization for Migration working together with public institutions of countries, to investigate the supply and demand of labor resources in the labor market. The results of the research should be communicated to potential migrants, for example, in the form of information on the official website of the International Organization for Migration.

The International Organization for Migration should cooperate with specialized agencies that assist migrant workers with employment abroad and the issuance of migration documents. These institutions need to provide assistance, control and verify their activities. The approved institutions should also be recommended on the official website of the International Organization for Migration. Collaboration with these institutions will allow you to efficiently direct the workforce to the countries and areas in which you work, reduce the risk of migrants entering the human trafficking situation and reduce the number of illegal migrants.

The main problem at the regional level is the lack of clear control over the extent of emigration and immigration between the countries of the integration association. As there is a possibility of free movement of migrant workers within these countries, in the more developed countries of the integration association there is an increase in the unemployment rate of the indigenous population. Strengthening the control of migration will allow for a more efficient exchange of employees, depending on the needs of labor markets.

The regional level of migration management in the most institutionalized form has been formed in the European Union and acts in the interests of the EU member states, limiting their sovereign competence on certain issues.

The EU's comprehensive approach to combating illegal migration includes border guarding, the illegal deportation of persons in the country, the prosecution of traffickers and slave laborers, the protection

of the rights of victims of traffickers, especially children, measures against false marriages, information exchange and visa policy.

At the same time, the complex of events taking place in the European Union in order to form a united European scientific space, is aimed at attracting talented young people, expanding opportunities in the scientific sphere.

However, in other integration associations (ECOWAS, COMESA, MERCOSUR) there is a weak legislative system for regulating international labor migration, an insufficient number of agreements has been signed, and no control over the implementation of already adopted decisions, which necessitates the establishment of a common migration policy, using the EU experience.

Therefore, in Ukraine to reduce emigration, it is necessary to take the following measures: to improve working conditions, raise wages, provide assistance and favorable conditions for the opening of small and medium-sized businesses, reduce tax pressure, etc.

The study of the regional level of migration management is of particular interest to Ukraine, in connection with its aspirations to become a full member of the European Union. In the last decade, the establishment of diplomatic relations between Ukraine and the European Union took place in many areas, including in the area of moving Ukrainians across the borders of the EU member states.

The signing of the Association Agreement between Ukraine and the EU has caused the vector of "political association and economic integration" and defines new conditions for the movement of not only goods, services, capital, but also labor (**Anon., 2014**). Important steps in the development of these relations were the introduction of visa-free regime of Ukraine with EU countries (**Anon., 2017**), as a result of which the number of emigrants from Ukraine will increase, which will slow down the development of the country's economy. The ratification of the EU-Ukraine Visa Facilitation Agreement and the Agreement on visa facilitation between the EU and Ukraine improved the conditions for issuing visas to Ukrainian citizens (**Anon., 2014**).

The transnational level of regulation of international labor migration deserves to be singled out in a separate direction in view of the problems created by TNCs in international labor markets, in the local labor markets of exporting countries and the countries of the TNCs.

So, jobs are being exported from industrialized countries, resulting in the problem of unemployment in these countries. The structure of the workforce is also shifting towards an increase in the proportion of

employees, since TNCs are often trying to create production in countries with cheap labor and high unemployment, thereby concentrating in industrialized countries such functions as marketing, planning, accounting, scientific and research – design development and others like that.

On the other hand, in any case, the ultimate goal of the operation of TNCs is to maximize profits through the use of highly skilled labor and even its exploitation in countries with low development.

At the global level, there are codes of conduct of TNCs that regulate the activities of multinational corporations, enterprises with foreign labor force and foreign capital, including in the sphere of the use of labor force and the provision of labor rights of employees. These codes are framework agreements between corporations and International Workers' Organizations. However, as practice shows, they are optional and voluntary, and all the commitments made by TNCs are largely declarative, and TNCs throughout the world constantly violate human rights in general and the labor rights of workers in particular (**Morozov & Chanyshev, 2017**).

Observance of the codes of the TNCs should be controlled by the UN Commission on TNCs, and the regional regulatory institutions should be the relevant centers within the framework of the international groups within the EU, OECD, LNPP, etc.

The institutional component of the individual level of regulation of international labor migration is provided at the national level and involves the creation by state agencies of information programs on the state of the international labor market and the rights of international labor migrants.

The current stage of the development of migration relations in the world, and in Ukraine in particular, is characterized by the need for a holistic understanding of the increased dynamism and unpredictability of international labor migration, which requires a broad view of the regulation of market processes associated with this phenomenon.

In Ukraine, at the national level, migration relations are governed by the law of migration, which can be defined as a set of legal norms regulating social relations related to the migration of individuals, the definition of the legal status of a migrant in the context of freedom of movement, and the securing the guarantees and responsibilities of the state and its institutions in relation to the approval and provision of the status of various categories of migrants (**Moskal, 2012**). The main role of state-legal regulation of migration processes belongs to the

Constitution of Ukraine, which guarantees migrants protection of their rights, freedom of movement, free choice of place of residence, free entry and exit from the country (**Anon., 1996**).

The current situation in the legal sphere is imperfect, especially given the fact that Ukraine is one of the largest donor countries for migrants to the EU and a transit country for many migrants.

It should be emphasized that one of the most important issues in the regulation of migration processes is the formation and streamlining of the relevant normative legal system. Despite the unity of social relations (relations in the spheres of migration), which regulate certain normative legal documents and the presence of a single object, these documents do not form a unified system (**Kurunova, 2014**).

In recent years, Ukraine has faced unforeseen political and economic problems that directly affected the migration situation (**Anon., 2015**). Therefore, there is a need for proper systematization of normative documents and the creation of single maximum codified normative documents, in the first place documents related to the formation, determination of powers, and the procedure of the State Migration Service and other institutions of state power and local self-government.

The need for systematization and ordering is also indicated by the presence of various state authorities that need to coordinate their joint activities (state migration service authorities, employment service institutions, local self-government institutions, state administrations, law enforcement agencies, etc.).

Along with the development of a regulatory framework in the sphere of regulation of labor migration in Ukraine, during all years of its independence, the institutional principles of state management of international migration flows are formed. In the sphere of regulating migration processes, the National Security and Defense Council of Ukraine, the Security Service of Ukraine, the Ministry of Internal Affairs of Ukraine, the Ministry of Foreign Affairs of Ukraine, the State Migration Service of Ukraine and others should be noted.

The State Migration Service of Ukraine is a central executive institution whose activities are directed and coordinated by the Cabinet of Ministers of Ukraine through the Ministry of Internal Affairs and which implements state policy in the spheres of migration (immigration and emigration), including counteraction to illegal (illegal) migration, citizenship, registration of physical persons, refugees and other categories of migrants determined by the legislation (**Anon., 2014**).

The main tasks of the State Migration Service of Ukraine are:

implementation of the state policy in the sphere of migration (immigration and emigration), including counteraction to illegal (illegal) migration, citizenship, registration of individuals, refugees and other categories of migrants determined by the legislation; making proposals to the Ministry of Internal Affairs for ensuring the formation of the state policy in the spheres of migration (immigration and emigration), including counteraction to illegal (illegal) migration, citizenship, registration of individuals, refugees and other categories of migrants determined by the legislation (**Anon., 2014**).

It should be noted that now the State Migration Service of Ukraine does not solve all the problems related to the migration of labor resources, which implies the need to expand its powers. Consequently, it is expedient to extend the powers of the Department of Foreign Affairs of the State Migration Service through the creation of a partition on external labor migration. Thus, the work of this partition should be directed, on the one hand, to ensuring the official employment of Ukrainians abroad, and, on the other hand, to attract and use foreign labor in the territory of Ukraine in sufficient quantity and in the required quality.

Given that international migration processes are a complex socioeconomic phenomenon associated with various aspects of social life, it is impossible to combine all of the functions of regulating them within one agency. That is why it is advisable to coordinate the work of the Department of Foreign Affairs with other institutions, which will continue to participate in the regulation of international labor migration.

Therefore, for the effective use of instruments for regulating international labor migration, the partition for International Labor Migration should fulfill the following tasks: regulating immigration and emigration flows, information and research activities, increasing the gross domestic product through the use of transnational links of migrants and remittances, improving the normative provision of international labor migration.

With regard to immigration policy, this partition, with the help of the Ministry of Social Policy, the Ministry of Foreign Affairs, the State Border Guard Service and the State Employment Service, determine the sectors and categories of workers which needs a national labor market, help establish annual immigration quotas, and develop programs of involvement in sufficient (necessary) the quantity and the required quality of the foreign labor force in Ukraine (attracting highly skilled personnel).

The partition for International Labor Migration helps foreign students with immigration, moving, and house search documents. This department also provides: informing migrants about the possibility of entering, obtaining legal status, employment, education and social protection in the country; study of the state and trends of international labor migration; the formation of a database of statistical information on qualitative and quantitative migration parameters in Ukraine.

Regarding normative support, the partition for International Labor Migration takes part in the development of recommendations for the improvement of the relevant legislation. He also concludes agreements on partnership cooperation with similar bodies of state recruitment of labor resources.

With regard to issues of emigration policy, the partition for International Labor Migration, together with private enterprises, helps with looking for work abroad those workers who are not able to realize their own potential in the national labor market. The partition supervises the activity of these enterprises and the migration of migrants within the framework of TNCs, as well as protects the interests of Ukrainian citizens abroad. Another task of this department is the development of special remineral programs that provide assistance for reverse migration flows, solve their employment, social and pension provision.

The need to delegate broader powers to the State Migration Service of Ukraine is due to a number of advantages:

- it is much easier to provide systematic regulation of international labor migration with its help;
- the specialized partition concentrates most of the powers in the field of labor migration, and therefore has primary responsibility for managing it. This, in turn, not only simplifies the definition of the goals and priorities of migration policy, but also greatly facilitates the process of reporting and public control;
- the availability of a self-sufficient State Migration Service of Ukraine will make it possible to substantially reduce the risks of dispersal of financial, material and human resources and promote their more efficient use;
- the partition for International Labor Migration provides a closer link between the strategy of Ukraine's participation in the world processes of labor migration and its direct implementation, since the formation of the strategy and its implementation will fall within the competence of the same agency.

Thus, the current state migration policy, which is designed to

regulate employment, adaptation, social protection and the rights of labor migrants, is imperfect and needs reform.

Despite the rapid development in recent years of the legislative framework and the definition of strategic objectives at the state level, the unresolved problems of international labor migration remain: contradictions in legislative documents; problems of statistical registration of labor migrants; unresolved issues of the outflow of intellectual workforce; the practical absence of a mechanism to encourage the return of emigrants in order to use their experience and savings in economic development; the high number of illegally employed immigrants; the actual absence of a mechanism for the implementation of immigrants.

The determined recommendations of the state migration policy are only its target effective priorities, which require the development and implementation of a set of regulatory measures related to the improvement of the internal and interdepartmental organizational work of state bodies, establishing their close cooperation with associations of national minorities in Ukraine, foreign missions of Ukrainian migrants , governments of counterpart countries and international institutions, as well as their transparent information provision on rules, procedures the fools of the work of migrant workers. In addition, measures of the state migration policy must be coordinated and aimed at increasing real wages, reducing illegal employment, as well as ensuring social protection of working citizens in accordance with modern European practices.

References

1. *Anon., 1996. The Constitution of Ukraine dated June 28, 1996 № 254к/96-VR. s.l.:Information from the Verkhovna Rada of Ukraine.*
2. *Anon., 2014. Law of Ukraine "On ratification of the Agreement between Ukraine and the European Union on amendments to the Agreement between Ukraine and the European Community on the facilitation of the issuance of visas» http://zakon3.rada.gov.ua/laws/sho, s.l.: s.n.*
3. *Anon., 2014. Resolution of the Cabinet of Ministers of Ukraine "On Approval of the Regulation on the State Migration Service of Ukraine", s.l.: s.n.*
4. *Anon., 2014. The Association Agreement between Ukraine, on the one hand, and the European Union, the European Atomic Energy Community and their Member States, on the other hand, s.l.: s.n.*
5. *Anon., 2015. World report 2015. Events of 2014, s.l.: Human rights*

watch, Anon., 2017. Visa-free regime between Ukraine and the European Union. [Online] Available at: https:// Безвізовий_режим_між_Україною_та_Європейським_Союзом..

6. *Kurunova, Y. O., 2014. International labor migration and migration policy, s.l.: Actual problems of the development of the socio-cultural sphere: a collection of materials of the International scientific and practical conference.*
7. *Morozov , P. E. & Chanyshev, A. S., 2017. International labor law: a textbook. s.l.:"Prospect".*

Moskal, G., 2012. System of normative acts in the sphere of regulation of migration processes. Journal of the Verkhovna Rada of Ukraine "Veche".

Levytska Olga
PhD in Economics, Research Worker
State Institution "Institute of Regional Research named after M.I. Dolishniy of the NAS of Ukraine"
(Lviv, Ukraine)

MOTIVATION FACTOR OF COMPETITIVENESS OF THE HEALTH CARE WORKERS: INTERNATIONAL EXPERIENCE FOR UKRAINE

Ukrainian health care system meets diverse dynamic changes in health staff number, deep quantitative and qualitative disparity in health workforce structure. All the changes are mostly caused by inefficient use of the health care system's potential (in particular, the human-resource potential) in terms of the growing need for medical services. Thus, strengthening of motivation and retention policy for health care providers is one of the crucial issues. In this connection, the aim of the article is to analyse problems and prospects of motivation and retention in Ukrainian health care sector under the so-called "medical reform 2017-2020" with the use of trend and structural analyses, as well as content analysis and cross-country comparisons.

In theoretical terms, competitiveness of human resources is a multi-component concept. Its structure involves many characteristics describing the human-resource potential, determining competitive advantages, and social-economic efficiency. And at the same time, motivation is one of the core components forming the labour force

competitiveness. According to A. Maslow's theory of needs, motivation factor deals not only with financial stimuli but also with the opportunities of personal and professional growth, with the guarantee of social protection, and with the level of freedoms and initiatives provided. In considering this, it should be noted that the health care system is the most vulnerable social sector keenly reacting to any change or reform. Medical workers take responsibility for human health and life accompanied with intense physical and psychological stress, they face a number of serious safety and health hazards as health care industry has one of the highest rates of work related injuries and illnesses. Such peculiarities of the health providers' work must be adequately compensated. Different countries tackle this question in a different manner carrying on their health care policy, which in its turn greatly contributes to health workers' retention.

For effective policy elaboration, it is necessary to focus on the main indicators determining the health workforce motivation and competitiveness in the labour market. All of the determinants can be divided into quantitative and qualitative groups (fig. 4.1).

In Ukraine, state funding for hospitals and other public health facilities covers only the electricity and meagre staff salaries (the percentage of state budget spent on wage costs for health workers reaches up to 70-75%). Such a system is considered inefficient and requires urgent reforms.

Generally, there are three ways to pay medical practitioners: fee for service, capitation, and salary. There has been growing interest in blending elements of these systems.

Fee-for-service arrangements pay general practitioners based on the service. They are even more widely used for specialists working in ambulatory care. There are two ways to set fee levels:

- by individual practitioners;
- central negotiations (as in Japan, Germany, Canada and in France) or hybrid model (such as in Australia, New Zealand and France's sector 2) where general practitioners can charge extra fees on top of standardized patient reimbursement rates [2].

In *capitation payment* systems, general practitioners are paid for each patient on their "list", usually with adjustments for factors such as age and gender. According to OECD, "these systems are used in Italy (with some fees), in all four countries of the United Kingdom (with some fees and allowances for specific services), Austria (with fees for specific services), Denmark (one third of income with remainder fee for

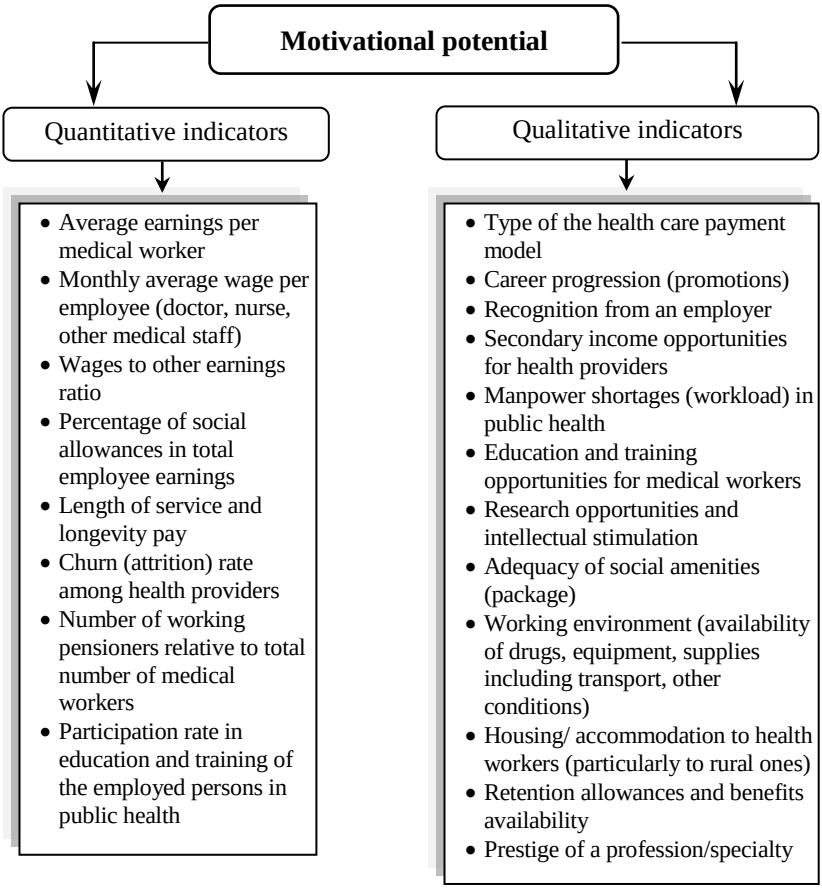


Figure 4.1. Quantitative and qualitative indicators (measures) of motivational potential in the health care sector

Source: Own elaboration

service), Ireland (since 1989), the Netherlands (fee-for-service for privately insured patients and public employees) and Sweden (since 1994). Capitation payments have become more frequent in "managed care" environments in the United States. Such a payment model allows funders to control the overall level of primary health expenditures, and the allocation of funding among general practitioners is determined by patient registrations. However, under this approach, general practitioners may register too many patients and under-serve them, select the better

risks and refer to patients who could have been treated by the general practitioners directly. Freedom of consumer choice over doctors, coupled with the principle of "money following the patient" may moderate some of these risks. Aside from selection, these problems are likely to be less marked than under salary-type arrangements [2].

