ADAPTATION OF SCIENCE, EDUCATION AND BUSINESS TO WORLD INNOVATIVE MEGATRENDS

International collective monograph

Missouri – Thessaloniki
2018

First published 2018

ISBN

Printed by: Publishing House Science and Innovation Center, Ltd. St. Louis, Missouri, USA

Minutes of the meeting of the Presidium of International Academy of Information Science (IAIS) № 9, September 12, 2018

Adaptation of science, education and business to world innovative megatrends: International collective monograph / Edited by M.M. Iermoshenko – Doctor of Science in Economics, Professor, President of the International Academy of Information Science, Real Member of New York Academy of Sciences USA, St. Louis, Missouri: Publishing House Science and Innovation Center, Ltd., 2018. – 296 p.

DOI:

The monograph is registered, being reviewed and indexed in the following international scientometric databases, repositories and search engines: ISBN International Centre, Google Scholar, Social Science Open Access Repository, Figshare, Research Gate, The Internet Archive, Social Science Research Network's.

Urgent problems of present-day economics' development, different ownership enterprises operation and development, investment and innovative activity, increasing national economy's competitiveness, regional development are reported.

It is intended for scientists, lecturers, postgraduate students, students and practitioners.

Reviewers:

Katarzyna Gdovska – Doctor of Economics, Associate Professor, ACH University of Science and Technology, Poland

Olga Pavuk, Doctor of Economics, Associate Professor, Baltic International Academy,
Latvia

Paresashvili Nino – Doctor of Economics, Associate Professor, Ivane Javakhishvili Tbilisi State University, Georgia

The editorial board would like to thank the leading representatives universities and public organizations of Ukraine and Europe for support, tips and advice, including:

- INTERNATIONAL ACADEMY OF INFORMATION SCIENCE, UKRAINE – USA
- ACH UNIVERSITY OF SCIENCE AND TECHNOLOGY, POLAND
- BALTIC INTERNATIONAL ACADEMY, LATVIA
- IVANE JAVAKHISHVILI TBILISI STATE UNIVERSITY, GEORGIA
- ARISTOTLE UNIVERSITY OF THESSALONIKI, GREECE
- KYIV NATIONAL ECONOMIC UNIVERSITY NAMED AFTER VADYM HETMAN, UKRAINE
- KYIV NATIONAL UNIVERSITY CULTURE AND ARTS, UKRAINE
- KHARKIV NATIONAL AUTOMOBILE AND HIGHWAY UNIVERSITY, UKRAINE
- STATE HIGHER EDUCATIONAL INSTITUTION «PRYAZOVSKYI STATE TECHNICAL UNUVERSITY», UKRAINE
- TAVRIA STATE AGROTECHNOLOGICAL UNIVERSITY, MELITOPOL, UKRAINE
- KHERSON NATIONAL TECHNICAL UNIVERSITY, UKRAINE
- KHERSON STATE AGRARIAN UNIVERSITY, UKRAINE
- ADMIRAL MAKAROV NATIONAL UNIVERSITY OF SHIPBUILDING, KHERSON BRANCH, UKRAINE
- KHERSON STATE MARITIME ACADEMY, UKRAINE
- INTERNATIONAL UNIVERSITY OF BUSINESS AND LAW, KHERSON, UKRAINE
- PUBLIC ORGANIZATION «NEW MIND», UKRAINE
- NONPROFIT PROJECT «EDUCATIONAL TRAVELS», UKRAINE

TABLE OF CONTENTS

Розділ 1.

Intellectual capital and higher education

1.1. INTELLECTUAL CAPITAL: A VIEW FROM UKRAINE

OKSANA LOMONOSOVA
Ph.D. (Economics), Associate Professor,
Head of Department of Economics,
Admiral Makarov National University
of Shipbuilding, Kherson Branch

The emergence of the intellectual capital concept is associated with a new wave of scientific and technological revolution, which began in the leading countries of the world at the end of the 1970s. Vital changes in science and technology, the introduction of electronics, computer technology, new materials, non-traditional energy sources, the creation of flexible automated manufacturing, robotics, the knowledge-intensive products increase, computerization of manufacturing and the whole life of people caused not only the emergence of radically new products and services but also led to the start of a new technological mode of production, marked the beginning of the transition to a new post-industrial society. Some scientists predict that this transition period may end in the middle of the 21st century.

For a knowledge-based economy, the principal raw material is information, and the central resource is people. As the economy develops in the circumstances of a scarcity of many resources, the role of a man becomes vital. Material and spiritual values were always created by humans who at the same time were and are the ultimate consumers of these values. With the gradual transition to a knowledge society, the role of a person grows. It is a human being, who generates, disseminates and uses knowledge to manufacture products, perform work and provide services, increase the efficiency of production and of knowledge itself, which is worthless and does not exist without a person. Hence, it is a human being, who is highly developed and intellectual, is considered to be the principal component of the social production system, who must continually be at the center of attention and who must develop himself in the first place. And the very person, but not production in general, should be given the highest attention.

Ukraine has favorable geographic position and natural resources, and despite some losses over the past two decades, keeps possessing a particular scientific and technical potential. Although Ukraine is currently characterized by all the signs of an industrial society, it aims to transit to

an innovative way of development and to enter Europe as an equal partner. All this is possible only in the context of implementing a strategy based on the latest ideas and achievements of the advanced economies of the world, and at the same time provides for a faster pace of development.

The transition to the information society implies a significant increase in intellectual capital. The development of any country trying to ensure its competitiveness and independence is associated with the intellectual capital, its formation, and effective use. As for the enterprises, intellectual capital is also increasingly considered as the central resource for ensuring their competitiveness and development.

Although a large number of studies both in domestic literature and abroad is dedicated to the analysis of the intellectual capital nature, structure, problems of reproduction and its management, none of the listed above issues can be considered solved. Either there are no legislative documents that relate to intellectual capital, its composition, etc. The reasons for this are the relative novelty (the research of intellectual capital started only in the second half of the last century), and the complexity and versatility of this category, which continues its development, constantly transforming and enriching.

It should be emphasized that there is still no single approach even to the intellectual capital essence interpretation. Diverse existing definitions vary among themselves and focus on different aspects of this category. Quite often, such concepts as intellectual capital, human capital, intellectual potential, intangible assets, intellectual property are mixed. So, S. M. Klimov identifies intellectual capital with intellectual potential [21, p. 14], while E.Brooking [5, p. 30], K.Swaby [57], V.Kyvachuk and I.Pryimachuk [21, p. 54] – with intangible assets, S.Syvukhin [42, p. 27] – with intellectual property etc.

It should also be noted that the scientists and practitioners who introduced the term "intellectual capital" and who were the first to study it, gave unclear definitions that were mostly descriptive. This is quite understandable because of the complexity and ambiguity of the concept, its various manifestations, and aspects of functioning.

The understanding of this category was also influenced by the fact that during the early periods of the study, the stages of accumulating the primary information and forming the general ideas of intellectual capital, many authors pursued the goal to increase the value of their companies and their shares, create a favorable image of the companies. At the same time, reports of a propaganda character on intellectual capital were presented. The first such reports were published by the Swedish insurance company Scandia [21, p. 55]. In this regard, I. I. Prosvirina points out that "various

models and theories of intellectual capital represent a generalization of the practice of managing factors of value in specific companies, and this is now recognized by both researchers and practitioners. For this reason, each model is unique and reflects the specifics of its company "[40, p. 104]. It also explains different approaches to the understanding of intellectual capital and its essence.

In our opinion it is interesting to note that T. Stewart [55], the author of one of the most well-known publications on intellectual capital is a professional journalist. Therefore, his book, as A.M. Kozyrev emphasizes "are characterized not only by the bright presentation but also by a lot of inaccuracies and understatements, which reveals the lack of knowledge of particular rules and procedures" [23].

The definitions of intellectual capital, given in the early stages of his study should be considered as simplified and somewhat one-sided ones. It mainly concerns the founders of the intellectual capital concept, who described its various properties.

One can draw a parallel between the evolution of the essence of capital, which was first characterized as primary wealth, property, and the development of ideas about intellectual capital. The latter was often described as the characteristics of individual components or even a simple listing of its elements. For example, G. Saint-Onge, characterizing the intellectual capital, writes that it includes three components: human capital, consumer capital and structural capital [54, p. 10-14]. O. L. Gaponenko also reveals the essence of intellectual capital listing its elements (knowledge, information, experience, organizational capabilities, information channels), although at the same time he stresses that they can be converted into the cost [11].