In several countries, general practitioners are employed on salaries for the government. *Salary arrangements* allow funders to control primary care costs directly; however, they may lead to under-provision of services (to ease workloads), excessive referrals to secondary providers and lack of attention to the preferences of patients [2]. There has been a movement away from this system but Ukraine is one of the countries still practising such a payment model. The so-called "Semashko"[1] centralized (state-controlled) health care system in Ukraine does not work under current conditions. According to this model, the health care is free for citizens, as defined by the law, but in practice patients contribute to the cost of health services. Moreover, medical staff in public sector earns very low salaries and is crucially demotivated. Hence, one of the priorities of the on-going medical reform in Ukraine is a transformation from a budgetary funding to a state insurance medicine on the basis of the capitation payment system. The current reform started in 2017 and will last until 2020. It is supposed to bring the best European practice of medical care to Ukraine, concurrently affecting motivation of human resources for health.

As mentioned above, improper motivation is seen as the most critical health workforce problem in Ukraine. Underpayment and irregular remuneration of health care personnel have resulted in increasing dissatisfaction and the persistence of informal ("shadow") payments, thus impeding possible positive effects of any new type of payment mechanism. A priority, therefore, is to increase wages relative to other sectors and eliminate untaxed informal payments (fig. 4.2).

Regarding health workers' remuneration, today there is a non-compliance with the Law of Ukraine "Principles of Legislation on Health Care in Ukraine". Pursuant to the article 77 of the Law, wages in the health care sector cannot be lower than wages in the industry. Nevertheless, wages for health workers (120.2 euro on average in 2016) are traditionally lower when compared to the workforce average (183.2

[1] Dr. N. A. Semashko was a Russian statesman who became People's Commissar of Public Health in 1918 and served until 1930. He was one of the organizers of the health system in the Soviet Union, including Ukrainian SSR.

euro per person), and particularly to those working in the industry (208.6 euro per person). This gap gets bigger every year. On the one hand, as an employer, the government wants to keep its costs as low as possible, which means controlling wages. On the other hand, it seeks to ensure that there are sufficient health workers to meet population needs, which cannot be achieved without increasing wages. The extent of migration of health workers from Ukraine to higher-income countries is the result of an inappropriate wage policy due to not only low earnings but also to the independence of wages on workload and quality of work.

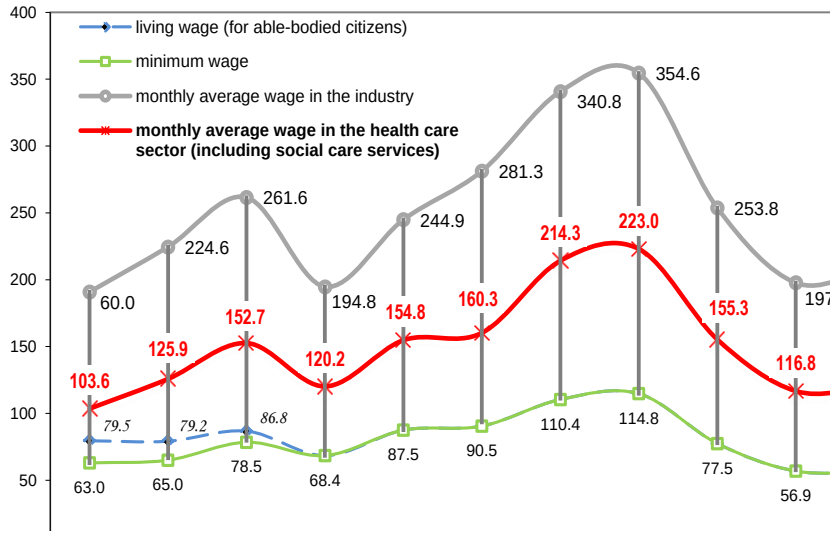


Figure 4.2. Dynamics of basic social indicators in Ukraine in 2006-2016 (in euro)

Note: Data were converted using average official exchange rates of the Ukrainian hryvnia against the euro (2006: 1 EUR = 6.35 UAH; 2007: 6.92 UAH; 2008: 7.71 UAH; 2009: 10.87 UAH; 2010: 10.53 UAH; 2011: 11.09 UAH; 2012: 10.27 UAH; 2013: 10.61 UAH; 2014: 15.72 UAH; 2015: 24.23 UAH; 2016: 28.29 UAH)

Source: Own calculations based on the State Statistics Service of Ukraine data and Laws of Ukraine on State Budget of Ukraine for the years analyzed

Analysis of current work incentives for health care workers reveals many demotivating factors in this sector. Only two out of six defined incentives are present in Ukraine, namely, desire to be socially beneficial and possibility to receive "shadow" income. However, the

latter incentive was evaluated as being against of human moral norms (table 4.1).

Table 4.1

Work incentives for health care professionals in Ukraine

Incentives	*National realities*
Desire to be socially beneficial	More or less satisfactory
Level of official salaries	Low
Possibility to receive "shadow" income	High
Differentiation of official salary of medical doctors according to level of their qualification	Absent de facto
Differentiation of official income of doctors according to treatment provided to patients	Absent de facto
Housing (accommodation) to health workers (particularly to those working in rural areas)	Unsatisfactory

Source: Own elaboration

Therefore, in Ukraine work incentives for health personnel are weak and do not allow for improving quality of medical services and system's productivity on the whole.

Other demotivating factors deal with the lack of equipment and medical supplies, poor management, insufficient informatization of working process, great responsibility and excessive workload.

Under such conditions, Ukrainian health system faces many challenges and threats. Most of them deal with the human resources crisis and human potential reduction. Thus, for example, increasing migration of the health care workers in search of employment and better social opportunities has been observed in recent years. It is predicted that in 10 years Ukraine will face a real workforce deficit in the public health sector. The problem of providing this sector with human resources and their effective use should be resolved by means of legal, organizational, technological and economic methods of regulation, including the issues regarding labour organization, a system of remuneration, staff training and retraining, etc.

Nevertheless, special attention must be paid to involuntary unemployment of medical workers (underemployment of labour) with further elaboration of the proposals concerning these processes overcoming.

Annually, due to the international migration of health care workers, significant funds from Ukrainian migrants come to the country. Moreover, medical specialists, having gained a rather high level of skills and experience, become more competitive in the labour market. They can return to Ukraine (re-emigration) and raise the human resource potential of the national public health sector. In case of a numerous emigration of doctors and nurses (as typical for Ukraine), the domestic country does not receive back the funds invested in training of the mentioned specialists, thus becoming an involuntary labour donor (exporter) for other countries, as a rule, the developed ones. Financial loss is not the most destructive effect of migration. In poor health care systems, the workforce outflow can put the whole medical service on the verge of collapse. From this point of view, international labour migration turns from the loss of health care workers into the loss of human lives.

Moreover, wage differentials between Ukraine and developed countries are so large that small increases (up to 50 euro annually, except for the last three years) in health care wages are unlikely to affect significantly Ukrainian health workers' motivation and to prevent them from migration or social mobility. For instance, the International Labour Organization reports that in 2016 total health care earnings per month in Norway were equal to 4558 euro, in the UK – 2764 euro, in Germany – 3886 euro, in Japan – 2326 euro, in Slovenia – 1400 euro, in Estonia – 1209 euro, in Poland – 895 euro, in Portugal – 830 euro, in Hungary – 774 euro and Russian Federation – 403 euro. In EU-28 total health care earnings are equal to 2601 euro [5; 6].

The data presented in table 4.2 refers to earnings in nominal terms and on the basis of the mean of monthly earnings of all employees. The earnings of employees relate to the gross remuneration for time worked or work done together with remuneration for time not worked, such as annual vacation, another type of paid leave or holidays. Earnings exclude employers' contributions in respect of their employees paid to social security and pension schemes.

Cross-country comparisons show significant gaps in terms of mean nominal monthly earnings in the health care sector and social work activities. Quite a big disproportion can be noticed between Ukraine (120.2 euro in 2016) and foreign countries, namely in relation to Norway, Germany, Finland, Ireland and UK. The rate of medical workers' salary is 23-38 times higher there. This provokes demotivation among human resources for health and "pushes" them abroad or even

Table 4.2

Cross-country comparisons of mean nominal monthly earnings of one employee in the health care sector (including social work activities), 2006-2016

Country	Mean nominal monthly earnings, *euro*						Earnings ratio *(foreign country to Ukraine)*
	2006	**2008**	**2010**	**2012**	**2014**	**2016**	**2016**
Norway	…	4034	4307	5013	4761	4558*	37,9
Germany	2731	2840	2725	3550	3685	3886	32,3
Finland	2321	2536	2710	2762	2930	3018	25,1
Ireland	2660	3107	3536	3063	2920	2961	24,6
UK	2989	2409	2327	2468	3767	2764	23,0
France	2148	2252	2261	2384	2322	…	…
Spain	2174	2498	2133	2130	2136	2172*	18,1
Poland	540	695	779	790	878	895	7,5
Portugal	824	898	821	855	837	830	6,9
Russian Federation	232	306	407	517	536	403	3,4

Note: "…" means lack of data
** Data for 2015*

Source: ILO and Eurostat statistics and databases [3; 5; 6]

away from the health system. In the current situation, medical reform must be a priority of the health state policy. Some steps have been already taken on this path.

On 19 October, Ukraine's Verkhovna Rada approved the draft Law No. 6327 "On state financial guarantees for the provision of medical services and medicines". The reform foresees a shift from financing a medical institution to financing the services provided to the patient (in other words, capitation payment system). According to the reform, all health services and medicines provided to patients should be entirely or partially paid for by the state through the state insurance system, which will cover all persons living in Ukraine. And what is the most important

– flexible salary of doctors will be introduced. It will depend directly on the number of patients who visit this doctor. On average, the state plans to allocate 370 UAH (12 EUR) per year for one patient. The doctor's (general practitioner) norm will be 2,000 patients. For pediatricians, the number will be 800-900 patients. They will receive more money per patient, taking into consideration the greater amount of work and workload. The same applies to doctors who will treat elderly people (65+). The patient can still choose a doctor, but now the specialist who has more patients must be paid primarily. However, the corresponding mechanisms are not yet sufficiently spelt out [1].

In terms of the on-going medical reform in Ukraine with consideration of the international experience, some important measures should be taken – to be exact:

- It is necessary to increase the wage rate in Ukrainian health care system relative to other sectors (to the industry in particular: according to the law, this ratio must be at least 1:1), ensuring qualification differentiation in remuneration and elimination of informal payments, health professionals' outflow.
- Special incentives and benefits for health staff working in rural areas (staff housing, transport, other rural service incentives, etc.) must be provided.

The growth of additional wage bill (bonuses, gratuities, premiums and other benefits) is also a compulsory measure to improve health staff performance, motivation and competitiveness.

References

1. *Chernenko Z. What Ukraine's healthcare reform is about // Euromaidan Press (October 20, 2017). – Available at: http://euromaidanpress.com/2017/10/20/what-ukraines-healthcare-reform-is-about/#arvlbdata.*
2. *Docteur Elizabeth, Oxley Howard. Health-Care Systems: Lessons from the Reform Experience. OECD, 2003. – Available at: http://www.oecd.org/health/health-systems/22364122.pdf.*
3. *European Commission. Eurostat Database. – Available at: http://ec.europa.eu/eurostat/data/database?p_p_id=NavTreeportletprod_WAR_NavTreeportletprod_INSTANCE_nPqeVbPXRmWQ&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1.*
4. *Experience of Europe's countries in health care financing: lessons for Ukraine (Overview) [collected papers]. Tacis BISTRO Project. – 2002. – Available at: http://eeas.europa.eu/archives/delegations/ukraine/*

documents/virtual_library/14_reviewbook_uk.pdf.
5. *International Labour Organization: Statistics and Databases. – Available at: http://www.ilo.org/global/statistics-and-databases/lang--en/index.htm.*
6. *Russian Federation Federal State Statistical Service: Russia in Figures. – Available at: http://www.gks.ru/wps/wcm/connect/ rosstat_main/rosstat/en/figures/labour/*

Yushchenko Nadiia
PhD (Economics), Associate Professor Chernihiv National University of Technology (Chernihiv, Ukraine)

EFFECTIVE USE OF HUMAN POTENTIAL OF UKRAINIANS AS A FACTOR OF ENHANCING THE NATIONAL COMPETITIVENESS LEVEL AND ENSURING SUSTAINABLE ECONOMIC GROWTH

According to UN General Assembly Resolution „Transforming Our World: The 2030 Agenda for Sustainable Development", approved on September 25, 2015 (A/RES/70/1) one of 17 global goals for sustainable development is to promote complete and productive employment and decent work for everyone (Goal 8) [1].

The concept of a decent work, proposed by the International Labour Organization as a global goal and a basic strategy for the labour market development, determines the achievement of productive employment as a priority, which has to ensure sufficient income for decent living, sustainable economic development and competitiveness of production and the country as a whole. Labour productivity and unit labour cost have been added to the Key Indicators of the Labour Market (KILM) by International Labour Organization. Labour productivity is defined as a general indicator of labour performance, which characterizes the efficiency of its expenses on production and services. According to [2] labour productivity for international comparisons is defined as the ratio of gross domestic product (GDP) due to the purchasing power parity and number of employed population (according to the analysis of economic activity of population by Labour Force Survey). International comparisons of GDP (due to the purchasing power parity) per one employed person, reflecting the labour productivity, are pointing to [3]

the significant underrun of Ukraine from economically developed countries (Sweden, Germany, France), as well as post-Soviet countries by this indicator. This may be the result of Ukraine's staying in a crisis situation for quite a long period of time, thus leading to the reduction of GDP volumes and preservation of a significant share of „shadow" economy in the country.

Leading Ukrainian scientists, in particular V.M. Geiets [4], noting the tendency of weakening the motivation to increase the labour productivity, the level of education and competence of workers, have suggested as an argument the existing strains in wages, the pre-eminent growth of the share of social transfers in the structure of population's income in comparison to the share of wages in recent years. In general, this indicates that both society and science are aware of the importance of improving the labour productivity as a prerequisite for the growth of the economy competitiveness and existence of a number of factors to counteract its growth.

Labour productivity, calculated at the macro level in Ukraine in 2014 was 9% lower than in 2013. In 2015, compared with the previous year, there was a decrease of GDP per capita by 8% (681 USD), table 4.3.

In 2015 labour productivity per person employed in Ukraine (within current prices) amounted to 120.4 thousand UAH, which is 0.9% below the level of previous year. In this case, the number of employed population aged 15-70 decreased by 9%. As a result, in 2015 the drop in real GDP was 9.8% compared to 2014 [6]. In the third quarter of 2016 GDP per person employed aged 15-70 was 40.2 thousand UAH, which is 3.3% more than the indicator of labour productivity at the national level of corresponding period in 2015, and this happened under the growth of GDP by 2% and reduction of the number of employed population by 1.3%. In comparison, the average level of labour productivity in the USA is 137 thousand USD per person employed. Ukraine lags behind the indicator of labour performance from such countries as the United Kingdom, Israel, Canada and Japan in the range of 4-6 times, from such CIS countries as Azerbaijan, Belarus and Kazakhstan by 2-2.5 times and in relation to Russia by 1,7 times. In addition, due to the low labour productivity Ukraine's labour force is being underestimated in relation to the world developed countries (table 4.4) [7]: in terms of the ratio indicator of GDP per capita to the hourly salary, labour productivity in Ukraine is underestimated almost twice relative to the average value of EU countries, and by 4 times – in comparison with Belgium, France and Sweden.

Table 4.3

The impact of GDP on the salary in some European countries [5]

Country	GDP[2] per capita			The average monthly salary of employees in 2014, €
	2014, USD	2015 (according to the IMF), USD	Growth rate, %	
Austria	46433	46986	101,19	2124
Bulgaria	17860	19169	107,33	356
Great Britain	39511	41499	105,03	2223
Estonia	26999	28650	106,12	841
Ireland	49195	65806	133,77	2129
Spain	33711	34861	103,41	1734
Holland	47355	49624	104,79	2158
Germany	45888	46974	102,37	2155
Poland	25105	26499	105,55	730
Romania	19712	20872	105,88	423
Serbia	6200	13699		360[3]
Croatia	20889	21625	103,52	735
Switzerland	85815	58647		The minimum salary of 3500 €. The average salary in Zurich is 9700 €
Ukraine	**8668**	**7987**	**92,14**	**178**

Table 4.4

Evaluation of individual indicators of labour expenditure in some countries as in 2013

Country	The average hourly labour compensation, €	The ratio of GDP per capita to the average hourly labour compensation
Denmark	39,5	0,7
Italy	27,2	0,9
Russia	3,9	2,8
Finland	31,1	0,9
France	34,9	0,8
Sweden	41,9	0,8
Countries of the European Union	20,2	1,5
Ukraine	**1,8**	**3,2**

According to the statistics by International Labour Organization [8] the value of labour productivity in the world developed economies and EU countries exceeds the corresponding world index by 3.4 times, in the

[2] According to the NAS-2008 accounts system, which, unlike NAS-1993, considers intellectual property, derivative financial instruments of expenses on R&D and armament

[3] February 2016

Central and Eastern Europe – by 1,1 times, in the countries of the Middle East – by 1,6 times, while such regions as East Asia, South Asia, North Africa, Latin America and the Caribbean have the labour productivity index much less than the world-wide value, indicating the presence of respective imbalance between the countries.

Ukraine has a resource-based economic model of development based on a relatively low level of efficiency, the dominative role of metals, chemical products and agriculture in Ukrainian export, mainly at the raw material level, instead of high value-added production. Ukraine has low levels of GDP per capita and labour compensation due to the insufficient level of introduction of modern innovative technologies, new equipment, production technologies, high material and energy consumption of national products, which are affecting their cost and competitiveness (the energy intensity of Ukraine's GDP exceeds the corresponding value in the world developed countries approximately by 5 times), thus explaining the decline in the real wages of Ukrainians, as our enterprises spend five times more energy on the production unit and this increases its cost, making it uncompetitive in the international markets.

During the years of independence, the use of human capital has been practically limited, while in the developed countries it is the most valuable resource and is a prerequisite for the growth of labour productivity. For example, comparing the value of the average hourly salary in Ukraine with such countries as Sweden, Denmark, France and Italy, it becomes clear that the labour compensation of Ukrainian citizens is 20 times less (table 4.4).

Improvement of the labour force qualitative characteristics is one of the aggregated factors in the whole set of reasons for the change in labour productivity, consisting of (1) measures to improve business activities, which include the foundation of new enterprises, introduction of new structural units of existing enterprises, reconstruction of existing enterprises and their structural divisions, improvement of working equipment at existing enterprises, improvement of labour materials and supplies, change in the methods of combining the labour force, means and supplies, change in characteristics of produced goods and services and (2) change in the natural environment of economic activity [9, p. 127].

Despite the high level of literacy and solid basic knowledge of the majority of graduates, in Ukraine the system of education, training, retraining and advanced training of employees does not provide the

qualified staff [10]. To ensure the success of workers and employers in the modern economic environment, promotion of development and competitiveness of enterprises, staff training should include the following components: 1) a combination of cognitive skills, such as literacy and mathematical abilities; 2) social and emotional skills such as responsibility and creativity; 3) technical skills and abilities required for a certain type of activity.

In terms of dynamic changes taking place in the modern world, as well as rapid development of digital economy, productive employment can be ensured by simultaneous formation of professional and career responsibilities. New economy requires a person to become a bearer of various new features, so-called Soft Skills such as readiness to cooperation and support, culture, communication, willingness to work in team, psychophysiological readiness to work in modern informational environment, ability to learn and train, goodwill to changes and innovations and so on [11]. The system of education should pay great attention to the formation of such personal qualities as resistance to stress, emotional stability of people, confirmatory determination of the central role of personal resources, self-responsible position in relation to professional and economic choice, capability of people to repeatedly change the scope of application of their own business and personal potential during their life [12].

Sustained development of economy requires a multifunctional labour force, which is also flexible and mobile, capable of learning and continuous updating of received knowledge, perception of technological innovation, development of new specialties, availability of stable motivational orientation to the increase of professional level, and, consequently, labour productivity. At the macroeconomic level, the growth of labour productivity determines the dynamics of GDP, ensures the growth of purchasing power of population, becomes an effective mean for the easing of inflation and a main source of implementation of measures aimed at social development and the enhance of population living standards [13].

In 2017 the program of government statistical monitoring involves working out methodological provisions by the State Statistics Service of Ukraine concerning calculation of labour cost index as part of adjustment of methodological and organizational provisions for carrying out the enterprise surveys on questions of labour reward and labour cost statistics in compliance with EU standards, introduction of statistical information and productivity statistics by the Ministry of Economic

Development and Trade and the State Statistics Service of Ukraine within the framework of promoting the further development of cooperation among the manufacturers [14].

Since 2013 my attention in the articles has been focused on the reasonability of introducing the practice of comprehensive statistical analysis of labour productivity in the system of state statistical institutions, as well as involvement of an appropriate indicator into reports together with the recommendations to consider this indicator at all levels of management hierarchy [15]. Due to the representative questionnaire survey of the citizens of working age in the Chernihiv region of Ukraine, among which the public sector employees at the age of 40-49 have made 26.9%, the employees of private enterprises aged 25-54 – 57.7% and the unemployed population at the age of 43-47 – 15,4%, the personal qualification level (knowledge, skills, communication, autonomy and responsibility) provided by the National Qualifications Framework [11] has been considered as 2-4 for 14.3% of the public sector employees, the level of 5-6 for 28.5% and the highest level of 9 for 43%; as for the employees of private enterprises – up to 1 or 3 level for 7%, up to 0,2 or 4 level for 13%, up to 7 level for 20% and up to 5 level for 27%; as for the most of the unemployed population – up to the level of 3.

In the report of the World Bank on „Skills for Modern Ukraine", released on June 8, 2017, it has been noted that it is important to improve the skills of Ukrainian employees in order to increase the productivity of the country and make it more competitive [10]. The country does not have enough employees with sufficient skills to meet the needs of the market, and, as a result, its enterprises are losing their customers, as well as access to markets and innovative opportunities.

The national social policy should focus on creating preconditions for the growth of motivational potential, labour mobility, labour and productive activity of national human resources; thus, instead of struggling to ensure minimum living wages for every member of society, it is necessary to establish proper conditions for the development of personal productive capacities and provide their effective implementation. After all, high level of job-satisfaction among people involved in labour and those who use its results will significantly contribute to sustained, comprehensive and stable economic growth and improvement of human life.

The priority directions of the use of state investments, legislative and organizational opportunities to support creation of working places in

Ukraine should be the types of economic activity, the development of which directly determines the level of economic security of the state (fuel and energy, agricultural and industrial complex); accumulating a large export potential (aircraft and shipbuilding, metallurgy, chemical and petrochemical industry); having a rapid turnover of capital (light, food, microbial industry, trade, some branches of agriculture); creating the material and technical base of production (mechanical engineering, especially energy, electric and technical sector and electronics, construction and building materials industry); promoting creation and operation of industrial and commercial infrastructure (transport and communications, scientific, technical and financial engineering); being oriented to meet the immediate needs of population (housing, municipal economy, medicine, education) [16].

Among the promising directions in the development of Ukraine the experts have pointed out [17]:

- development of agrarian infrastructure, water logistics, storage systems and biofuel production, etc. as for traditional specialization of Ukraine in agricultural industry due to the favourable weather conditions, black soils (chernozem), population growth of the planet and, accordingly, further demand for food products;
- the growth of national IT business, which is less dependent on political conditions and more – on human capital;
- development of renewable and alternative energy, especially in the framework of rising costs of resources and an attempt to follow European energy saving tendencies;
- the growth of private medical sector, as it is in all developed countries, and manufacture of a wide range of pharmaceuticals based on the latest global formulations, due to the pan-European aging population tendency and the availability of Ukraine's potential to build up productive capacities, skilled human resources, relative unemployment of the market, state support programs for pharmaceutical business.

Reserves for improving the labour productivity in Ukraine [3], [18]:

- solution of the problem of redundant number of workers at state-owned enterprises, the overwhelming majority of which are not functioning effectively;
- introduction of preferences when creating new working places, encouraging self-employment of population and conduction of business activity;
- restructuring of employment in order to increase the share of innovative labour, which implies the need for systematic growth of

labour productivity in contrast to employment in low-productive forms of economic activity;

- implementation of preferential taxation and depreciation policy fixed assets of innovative enterprises;

- the growing importance of intensive levels of economic growth, which will reduce the share of material costs within operating activity expenditure;

- encouraging employers to introduce energy-saving technologies and technical innovations in order to increase the share of labour costs in the structure of operating expenses;

- unshadowing of the economy, counteraction of the shadowing of incomes, etc.

Improvement of productivity and hence economic growth will be facilitated by the implementation of professional standards and their compliance through the creation of the National Centre for Professional Qualifications, the tasks of which are development of new professional standards, independent assessment of the qualification of employees, certification of specialists of different professions and qualifications in accordance with international professional standards [19]. The absence of the centre of labour productivity means a lack in the possibility of comparative assessment of productivity of individual enterprises in the industry and in various sectors, which leads to the incorrect salary balance in various spheres. Creating the Centre of Labour Productivity in Ukraine will form a basis for monitoring and analysing the labour productivity. Availability of comparative data on labour productivity in industrial sectors could serve as a benchmark for the structural reform of the country's economy, including development of new types of economic activity.

References

1. *Sustainable Development Objectives 2016-2030. A/RES/70/1. Retrieved from: http://www.un.org.ua/ua/tsili-rozvytku-tysiacholittia/tsili-staloho-rozvytku*
2. *On approval of Provisional methodological recommendations for calculating labor productivity in general in the economy and by types of economic activity: Resolution of the Ministry of Economy of Ukraine from December 26, 2008 №916. Retrieved from: http://www.me.gov.ua/Documents/List?lang=uk-UA&tag=MetodichniRekomendatsii&pageNumber=2*
3. *Lisogor, L. S. Labor productivity in Ukraine: problems and prospects for improvement. Labor market issues. Retrieved from:*

https://dse.org.ua/arhcive/14/14.pdf
4. *Heyets, V. M., Semynozhenko, V. P. & Kvasnyuk, B. E. (eds.) (2007). Strategic Challenges of the 21st Century for the Society and Economy of Ukraine. Kyiv : „Phoenix", 556 p.*
5. *Wikipedia. Retrieved from: https://ru.wikipedia.org*
6. *Labor productivity and capital productivity. Kyiv-2017. Site of the Ministry of Economic Development and Trade of Ukraine. Retrieved from: http://me.gov.ua/*
7. *Federation of Trade Unions of Ukraine. Information and analytical materials for the meeting of the NTSEC to the question of the state of labor remuneration reform. Kyiv-2014. Retrieved from: http://www.ntser.gov.ua/split/files/content/p1-ps.doc*
8. *Zayukov, I. V. (2015). Labor productivity in the context of providing innovative development of the Ukrainian economy. Economy: realities of time, no. 2 (18), pp. 236-242. Retrieved from: http://economics.opu.ua/files/archive/2015/n2.html*
9. *Baklanov, G. I. & Kildyshev, G. S. (eds.) (1981). Statistical study of labor productivity. Scientific notes on statistics, vol. 41. Moscow: Nauka, 408p.*
10. *The best qualification of employees is important for the development of Ukraine's economy. Retrieved from: http://www.worldbank.org/uk/news/press-release/2017/06/08/a-better-skilled-workforce-is-essential-to-boosting-ukraines-economy*
11. *On Approval of the National Qualifications Framework : Resolution of the Cabinet of Ministers of Ukraine from November 23, 2011 №1341. Retrieved from: http:// zakon2.rada.gov.ua/laws/show/1341-2011-%D0%BF*
12. *Yushchenko, N. L., Yushchenko, T. L. & Rakhmankulova, M. A. (2009). On the functioning of the labor market and the problem of youth employment in the conditions of the economic crisis. Bulletin of the Chernihiv National University of Technology, no. 38, pp. 289-298.*
13. *Grishnova, O. A. (ed.). (2011). Labor potential of Ukraine: assessment of the state, efficiency of use, strategic directions of development. Cherkasy : „MacLeut" Ltd., 360 p.*
14. *Draft State Statistical Survey Plan for 2017. Site of the State Statistics Service of Ukraine. Retrieved from: http://www.ukrstat.gov.ua/*
15. *Yushchenko, N. L. (2013). Organization of the operational accounting of personal achievements of employees through the computer information system as an effective means of stimulating labor activity. Visnyk of Chernihiv National University of Technology. Series „Economic Sciences", no. 3 (68), pp. 185-192.*
16. *Yushchenko, N. L. (2016). Statistical analysis of average wages in Ukraine and the European Union. Economic analysis, Vol. 24, no. 1, pp.*

92-105.
17. *Retrieved from: http://www.epravda.com.ua/news/2015/12/21/573253/*
18. *Ukraine Jobs Study. Fostering Productivity and Job Creation. Report No. 32721-UA. World Bank, Human Development Sector Unit. February 10, 2006. – P. 2.*
19. *Balabanyuk, J. How to increase productivity of Ukrainians: 6 main problems of labor resource management and ways to overcome them. Retrieved from: http://forbes.net.ua/ua/opinions/1402269-yak-pidvishchiti-produktivnist-praci-ukrayinciv*

Chapter 5

FORMATION OF INNOVATIVE MECHANISMS FOR AGRICULTURAL DEVELOPMENT

Baryshevska Inna
Candidate of Sciences (Economics), Associate Professor
Poltorak Anastasiya
Ph.D. in Economics
Shishpanova Natalia
Candidate of Science (Economics)
Mykolaiv National Agrarian University (Mykolaiv, Ukraine)

FORMING AN INNOVATIVE STRATEGY FOR THE DEVELOPMENT OF AGRONOMIC COMPANIES

The first stage of an effective development of agricultural companies is a formed system of strategic management, because this strategy shows the direction of the development, which was chosen by the company to achieve priority tasks.

The formation of a portfolio of strategic alternatives and the choice of the strategy for the development of an agricultural enterprise makes it possible to determine the direction of the enterprise's behavior in the market, taking into account the conditions of the environment and the probable nature of their change; assess competitiveness and strategic competitive advantages of the enterprise; Identify the resources that must be involved in achieving the goals and ensure their most effective use [3].

The formation of a portfolio with strategic alternatives is based on the choice of the basic strategy of the company, which in turn, begins with the choice of a model of its behavior in accordance with the position in the market and the type of development – protective or offensive. Formalization of the choice of a behavior model can be made by estimating the external potential of the company: the high potential corresponds to an offensive model, and the low one is protective [5].

The protective behavior model of the company is reduced to the

implementation of conservation measures to reduce all costs associated with production and sales, the maintenance of fixed assets and personnel, which leads to a reduction in production in general. The direction, although it seems attractive, because it leads to a reduction in losses and costs, is not effective for all companies and is disadvantageous for the economy of the country. Better from a position of further development is an offensive model of behavior, in which, along with the reduction of losses and costs, active marketing, implementation of promising technologies, renewal of fixed assets, the conquest of new markets, change in management, improvement of management system is carried out.

Effective implementation of the agricultural company development strategy requires, first and foremost, a justification of the need for resources and the level of their use, identifying unused resource potential, optimizing the resources of the enterprise and sources of their formation; assessment of the risks of additional resource attraction. Determining the resource potential of the company is a necessary component and prerequisite for implementing the strategy (strategic alternatives) for its development.

Implementation of the strategy as the next stage of management is a critical process, since it is the successful implementation of this strategy that leads the company to achieve its goals. The strategy is implemented through the development of programs, budgets and procedures that can be considered as mid-term and short-term plans for implementing the strategy. We believe that the main conditions for successful implementation of the agricultural company development strategy are:

- Goals, strategies and plans are brought to the employees so that they, on their part, will gain an understanding of what the organization seeks to achieve, and to engage them in the process of implementing the strategy;
- The management timely ensures to receive all necessary resources for implementation of the strategy, and forms a plan for implementing the strategy in the form of target facilities;
- In the process of implementing the strategy, each level of management solves its tasks and performs the functions assigned to it.

The choice of strategies is dominant in the management system. Clarification of the goals of development – as Timo Santalainen says – gives management the opportunity to assess, and if necessary, to clarify the strategic outlook positions of the organization [7]. Such positions, in his opinion, can be the current level of tasks, the validity of commercial

ideas, intermediate goals and the order of their importance, as well as the nature of the strategy. In addition, the process of strategy development of agricultural enterprises causing significant impact on natural biological processes and the type of development in which agricultural company is at any given time.

The formation of a strategy can be done by senior management with the help of formal planning methods: based on empirical models and concepts. Accordingly, G. Mintzberg describes three main models of strategy development [4]:

- planned – the strategy is developed, performed and evaluated in the planned mode with the involvement of a specialist staff of highly skilled specialists who, through various models and methods, determine the possible results and find the most effective way to achieve the goals;

- "entrepreneurial" – more informal methods of constructing strategies based on the personal experience of the entrepreneur leader, his knowledge on the logic of the industry's operation are used; these factors are used to form the "vision" of a future business, which is then taken into account in plans, projects and programs;

- "learning by experience" – used in conditions of an unstable environment. The main thing is taking into account external impulses and the possibility of reviewing the established strategies, in which the process of developing and correcting strategies may be somewhat spontaneous, poorly controlled; an important role is played by the manager – the entrepreneur.

Since in the process of strategy formation, the position and vision of the development prospects of senior management is of particular importance, A. Thompson and A. Strickland distinguish four main approaches to the development of strategic decisions, depending on the participation of management and executives [8]:

1. The one-person approach. In this case, the leader is the main strategist who has a decisive voice in analyzing, developing alternatives, and defining key strategies. This does not mean that he works alone, but the manager is the last resort in making strategic decisions. This approach is inherent to agricultural companies with a low level of management potential, since it does not allow the full use of the staff proposals.

2. Approach based on delegation. The head delegates almost all work to subordinates, most often - a special plan or other units. The leader reduces the process of defining a strategy to work "one from among others", no more important than planning ongoing work. The result may

be writing plans that nobody will ever perform. Through meetings with the planned units, the head falls into the trap of "artist-job" because only with their participation can form effective strategic plan.

3. An approach based on co-operation. This is an intermediate approach when, together with the planned units, the manager uses the help of future key executives. On this basis, you can formulate a strategy balanced in terms of content, terms, as well as the interaction of performers.

4. An approach based on competition. The content of this approach is to encourage subordinates to participate in the development of a strategy, to fight for primacy in putting forward ideas, finding the most effective ways to achieve their goals. The formation of strategies takes place with the help of future performers, and in such an environment quite often innovative ideas are generated, which in the future can be easily realized, since the workers made the initiatives.

In a generalized form, the process of forming a strategic plan represents a certain point in the intersection between the identified opportunities and threats of the external environment, expressed in the form of key factors of success, as well as the strengths and weaknesses of the resource potential of the company, which in turn is expressed by its abilities to develop. There is no doubt that the opportunities of the environment depend on the use of the strengths of the resource potential. In addition, there are threats to the environment, and the weaknesses of the resource potential of the company are minimized. The formation of a strategy, its evaluation and the choice of the best option are influenced by the values of senior management, as well as ethical norms of society, expressed in the form of social responsibility.

The methodological principles of a model for forming a strategy for the development of an agricultural company are:

1. The formation of a strategy should be a controlled, conscious process of thinking. This means that the strategy does not appear intuitively, and not as a result of sudden detection from the "problem stream", but is the product of a carefully controlled reflection process. K. Andrews notes that strategic thinking should be based not on intuitive, but on conscious experience, calling at the same time suddenly emerging strategies as "opportunism" and "conceptual enemy of strategy" [7].

2. The responsibility for the process of forming a strategy should be assigned to the top manager of the organization. The executive director is a sort of "architect" for the strategy, identifying who will be

specifically involved in the strategic planning process.

3. The model for forming a strategic plan should be simple enough and informative.

4. Strategies should be unique, that is, unified of their kind, and is the result of the process of creative design. In other words, the strategies must reflect the essential (conceptual), which distinguishes the particular enterprise from its development, rather than being built on a standard template.

5. Strategy as a result of the strategic planning process should be completed. The process of forming a strategy is the final product, when all alternative variants are fully analyzed and evaluated, and the choice of the best one is made.

6. The strategy should be simple, concise and expressed in an accessible form, should facilitate the activity of the company and, therefore, enables its understanding and perception by the employees of the company.

7. If the strategy is unique, fully developed and clearly articulated, then it is implemented. Thus, all elements of the organizational structure of the company must possess the necessary knowledge and resources and the desire to implement the chosen strategy in life.

The choice of development strategies by agricultural companies depends on the development of situations of a promising, current and operational character. Common in their implementation is a systematic and integrated approach to the formation of appropriate mechanisms. Since the development strategies of enterprises require rapid changes in the subsystems of the business structures, the final result can be achieved provided a balanced approach to changes in the biological, technical, technological, personnel, organizational, economic and other organizational organization potential. This is an objective necessity, since the changes may be of a different nature [7].