This structural approach to the definition of intellectual capital exists at present. Thus, N. N. Prytulyak gives the definition of corporate intellectual capital as a set of “intangible assets available at the company (including intellectual property); components of the employees' individual human capital; aggregated databases, useful relations with partners; peculiar management and other technologies." [37, p. 27]. T. M. Kolesnik, when describing the essence of intellectual capital, confined herself to a simple and incomplete listing of its components [24, p. 129]. Similar examples can be continued.

Often the simplified or publicistic definitions, which do not reveal the essence of intellectual capital are widespread. Thus, Y. V. Sumina and G. Ya. Belyakova call intellectual capital "the principal competencies of the company knowledge of external and internal carriers, strategically aimed at the realization and firmly connected with the infrastructure ensuring

their efficient functioning". At the same time, investors, consumers are implied as the external carriers of intellectual capital and the personnel is implied as the interior carriers [47].

Some interpretations of intellectual capital are blurred, not specific, and sometimes even not clear enough. For example, I.V. Khovrak, O.O. Lozovska think that "intellectual capital is a set of all tangible and intangible assets that give its owner significant advantages in any sphere of activity" [51]. Such a definition can be attributed to a wide variety of assets, including those that do not have any relation to intellectual capital. The definition of A.V. Bytyi, which includes material resources in intellectual capital is equally confusing and ambiguous: "... intellectual capital is not only the tangible and intangible resources used at the enterprise in the process of production but also the specific abilities of the personnel of the enterprise, expressed in knowledge, skills, experience; the abilities that accumulate particularly valuable information for an enterprise that provides a significant competitive advantage on the market" [2, p. 29].

In Ukraine, interest in intellectual capital arose in the late 1990s and early 2000s. And scientific papers on the problems of intellectual capital immediately began to appear. The conducted analysis of more than eighty scientific works of the Ukrainian scientists on the study of intellectual capital, published in the period from 2001 to 2017 allowed us to come to the following conclusions.

Firstly, there is a variety of approaches to the interpretation of this concept. Existing definitions of intellectual capital have significant differences and focus on its various characteristics.

Secondly, by grouping the definitions of this category, different authors distinguish various approaches, which significantly differ from each other. Thus, O.V. Kendiukhov distinguishes between structural, functional-structural and terminological approaches [19, p. 28]. O.A. Nikolaichuk considers structural, functional, generalization and cost approaches [32, pp. 354-355]. N. M. Proskurin and O.O. Dyadyun write about functional, content-based and content-functional approaches [40, p. 182]. O. B. Kolomina, analyzing approaches to the definition of intellectual capital, initially distinguishes terminological, structural and functional, and then considers economic-theoretical, balance and resource approaches [25, p. 15, p. 18].

Y. V. Gava divides all approaches into two main groups. The first combines the definitions that are based on the understanding of intellectual capital as purely non-material elements. E. Brooking and H. McDonald, for example, also maintain this interpretation. The second contains

approaches according to which intellectual capital in addition to intangible elements includes the material resources used by humans. Such definitions are given by L. Edwinson, M. Melon, F. Leliart [10, p. 7].

O.A. Khilukha, O.E. Kuzmin and L.G. Lipych consider that all "approaches to the determination of the essence of intellectual capital should be generalized and structured according to the content". They also highlight the cost and value approaches [50, p. 14-15].

L. Dyba distinguishes "three approaches to the interpretation of the "intellectual capital" concept: a set of values, process, result" [14, p. 125]. J. O. Topilnytska [48, pp. 354-355], O. P. Columbet [27, p. 123] and others share the same opinion. A list of various examples of grouping the approaches to the intellectual capital defining can be continued.

Summarizing the intellectual capital definitions gives the possibility to divide them into a few groups. The first group combines the definition of intellectual capital based on the terms "knowledge", "experience", "skills", "creativity", "ability" and other qualities inherent in human capital. O. Strizhak [45], G. Vozniak and L. Benovska [8], O. Torba [49] and others stick to this approach in Ukraine. Sometimes "organizational capabilities", "information channels", "communication technologies" are added to the listed qualities [33], [2], etc. However, the characteristics that are inherent in human capital are their essential feature too. This approach is sometimes called economic-theoretical (see [25, p. 18]).

The second group consists of the definitions based on the resource approach. In this case, intellectual capital is considered as an intellectual resource or a set of intellectual resources. This is how the essence of the considered concept is interpreted by T. O. Gusakovska [13, p. 5], O.V. Kendiukhov [19, p. 31], O. M. Sobko [44, p. 43], etc.

The supporters of the third approach, which is called structural, define the essence of intellectual capital through disclosure of its structure. This opinion is adhered by S.I. Grytsulenko [12, p.5], S.I. Kravchenko and O.V. Korneva [29, p. 131], O. V. Poluyaktova [35, p.9] and others.

Quite often, in the literature sources, while systematizing approaches to the definition of intellectual capital the so-called political-economic approach is distinguished. In this case, intellectual capital is characterized as a category, reflecting a set of economic (economic and social, socio-cultural and economic) relations in the formation, search, attraction, distribution, use and reproduction of intellectual production resources in order to generate additional income, create a new value, etc. In Ukraine, this approach is used by T. R. Vlasova [7, p. 4], O. M. Kovalenko and O.I. Dragan [22, p. 26], I. M. Zelisko and G. Yu. Ponomarenko [17, p. 43], etc.

The fifth approach is functional. According to it, the essence of intellectual capital is disclosed by describing its purpose and the functions it performs. At the same time, there are different opinions on the functions of intellectual capital. For example, O. V. Kendiukhov emphasizes the primary function of intellectual capital – the creation of a new value [19, p. 30]. In addition, "the acquisition of competitive advantages" [32, p. 353], "increase in the fair value of an enterprise" or "provision of additional value" [40, p. 182], "gaining more profit" [25, p. 15], "carrying out specific actions" [14, p. 125], are indicated as functions.

According to the sixth approach, intellectual capital is considered as a product of intellectual labor. O.B. Butnick-Siversky [6], I.V. Prokopenko and A.O. Bosak [38, p. 90] as well as others stick to this interpretation of the concept.

The supporters of the seventh approach, which V. Yu. Shevchuk and A. Golovko proposed to call the accounting one [53], identify the intellectual capital with intangible assets. D. M. Stechenko, N. Y. Tymoshenko [44, p. 26], G.V. Yevtushenko [16, p. 110], G. L. Stupniker [46] and some other economists share this opinion. This approach is sometimes called generalization one [32, p. 353].

The above-mentioned approaches are most common. But there are others, for example terminological, content-based approach, etc.

The third conclusion, which was made after analyzing the studies of the Ukrainian scientists on intellectual capital, is that quite often different authors refer the same definitions of intellectual capital to the various approaches. For example, V.Yu. Shevchuk and A.M. Holovko, consider the definitions of intellectual capital by O. V. Kendiukhov [19, p. 31] and O.B. Butnick-Siversky [6] as "intellectual capital in terms of production" [53]. O. A. Nikolaichuk refers the definition of both authors to a functional approach [32, p. 353]. O. O. Ziolko in the characteristics given to the essence of intellectual capital by O. B. Butnik-Siversky sees all the signs of the terminological approach [18, p. 14]. The definition of A. Chukhna [52, p. 53], N. M. Proskurina and O.O. Dyadyun refer to the content-based approach [40, p. 182], and O. A. Nikolaichuk – to the structural [32, p. 353]. And one can give many more such examples.

In determining the essence of intellectual capital one must take into account that it is one of the components of capital as a whole, but there is no generally accepted definition of the latter economic category yet. Despite the long-term evolution of both the capital itself and the corresponding economic category, there is a diversity of views and approaches to the definition of the essence of capital. I.O. Blank notes that although the modern paradigm of capital as an economic category is determined by the

deep genesis and broad views, and the researchers pay considerable attention, scientific thought has not yet found a universal definition of capital that would satisfy both the theory and practice [3, p. 207-208].

Capital represents a specific resource of a business or organization that has a value expression, used for a long time to carry out their operating activities for making a profit. At the same time, capital reflects the relations between the entities involved in commodity production, as for the use of means of production, labor force and appropriation of labor results. One should agree with the economists who argue that capital cannot be regarded as something wholly formed, frozen. It continually changes, develops as well as the ideas of it. Finally, the issue of the source of self-development remains unresolved. (see, for example, [9, p. 277]).