Moreover, the strategy of development of each agricultural company determines its production and technical potential, that is, the ability to stable production activities within the chosen strategy in a complex and changing environment [2]. Production-technical potential determines the development of all elements of the company as a socio-economic system. In the process of analyzing the internal environment of a company it is necessary to find out which of its elements can contribute to the implementation of the development strategy, and which are the weak links (table 5.1). Regarding the external environment, it is advisable to find the opportunities that it provides.

Table 5.1

Factors of the internal and external environment for the formation of a strategy for the development of agrarian companies

Group of factors of the internal environment	Group of factors of the environment
1. Factors in the strategy of developoing the mission of the enterprise	1. Political factors
2. Factors of the company's development strategy to the external environment	2. Social factors
3. Factors in the strategy of developing of the enterprise's internal potential	3. Environmental factors
4. Factors in internal balancing of parameters in the strategy of enterprise development	4. Organizational and economic factors
5. Factors in the implementation of the enterprise's development strategy	5. Information factors
6. Factors of economic efficiency in implementation of the enterprise's development strategy	6. Institutional factors
7. Factors of social, environmental efficiency in implementation of the enterprise's development strategy	

Source: author's development

Innovative strategy, as most adequate to the requirements of the present, reflects the content and main directions of the process of innovative development of the agrarian enterprise. An analysis of modern innovation issues makes it possible to distinguish the following main types of innovations in agricultural enterprises (fig. 5.1).

The specific type of innovations in the agricultural sector is due to its features. First, it is the involvement in the production process of natural resources, orienting innovation to ensure and preserve ecological safety, the rational use of natural potential. Secondly, the innovation process in the agricultural sector is differentiated into economic, organizational, technological, technical, etc., which are united by a single element - creation of new biological species. Thirdly, on the basis of the fact that agricultural products as an element of human life expectancy have a significant impact on health and the viability of the latter, innovation in the agricultural sector should ensure the priority of improving the quality of agricultural products, its safety and the preservation of natural properties.

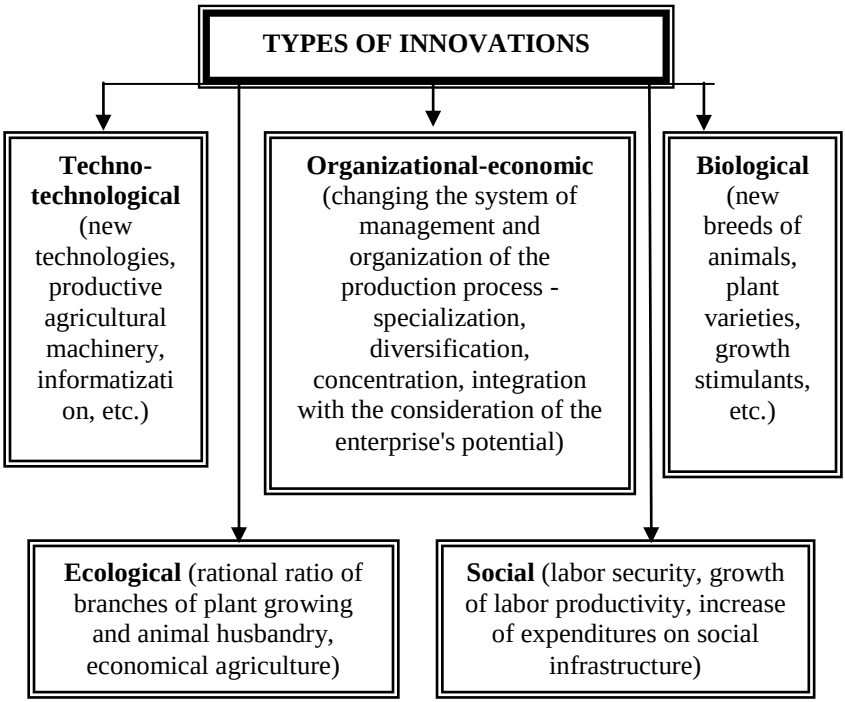


Figure 5.1. Types of innovations implemented at agrarian enterprises

Source: built according to [1]

The position of the authors is based on the inherent innovations of the characteristics in the coverage of a number of heterogeneous objects, phenomena, processes, and therefore, an innovation can be considered a process, change, object, result or system that corresponds to the features:

- provide competitive advantages to the social and economic system;
- ensure achievement of the goals of the socio-economic system and its stability;
- applied in practice;
- are confirmed by the objects of intellectual property;
- have a commercial return;
- are derived from the process of generating ideas and fundamental and applied research [6].

Some authors identify the concept of agronomy as an innovation that belongs directly (or indirectly, within the technological chain) to those

processes involving people, machines (equipment, tools, etc.), and the environment component (animal, plant, etc.).), the existence of which in the natural environment (without human involvement) is impossible or possible only if the basic functional characteristics are lost [6]. Yankovskaya O.I. defines the essence of agronomy as "... the final result of the introduction of innovations in the field of agriculture (a variety of plants, animal breeds, plant protection products or animals, cultivation technologies, etc.), which led to economic, social, environmental and other types of effect" [9].

The sequence of formation of an innovative strategy of agrarian enterprises is proposed to be carried out according to the scheme shown in fig. 5.2.

The development of a strategy for development of an agricultural enterprise of a certain type should be carried out in stages from the higher to the lower level, taking into account the peculiarities of the internal and external environment of the business entity, its resource, financial and intellectual capabilities, the development of management capacity, especially in terms of readiness for risk, perspectives of thinking and attitude of the team before changes.

References

1. *Bredun N. V. (2011) Strateghichne planuvannja innovatsijnogho rozvytku silskoghospodarskykh pidpryjemstv : avtoref. dys. ... kand. ekon. nauk : spec. 08.00.04 – ekonomika ta upravlinnja pidpryjemstvamy. Poltava, 20 s.*
2. *Ghalushka Z. I., Komarynsjkyj I. F. (2006) Strateghichnyi menedzhment : navch.–metodychnyj posib. Chernivci, s. 101-148.*
3. *Mazaraki A. A. (1999) Ekonomika torghovelnogho pidpryemstva : pidruchnyk dlja vuziv; pid red. prof. N. M. Ushakovoji. Kyiv: Khreshhatyk, 800 s.*
4. *Myntsbergh Gh., Aljstrand B., Lampel Dzh. (2001) Shkoly strateghyj; pod red. Ju. N. Kapturevskogho; per.s anghl. SPb.: Pyter, 336 s.*
5. *Prodius I. P., Doroshuk A. A. (2003) Formyrovanie strateghii predotvrashenija bankrotstva na predpryjatii : monoghrafiya. Odessa: Yzd-vo Odesskogho juridicheskogho instituta NUVD, 137 s.*
6. *Sirenko N. M. Upravlinnja strateghijeju innovatsijnogho rozvytku aghrarnogho sektora ekonomiky Ukrayiny : monoghrafiya. Mykolayiv, 416 s.*
7. *Sudomyr S. M. (2011) Strateghija rozvytku pidpryjemstv ta jiji tsilova sprjamovanistj. Innovatsijna ekonomika : naukovyj zhurnal. No. 21, S. 67- 69.*

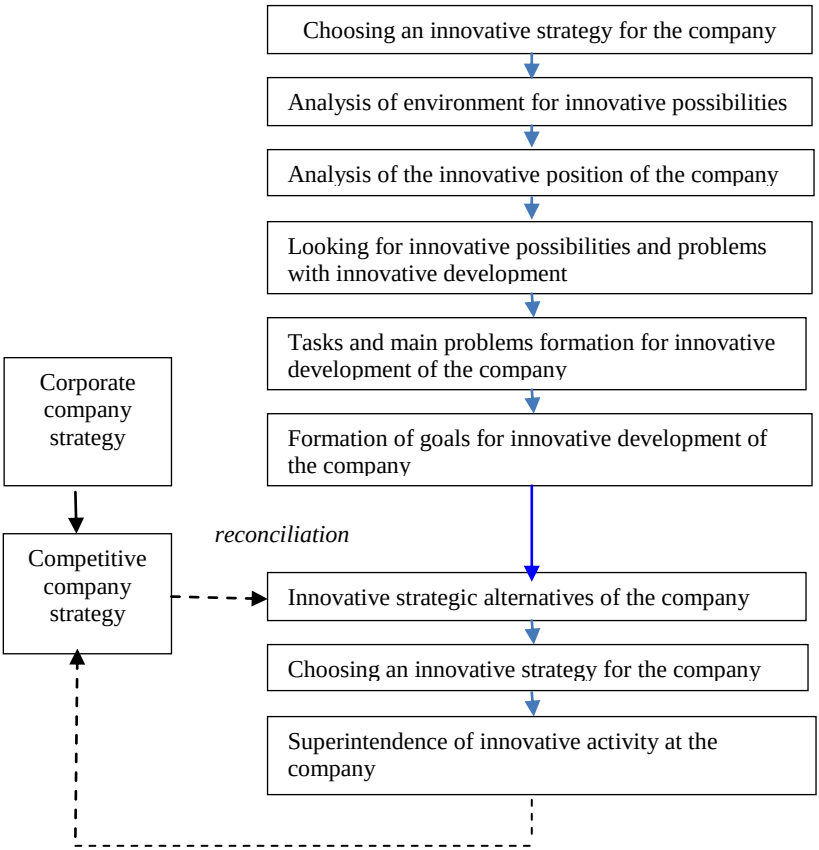


Figure 5.2. Scheme of formation of an innovative strategy for agricultural enterprises

Source: author's development

8. *Tompson A. A., Striklend A. Dzh. (1998) Strateghycheskij menedzhment. Iskusstvo razrabotki i realizatsii strateghii : uchebn. Moscow, Banki i byrzhiy ; JuNITI, 576 s.*
9. *Jankovsjka O.I. (2010) Osoblyvosti innovatsij v silskomu ghospodarstvi [Elektronnyj resurs]. Ekonomika. Upravlinnja. Innovatsii. : elektronne naukove fakhove vydannja. No. 2 (4) - Rezhym dostupu: http://www.nbuv.gov.ua/e-journals/eui/2010_2/10yaoiicg.pdf*

Ilyin Valeriy
Doctor of Economics, Associate Professor, Head of Agroindustrial Sector Accounting, Analysis and Audit Department
Kyiv National Economic University named afer Vadym Hetman
Ilyina Olena
PhD Student, Luhansk National Agrarian University
Ilyina Olena
PhD Student, Luhansk National University named after Taras Shevchenko (Kyiv, Kharkiv, Starobilsk, Ukraine)

PROSPECTS FOR THE DEVELOPMENT OF INNOVATION ACTIVITY OF AGRARIAN ENTERPRISES

The effective and continuous development of agro-industrial complex depends directly on the level of its scientific support and the effectiveness of interaction with science. One of the factors contributing to the development of scientific potential in Ukraine is the rather powerful network of scientific organizations, which today there are more than 1500 in Ukraine. They are represented by sectors of academic, sectoral, university and industrial science [1].

The agricultural science is directly based on the development of the National Academy of Agrarian Sciences of Ukraine (NAASU). Among the latest results of NAASU activities are the following:

• the creation and transfer to the state variety testing of 170 new varieties and hybrids of agricultural crops;

• the development of a number of resource-saving technologies for the cultivation of cereals, fodder and vegetable crops;

• 17 new technologies and technological instructions, 4 types of technological equipment which are elaborated for the food and processing industry;

• the testing of 709 completed scientific developments and implementation of 957 completed scientific developments into 1072 agribusinesses.

At the same time, the overall level of scientific influence and the use of scientific developments in the agro-industrial complex and the Ukrainian economy in general during the period of Ukraine's independence significantly decreased. The main reason for this negative

trend is a reducing of the role of the state in the processes of scientific support and support of agro-industrial production. Moreover, this approach to defining of the role of the state in the field of scientific activity is at odds with international practice. The state plays a crucial role in the field of scientific and technological activities and accordingly in the implementation of innovation strategy in the developed countries of the world and in many countries outsiders. There is a high level of financing of science in these countries (up to 2% of the country's GDP).

The main objective reasons for reducing the role of science in the domestic economy are the following:

– the lack of goverment budget financing (0.3% of GNP);

– the dispersion of the state financing of scientific and technical programs among several central executive authorities and the lack of any effective mechanism for their coordination;

– the lack of procurement of scientific products with the further mechanism for its implementation;

– the lack of public policy protection of national scientific production in the domestic market.

In addition, the subjective factor is the lack of interest of the scientific staffs in any changes in the system of organization of science because of the lack of effective mechanisms of motivation. Because of this, we have two main issues: insufficient financing of science; complications for the commercialization of scientific research (as system of scientific works essentially remained the state one, and the production was transferred to a private foundation).

The main directions of solving these problem issues are set out in the draft Concept of Reforms and Development of Agrarian Education and Science in Ukraine, which is being discussed by the public. In particular, the development of science should be carried out in the following areas:

– the creation of an effective system of ordering of scientific products financed by the state through the Ministry of Agrarian Policy of Ukraine under scientific coordination by the NAAS of Ukraine;

– the transition to an innovative model of functioning and development, which should ensure the competitiveness and commercial attractiveness of scientific and technical products in the market of high-tech products;

– the optimization of the system of agrarian science for the concentration of the material and technical base, personnel and financial resources in order to solve the priority tasks of agro-industrial

production;

– the formation of the system of planning and implementation of scientific and technical programs in accordance with the innovation model;

– creation of an effective system of innovative providing;

– the formation of regulatory and legislative mechanisms that would ensure the attraction of investments in research farms of NAAS of Ukraine for the purpose of their innovation development, the creation of holdings by branch principle, the use of part of their profits for financing of scientific fields.

The development of market relations also requires the development of an infrastructure of high-tech products that will ensure the measures for the effective support of innovative projects and the provision of consulting services. And, of course, one can not forget about personnel issues, the motivation of labor resources for the production and use of scientific products.

In our opinion, the implementation of the strategy of innovation development needs to be managed not only at the national level but also at the regional level. The conceptual scheme of the proposed regional management system for innovation process is presented in fig. 5.3. All enterprises and scientific organizations of the region should be integrated into this system.

On the basis of the scheme we believe that one of the first steps towards improving state financial support should be an increase of the efficiency of using the state budget funds allocated to support the agro-industrial complex.

For this purpose, first of all, it is necessary to reconsider approaches to the organization of the current system of financing state support to the agro-industrial complex and the methodology for monitoring the implementation of budget discipline in its use. The attractiveness of this direction of the improving the state support for agrarian production is due to its low financial burden.

This direction of improvement includes:

– improvement of the mechanisms of obtaining and distributing of the budget funds taking into account the size of enterprises and the results of their activities;

– the organization of timely financing on the basis of clear, easy to implement, transparent mechanisms;

– the organization of equal access opportunities for all agricultural producers to a state financial support, which should contribute the

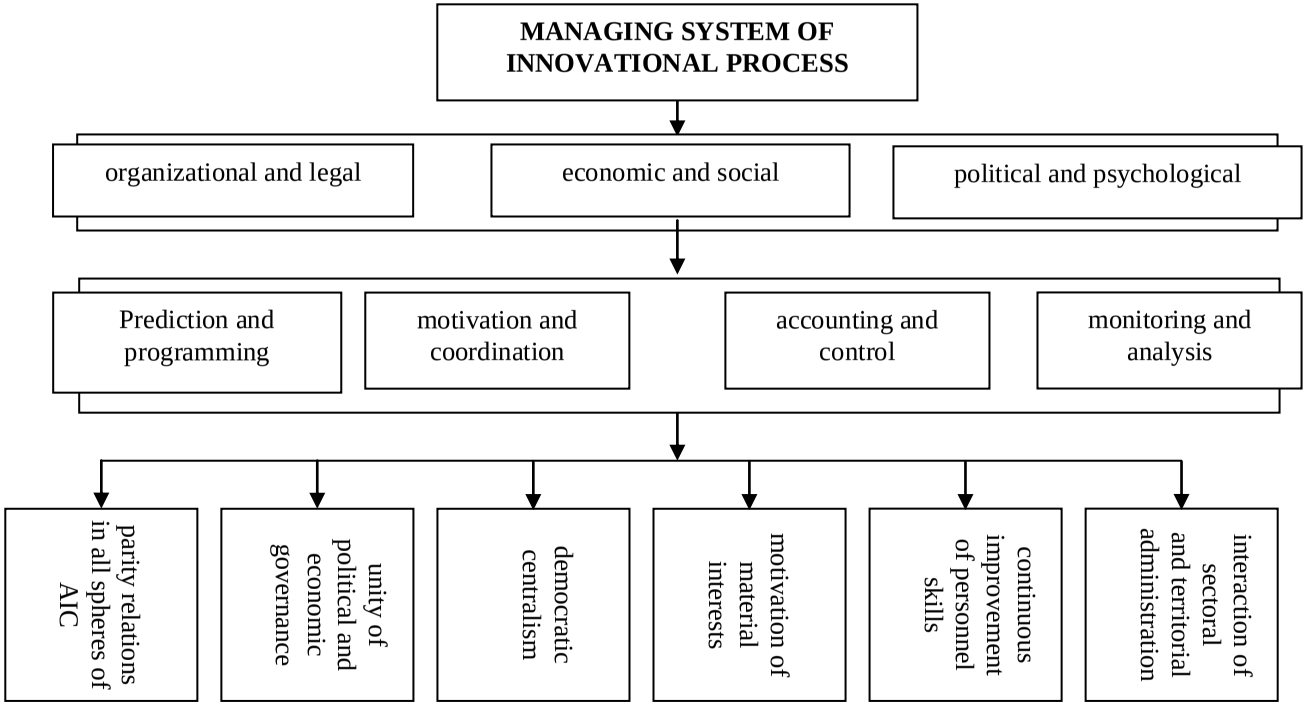


Figure 5.3. Conceptual Scheme of the Regional Management System for the Innovation Process

Source: development of the authors.

creation of a ramified system of regional advisory services whose purpose is to increase professional knowledge and improve the skills of commodity producers, improve the efficiency of economic management and rural development;

– the tightening of the requirements for internal control over the use of the state budget funds in support of the agroindustrial complex in the system of the Ministry of Agrarian Policy of Ukraine as the main spending unit manager and the Ministry of Finance of Ukraines starting from the stage of planning costs;

– the planning and accordingly the use of budget funds in support of the agrarian sector should be based on the economically sound calculations by taking into account the regulatory costs;

– the use of international experience of state support the agricultural sector.

Regarding international experience we note that the financial state support in developed countries is focused first of all on large-scale enterprises because of the rational nutrition of the population is ensured by the production of foodstuffs precisely at these farms. It can be concluded about the correctness of this approach to the allocation of financial resources of state support. These large domestic producers have a competitive advantage in the global agricultural market [2].

There is a paradoxical situation in Ukraine in conditions of long-term economic crisis: there are the farms, which their average area size on January 1, 2015 did not exceed 1.21 hectares, produced 44.8% of gross agricultural output in 2015. And despite the fact that dwarf the size of the households do not allow them to be used for improving the efficiency of the economic activity such important forms of organization of social labor as specialization and concentration of production [3].

Our analysis showed that the mechanism of state support for the agrarian sector of Ukraine's economy is imperfect and inadequate. Therefore, we think it is necessary to consider the experience of developed countries in the field of providing state support to agricultural enterprises.

The state regulation has a systemic character in these countries and is carried out in different directions. One of its main priorities is the regulation of prices for agricultural products, which is objectively justified by such a disadvantage of a market economy as the inability of the market through the mechanism of market prices to ensure the sustainable development of agriculture.

The scheme of state regulation of prices for agricultural products in

developed countries usually involves establishing upper and lower boundaries of prices and indicative or conditional prices that the state seeks to maintain, therefore we consider that the state's primary task in modern conditions (formation of market relations, openness of the economy, Ukraine's accession to the WTO) is the creation of conditions for the formation of effective competitive agricultural production.

The basics of this production:

– the specialization and concentration of production;

– the strengthening of the material and technical base by accumulating investment resources;

– the application of the latest technologies and equipment;

– the increase of labor productivity and corresponding reduction of the cost price of products.

From the above features of competitive production there is a clear conclusion that production of such a level can be organized only in large and medium-sized agricultural enterprises. We believe it is worth to concentrate the state financial support and the state agrarian policy in general preciously on this direction.

Among the most significant documents on the regulation of the agrarian sector and agrarian relations should also be noted the draft of the Agrarian Code of Ukraine, which should be to put in order and to coordinate the existing existing for today fairly large legislative framework of the agrarian law. Thus, we see the main goal of the state agricultural policy in Ukraine is the increasing of the competitiveness of Ukraine's agricultural production in both the domestic and international markets together in combination with social protection of the population and the development of rural areas, based on the introduction of an investment and innovation model for the development of the agrarian sector of the economy.

The ultimate goal of the direct state support to the agroindustrial complex is to achieve such a level of development of agrarian production which will guarantee the most complete food supply of all segments of the population and the output of domestic food products to the world markets. In our opinion, the priorities of state support to the agrarian sector should also include:

– the development of rural areas (social infrastructure) and agrarian market (market infrastructure

– the reproduction of the resource potential of agricultural enterprises which is able to ensure their competitiveness

– creation of a modern (on an innovative basis) industrial

infrastructure of agricultural enterprises.

Solving the problem of maximizing the profit of an agrarian enterprise is a solution to the problem of determining the optimal range of products that maximizes profits. On the one hand, in the market economy conditions an agrarian enterprise must come from the requirements of the market like any producer, it is the demand, that apply to the production on the market. On the other hand, an economically grounded agricultural program of an agrarian enterprise must be formed by taking into account the limitations of the existing production [4].

Applying methods of linear programming the problem of maximizing profits can be formulated as the definition of the maximum value of the objective function in general:

$$I(x) = \sum_{i=1}^{n} D_i x_i \rightarrow max \tag{5.1}$$

$$\sum_{i=1}^{n} a_{ji} x_i < K_j \tag{5.2}$$

$$x_i \geq 0$$

where x_i – the i-th type of products;

D_i – coefficients for variables used for decision making;

K_j – the provision of the enterprise j-th resource;

a_{ji} – consumption of j-th resource for the i-th type of products.

In this case it will be more expedient to use marginal revenue per unit of output rather than planned profit as the coefficients for variables in the target function. This approach will take into account the change in the cost of production with the change in the volume of its implementation, which directly affects the amount of profit.

The modern economic processes taking place in conditions of constant inflationary pressures. Therefore, when solving the problem of maximizing profits in order to take into account the influence of inflation processes on the formation of investment resources, the adoption of the introduction of restrictions on implicit costs should be used. In addition, the factor of the alternative of using resources can be taken into account in this way [5].

In general, the task of maximizing financial stability can also be formulated as a definition of the maximum value of the objective function:

$$FS = SP - \frac{SP \times C_{const}}{SP - C_{\text{var}}} \rightarrow \max , \quad (5.3)$$

where FS – financial stability of the enterprise;
SP – proceeds from sales of products;
C_{const} – amount of constant expenses;
C_{var} – amount of variable costs.

An innovative project for an active agrarian enterprise is usually aimed at the increase of the technical level of active production, the reducement of the material consumption, the improvement of other technical and economic indicators. In this case, the income in separate years of the project activity will be determined as the difference between the current production costs after the project implementation (they will be lower than the pre-project level due to replacement of outdated funds, additional depreciation and revenues from the increase in production, reduction of the taxable profit tax in connection with an increase in the share of depreciation in the cost price, as well as at the expense of the liquidation cost of the old equipment) and a cost estimate of the costs associated and the implementation of innovative measures (cost of acquisition and installation of new equipment, loss of income from assets that were previously, including their depreciation).

The world experience of risk insurance, including in the agrarian sector, is characterized by a sufficient diversity, first of all, by the degree of state participation in the insurance system. Based on the fact that insurance of investment risks is a guarantee of stability and protection of investment capital, both for domestic and foreign ones, as well as in order to intensify the investment of innovative development of agrarian enterprises, we consider it is necessary: 1) to strengthen a direct state support of investment activity in the agroindustrial complex, especially in ensuring its innovation development on the basis of sectoral and special purpose-oriented investment programs of innovation orientation; 2) to promote the development of a mechanism for attracting investment resources to the agricultural sector from other sectors of the national economy, both at the level of local authorities and at the level of central authorities.

The economy of Ukraine is in the stage of transformation, therefore society should have an appropriate development strategy. The realization of this strategy depends on many factors, first of all, on the

potential of the regions, which is an important condition for economic growth based on investment and innovation development.

It is the development of innovative entrepreneurship in the scientific sphere in the most flexible form should bring a scientific potential closer to the needs of a market economy, to ensure the commercialization of scientific products, to create a competitive environment on alternative foundations, to promote the development of market relations in the scientific sphere, to accelerate the pace of implementation of the scientific achievements and to increase their efficiency. At the same time the development of innovative entrepreneurship needs some support from the state and the market institutions.

A significant role in financing innovation has borrowed funds: 1) loans of commercial banks; 2) borrowed funds from the placement of bonds of an innovative enterprise; 3) tax credits; 4) commercial loans to suppliers of material resources upon the purchase of these materials with a delayed payment; 5) leasing.

In our opinion, it is necessary to consider investment potential as a potential system. This system consists of production, labor, financial, innovation, infrastructure, consumer and natural resource potential. The magnitude of the aggregate investment potential should be calculated as the specific weight of the region in the nationwide potential adopted for 100%. The amount of these potentialities is the investment potential of the region, which is largely generated under the influence of its socio-economic development.

References

1. *Ilyina, O.V., Ilyin, V. Yu., Kotsupatry, M. M. (2016) Investments as a factor in the transition to innovative competitive development of agrarian enterprises. Increasing the competitiveness of agrarian enterprises. Monograph. Severodonetsk: View of «Nulledzh» (Severodonetsk Branch), 366 p.*
2. *Santo, B. (1990) Innovation as a means of economic development. Moscow : Progress, 292 p.*
3. *Official site of the magazine «About Agro-News». URL http://www. proagro. com. ua.*
4. *Sabluk, P.T. (2004) Structural-innovative shifts in the agrarian sector of Ukraine as a factor of its socio-economic growth. Economy of agroindustrial complex., 6. p. 3-8.*
5. *Lupenko, Yu. O., Demyanenko, M. Ya., Kisil, M. I. (2012) Strategic directions of investment support for agricultural development of Ukraine for the period up to 2020. NSC IAE, 66 p.*

Piankova Oksana
PhD (in Economics), Associate Professor,
International Economic Relations Department
Kyiv National University of Trade and Economics
Ralko Oleksandra
PhD (in Economics), Associate Professor,
Production and Investment Management Department
National University of Life and Environmental Sciences of Ukraine (Kyiv, Ukraine)

UKRAININAN PRODUCERS ON THE WORLD MARKET OF AGRICULTURAL PRODUCTS AND FOODSTUFS: CURRENT STATE, TRENDS AND PROSPECTS OF DEVELOPMENT

Determining the position of Ukrainian enterprises in the global market for agricultural products and food products and identifying trends and prospects for further market development is of particular importance in the context of the implementation of the Export Strategy of Ukraine.

The research was conducted on the basis of official data of the State Statistics Service of Ukraine [3, 4, 7], the State Fiscal Service of Ukraine [8], publications of the National Institute for Strategic Studies [6], analytical publications of the Ukrainian Agribusiness Club [9], FAO.

Ukraine is a trading partner of more than 220 countries. Ukrainian governance countries have been signed 17 free trade agreements with 45 during the period of independence, and negotiations are continuing with Turkey, Israel, and Serbia.

The state of foreign trade policy of Ukraine is formed according to the instruments of the World Trade Organization, the membership of which the country acquired in 2008.

The current state and prospects of Ukrainian producers in the world market are determined by the competitiveness, which is the result of the hard work of business entities for the cultivation (production) of goods and the implementation of efficient export supplies. The export-oriented policy of the state, which is being implemented in accordance with the Export Strategy of Ukraine and international trade agreements, promotes the strengthening of the positions of domestic exporters.

Enterprises of the agro-industrial complex and the food industry are

undoubtedly a significant component of the national economy, because they are intended to provide national food independence, to adequately represent the country on foreign markets through effective export activity, while ensuring the food security of Ukraine.

The agrarian sector of Ukraine is characterized by the following indicators (table 5.2): the share of agriculture in the GDP of Ukraine reaches 9.8%, while in the world it is 3.1%; the share of employed in agriculture is 19%, the value added per employee equals 4,603 dollars, which is three times more than the average world value.

Table 5.2

Aggregated indicators of agrarian sector of Ukraine

Indicator	AVG in world	Ukraine
The share of agriculture sphere in GDP, %	3,1	9,8
The share of employed in the agriculture sphere, %	20	19
The value added per employee in agriculture sphere, USD	1331	4603

Source: *Ukrainian Congress of Agricultural Producers*

According to works of different scientists [5], the growth of the share of agriculture in GDP by 10% leads to an increase in food expenditure by 1% (with other unchanged terms), while the growth of value added in the agrarian sector contributes to a reduction of poverty by 0.07%, which is significantly less than the result produced by other sectors of the economy.

According to the World Bank, the positive value for the past 15 years has increased by 20%, in the agro-industrial complex - 80%.

Today, domestic producers retain their first place in terms of exports of agrarian products in the overall structure of commodity exports of the country: from 26% in 2012 to 42% in 2016 (table 5.3). At the same time, it is appropriate to note the gradual recovery from the fall of 2015 of agricultural exports in cash terms to 8.7 billion USD in the first half of 2017.

Given the rapid growth in the share of agricultural exports in the total volume of goods delivered to the external market, the issue of the positivity of certain achievements acquires discussion. After all, it is a well-known fact that it is impossible for agrarian countries to be rich and necessary, together with the development of the agro-industrial complex, to promote the development of high-tech sectors of the economy.

Table 5.3

Commodity and agrarian exports

Period	Commodity export, bln USD	Agrarian export, bln USD	Agrarian export , %
2012	68,8	17,9	26
2013	63,3	17,0	27
2014	53,9	16,7	31
2015	38,1	14,6	39
2016	36,4	15,3	42
First half of 2016	16,6	6,8	41
First half of 2017	20,6	8,7	43

Source: table was built by the authors on the basis of the State Statistics Service of Ukraine data

Ukraine is one of the leaders of agricultural production and exports among the countries of the world. Domestic producers occupy the first place in terms of production of sunflower and sunflower oil; third place in the export of barley, rape, corn; the fourth place in the production of barley; at the sixth position in terms of maize production and wheat exports; at the seventh place in the production of honey and soybean exports; in the eighth place in terms of wheat production.

At the end of 2016, the agrarian foreign trade turnover amounted to 19.2 billion US dollars, which is 25.4% of the country's foreign trade turnover; the foreign trade balance of the agro-industrial complex amounted to 11.4 billion dollars, exports in the total structure of agricultural trade reached 78.7%, therefore, the index of coverage by the export of imports - 3.93.

Analysis of export earnings (table 5.4) shows that the largest receipts Ukrainian exporters receive from sunflower oil supplies - 4203 million US dollars, corn – 3207 million US dollars and wheat 2,682 million US dollars.

The analysis of the structure of exports of agricultural and finished food products (table 5.5) shows the overwhelming role of crop production, which accounts for 53.0% of exports, compared with 5.1% of livestock, and only 16% of food products.

According to the results of the first half of 2017, there was a change in the structure of agrarian exports (table 5.6): the volumes of deliveries to foreign markets increased: grain crops (614.2 mln USD), fats and oils of animal and plant origin (528.8 2 mln USD), sugar and confectionery (176.7 2 mln USD), meat and edible offal (109.7 2 mln USD).

Table 5.4

Agricultural production and export

Commodity	Production, ths. tons	Export, ths. tons	Income by exporting, mln USD
sunflower oil	4399	4842	4203
corn	28075	21500	3207
wheat	26854	17800	2686
soy	4280	2900	1133
barley	9938	5300	747
rape	1200	1000	413
meat and offal	2323	330	388
sunflower	13756	200	72
eggs	906	51	46

Source: [1]

Table 5.5

Export of agricultural and food products in 2010-2016, %

Category	Period						
	2010	2011	2012	2013	2014	2015	2016
Agricultural and food products in total (1-24)	100	100	100	100	100	100	100
Agricultural products (1-14)	47,8	50,5	56,9	58,5	58,5	60,4	58,0
Livestock products (1-5)	7,8	7,3	5,4	6,4	6,1	5,7	5,1
Crop products (6-14)	40	43,2	51,5	52,1	52,4	54,7	53,0
Fats and oils of animal and vegetable origin (15)	26,3	26,5	23,5	20,6	22,9	22,7	25,9
Finished food products (16-24)	25,9	23,0	19,6	21,0	18,6	16,9	16,0

Source: [6]

Table 5.6

Agrarian export in the 1st half of 2017 compared with 1st half of 2016, mln USD

Group nr.	Category UCGFEA	Difference
01	Live animals	+4,2
02	Meat and meat preparations	+109,7
03	Fish and crustacean	+1,4
04	Milk and milk products; eggs; honey	+58,4
05	Other animal products	+1,1
06	Seed and other trees	+0,4
07	Vegetables	+24,8
08	Eatable fruits and nuts	+1,7
09	Coffee, tea	+1,1
10	Cereals	+614,2
11	Flour-grinding products	+27,6
12	Oil seeds and fruits	+175,4
13	Shellac natural	-0,1
14	Plant materials for producing	-3,1
15	Animal or plant fats and oils	+528,8
16	Preparations from meat, fish	+1,7
17	Sugar and sugar confectionery	+176,7
18	Cocoa and cocoa preparations	+9,8
19	Preparations of grains	+49,5
20	Products of vegetables processing	-6,4
21	Other mixed foodstuffs	+4,9
22	Alcoholic and non-alcoholic beverages, vinegar	+30,0
23	Remains and wastes of food industry	+79,1
24	Tobacco and industrial substitutes of tobacco	+12,4

Source: [9]

At the same time, the products of processing vegetables, fruits, rocks or other parts of plants (-6.4 2 mln USD), vegetable materials for making wicker products (- 3.1 2 mln USD) were characterized by the downward dynamics.

According to the results of 2016 (table 5.7), the largest share of agrarian exports was exported to Asian countries and amounted to 7.37 bln USD, which is 11% more than in 2015. India, China, Egypt have become leaders in terms of import volumes of agrarian products from Ukraine.

Table 5.7

Agrarian export of Ukraine by regions and countries

Region/country	Export	
	Billion USD	%
Asia	**7,37**	**45,9**
India	1,58	10,2
China	1,02	6,6
Iran	0,68	4,4
Turkey	0,61	3,9
Other countries	3,48	20,8
EU	**4,14**	**27,5**
Spain	0,83	5,4
Netherlands	0,71	4,6
Iceland	0,60	4,1
Poland	0,44	3,3
Other countries	1,56	10,1
Africa	**2,42**	**15,7**
Egypt	1,33	8,6
Other countries	1,09	7,1
CIS	**1,15**	**7,7**
Belorussia	0,40	2,6
Other countries	0,75	5,1
US	0,05	0,3
Other countries	0,47	2,9

Source: composed using data shared by State Statistics Service of Ukraine

Analyzing the changes and prospects of agrarian exports, it is appropriate to note the gradual diversification of the geography of supply of agrarian products (table 5.8). Thus, in the first half of 2017 compared with the corresponding period in 2016, the leaders of the growth volumes were: India (414.1 mln USD), Turkey (212.3 mln USD), the Netherlands (208.3 mln USD). At the same time, there was a slight decrease in supply volumes to China (-221.0 mln USD), Bangladesh (-132.0 mln USD), Indonesia (-76 mln USD).

According to the Export Strategy of Ukraine, 10 countries and the EU are among the most perspective countries for the further development of cooperation in the field of agrarian and food exports of the Ministry of Foreign Trade of Ukraine (table 5.9).

Table 5.8

10 countries that were increased consumption of Ukrainian agricultural products in the 1st half of 2017 compared with the 1st half of 2016

Country	Diff, million USD	Country	Diff, million USD
India	+414,1	China	-221,0
Turkey	+212,3	Bangladesh	-132,0
Netherlands	+208,3	Indonesia	-76,0
Egypt	+176,5	Thailand	-58,7
Iran	+148,1	Hong Kong	-50,9
Bangladesh	+128,5	Phyllipins	-40,1
Spain	+122,0	Germany	-34,3
Italy	+97,8	France	-27,0
Israel	+97,0	Lebanon	-19,2
Tunisia	+76,4	Ethiopia	-17,1

Source: based on data shared by State Statics Service of Ukraine

Table 5.9

List of the most perspective countries for development of Ukrainian export (10 countries, excluded European)

No.	Country	Place of country by the most developed economies ranking	Level of absolute growth	Estimation of potential consumption of foodstuffs
1.	USA	1	2	4
2.	China	2	1	1
3.	Turkey	18	11	14
4.	Japan	3	7	13
5.	Georgia	115	99	119
6.	Moldova	141	121	117
7.	Israel	35	30	74
8.	India	10	3	2
9.	Indonesia	16	6	6
10.	Belorussia	66	103	51

Source: [2]

As of the beginning of October 2017, 287 Ukrainian enterprises were granted permission to export products to EU countries, including 107

food producers, including fish, honey, poultry, milk and dairy products, eggs and egg products.