The complexity and ambiguity of the essence of capital cause difficulty in interpreting the "intellectual capital" category. At present, intellectual capital is definitely a new, more developed, complex and fundamentally new form of capital, which has been repeatedly emphasized by its researchers (see, for example, [52, p. 49], [30, p. 117], etc.)

Intellectual capital is a market category. It exists only in market conditions and has a cost expression. As a type of capital, intellectual capital must provide its owner with a profit. Therefore, the definition of this category, which does not take into account these moments, cannot reveal the essence of intellectual capital. In this regard, the definition, given by the group of researchers, cannot be considered accurate and complete. These definitions include the overwhelming majority of intellectual capital definitions that are based on the terms "knowledge", "experience", "skills", "creativity", "ability". Thus, in the definitions of Yu.V. Mahomet [31, p. 223], S.I. Kravchenko and O.V. Korneva [29, pp. 131-132], I. I. Pominova [36, pp. 245-246], A.V. Bytyi [2, p. 29] and many others there is not a matter of making profit or income generation.

It must be emphasized that intellectual capital has many manifestations that significantly differ from one another and each of which corresponds to a specific element of it. All these elements, being elusive, are related to intellectual abilities, intellectual potential of people, or are products (patents, copyrights, brands, etc.) obtained as a result of the realization of these abilities. All the considered elements are not in themselves capital. They become the intellectual capital only in commodity production when they are used to create a new value and profit.

A.M. Kolot defines the essence of intellectual capital and its individual components through the term "resource". He calls human capital a resource that accumulates knowledge, skills, creative and intellectual abilities, and so on. The institution's capital is the organizational-technical,

innovation-informative resource associated with the functioning of the institution as a whole. The institution's capital is able to create competitive advantages of domestic origin due to the high quality of information and intellectual resources. And, in the end, the capital of interaction with market institutions is the resource of the institution's relations with clients and partners, other market institutions and technologies for their development [26, pp. 9-10].

Indeed, intellectual capital, as well as physical, is a resource (that is, a means, a reserve, an opportunity, an element of the production potential used to achieve the specific goals of the system's economic development [15, p. 206], the value, source of funds, income [4, p. 852]). Moreover, it represents a complex, heterogeneous and intangible resource, which is used to create a new value and profit.

Intellectual capital is currently the highest form of capital, which corresponds to a higher level of development of society. Its importance with the growing knowledge capacity of the economy is increasing. Gradually, it turns into a principal type of capital, affecting the outcomes of production and efficiency of the economy.

Thus, intellectual capital is an intangible resource based on the intellectual abilities of the staff, the intellectual potential of the organization, it has a value expression, being used for a long time to carry out the organization's operating activities in order to create a new value and profit. At the same time, intellectual capital reflects the system of relations between the entities involved in commodity production with regard to the creation, distribution, use and reproduction of intellectual potential of personnel and intellectual property of enterprises and organizations with the aim of increasing the efficiency of their activities and receiving higher income by the staff, and more profit by enterprises and organizations.

All elements of the intellectual capital can be represented in the value expression. In this case, according to L. Edvinson and M. Melone, any elements of intellectual potential other than human capital may be the property of the company. That is, structural and client capital can be enterprises and organizations' own capital. Human capital is the property of an employee. For the company, it is a loan capital. The company uses it temporarily, paying for its use a certain remuneration to its owner-employee in the form of salary.

In this regard, N.V. Smirnova rightly notes that "the education and competence of employees, their motivation to work, production and social experience is more likely to be used by the organization on the "lease" basis.

Indeed, in the labor market, the commodity is the ability of a person to work, and not a person himself " [42, p. 58].

The promising, in our opinion, in determining the structure of intellectual capital, is the division of its elements into generating (human capital associated with the capabilities of the personnel) and generated (intellectual property, organizational structures, etc.), with the further construction of the multilevel structure by separation of components of the lower rank. The main thing here is that at present, the basic set of elements that gives the reasonably complete picture of intellectual capital and its composition is sufficiently well defined. The problem of its correct structuring still awaits its solution.

As the study of intellectual capital develops, this concept is continuing to be filled with new content, getting clear contours and gradually transforming into a complex philosophical, political, economic and social category. Most economists studying the problems, connected with intellectual capital think that nowadays this category in modern economic science is considered to be one of the most controversial and dynamic.

References

1. Бацалай Т. М. Сутність інтелектуального капіталу інноваційно-активного підприємства / Т. М. Бацалай // Зб. наук. праць Національного технічного університету України «КПІ». Серія «Економіка». Вип. 9. – К. : НТУУ, 2012. – 404–409. / Т. М. Бацалай // Зб. наук. праць Національного технічного університету України «КПІ». Серія «Економіка». Вип. 9. – К. : НТУУ, 2012. – С. 404-409.

2. Битий А. В. Сутність інтелектуального капіталу в сучасних умовах / А. В. Битий // Вісник Хмельницького національного університету. Економічні науки. – 2017. – № 2, т. 1. – С. 26-29.

3. Бланк И. А. Управление активами и капиталом предприятия / И. А. Бланк – К. : Ника-Центр, Эльга. – 2003. – 448 с.

4. Большой экономический словарь [под ред. А.Н. Азрилияна. 4-е изд. доп. и перераб.] – М.: Институт новой экономики, 1999. – 1248 с.

5. Брукинг Э. Интеллектуальный капитал: ключ к успеху в новом тысячелетии / Э. Брукинг; пер. с англ., под ред. Л. Н. Ковачин. – СПб. : Питер, 2001. – 288 с.

6. Бутнік-Сіверський О. Б. Інтелектуальний капітал (теоретичний аспект) / О. Б. Бутнік-Сіверський // Інтелектуальний капітал. – 2002. – № 1. – С. 16–27.

7. Власова Т. Р. Формування та використання інтелектуального капіталу в процесі суспільного відтворення // Автореферат дисертації на здобуття наукового ступеня кандидата економічних наук. – К. – 2008. – 14 с.

8. Возняк Г., Беновська Л. Інтелектуальний капітал підприємств: проблеми ідентифікації та оцінки / Г. Возняк, Л. Беновська // Вісник Львівського університету. Серія екон. – 2009. – Вип. 41. – С. 115–123.

9. Гальчинський А. С. та ін. Основи економічних знань : Навч. посіб. / А. С. Гальчинський, П. С. Єщенко, Ю. І. Палкін. – 2-ге вид., перероб. і допов. – К.: Вища шк. – 2002. – 543 с.

10. Ґава Ю. В. Інтелектуальний капітал: сутність та зростання ролі в розвитку економіки : автореф. дис.. на здобуття наук. ступеня канд.. екон. наук : 08.00.01 / Ґава Ю. В. – Київ, 2009. – 19 с.

11. Гапоненко А.Л. Интеллектуальный капитал: сущность, структура, оценка // www.koism.rags.ru/publ/articles/25.php. Доступний 20.02.2010.

12. Грицуленко С. І. Інтелектуальний потенціал в інноваційній моделі розвитку оператора зв'язку : автореф. дис. на здобуття наук. ступеня канд. екон. наук / С. І. Грицуленко. – Одеса, 2008. – 23 с.

13. Гусаковська Т. О. Управління інтелектуальною власністю підприємства : автореф. дис. на здобуття наук. ступеня канд. екон. наук / Т. О. Гусаковська. – Харків, 2009. – 20 с.

14. Диба Л. М. Сутність понять інтелектуальний потенціал та інтелектуальний капітал як економічних категорій / Л. М. Диба // Економічний вісник університету : Збірник наукових праць. – Переяслав-Хмельницький: Державний педагогічний університет імені Григорія Сковороди. – 2011. – № 17/1. – С. 124-129.

15. Економічна енциклопедія : [у 3 т.] / редакційна рада : Б.Д. Гаврилишин (голова) та ін. Т. 3 / відп. редактор С.В. Мочерний та ін. – Київ : Видавничий центр «Академія», 2002. – 952 с.

16. Євтушенко Г. В. Маркетингова складова інтелектуальних активів національного господарства / Г. В. Євтушенко // Проблеми і перспективи розвитку підприємництва. – 2013. – № 1. – С. 107-115.

17. Зеліско І. М., Пономаренко Г. Ю. Управління інтелектуальним капіталом підприємств : монографія / І. М. Зеліско, Г. Ю. Пономаренко. – Київ, 2015. – 280 с.

18. Зьолко О. О. Сутність інтелектуального капіталу: підходи до визначення / О. О. Зьолко // Гуманітарний вісник Запорізької державної інженерної академії. – 2013. – Вип. 53. – С. 11-18.