Among the exporters of the agrarian sector and the food industry, it is worth mentioning Kernel, Nibulon, MHP, Bunge Ltd. and Cargill Ukraine in terms of income value. The vast majority of the Landlord edition (table 5.10) specializes in the export of cereals and oilseeds, with the exception of MHP and Ukrlandfarming, which export meat, meat products and egg products at the same time.

Table 5.10

Top of Ukrainian companies exporting agricultural and food products

Company	Directions	Income by export, mln USD
Kernel	Sunflower oil	1952,2
Nibulon	Cereals and oil seeds	741,7
MHP	Poultry, cereals	635
Bunge Ltd.	Cereals and oil seeds	627,4
Cargill Ukraine	Sunflower oil, cereals and oil seeds	609
State Food and Grain Corporation of Ukraine	Cereals, flour	449
ADM Trading Ukraine	Cereals and oil seeds	394
Vioil	Vegetable oils and fats	370,6
Ukrlandfarming	Egg and egg products, cereals	317
Astarta	Cereals, soy products, suger and offal	200

Source: [9]

Conclusions. Noting the significant success of farmers and food industry producers, it is appropriate to focus on: the narrow specialization of Ukrainian exports, namely, its raw materials; dependence of Ukraine on exogenous influences, including fluctuations in world prices for food raw materials; loss of historically priority market; discrepancy of quotas granted to the EU, export opportunities of domestic manufacturers; the difficulty of entering the European market for small and medium-sized businesses.

References

1. *Agribusiness of Ukraine: Infographic Collection2016-2017: (2017) [Internet source]. - Mode of access: http: // http://agribusinessinukraine.com/get_file/id/the-infographics-report-ukrainian-agribusiness-2017-0510.pdf*
2. *Detecting countries list in the focus of Ukrainian exports (2017) : [Internet source]. – Mode of access: https://docs.google.com/spreadsheets/d/1GRMbDYgkaBOYRwU4I6tg8zUB5Eiiw 8y8zks49 berrK0/edit?usp=sharing*
3. *Foreign Trade of Ukraine in 2016: Statistical Collection. (2017): [Internet source]. - Mode of access: http: // www.ukrstat.gov.ua*
4. *Foreign Trade of Ukraine by Patterns and Services in 2016: Statistical Collection. (2017): [Internet source]. - Mode of access: http: // www.ukrstat.gov.ua*
5. *Nivevskiy, O.(2017) Agrarian country – poor country: [Internet source]. - Mode of access: http: // http://agroportal.ua/views/blogs/agrarnaya-strana-bednaya-strana/*
6. *Rusan, V., M., Jurakovska, L., A. (2017) Priorities of ensuring foreign trade safety in the agrarian market of Ukraine: [Internet source] .- Mode of access: http: // www.niss.gov.ua*
7. *Cooperation between Ukraine and EU countries: statistical collection (2017): [Internet source] .- Mode of access: http: // www.ukrstat.gov.ua*
8. *Statistical data of the State fiscal service of Ukraine: [Internet source] .- Mode of access: http: // sfs.gov.ua/ms*
9. *Sales leaders: 25 largest exporters of agricultural and food products [Internet source] .- Mode of access: http: // http://landlord.ua/chempionyi-prodazh-25-krupneyshih-eksporterov-selskohozyaystvennoy-i-pishhevoy-produktsii-2/*

Chapter 6

FORMATION OF COMPETITIVE ADVANTAGES AND USE OF INNOVATIONS BY BUSINESS ENTITIES IN THE CONTEXT EUROPEAN INTEGRATION

Danylchuk Hanna
Ph.D in Economics, Senior Lecturer, Department of Modeling Economics and Business
Kibalnyk Liubov
Doctor of Economic Sciences, Professor, Department of Modeling Economics and Business
Serdiuk Olexander
Ph.D in Economics, Senior Lecturer, Department of Mathematics
Cherkasy Bohdan Khmelnytskyi National University
(Cherkasy, Ukraine)

MODELING OF INTEGRATION PROCESSES OF UKRAINE TO EU USING RANDOM MATRIX THEORY

Integration processes in the global economy cause the search of new approaches to the development of economy. Integration processes give new opportunities to the UE member states.

Ukraine has chosen the course on European integration determining it as a priority in its foreign economic activity. The prospect of joining the EU can have a powerful effect on all the processes (economic, political, social, etc.) taking place in the country.

The multifaceted problem of European integration of Ukraine has been a subject and object of regular scientific research of national scientists. At the same time, there is a need to continue the scientific development of the mentioned scientific issues in the context of new factors affecting these processes, both in Ukraine and abroad.

In modern conditions, one of the efficient forms of functioning

national economy is the implementation of rational and efficient foreign economic policy. Ukraine has clearly determined the vector of its development and its focus on deep and comprehensive integration with the EU. Foreign trade activity plays a leading role in foreign economic policy of Ukraine having an influence on the development of specialization, the increase of resource productivity, the growth of production capacity, and the satisfaction of the need in those articles, the production of which is extremely ineffective or impossible in the country.

The export orientation of the domestic economy (over the past ten years, the share of exports in our country's GDP ranged from 40 to 60%) is one of the most important ways of its development. A wide range of prospects for foreign trade cooperation with the EU countries that have opened for our country as a result of accelerating the pace of European integration, signing landmark documents between Ukraine and the EU, Ukraine's unilateral trade preferences of the EU, and the consequences of these processes, have stipulated the need for this study.

Foreign trade significantly influences the dynamics of GDP. The export-import activity of the state has a positive impact on GDP growth under the conditions of high productivity and competitiveness of national products. A common and widely used method for assessing the foreign trade of the country is the statistical analysis of trade balance: the analysis of its individual indicator dynamics, particularly, the commodity structure, the use of averages (for example, the volume and rate of goods and services export growth), absolute and relative values, the use of chain substitution method. At the same time, we point out that special methods of economic mathematical modeling, which would enable predictable calculations, are not practically used in the research studies on the country's trade balance. The topicality of the research is stipulated by the use of these methods to study trade balance.

In the paper, economic data are analyzed using tools of random matrix theory. Parameters calculated on the basis of input data are mostly stationary, since they allow to obtain numerical estimates of a stationary system. In order to increase the informative character of analysis results, the algorithm of moving window was used. The consequence of its application is the derived numerical row of change in a specific indicator calculated for each window. The next step is to analyze this change, which gives an opportunity to get new information about the economic system.

The method of studying the statistical properties of matrices with

independent random elements (random matrices) originates from nuclear physics [1, 2]. The task from which the development of random matrix theory (RMT) began, was to determine the energy levels of complex nuclei, which could not be done with the existing theories at that time. Scientists have argued that the Hamiltonian, which describes heavy nuclei, can be presented with some matrix H_{ij} with independent random elements constructed on the basis of probabilistic distributions [2]. Deviations from the universal properties of RMT allowed to determine system-specific non-random properties that contained information about hidden interactions in the system [1].

Further application of RMT methods to analyze the properties of C_{ij} cross-correlation matrices shows that almost 98% of matrix eigenvalues satisfy the condition of randomness, however, it is found that about 2% of the largest eigenvalues deviate from RMT, and therefore their analysis allows obtaining specific information for the analyzed system [3].

The first attempts to apply random matrix theory for the analysis of economic systems, particularly, stock and currency markets, were the works of Y. Stanley, V. Plerou, B. Rosenow, and others [4]. Further application of random matrix theory consisted in the study of specific properties of complex economic systems, such as the management of securities portfolio based on risk assessment [5], the study of cross-correlation dynamics [6, 7], the use of random matrix ensembles for the study of economic systems [8], the evaluation of information that can be obtained by analyzing eigenvalues and eigenvectors of the cross-correlation matrix [9], the collective behaviour of agents of a complex economic system [10].

To obtain information from time series that can be interpreted, the input data are converted and presented as a tree (graph). In the connected graph with the taken distances between all the vertices found, the minimum spanning tree (MST) has an n-1 edge and the smallest length from the lengths of all spanning trees, based on the sum of the distances between two points. Hierarchical tree is obtained on the basis of MST and corresponding matrix of distances. Minimal spanning tree and associated hierarchic tree show the cluster existence of any market assets that are of great economic significance.

The International Trade Center website provides annual statistics [11, 12] having been loaded since 2001, for the data of exports volume by type of goods. In general, the website provides statistics for 99 export product groups. However, considering the fact that Ukraine has a small

export volume in many commodity groups, we suppose significant data of only selected 27 groups. At the same, according to the results, one group (musical instruments) was deleted because of the lack of sufficient data, even in such short time series. Thus, a total of 26 groups of goods exported by Ukraine and European countries were analyzed.

In table 6.1 in column 1, the short name of the group of exported goods is given. Column 2 shows the approximate cross-correlation value, which has the maximum distribution of the probability of cross-correlation coefficients. We note that in columns 1, 2 and 4, value was evaluated visually, since the small shift in the distribution of the probability of cross-correlation coefficients in comparison with the probability distribution for a matrix derived from the mixed data, means practical absence of useful information obtained by the chosen methods. We consider the results, for which the value of the cross-correlation for the maximum of probability distribution is greater than 0.4, to be significant.

Column 3 shows indexes that indicate whether the maximum is exceeded, what it precedes, and the minimum eigenvalues of the cross-correlation matrix beyond the boundaries of the random region. In the case where the corresponding value goes beyond the scope of the random field, the table uses the «+» mark, otherwise, the «-» mark is used.

Column 4 shows the approximate value of the distance of Ukraine to the nearest country in the hierarchical tree. This value was evaluated visually, as it was previously indicated. We consider only those groups of goods to be essential, for which the value of distance is received not more than 0.8 obtained for values of cross-correlation greater than 0.68. In other words, there is a close correlation between the dynamics of Ukraine and corresponding country being more than +0.68.

On the basis of the correlation analysis (using the minimum spanning and hierarchical trees), we identified 2 large groups of the exported goods.

The first group includes the following goods: products of the mill industry, animal and vegetable fats, footwear, glass and articles, cars (in table 6.1, the elements of this group are in italics on the light-grey background of the cells). In this group, the distribution of cross-correlation coefficients in the cross-correlation matrix is characterized by the bias to a positive region; the maximum distribution value is the cross-correlation coefficient being close to 0.5-0.6, which indicates a rather close (on average) link between the dynamics of exports of the

specified goods for different countries, in general; and the distance in the minimum spanning and hierarchical trees between Ukraine and the nearest European countries is from 0.8 to 0.5. We stress that in many minimal spanning trees for the given groups of goods, Ukraine is in the same cluster with powerful European countries, such as Germany, Great Britain, Italy, etc. (fig. 6.1). It shows similar dynamics between the exports of the respective groups of goods of our country and the mentioned countries of Europe. Unfortunately, it is impossible due to lack of relevant data to estimate what proportion of goods exported by Ukraine, European countries import.

Table 6.1

The investigated indicators based on ITS data and their approximate values

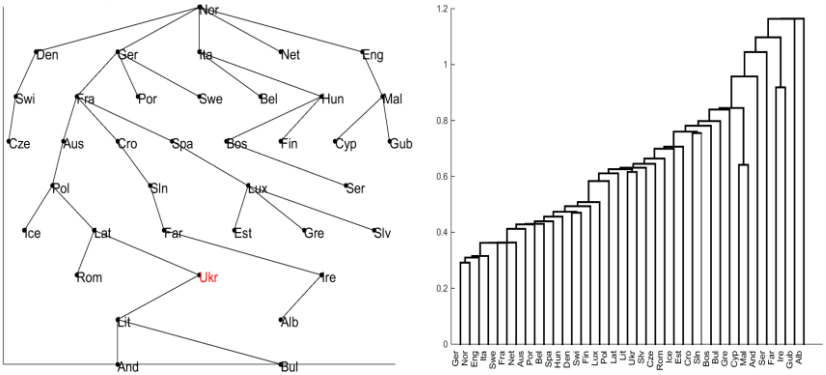
Goods	Shift in distribution of probability of cross-correlation coefficients	The output of eigenvectors, λ_{max}, λ_{max-1}, λ_{min}, outside the domain of random values	The degree of connection tightness of Ukraine to the nearest object in the minimal spanning and hierarchical trees
1	2	3	4
Livestock	≈0.15	+ – –	≈0.9
meat	≈0.45	+ + +	≈0.9
food products	≈0.8	+ – +	≈0.5
animal products	≈0.2	+ – +	≈1.0
mill industry products	*≈0.5*	+ – +	*≈0.6*
animal and vegetable fats	*≈0.5*	+ – +	*≈0.8*
sugar and confectionery	≈0.3	+ – +	≈0.8
tobacco	≈0	– – –	–
inorganic chemistry products	≈0.6	+ – –	≈0.45
organic chemistry products	≈0.4	+ – +	≈0.6

Table 6.1(continued)

1	2	3	4
wood and wood products	≈0.8	+ – +	≈0.4
paper and its derivatives	≈0.8	+ – +	≈0.5
Cotton	≈0.2	+ – +	≈1.1
Footwear	*≈0.5*	+ – +	*≈0.5*
articles made of stone, plaster, cement	≈0.4	+ – +	≈0.5
glass and wares	*≈0.6*	+ – +	*≈0.5*
pearls, precious stones	≈0.3	+ – +	≈0.9
iron and steel	≈0.9	+ – +	≈0.15
copper and products	≈0.8	+ – +	≈0.5
nickel and products	≈0.3	+ – +	–
aluminum and products	≈0.9	+ – +	≈0.7
other metals, cermet	≈0.4	+ – +	≈0.5
mechanical machines	≈0.9	+ – +	≈0.7
electric machines	≈0.7	+ – +	≈0.6
Cars	*≈0.6*	+ – +	*≈0.6*
art products	≈0.0	– – –	–

Source: calculated by authors for [11, 12]

The second group includes the following goods: food products, inorganic chemistry products, wood and wood products, paper and its derivatives, iron, steel, copper and copper products, aluminum and aluminum products, mechanical and electrical machines (in table 6.1, the elements of this group are in the cells of dark grey background). In this group, the distribution of cross-correlation coefficients in cross-correlation matrix is characterized by shifting to positive region, the



a) b)

Figure 6.1. Minimal spanning (a) and hierarchic (b) trees for vehicle group (cars)

Source: calculated by authors for [11, 12]

maximum value of distribution is the coefficient of cross-correlation from 0.7 to 0.9. It shows an extremely close link (in average) between export dynamics of the mentioned goods for different countries in general. The distance in minimum spanning and hierarchic trees between Ukraine and the nearest European countries is from 0.7 to 0.15.

The analysis of eigenvector components for the largest and smallest eigenvalues of cross-correlation matrix shows the following regularity: if Ukraine is among the original components of its own vector, which corresponds to the maximum value of the cross-correlation matrix, then it is among the last components of its own vector corresponding to the minimum value of the cross-correlation matrix, and vice versa. If we consider that the maximum actual value of cross-correlation matrix indicates the same general effect of the system on individual objects, and the minimum – on the pair of the most influential for the system of countries, then Ukraine in these groups of goods either follows the general dynamics of the market, or, in some way, affects the market, which in both cases indicates the symbiosis of Ukraine and other objects of the market (system).

Table 6.2 shows the first 15 components of eigenvector corresponding to the maximum eigenvalues of cross-correlation matrices obtained for «products of inorganic chemistry» and «iron and steel» groups of products. Ukraine occupies the 6 and 5 places, respectively; it shows rather high country's response to changes in the

Table 6.2

Some components of eigenvector corresponding to maximum eigenvalue of cross-correlation matrix of some goods groups

Component no.	Country symbol	«Inorganic chemistry goods» group	Component no.	Country symbol	«Iron and steel» group
1	Pol	0.22872	1	Cze	0.1801
2	Lit	0.22872	2	Fra	0.18005
3	Hun	0.22425	3	Ger	0.18004
4	Bel	0.22162	4	Spa	0.17958
5	Ger	0.21981	5	Ukr	0.17914
6	Ukr	0.21952	6	Ita	0.179
7	Aus	0.21782	7	Swi	0.17821
8	Ita	0.20764	8	Bel	0.17629
9	Spa	0.20629	9	Por	0.17609
10	Fin	0.20245	10	Slv	0.17603
11	Swe	0.19783	11	Bul	0.17567
12	Swi	0.19549	12	Net	0.17549
13	Rom	0.19325	13	Den	0.17503
14	Cze	0.19171	14	Nor	0.17467
15	Fra	0.18916	15	Cro	0.17448

Source: calculated by authors for [11, 12]

system of goods turnover for these groups in Europe. It may point out the close connection of our country and Europe according to the specified and some other groups of goods.

Instead, the analysis of the first components of eigenvectors corresponding to the smallest eigenvalues of the cross-correlation matrices obtained for «wood and wood products» and «paper and its derivatives» groups of goods only confirms the thesis that Ukraine is a supplier of raw materials and goods of primary processing.

It is rather interesting observation that Ukraine is among the countries that are the main suppliers of the relevant group due to its location in clusters for many commodity groups. For example, for inorganic chemistry products, Ukraine is in the same cluster with Poland, for wood and products from it - with Austria, for iron and steel - with Hungary, the Czech Republic, and even more – Ukraine is the center of a separate cluster for this group of goods.

Consequently, the application of random matrix theory made it possible to determine the place of Ukraine in separate clusters for

certain groups of goods, as well as to find out the fact that Ukraine either operates within the general dynamics of the relevant market, or affects individual markets in some way in these groups of goods. It shows the close connection of our country with other subjects of the European region.

According to the study results of ITC database, we can make a conclusion that the main share in Ukraine's foreign trade activities with the countries of Europe is taken by such groups of products as mill products, animal and vegetable fats, footwear, glass and its articles. At the same time, Ukraine is an important subject of the European market for inorganic chemistry products, wood and its products, paper and its derivatives, iron, steel, copper, aluminum, etc.

We consider that in modern conditions, it is expedient for Ukraine to transfer from the export of raw materials and products of primary processing to the production and supply of the results of manufacturing industry, i.e. finished goods, to the European market. Finished goods, in their turn, contain a larger share of added value, and, therefore, can provide an increase in revenues to the state budget at the expense of exports, growth of volumes and value of GDP. At the same time, it will help to create additional job positions in the domestic labour market and increase the incomes of the population.