19. Кендюхов О. Гносеологія інтелектуального капіталу / О. Кендюхов // Економіка України. – 2003. – № 4. – С. 28–33.

20. Кивачук В.С., Приймачук И.В. Неосязаемые активы и их место в кругообороте средств предприятия // Проблеми теорії та методології бухгалтерського обліку, контролю і аналізу: Міжнародний збірник наукових праць. Вип. 1(13). Житомирський державний технологічний університет. – 2009. – С. 49-57.

21. Климов С. М. Интеллектуальные ресурсы общества / С. М. Климов. – СПб. : ИВЭСЭП, Знание, 2002. – 199 с.

22. Коваленко О. М. Теоретичні, практичні і культурні аспекти інтелектуального капіталу: Монографія / О. М. Коваленко, О. І. Драган.– К.: НАКККіМ, 2013.– 260с.

23. Козырев А. Н. Интеллектуальный капитал: состояния проблемы. [Електронний ресурс] – Режим доступу: http://www.labrate.ru/kozyrev/ kozyrev_doklad_icapital_2004.htm.

24. Колесник Т. М. Особливості управління інтелектуальним капіталом організації та методи його оцінки / Т. М. Колесник // Збірник наукових праць Черкаського державного технологічного університету. Серія: Економічні науки. – Том 2. –2016. – № 43. – С. 128-136.

25. Коломіна О. Б. Організаційні засади управління інтелектуальним капіталом виробничого підприємства : Дис. … кандидата екон. наук : 08.00.04 / Коломіна Ольга Борисівна. – Одеса, 2016. – 238 с.

26. Колот А. М. Інноваційна праця та інтелектуальний капітал у системі факторів формування економіки знань // Економічна теорія. – 2007. – № 2. – С. 3-13.

27. Колумбет О. П. Інтелектуальний капітал як основа розвитку інноваційної діяльності підприємства / О. П. Колумбет // Науковий вісник Академії муніципального управління. Серія : Економіка. – 2011. – Вип. 10. – С. 122-12.

28. Комліченко О. О., Ротань Н. В. Аналіз сучасних підходів до визначення сутності інтелектуального капіталу / О. О. Комліченко, Н. В. Ротань // Соціально-економічні реформи в контексті інтеграційного вибору України: матеріали VIII Міжнар. наук.-практ. конф., 29-30 листоп. – 2012. [Електронний ресурс] – Режим доступу: http://www.confcontact.com/2012_11_29/3_komlichenko.htm.

29. Кравченко С. І., Корнєва О. В. Генезис характеру впливу інтелектуального капіталу на ефективність діяльності суб'єктів господарювання / С. І. Кравченко, О. В. Корнєва // Теоретичні та прикладні питання економіки. Збірник наукових праць. – К. : Київський національний університет імені Тараса Шевченка. – 2009. – Випуск 20. – С. 130–137.

30. Мазнєв Г. Є., Заїка С. О., Грідін О. В. Сутнісна характеристика інтелектуального капіталу / Г. Є. Мазнєв, С. О. Заїка, О. В. Грідін // Причорноморські економічні студії. – 2016. – Вип. 10. – С. 117-120.

31. Махомет Ю. В. Сутнісна характеристика та структура інтелектуального капіталу підприємства / Ю. В. Махомет // Економічний простір. – 2009. – № 25. – С. 221–229.

32. Ніколайчук О. Теоретичні підходи до визначення сутності інтелектуального капіталу та інтелектуального потенціалу підприємства / О. Ніколайчук // – Економічний аналіз. – 2012. – Вип. 11. Ч. 2. – С. 353-358.

33. Плєтникова І. Л. Підходи до визначення сутності й величини інтелектуального капіталу залізничного транспорту / І. Л. Плєтникова // Вісник економіки транспорту і промисловості. – 2010. – № 29. – С. 272-277.

34. Пожуєв В. І. Інтелектуальний капітал як стратегічний потенціал організації / В. І. Пожуєв // Гуманітарний вісник ЗДІА. – 2009. – Випуск 37. – С. 4–15.

35. Полуяктова О. В. Інтелектуальний капітал в економіці України : автореф. дис. на здобуття наук. ступеня канд. екон. наук / О. В. Полуяктова. – Львів, 2008. – 28 с.

36. Помінова І. І. Интеллектуальный капитал: теоретико-методологический аспект / І. І. Помінова // Науковий вісник Полтавського університету економіки і торгівлі. – № 3 (59). – 2013. – С. 243-248.

37. Притуляк Н. Н. Классификация интеллектуального капитала – методологический аспект внутрифирменного управления / Н. Н. Притуляк // Экономика Украины. – 2015. – 10 (639) – С. 23-31.

38. Прокопенко І. В., Босак А. О. Сутність і структура інтелектуального капіталу підприємств / І. В. Прокопенко, А. О. Босак // Вісник Національного університету «Львівська політехніка». Менеджмент та підприємництво в Україні: етапи становлення і проблеми розвитку. – 2016. – № 851. – С. 82-93.

39. Просвирина И.И. Интеллектуальный капитал: новый взгляд на нематериальные активы // Финансовый менеджмент. – 2004. – № 4. – С. 103-120.

40. Проскуріна Н. М., Дядюн О. О. Інтелектуальний капітал та нематеріальні активи підприємства: підходи до розмежування дефініцій / Н. М. Проскуріна, О. О. Дядюн // Науковий вісник Херсонського державного університету. Економічні науки. – 2016. – Вип. 21, Ч. 1 – С. 181-185.

41. Сивухин С. А. Корпоративная собственность как фактор развития интеллектуального потенциала фирмы : Дис. … кандидата екон. наук : 08.00.01 / Сивухин Святослав Александрович. – М., 2009. – 159 с.

42. Смирнова Н. В. Анализ интеллектуального капитала хозяйственной организации: методологические основания / Н. В. Смирнова // Труды НГТУ им. Р.Е. Алексеева. Серия «Управления в социальных системах. Коммуникативные технологии». Н. Новгород : НГТУ. – 2008. – С. 47–64.

43. Собко О. М. Інтелектуальний капітал і креація вартості підприємства: моногр. / О. М. Собко. – Тернопіль : ТНЕУ, 2016. – 444 с.

44. Стеченко Д. М., Тимошенко Н. Ю. Інтелектуальний капітал як економічна категорія / Д. М. Стеченко, Н. Ю. Тимошенко // Вісник Чернівецького торговельно-економічного інституту. Науковий журнал, 2009. – № 2. – С. 20–27.

45. Стрижак О. О. Формування інтелектуального капіталу підприємства : автореф. дис. на здобуття наук. ступеня канд. екон. наук / О. О. Стрижак. – Харків. – 2004. – 20 с.

46. Ступнікер Г. Л. Управління інтелектуальним капіталом підприємства на основі економічної діагностики / Г. Л. Ступнікер. // Ефективна економіка. – 2011. – № 5. – Режим доступу: http://nbuv.gov.ua/UJRN/efek_2011_5_31.

47. Сумина Е. В., Белякова Г. Я. Управление интеллектуальным капиталом в «новой экономике» / Е. В. Сумина, Г. Я. Белякова // Проблемы повышения эффективности региона. [Електронний ресурс] – Режим доступу: www.efficiency24.ru/upravlenie-intellektualnym-kapitalom-v-novoj-ekonomike.

48. Топільницька Я. О. Суть та значення інтелектуального капіталу / Я. О. Топільницька // Науковий вісник НЛТУ України. – 2012. – Вип. 22.10. – С. 278-286.

49. Торба О. В. Інтелектуальний капітал як об'єкт бухгалтерського обліку: визачення та методика оцінки / О. В. Торба // Міжнародний науковий журнал «Інтернаука». – Серія: «Економічні науки» – № 2 (2), 2017. – С. 67-62.

50. Хілуха О. А. Управління інтелектуальним капіталом машинобудівних підприємств: теоретичні та прикладні положення : монографія / О. А. Хілуха, О. Є. Кузьмін, Л. Г. Ліпич. – Луцьк : Вежа-Друк, 2014. – 200 с.

51. Ховрак І. В., Лозовська О. О. Еволюція поглядів на сутність інтелектуального капіталу / І. В. Ховрак, О. О. Лозовська [Електронний ресурс] – Режим доступу: www.rusnauka.com/36_PWMN_2010/Economics/76506.doc.htm.

52. Чухно А. А. Інтелектуальний капітал: сутність, форми і закономірності розвитку / А. А. Чухно // Економіка України. – 2002. – № 11. – С. 48–55.

53. Шевчук В. Ю., Головко А. М. Аналіз підходів до визначення поняття «інтелектуальний капітал» / В. Ю. Шевчук, А. М. Головко // II Международная научно-практическая Интернет-конференция «Проблемы формирования новой экономики XXI века» (25-26 декабря 2009 г.) http://www.confcontact.com/2009new/3-shevchuk.php.

54. Saint-Onge H. Tacit knowledge: the key to the strategic aligment of intellectual capital / Strategy and Leadership N.Y. March-April. – 1989. – P. 9-22.

55. Stewart T. Intellectual Capital / T. A. Stewart. N.Y.I., 1997/ P. X, 67.

56. Sveiby, K.E. (1997) The New Organizational Wealth: Managing and Measuring Knowledge Based Assets, Berrett Koehler, San Francisco, CA. Chapter on measuring available. [Електронний ресурс] – Режим доступу: http://www.sveiby.com/articles/ MeasureIntangibleAssets.html.

1.2. THE EFFECTIVENESS AND POTENTIAL OF HIGHER EDUCATION AS THE INTELLECTUAL SECTOR OF THE UKRAINIAN ECONOMY

OKSANA LOMONOSOVA
Ph.D. (Economics), Associate Professor,
Head of Department of Economics,
Admiral Makarov National University
of Shipbuilding, Kherson Branch

ANATOLII LOMONOSOV
D. Sc., Associate Professor,
Professor of Admiral Makarov National
University of Shipbuilding,
Director of Kherson Branch,
Admiral Makarov National
University of Shipbuilding, Kherson Branch

IRYNA NADTOCHII
Ph.D. (Economics), Associate Professor,
Department of Economics,
Admiral Makarov National
University of Shipbuilding, Kherson Branch

Education is one of the most important social institutions, which is a historically shaped form of organization of a joint life of people with appropriate connections and social norms, uniting significant social values and procedures. By playing a leading role in the development of economic, social, scientific, technical and political activities, it should become a catalyst for the country's innovation development, technological and social progress, acceleration of European integration processes and the gradual transition of Ukraine to a knowledge society in the future. The principal productive resource of such a society is the scientific knowledge. At the same time, the creative human activity, education and science which play an essential role in the creation of information and knowledge-based technologies, and the modernization of society come to the fore.

A peculiar role in the information society belongs to higher education. At present, its importance as one of the principal factors of economic and social development has grown to such an extent that together with the

system of research institutes it began to be called highly-intellectual sector of the economy.

It is no coincidence that at that time one of the forms of countries' economic competition was in the sphere of higher education. It is connected with the fact that only a new generation of employees with a university degree, focused on the scientific and technological revolution and the continuous use of its achievements, the growth of knowledge bases at the private firms and enterprises, as well as the accumulation of knowledge in society as a whole, is capable to master innovations, to identify the correct ways of development of their enterprises, to do research, to evaluate the possible economic, social and environmental consequences of its practical use, to implement research results in production, to adapt to the rapid changes in the environment, ensuring economic and social progress.

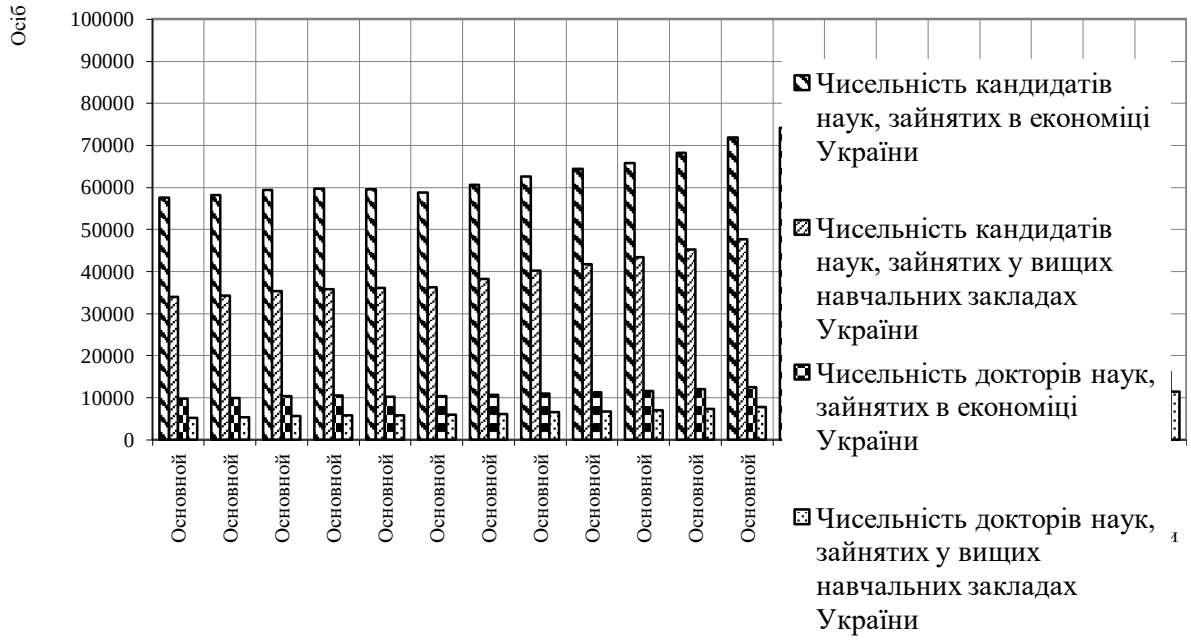
In recent times, the development of higher education has become one of the preconditions for sustainable economic growth. Therefore higher education in most countries belongs to rapidly developing industries. It is important that education does not lag behind the development of leading industries, transport, construction, communications, etc. It should go ahead because otherwise, it can lead to a shortage of skilled staff for developing industries and companies.

It is widely acknowledged that the economy developed more dynamically in those countries where citizens devoted more than a few years to their studies. Starting with the 1960s, the pace of economic growth was higher in those countries where the spread of higher education was quicker. At the same time, the relevance of education one could see in increasing productivity, though it also positively affected investments in physical capital, increasing their viability.

All this is true not only for the countries as a whole but also for their regions. This is especially important for Ukraine, since its separate regions as for their territories, population, number of enterprises, etc. do not yield many European countries. But, unlike the latter, industry, agriculture, communications, transportation and other sectors of the Ukrainian economy are less developed.

In Ukraine, as a result of the gradual progress towards a market economy and significant transformations in society, a number of preconditions to strengthen the role of higher education in an information society appeared. It should be noted that the most important resource of the knowledge economy – a new human intellectual capital is forming in higher education. Equally important, at that time, the principal part of the most qualitative human intellectual capital is concentrated in higher education of Ukraine. In the last three decades, higher education plays the

role of an accumulator, which increasingly accumulates human intellectual capital. This is primarily connected with the fact that in Ukraine, the number of candidates and doctors of sciences is increasing. Thus, in 1998-2014, their number increased from 70.1 thousand to 102.3 thousand people, i.e. 1.46 times (Fig. 1).



1 The number of candidates of sciences, employed in the Ukrainian economy
2 The number of candidates of sciences, employed in higher education institutions in Ukraine
3 The number of doctors of sciences, employed in the Ukrainian economy
4 The number of doctors of sciences, employed in higher education institutions in Ukraine

Fig.1. The number of employees with the science degree at the higher education institutions and Ukrainian economy in general in 1995-2014

(built by the authors according to the collections of the State Statistics Service of Ukraine "Scientific and Innovative activities in Ukraine in 1998-2014)

At the same time, the number of candidates and doctors of sciences in higher education institutions was much higher than in research institutes. According to the data from the Statistical Collections of the State Statistics Service of Ukraine "Scientific and Innovative Activities in Ukraine", since 1999 to 2016, from 28 to 177 dissertations for the Doctor of Science Degree were defended every year, while in all the research institutes – from 2 to 24 only. The disparity in the number of dissertation defenders for obtaining a scientific degree of the candidate of sciences is even greater. Their number in all universities of Ukraine ranged from 764 to 2035, and in all the research institutes – from 76 to 165. In addition, since in research institutions during this period there was a reduction of staff, the

overwhelming majority of those who defended their dissertations were employed by the universities. At the same time, the number of research institutions and organizations involved in the implementation of research activities continued to decline. Only in 2001-2015 the total number of organizations that carried out research and development decreased from 1479 to 972, i.e. 507 units or 34.3% (Fig. 2).