References

1. *Mehta, M. (1991). Random Matrices. Revised and Enlarged. Orlando, Academic Press.*
2. *Wigner, E. (1956). Results and theory of resonance absorption. Conference on Neutron Physics by Time-offlight. – Oak Ridge National Laboratories Press, Gatlinburg.*
3. *Laloux, L., Cizeau, P., Bouchaud, J.-P., Potters M. (1999). Noise Dressing of Financial Correlation Matrices. Physical Review Letters. Vol. 83, p. 1467.*
4. *Plerou, V., Gopikrishnan, P., Rosenow, B. etc. (2002). Random matrix approach to cross correlations in financial data. Physical Review E. Vol. 65, Issue 6. – pp. 1–18.*
5. *Meng, H., Xie, W.-J., Jiang, Z.-Q. etc. (2013, Jun). Systemic risk and spatiotemporal dynamics of the US housing market. arXiv:1306.2831v1 [q-fin.ST].*
6. *Conlon, T., Ruskin, H. J., Crane, M. (2010 Feb). Cross-correlation dynamics in financial time series. arXiv:1002.0321v1 [q-fin.ST].*
7. *Nakayama, Y.& Iyetomi, H. (2009). Random matrix theory of dynamical cross correlations in financial data. Progress of Theoretical Physics*

Supplement, 179, pp. 60–70.
8. *Drozdz, S., Kwapien, J., Oswiecimka, P. (2007 Nov) Empirics versus RMT in financial cross-correlations. arXiv:0711.0644v1 [physics.soc-ph].*
9. *Biroli, G., Bouchaud, J.-P., Potters, M. (2006 Sep) On the top eigenvalue of heavy-tailed random matrices. arXiv:cond-mat/0609070 v1.*
10. *Pan, R. K.&Sinha, S. (2007 Apr) Collective behavior of stock price movements in an emerging market. arXiv:0704.0773v1 [physics:soc-ph].*
11. *Retrieved from International Trade Centre, export: [Electronic resource]. – Access mode: http://www.trademap.org/tradestat/ Country_SelProduct_TS.as px?nvpm=1|||||TOTAL|||2|1|1|2|2|1|2|1|1*
12. *International Trade Centre: [Electronic resource]. – Access mode: http://www.intracen.org/*

Kharun Olena
Ph.D in Economics, Docent
Rodionova Iryna
Ph.D in Economics, Research Associate
Khmelnytskyi National University (Khmelnytskyi, Ukraine)

INNOVATIONAL ACTIVITY DEVELOPMENT OF PERSONNEL OF INDUSTRIAL ENTERPRISES UNDER THE CONDITIONS OF EUROPEAN INTEGRATION

An industrial enterprise counts on staff by choosing a development strategy based on innovation in the context of European integration processes. However, the availability of employees with the most advanced knowledge and skills combined with a sufficient level of financial, organizational and technical resources does not guarantee that the qualifications of the staff will be effectively involved in the innovative development of the enterprise. However, innovation activity is not the dominant characteristic of employees even in some enterprises for which innovation is the principal activity [1].

The objects of innovation activity at the enterprise are: means of production and technological processes; manufactured products and their quality; human potential and development of creative and active personal background; social sphere, including changes in the behavior of workforce; organizational development, etc.

The subjects of innovation activity at the enterprise are associations of people who implement development, introduction and production of innovations. The success of the implementation of innovation activity is due to the awareness of employees about the need for continuous improvement. The availability of innovative active personnel either in the structural divisions of the enterprise, engaged in the development and implementation of innovations, or in the other divisions involved in the operational activities, allows us to estimate the degree of innovation orientation of the entire enterprise [2]. Summarizing the results of modern studies, we can distinguish three general approaches to interpreting the innovation activity of staff, depending on its level and the type of activity of the personnel of the enterprise. Thus, the supporters of the first approach note that the innovative activity of the personnel is the readiness of the personnel to develop and implement innovations under conditions of support and encouragement from the management of the enterprise. P. Drucker, B. Twis, P. Samuelson [3; 4] to a large extent identify innovative activity with the creative work of employees. According to the authors, in order to realize the motivation of the personnel regarding innovation activity, it is necessary to use a toolkit that controls the very motives of manifestation of creativity and perceptions of innovations. However, the above-mentioned approach does not take into account the presence of initiatives on the part of the staff in the implementation of innovation activities.

Supporters of a different point of view (L. K. Semiv, M. M. Voronovska, S.V. Mochernyi) believe that the innovative activity of the personnel is a deliberate activity of the subjects of entrepreneurial activity in relation to the design, creation and development of qualitatively new products, objects of intellectual property, introduction of more advanced technologies, forms of organization and management of production [5, p. 655]. Thus, the activity of staff in the field of innovation is conscious and aimed at achieving a certain goal. This approach seems to be more relevant from the point of view of the management of innovative activities of enterprises, but it does not focus on the role of leadership in increasing the innovation activity of employees.

In the theory of innovative project management, there is also an approach that innovative activity is one of the manifestations of labor activity associated with the implementation of creative abilities, acquired knowledge, professionalism, the ability to design and implement innovations regardless of the field of activity. The supporters

of this approach are the domestic ones (A. M. Kolot, O. E. Kuzmin, L. S. Lisohor, L. V. Shaulska, M. V. Semykina, etc.) and Russian scientists (B. G. Genkin, R. P. Kolosovoy). For example, L. V. Shaulska believes that the manifestation of the innovation activity of workers is correlated with the development of innovative potential in the labor potential of the employed population [6, p. 44]. According to L. S. Lisohor, in the conditions of formation of a competitive environment, intensive informatization of the economy namely knowledge, creative abilities, developed information needs, ability to study and retraining, motivation of self-development determine the possibilities of innovation activity of employees, in the end – their competitive advantages in the labor market [7, p. 74-78]. This approach compares innovation activity with ordinary labor activity, that is, does not distinguish the specificity of innovation from routine work, which can negatively affect the efficiency of management of innovative processes.

An analysis of the evolution of scientific thought suggests that the concept of "innovative activity" in the scientific literature more often refers to enterprises. Very rarely, this term refers directly to personnel, which can be explained by the inertia of thinking, the influence of former theoretical constructions, which underestimated the decisive role of man in production, the introduction of various innovations (innovations). In the interpretation of "innovation activity of personnel" it is expedient, in our opinion, to adhere to the approaches of M. V. Semykina, L. A. Koval, O. O. Smirnov [8; 9], which considers it as a component of the general work activity of the staff, reflecting the creative aspirations of employees to develop and implement innovations in the enterprise through the improvement of educational and professional development, the mastering of the latest knowledge for the production of new goods, services, products with improved qualities and properties that are in high demand on the market.

The synthesis of scientific thought makes it possible to distinguish between the innovation activity of the personnel and the components of its labor potential, such as: health; education, professionalism; morality; creative potential; ability to study and retrain; readiness for development and introduction of innovations; motivation of labor achievements; motivation for self-development and educational and professional growth; developed information needs [10].

In our opinion, the absence or underdevelopment of even one or two of these elements can lead to the negative effects of innovation. The

manifestation of innovation activity of employees of enterprises and organizations is largely influenced by the external environment and simultaneously influences the dynamics of scientific and technological progress of the country, the further development of society, the provision of its new diverse needs. On this basis, it should be borne in mind that selection in the labor market of highly skilled workers does not guarantee the manifestation of such an equally high level of innovation activity by such employees. The specificity of such activity is that it can not be inherent to all people to the same extent. The reason lies not only in the different strength of motivation, but also in the individual differences in creative and intellectual abilities that are accompanied by different rates of course of mental processes.

The extent to which innovations are rapidly implemented and effectively used depends heavily on the staff of the enterprise, on its willingness and ability to implement innovative measures.

The practical readiness for the innovative activity of the personnel involves mastering the professional skills of the employees on the basis of the development of theoretical knowledge. Following innovative actions, according to I. V. Pakhno, there is an innovative behavior, the development of innovative thinking, are consistently transformed into an innovative way of life [11].

Proceeding from this concept, we have defined conditions that allow to support the innovative activity of staff and turn it into a continuous process (table 6.3) [12].

As we can see, stimulating innovation activity is at the level of initiating innovative actions and innovative behavior of personnel, whereas the development of innovative thinking and the formation of an innovative way of life shift the importance of external stimuli to the activation of intrapersonal processes.

Self-development and self-improvement of the worker occur through the activation of internal resources (knowledge, ability, ambition, value), which requires some energy, which arises due to the emergence of internal motives that direct the personnel to increase their competence, deepening their knowledge, expanding their professional development, mastering new roles, overcoming difficulties, etc.

Innovative behavior is supported by innovative thinking and, based on a new level of awareness, is gradually transformed into an innovative way of life of an employee of an enterprise. Thus, the renewal of the innovation activity of the personnel takes place continuously, acting as the main driving force behind the innovation activity of the enterprise.

Table 6.3

Conditions of formation of enterprise innovative activity [12]

Levels of innovation activity formation	Manifestations of innovation activity	Necessary conditions
Innovative actions	Separate facts of manifestation of innovative behavior and willingness to perceive hidden ideas. The basic value is making changes to the elements of labor and the desire to be heard.	Innovatively developed environment at the level of divisions. Linear leaders are responsible for their condition.
Innovative behavior	Repeats the facts of manifestation of innovative behavior and the transfer of hidden ideas. Self-realization and self-disclosure of potential. The staff demonstrates openness, flexibility, creative approach to work, readiness to implement their capabilities "here and now." The basic value is self-realization.	Availability of an innovatively developed environment at the group level, stimulation of disclosure of innovation.
Development of innovative thinking	Self-development, constant self-improvement and updating of knowledge, application of innovative ideas in practical activity. Easiness in solving problem issues at the expense of flexible and non-standard thinking.	The presence of an innovative environment at the enterprise level, the formation of an innovative information field.
Formation of an innovative way of life	Rebuilding value orientations, social reorientation on the innovation-minded environment and the desire to be in this environment, exchange ideas and self-improvement.	The presence of an innovative environment at the level of intercompany communications.

We believe that in the innovation activity, the key function is the generation of ideas. Personnel – the only one of all factors of production carries a creative component. Subjects of active innovation work, that is, employees must be capable and inclined to innovate. Proceeding from this, one can propose the division of specialists into separate main categories that are of interest in terms of their value for

the innovation process [13]:

Type 1: Creative people – workers who actively develop new ideas and projects, regardless of how positively or negatively they perceive their proposals, as well as encourage other employees, activating their creativity.

Type 2: Active ideas are being actively developed – employees engaged in the creative process regardless of the conditions, without affecting others – active creative workers.

Type 3: Have a high creative potential – they offer their ideas, and if they do not find support, they cease to take the initiative.

Type 4: Capable of creative process – are beginning to be active if they expect to receive a reward for their development.

Type 5: Have creative abilities – they start to act only in the case of inductive influence, specific guidelines or guidelines.

Type 6: They strive in the conditions of high motivation for creativity, but they lack the knowledge and professionalism, are capable and ready to study.

Type 7: Have hidden creative abilities that they are not aware of themselves, can appear in terms of motivation and competition.

Type 8: Not capable of creative activity – do not appear as creative workers under any conditions.

Consequently, the first and second types are the most valuable types of creative employees in the proposed classification, since their creative activity does not need to be motivated and it demonstrates itself under any conditions. The third, fourth and fifth types require the creation of the necessary conditions for their activation: atmosphere, motivation, administrative influence, etc. Sixth and seventh types, besides this, suggest the need for organizing a learning process or self-study. The eighth type, as it turned out, is often difficult to separate from the seventh, so they are usually perceived as a single type.

Despite the innovation activity of the staff, the leadership of modern enterprises underestimates the potential of the innovative ideas of its employees. Considerable part of the staff can make a valuable contribution to the development of their enterprise. Their proposals can help solve many different problems, and sometimes push other ideas that are implemented at the level of managers and relate to the creation of new services, product improvement, or the choice of new business development strategies. Unfortunately, such ideas are expressed, as a rule, in informal communication between employees and are not implemented because of the lack of opportunities to get across

innovation proposals to managers [14].

Systemic measures that allow us to make the most of employees' creative ideas and develop their innovative skills are schematically presented in fig. 6.2. [15].

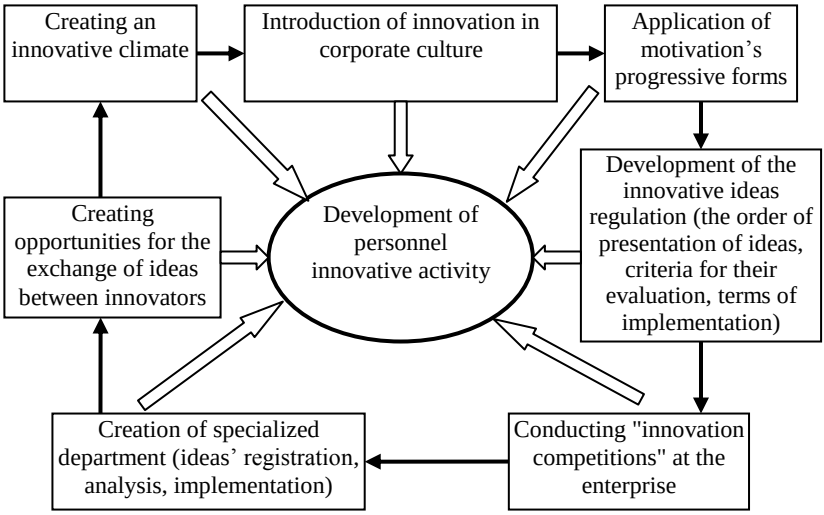


Figure 6.2. Measures for the development of innovative activity of personnel at the enterprise

In the system of European integration, the solution to the problem of increasing the competitiveness of domestic enterprises is due to their complex innovation and technological modernization, an increase in the indicators of innovation activity [16]. The main component in the efficiency and effectiveness of innovation processes in the enterprise is its professional staffing. It is the personnel of the enterprise possessing the innovative potential that is the bearer of innovation activity. It should be noted that innovative active staff is part of the company's staff, that is, employees with the necessary professional training and practical experience of work that perform various production and economic functions, including functions related to the production of intellectual property products. These workers include: inventors, innovators, scientists, engineers, entrepreneurs and other workers who can be grouped into the following groups: management personnel; engineering and technical staff; highly skilled workers [17].

Consequently, innovative-active personnel is a part of the personnel

of the enterprise, which reflects the creative desire for the development and implementation of innovations in the enterprise, has a hands-on experience, possesses the qualitative characteristics necessary for the creation of innovations and their implementation, able to realize their individual qualification and professional potential in order to increase the competitiveness of the enterprise and achieve its strategic development goals. Under the conditions of development of European integration processes, innovative activity of the personnel should ensure high efficiency of innovation activity of the enterprise, which depends on the perception of new ideas (novations), the intensity and timeliness of the actions on transforming novations into innovations, the ability to mobilize the potential of the required quantity and quality for the commercialization of innovations.

References

1. *Barsh, J., Capozzi, M. M., Davidson, J. (2008). Leadership and innovation. The McKinsey Quarterly, Vol. 1, pp. 36–47 [in USA].*
2. *Druker, P. F. (2002). Management practice. Moscow : Izdatel'skiy dom «Vil'yams» [in Russian].*
3. *Druker, P. F. (1992). Innovation and entrepreneurship. Practice and principles. Moscow : Izd-vo «Delovoy mir» [in Russian].*
4. *Tviss, B. (1989). Management of scientific and technical innovations. (K. F. Puzynya, Trans). Moscow : Ekonomika [in Russian].*
5. *Mochernyi, S. V. (Eds.). (2001). Economic Encyclopedia. Kyiv : Vydavnychyi tsentr «Akademiia» [in Ukrainian].*
6. *Shaulska, L. V. (2005). Strategy of Ukraine's labor potential development. Donetsk [in Ukrainian].*
7. *Lisohor, L. S. (2005). Competitiveness of the labor market: mechanisms of implementation. E. M. Libanova (Ed.). Kyiv : In-t demohrafii ta sotsialnykh doslidzhen NANU [in Ukrainian].*
8. *Semykina, M. V., Koval, L. A. (2002). Innovative work in a competitive environment: general methodology, motivational basics of regulation. Kirovohrad : «Step» [in Ukrainian].*
9. *Smirnov, O. O. (2004). Innovative activity of the personnel as a source of growth of competitive advantages. Aktualni problemy ekonomiky – Actual problems of the economy, Vol.11, pp. 116–125 [in Ukrainian].*
10. *Zbarzhevetska, L. D. (2009). Innovative activity of employees: concept and features. Naukovi pratsi KNTU. Ekonomichni nauky – Scientific works of KNTU. Economics, Vol. 16 (1), pp. 94–98 [in Ukrainian].*
11. *Pakhno, I. V. (2015). Innovative activity and newborn personality: a metasystem approach. Psikhologiya v ekonomike i upravlenii –*

Psychology in Economics and Management, Vol. 1 (7), pp. 16–25 [in Russian].
12. *Sokerina, S. V. (2016). Formation of active innovative activity of the personnel of the enterprise. Vestnik VGU. Seriya: Ekonomika i upravlenie, Vol. 2, pp. 96–100 [in Russian].*
13. *Tolmachova, O. V., Beltiukov, Ye. A. (2013). Motivation of innovative activity of staffing component of innovative potential. Ekonomichni innovatsii – Economic innovation, Vol. 52, pp. 191–197 [in Ukrainian].*
14. *Protsak, K. V., Prosovych, O. P. (2011). Creativity of the personnel as an important factor of innovative development of the enterprise. Bulletin of Lviv Polytechnic National University, Vol. 698, pp. 272–276 [in Ukrainian].*
15. *Kapinos, H. I., Zlobina, I. S. (2008). Stimulation of employees in the conditions of innovative development of the Ukrainian economy. Science and Economics Vol. 4 (12), pp. 119–123 [in Ukrainian].*
16. *Kolotiuk, O. I., Tatarchuk, R. P. (2013). Innovative "passivity" of Ukrainian enterprises at the present stage: causes, consequences and ways of overcoming. Bulletin of the NTU "KhPI", Vol. 22(995), pp. 33-37. [in Ukrainian].*
17. *Kibanov, A. Ya. (2007). Fundamentals of Personnel Management. Moscow : INFRA-M [in Russian].*

Zakharchenko Natalia
Candidat of Economics Science, Associate Professor, Department of Economy and Market Relations Odessa National I.I. Mechnikov University (Odessa, Ukraine)

PRESERVATION AND DEVELOPMENT OF HIGH TECHNOLOGY SECTOR IN UKRAINE

An innovative type of economic growth was leading in the global economy. According to world statistics, high-tech industries are growing twice as fast as manufacturing. We have witnessed that our government begins to actions aimed at overcoming the commodity bias in economic development. Make it difficult for a number of reasons: the need to consider the power of commodity and trade lobby (first do not agree to cut oil exports, braking thereby strengthening ruble, the second – to cut imports of consumer goods and assist domestic enterprises in its

production) and infrastructure monopolies (growth rates). The weakness of the institutions and economy of the state, violation of continuity of experience and knowledge, lack of extended reproduction capacity, including training engineers [3, p.30].

Development of high technology sector dedicated their works of local and foreign scientists: M. Bendykov [3] V. Zakharchenko [5, 6], K. Christensen and M. Rayner [7], M. Merkulov [5.8] L. Glushchenko [6] I.V. Ivanov, V.V. Baranov, G.I. Lysak, I.V. Kirsanov [4] L. Fedulova [10] L. Shiryaeva [5] and others.

In our understanding, those who control the Ukrainian economy at the state level, there is a clear presentation of not only the industrial policy and strategy (in the most general terms only talking about doubling GDP. Restoring the role of science and engineering, investment growth and so indicative of development planning is not talking), but thus the tactics of modernization. So do not take into account the stage of economic modernization. Emphasis is placed on some technological breakthroughs. Industry also must first upgrade the production apparatus and to provide a minimum level of competitiveness not primary industries. Not taken into account is the fact that it is impossible to ensure that competitiveness is not of primary industries, minimizing wide open internal market import tariffs. Although, of course, and breakthrough technologies as needed.

Karl M. Christensen and Raynor, raising his research findings, insisting: "You should begin with a business model that allows obtaining high profits at low prices for goods, and sticking to it, taking top market sector. The company's strategy in relation to the competition should be "subversive" and does not support - then they will go to fight "[7, c. 284].

Speaking of the development strategy, the question arises: how to implement it unless there is a body that would analyze and predict the structure of the economy, specifically to manage it. After all, if destroy Sciences of Ukraine, there will be specialists who understand the national economy and forecasting interbranch balance. Although perhaps it does not matter Academy of Sciences of the State Planning Commission at the time did not just come up and gave him a legislative function.

The experience of several countries to break the world's technological leaders (Japan, Korea, Taiwan, etc.), Managing such a breakthrough - it is extremely responsible, multi-stage, consistent and tough at the same time flexible. L. Fedulova showed in her works and

substantiated that the management of development must possess varying degrees of selectivity (universality) depending on the quality of market institutions (the weaker they are, the greater the need for selective policies and vice versa). Important not only a sequence of actions, but also the right choice since switching to more effective measures and mechanisms. It is necessary to avoid the mistakes of inertia and premature switching These measures are not new (financial, credit, tax, custom tools, safeguards internal market, promotion of technological exports and imports, exchange rate adjustment and reserves, etc.) but their timeliness are important and dosage.

A few words about the scale of the problem. L. Fedulova insists: "Due to inconsistent government economic policy of recent years Ukraine Industry so degraded that most experts seriously stress the need for industrialization selected and displays of national industry. This process should be based on the latest international scientific and technological achievements and considering the trends of the world economy, based on a combination of strategic interests of society, the interests of the people who work in the industry, the interests of business owners and the interests of the regions where industrial complexes and this time focused extensively" [10, c. 361]. She continues: "Confirmation of this is indicators of technological development industrial complex on the basis of 2008. And the results of international comparisons: yes, even in countries that have recently built identical to our social-economic structure, productivity in the sector of high technologies 1.5-2.5 times higher than in Ukraine today. In addition, the world's share of high-tech products is about 40% of global GDP, while in our country the figure innovative development, starting with the 1998 crisis. And the crisis in 2008 remained at 4.5%. The average age of equipment in the industry is now more than 25 years. Recovery process equipment in the most science-intensive and high-tech industries has been slow, and where is carried out mainly by purchases from foreign technologies and technological equipment" [10, c. 382].

But despite the fact that Ukraine industry as developed countries industry is multistructural, its institutional structure is obsolete – the majority of industrial enterprises belong to the fourth technological structure (table 6.4). That is, companies have the majority of subject specialization rigid production lines, which prevents effective use of existing scientific and technical potential, reduces the effectiveness of the reforms significantly reduces the competitive opportunities worsens the investment attractiveness of the industrial complex.

Table 6.4

Sectoral structure of economy of various countries (% of GDP) in 2008

Countries	Agriculture	Industry	Services	ICT sector	GDP, billion dollars
United States	1,0	20,7	78,3	7,6	12410
China	14,4	53,1	32,5	-	8172
Germany	1,1	28,6	70,3	4,3	2454
India	20,6	28,1	51,3	-	3699
Japan	1,3	25,3	73,4	3,0-5,0	3914
EU	2,2	27,3	70,5	3,0-5,0	12180
Ukraine	22,5	33,2	44,3	до 1,0	319
World	4,0	32,0	64,0	2,2	59590

Source: World Bank report on the global economy, Ukraine State Statistics Service data. Information CeBit.

In total disregard of global trends Ukraine high-tech development every year brings the sector to domestic production losing its scientific and technological potential, and this, in turn, threatens the scientific and technological capabilities and security of the country have their own competitive advantage in world markets.

Analysis of innovation, investment and production of domestic industry [5, 6, 8, 10, 11] allowed us to determine the main factors that prevent escalating and disclosure of scientific and technological potential:

- slow pace of development of the national economy as a whole;
- lack of appropriate state organization and economic mechanisms to regulate the process of improving the quality of high-tech development;
- lack of effective current legislation on the formation of integrated high-tech structures;
- favoring the production process instead of focusing on high-tech;
- lack of practice of modern methods of high-tech activity (reengineering, budgeting, balanced scorecard, risk management, competitive intelligence [11] et al.);
- currently existing ownership industry practices affect the lack of implementation of the principles of corporate governance, corporate culture as modern management;
- methodologically flawed work of managing industrial property;

- lack of integrated business units leading industrial enterprises towards the enrichment of high-tech production level through the mechanisms of technological forecasting, marketing and competitive intelligence [11] and others.

In comparison should look at the tech sector's most powerful economy in the world – the US (table 6.5) [9, c.90].

Table 6.5

High-tech US exports by type of equipment and some major countries, 2002-2007

	2002	2003	2004	2005	2006	2007
Exports all	165,8	170,9	191,4	199,3	220,2	214,1
By type of technology:						
Computers and office equipment	40,1	41,5	44,4	47,4	49,7	47,0
Consumer Electronics	8,4	8,1	9,1	10,2	11,0	8,8
Communication equipment	19,7	18,8	22,5	24,1	27,3	29,7
Electronic components	15,5	14,6	15,9	15,6	17,4	17,5
Semiconductors	42,2	46,1	48,1	47,2	52,4	49,8
Industrial Electronics	25,6	26,2	33,7	34,7	40,4	38,9
Medical ectronic equipment	9,6	10,9	12,2	13,8	15,3	16,6
Photonics	4,6	4,7	5,6	6,2	6,6	5,9
By country:						
Canada	23,7	24,3	27,6	29,6	30,1	28,8
China	5,8	7,0	8,8	10,0	14,1	14,5
Japan	13,1	12,2	13,2	13,1	13,9	11,9
South Korea	7,5	8,5	9,1	9,9	10,6	8,9
Malaysia	7,0	8,2	7,6	7,4	8,5	7,4
Mexico	24,6	25,0	28,1	27,1	29,6	26,4
Taiwan	8,3	7,3	8,6	8,0	8,9	8,4
EU-27	37,2	37,5	40,9	42,6	46,1	46,3

Source: AEA (formerly the American Electronics Association), Cyberstates 2008, annual (copyright).

Over the past twenty years there was a deep integration of key national innovation systems in the world through the activities of multinational corporations and individual scientists and experts [10, p. 94]. As a consequence, the gradual convergence of industrial and high-tech capabilities industrialized countries manifested the growing interest of multinational corporations use global volume of high-tech know-how.

Problems of high-tech sector are known. The main problem: while the central link being formed NIS - large industrial corporations are able to set and solve large-scale scientific and technical problems. Other problems:

- low demand for the products and, consequently, low capacity utilization and profitability;
- lack of funds (current and capital);
- dominant influence of competing imports;
- deterioration and lack of proper equipment;
- a high percentage of commercial loans, forcing the company to invest its own funds in technological development to the detriment of social;
- growing shortage of qualified engineers and technicians and skilled workers;
- the need to spend significant funds to support payment (under full state defense order) production facilities and their infrastructure, and mobilization capacity, etc.

What was positive in terms of management? First, in some sectors, fully market-oriented, able to run the same mechanism supporting the development of enterprises in which there were opportunities for reproduction of fixed assets, resulting in an increase in orders for machinery.

Second, there was very profitable and long-term foreign economic situation that will dramatically intensify the process of monetization and the capitalization of the domestic economy. Redeemed most of the foreign debt. There is a real opportunity to turn financial resources into investments, directing them to a deep modernization of the productive forces and the creation of new high-tech jobs.

A positive trend was the increase in the capitalization of banks, allowing them to focus on more long-term partnership with industry.

Another significant trend was the increase in inflation and the weakening of the hryvnia against the US dollar, which is not apparent and absolute boon to the domestic economy, deteriorating its structure, as reduced volumes and production rates due to lower domestic and

foreign competitiveness of enterprise. The fight against inflation has become a barrier to economic growth, there is no consensus on the issue of spending money coming into the country [5].

Thus, we can say that after 1998 external factors were much more favorable for engineering, high-tech sector as a whole, which caused its growth for machines. Currently, he has not got a normal figure, that investment growth. Investment growth will begin when the capitalization of the Ukrainian economy will reach a level that will not only increase production volumes of most products, but consistently reproduce material base of industry and agriculture, and manufacturing infrastructure – transport, communications, financial banking, science, education and health.

In conclusion, a few words about the activities of scientific and industrial policy and business innovation in the economy. Obviously, the adoption of numerous legislative documents, software and other measures are not a guarantee of innovation growth if insufficient state responsibility - financial, organizational, institutional. The set of measures to ensure the replacement of raw paradigm of economic growth can be multilevel only. Therefore, you must create integrated management system conditions, tools, tools that provide a solution to this strategic task.

The structure of investment in fixed assets reflects the policy priority of fuel and primary industries (in 2004 the share of engineering structure of industrial production was 21% in the structure of industrial investments did not exceed 3%). Overcoming this tendency is rooted in the conditions of weak economic institutions is possible only with the active support and regulatory functions of the state. Modernization of the economy requires a financial investment of this magnitude and time that the current Ukrainian business to make their own can not, invest in new technologies are mostly integrated and require simultaneous modernization of integrated process chains that include all the elements of the cycle of production.

In terms of a systemic crisis and intentionally discriminatory science and industrial policy in the early 1990's,. The high-tech sector has demonstrated its quality tactical weapons in the world markets and high vitality. But in low capacity and diversify their structural disintegration of such a provision does not give individual enterprises and high-tech sector as a whole guarantees sustainability and stability. The dominant impetus for its development should be the government orders and demands of the domestic market with maximum use of political and

business world market.

Among the high-tech sector growth limitations should be noted and the unwillingness of other sectors to accept the results of the latest national research and development, low effective demand for new products.

Enterprises tech sector generally lag behind foreign competitors in the technological equipment of production, the scale and degree of business diversification [4]. The task of the high-tech sector is to optimize its size and structure. In its decision to exclude a deterrent, as a rigid concept of structural reform of the sector. It declared within the concept of priority in the creation of large vertically integrated holding companies can meet great resistance from the companies if their interest is not to be taken into account.

We need to continue, of course, important projects on unification, reciprocal linking state programs of radio electronics, shipbuilding, aviation, space, weapons, etc.

It should identify two basic structures on which to create an effective NIS:

1) Ukraine's NAS system and specialized academies and public research centers;

2) sustainable research, design and manufacturing of high-tech economy.

Under this system should be priorities of state support for critical metatechnology (information technology, biotechnology, microelectronics, space, aviation, nuclear engineering and so on.) Can become "engines of development" for both industry clusters. So for the economy in general [8].

Note that most of the high-tech sector is focused on the development and production of military products and its export. Perceiving it as the situation internally, other recreational sector should be directed to build scale civil use to upgrade the entire domestic industry (especially mining and their focus on saving technologies) for the consumer market and to equip infrastructure sectors.

The use of foreign technologies is essential for the development of high-tech sector. It is unreasonable to try to recover positions in all areas of applied research and development. Business rationally buys overseas technology in foreign companies to patent and license basis are widely used. However, it should be noted that substantial borrowing technology typical of the type of catch. If weaken attention to their own science and technology, it will inevitably lead economy into the trap of borrowing

technology – borrowed technology can help temporarily reduce the backlog in the level of development, therefore, be developed simultaneously and innovation system with all its infrastructure.

Go to Western standards of product quality, as seemingly internal problem, may actually enhance the load capacity of high-tech enterprises external orders embedding enterprises in cooperative research and production chains and foreign multinationals.

The solution of complex problems listed high-tech sector in Ukraine will develop not only the sector itself, but also provide greater dynamics of the entire socio-economic system of the country, ensuring its integration into the global context of economic relations.

Regerences

1. *Sustainable Development Strategy "Ukraine–2020" (2015). Governmental Courier, No.6, p. 8.*
2. *The Cabinet of Ministers Ukraine (2016). Governmental Courier, No. 75, pp. 4–5.*
3. *Bendykov M.A. (2008) Measures Trends of development and stabilization hi-tech industry sector. Economics and mathematical methods, Vol. 44. No. 1, pp. 30–33.*
4. *Ivanov I.V., Baranov V.V., Lysak G.I., Kirsanov I.V. (2003 The hi-tech enterprise in the era of globalization. Moscow, Alpina Pablysher, 416 p.*
5. *Zakharchenko V.I., Merkulov N.N., Shiryaeva L.V. (2011) Innovative development in Ukraine: science, technology, practice. Odessa: Favorite, 598 p.*
6. *Zakharchenko V.I., Glushenko L.D. (2013) Improved implementation of projects in high-tech industry : monograph. Ball: Delo, 152 p.*
7. *Krystensen K.M., Raynor M.E. (2004) Solution of the problem of innovation in business. How to create a growing business and successfully support its growth. Moscow: Alpina Business Beech, 290 p.*
8. *Merkulov N.N. (2008) Scientific and technological development and innovation management : monograph. Odessa: Phoenix, 344 p.*
9. *Statistical application (2009). Economist (Moscow), No. 7, p. 90.*
10. *Fedulova L.I. (2015) Technological policy: global context and Ukrainian practice : monograph. Kyiv: KNTEU, 844 p.*
11. *Zakharchenko V.I., Merkulov N.N., Shiryaeva L.V., Zakharchenko N.V. (2017) Economic security and competitive intelligence : manual. Odessa: Atlant, 519 p.*

CONCLUSION

In today's conditions of internationalization and globalization becomes of paramount importance the problem of ensuring the competitiveness of economic systems. The sustainable development of any country's economy implies the existence of favorable conditions for functioning, as well as increasing adaptability to environmental changes and the constant increase of competitive advantages. Today, changes in the structure of the world economy and international economic relations are reflected, due primarily to the dynamic development of integration processes, the changing market trends, as well as the nature of competition.

At the expense of innovation development most developed countries have achieved high competitiveness and sustainable economic growth, for each state it is vital to be competitive and innovative in the market. In the context of the permanent growth of competition, the basis of competitiveness is the innovation that enables countries with innovative competitive advantages to take their place in the world community. The development and implementation of innovations is the basis for increasing the efficiency of the economy, increasing production volumes, improving living standards, entering new markets, therefore, first and foremost, state support is needed both for direct and indirect purposes. On increasing the innovative potential that will create a competitive economy should be aimed the state policy of the countries which should be focused on ensuring the proper conditions for the development of innovation activity, introduction of innovations, functioning of innovation infrastructure, market of innovations and technologies.

The use of innovations has a positive effect, which strengthens the national competitiveness of the country, strengthens the country's position in the global economy, directs the economy to develop more intensively, provides growth of productivity the factors of production, redistribution of resources in modern international economic relations.

World experience shows that the key conditions for achieving a higher level of competitiveness of a country are: promoting the creation and mastering of new knowledge as a defining basis for effective competition; development of internal competition that promotes innovative activity; creation of competitive advantages by applying innovations, new technologies, knowledge and information; the ability of individual enterprises and industry as a whole to innovate, improve

and modernize them; an understanding that maintaining competitive advantage can only be achieved through the continuous introduction of new and improved existing innovations, since any achievement is affordable for recurrence by competitors; creating a supportive environment to stimulate the development of advanced industries, the development of new industries and new enterprises.

New approach to understanding the role of innovation and innovation activity in the competitiveness of national economies in international economic relations requires a new economic strategy that should take into account such tasks as the development of the national innovation system and the state support of its main institutions; deepening the internationalization of the national innovation system based on the implementation of international standards of security; an increase in the share of science-intensive products in the structure of exports; increase in funding for fundamental and applied research, including the use of international mechanisms for conducting and financing R & D; the introduction of advanced forms of education and training of specialists in combining the efforts of the state and the private sector; the intensification of the commercialization of innovation, the creation of channels for their diffusion to provide wider development of innovations.

Prospects for country's development in the world economy are due to the competitiveness of the national economy. The deepening of globalization processes, the actualization of competitive rivalry, the formation of competitive advantages create new requirements for state policy in the direction of raising and creating conditions for the competitiveness of economic actors.

Sustainable economic development in the long run is primarily due to the introduction of foreign experience the innovative activity in developed countries, the actions of factors aimed at supporting the development of advanced achievements of domestic technology and science. Innovative factors are crucial in improving the competitiveness of country's economy and serve to accelerate, sustainability of the innovation process and development, the effectiveness of functioning the innovation system.

In order to ensure the innovative development of the national economy and to ensure its competitiveness in the world economy it is necessary to create a model of interaction of factors of innovation and competitiveness in ensuring the innovative development of the national economy. The factors of the competitive development of the national

economy are: orientation of the state policy on consolidation of actors of economic relations; effective implementation of economic instruments of state regulation of the economy; adaptation of international legal norms of competition law to national conditions; activization tools of innovation policy; implementation of the policy of intellectualization of socio-economic development, which today is the source of knowledge economy and forms competitive advantages for the long-term perspective.

Mechanisms of interaction between competitiveness and innovation in modern international economic relations

Collective monograph
edited by M. Bezpartochnyi

Konkurētspēju un inovāciju mijiedarbības mehānismi mūsdienu starptautiskajās ekonomikas attiecībās

Kolektīva monogrāfija
M. Bezpartochnyi zinātniskajā redakcijā