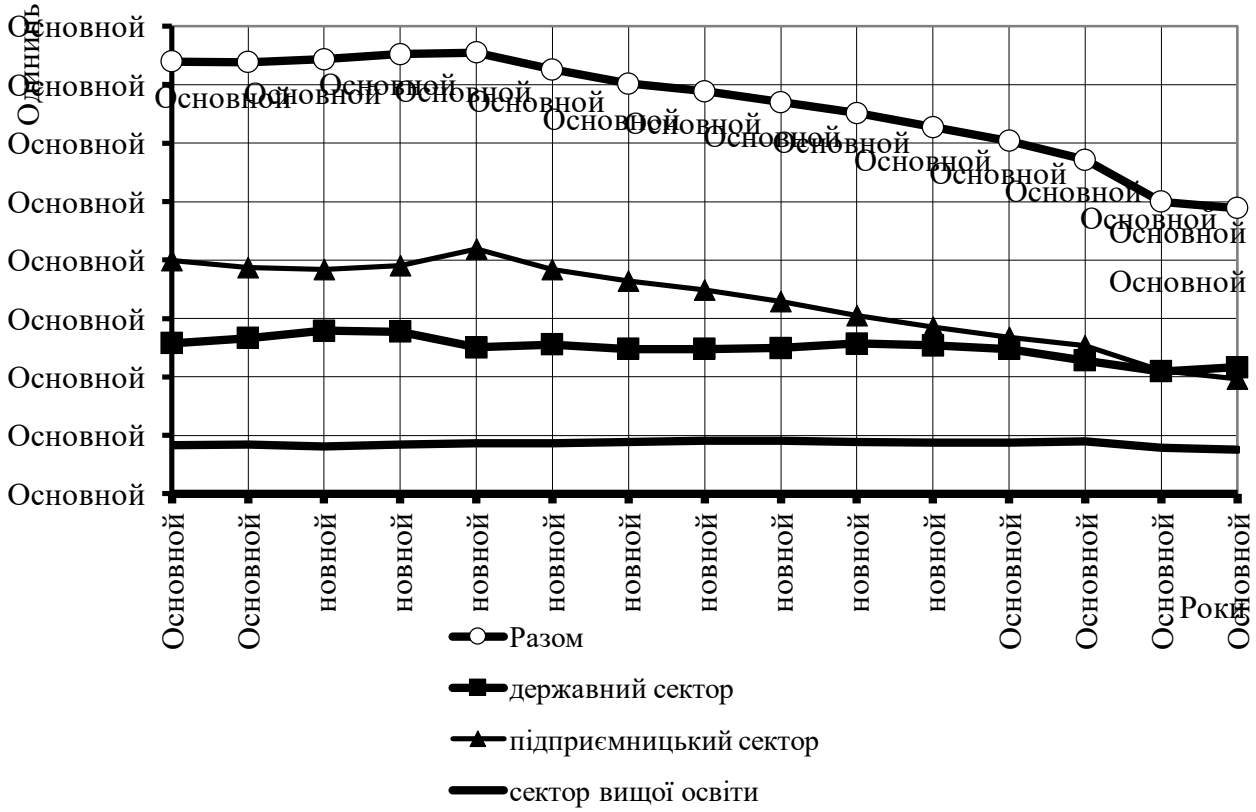


Fig. 2. The number of research organizations in Ukraine in 2001-2015.
(built by the authors according to the Collections of the State Statistics Service of Ukraine "Scientific and innovative activities in Ukraine" in 2001 – 2015)

The largest reduction occurred in the business sector – by 366 units, that is, more than a half (53.6%), the least – in higher education by 153 units (7.8%). The number of public sector organizations decreased by 453 units (12.0%). Naturally, this led to a reduction in the number of scientists in these institutions. Thus, for the same period of time (from 2001 to 2015), the number of specialists in Ukraine carrying out research has decreased from 113.3 to 63.9 thousand, that is, almost by half (Fig.3).

As it is shown in fig. 4 the decrease rate in the number of specialists exceeded the decrease rate in the number of research organizations. The reduction in the number of research institutions and their employees led to the flow of the latter into higher education institutions, which during this period lacked specialists with academic degrees and titles.

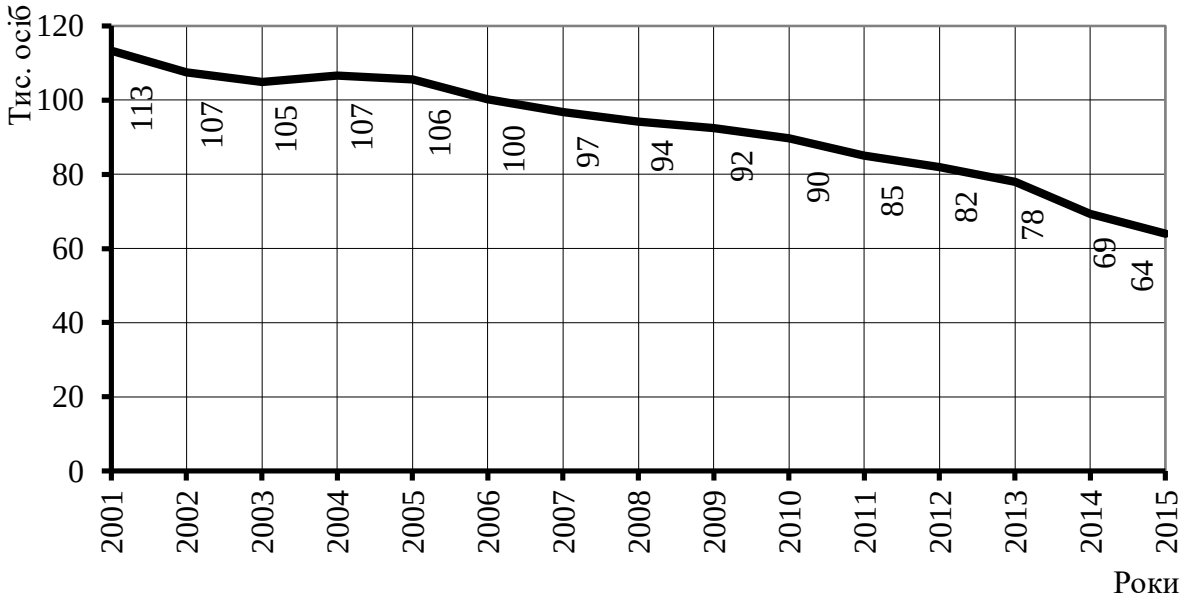


Fig. 3. The number of specialists carrying out research in Ukraine in 2001-2015.

(built by the authors according to the Collections of the State Statistics Service of Ukraine "Scientific and innovative activities in Ukraine" in 2001 – 2015)

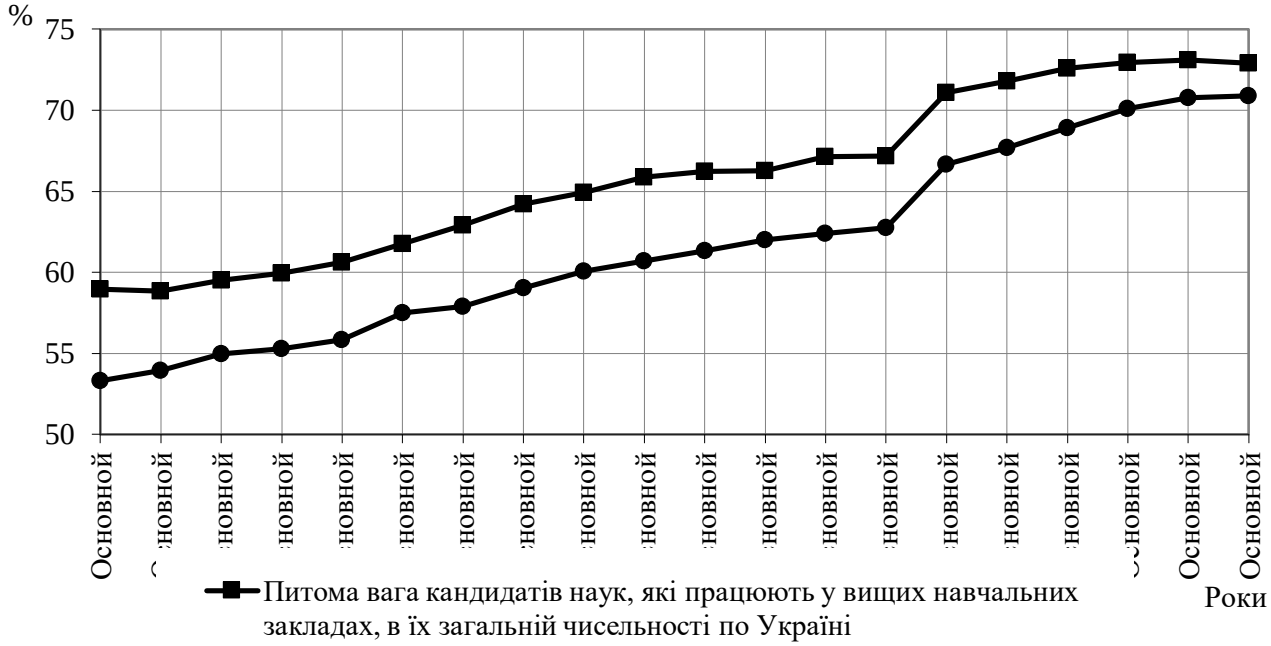
The number of specialists carrying out research

The number of research organizations

Fig. 4. The rates of change in the number of organizations and specialists carrying out research in Ukraine in 2001-2015

(built by the authors according to the Collections of the State Statistics Service of Ukraine "Scientific and innovative activities in Ukraine" in 2001 – 2015)

All these changes have led to the fact that the overwhelming majority of specialists with academic degrees and titles were concentrated in the higher education sector. Fig. 5. represents an increase in the concentration level of specialists with academic degrees and titles.



- The proportion of candidates of sciences in higher education, in their total number throughout Ukraine
- The proportion of doctors of sciences in higher education, in their total number throughout Ukraine

Fig.5. The quantitative characteristics of academic degree holders concentration in higher education in Ukraine

(built by the authors according to the Collections of the State Statistics Service of Ukraine "Scientific and innovative activities in Ukraine" in 2001 – 2015)

It is clear from the figure that in 1995 the share of candidates of sciences in higher education institutions was 59.0% out of their total number in Ukraine while it was 53.3% for the doctors of sciences. In 2014, 72.9% of all candidates of science and 70.9% of doctors worked in higher education.

As a result of these changes in 2014 the distribution of candidates and doctors of science employed in the Ukrainian economy by type of organizations was as follows (Table 1).

Although more than 70% of doctors and candidates of sciences are employed in higher education, its intellectual potential is not adequately used. The number of the research organizations employees in higher education is gradually decreasing.

Table 1

The distribution of doctors and candidates of sciences employed in the Ukrainian economy by the types of organizations (compiled by the author according to [1, p. 73, 79])

Type of organization	Doctors of Sciences		Candidates of Sciences	
	number of persons	share, %	number of persons	share, %
1. Research institutes, research organizations	3534	22,0	11651	13,5
2. Higher education institutions	11407	70,9	62874	72,9
3. Academies and their structural subdivisions	328	2,0	1094	1,3
4. Public authorities	128	0,8	1814	2,1
5. Industrial enterprises and research-industrial complexes	45	0,3	894	1,0
6. Other organizations and enterprises	648	4,0	7903	9,2
Total:	16090	100,0	86230	100,0

In 2010 57,831 academic staff members participated in research and development activities in Ukraine, and in 2016 this number was only 35,533 people.

At the same time, the proportion of the number of HEIs academic staff in these years decreased from 37.0% to 21.2% (Table 2).

It should also be taken into account that this reduction takes place against the background of a general decrease in the number of people carrying out research and development in Ukraine.

Table 2

The distribution of employees involved in research and development in Ukraine according to the sectors of activity (calculated by the authors using [3, p. 36])

Sector of activity	Year					
	2010		2015		2016	
	Persons	%	Persons	%	Persons	%
1. Public sector	57055	31,3 %	45835	37,4 %	41662	42,6 %
2. Higher education	67588	37,0 %	39670	32,4 %	20717	21,2 %
3. Business sector	57831	31,7 %	36999	30,2 %	35533	36,3 %
Total:	182484	100 %	122504	100 %	97912	100 %

If one takes into account only employees with academic degrees and titles taking part in research and development activities, their share in higher education is bigger. Thus, in 2016, in the total number of researchers with academic degrees and titles, the share of higher education employees was 39.1%. More than a half of the total number of employees with academic degrees and titles, who carried out research and development, worked in the public sector of the Ukrainian economy [3, p. 33]. The financing of research in higher education is unreasonably limited and inadequate to its available human intellectual potential. Its share in the total amount of domestic expenditure for research in Ukraine ranges from 5.0% to 7.0% for a long time. In 2015, it was 5.3% (Table 3).

Table 3

The share of the higher education institutions in the total amount of domestic expenditure on research in Ukraine (calculated by the authors using the collections of the State Statistics Service of Ukraine "Scientific and innovative activities in Ukraine" in 2001 – 2015)

Year	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1	2	3	4	5	6	7	8	9	10	11	12	13
%	5,0	4,7	5,9	6,9	7,0	6,5	6,3	6,3	6,9	6,1	5,8	5,3

The comparison of the share of expenditures on research and development in the public sector, business, higher education and private nonprofit sector in the total volume of these expenditures in Ukraine and the EU indicates an incomparably better use of the possibilities in higher education in the European countries. Thus, in the EU, in 2015 23.2% of total expenditure on research and development was in higher education [3, p. 79]. The share of business sector in Ukraine (60.7%) corresponds to the average European indicators (64.0%). At the same time, the share of the public sector in Ukraine, which is 33.9%, is much higher than in the EU countries, where it is equal to 12.0% [3, p. 79].

It is indicative that although the share of funding, and the number of research projects in higher education institutions is insignificant, the higher education sector outperformed other sectors in many respects. Thus, the higher education sector, accounting for more than 80.0% of publications, outstrips other sectors in the total number of published monographs, textbooks, and manuals.

Table 4

Research results publications volume in 2015 (composed by the authors according to [2])

Indicator	Nationwide total	Including higher education	The share of the higher education sector, %
The number of publications, including:	313021	250398	80,0
- monographs, textbooks, manuals;	20957	17797	84,9
- papers in scientific professional journals;	157319	119486	76,0
- others	134745	113115	83,9

Similarly, the leading position of higher education is based on the results of scientific activities, which are embodied in protection certificates. Its employees have prepared and received more than two thirds of all protection certificates that were created in Ukraine, including more than a half of all inventions. The results of the higher education sector activity in the protection certificates area of the foreign countries are modest (Table 5).

Table 5

The number of applications for the issuance of protection certificates and the number of positive decisions made in 2015 (compiled by the authors according to [2])

Indicator	Nationwide total	Including higher education	The share of the higher education sector, %
Submitted applications for protection certificates, including inventions	7358 1917	5233 1128	71,1 58,8
Received protection certificates including inventions	7334 1805	4963 1046	67,7 58,0
Submitted applications for protection certificates in patent offices of the foreign countries, including inventions	52 16	23 1	44,2 6,3
Received protection certificates in patent offices of the foreign countries including inventions	27 24	5 5	18,5 20,8

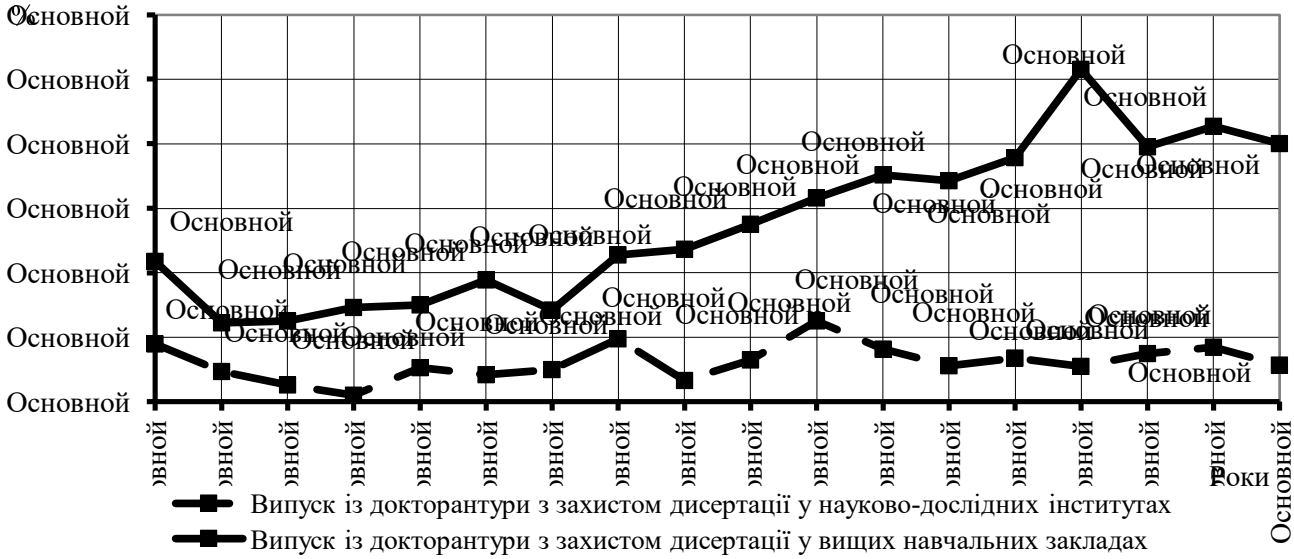
Higher education has a significant advantage in comparison with other sectors in international cooperation (Table 6).

Table 6

International activities of the research organizations of Ukraine in 2015 (compiled by the authors according to [2])

Indicators	Nationwide total	Including in higher education	The share of the higher education sector, %
1. The number of researchers who travelled abroad, persons, including with a purpose of: - training, internship, advanced training; - teaching; - research	7316 3394 281 3641	4066 2457 214 1395	55,6 72,4 76,2 38,3
2. The number of the researchers' trips abroad for participation in international seminars, conferences etc., persons	7638	5281	69,1
3. The number of international conferences, seminars etc., held by the organization (enterprise)	2023	1424	70,4
4. The number of research grants from the international foundations, including: - individual - collective	1885 1193 692	1515 1062 453	80,4 89,0 65,5
5. The number of researchers who got grants, persons	4513	2725	60,4

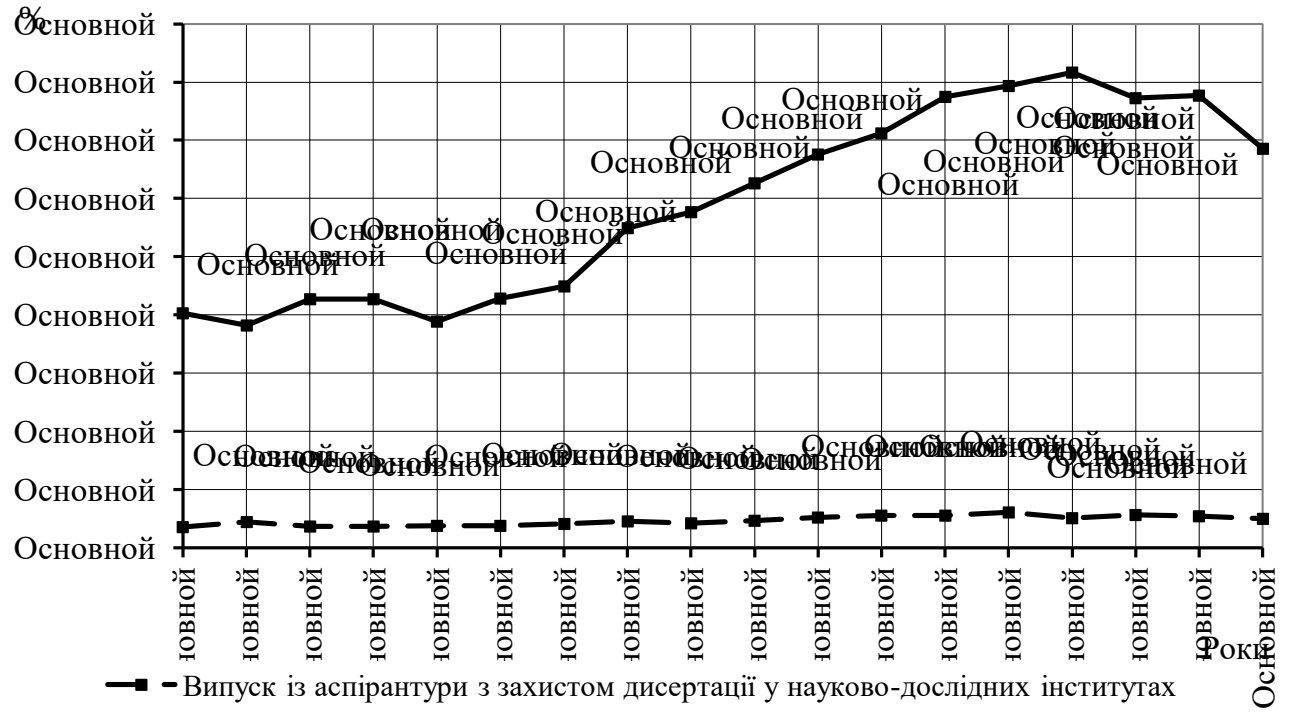
For an economy based on activities related to the development, accumulation, preservation, dissemination, and application of knowledge, the training of the academic staff of higher qualification, who are the core driving force of scientific progress, is of paramount importance. In this regard, HEIs also play a principal role. Firstly, they were the HEIs which have trained the majority of the highly-qualified academic staff for two decades. Secondly, the "productivity" of doctoral studies and especially postgraduate studies at higher education institutions was much higher than in research institutes (Figures 6-7).



- doctoral studies graduates who defended dissertations at the research institutes
- doctoral studies graduates who defended dissertations at HEIs

Fig. 6. "Productivity" of doctoral studies in research institutes and HEIs in Ukraine

(built by the authors according to the Collections of the State Statistics Service of Ukraine "Scientific and innovative activities in Ukraine" in 1998 – 2016)



- PhD studies graduates who defended dissertations at the research institutes
- PhD studies graduates who defended dissertations at HEIs

Fig. 7. "Productivity" of the PhD studies at the research institutes and HEIs in Ukraine

(built by the authors according to the Collections of the State Statistics Service of Ukraine "Scientific and innovative activities in Ukraine" in 1998 – 2016)

Thus, the accumulation of an increasing number of highly-qualified academic staff and high "productivity" of their training in the higher education institutions in Ukraine is a rather significant contribution to the country's scientific achievements. Despite the inadequate funding that holds up the increase of training quality and research development in higher education, this accumulation indicates an advance in the role of universities as education and science centers. They should become centers of innovation development of the country. At the same time, the concentration of employees with scientific degrees and academic titles in higher education puts the task to improve their use both for the training of highly skilled specialists as a result of the increase of students' intellectual capital and for the strengthening of research in higher education institutions.

References

1. Наукова та інноваційна діяльність в Україні: статистичний збірник. – К.: ДП ТОВ «Август Трейд», 2015. – 255 с.
2. Наукова та інноваційна діяльність в Україні: статистичний збірник. – К.: ДП ТОВ «Август Трейд», 2016. – 257 с.
3. Наукова та інноваційна діяльність в Україні : статистичний збірник. – К.: ДП ТОВ «Август Трейд», 2017. – 140 с.

1.3. FORMATION AND REPRODUCTION OF INTELLECTUAL CAPITAL AT HIGHER EDUCATION INSTITUTIONS

OKSANA LOMONOSOVA
Ph.D. (Economics), Associate Professor,
Head of Department of Economics,
Admiral Makarov National University
of Shipbuilding, Kherson Branch

Higher education institutions play the principal part in the formation of human intellectual capital. The students there obtain the chosen specialty, they cognize the universal values, increase their cultural level. While studying at higher education institutions, students receive and acquire some new useful information for their future professional and lifestyle activities. At the same time, they learn to be creative and responsible, develop their natural abilities, and most importantly – they learn to obtain the necessary information. The latter, in the conditions of

rapid and sometimes almost lightning changes in the spheres of production and services, in all modern life, is of particular importance.

In terms of human capital formation of enterprises, regions and the country as a whole, the principal task of higher education institutions is to select the most talented and hard-working young people who should be paid some special care because in the future they will form the elite of society. Some of these students will be selected to continue their studies for a master's or Ph.D. degree.

Knowledge-based society needs elite specialists who would always be aware of the current state in their sphere, would be able to identify the directions of search and obtain the necessary information to determine the ways of its use for solving problems. The peculiarity of the knowledge economy is that a large number of problems require an integrated approach and the application of non-standard solutions. In this regard, when reforming education in developed countries, the goals of vocational training were revised. For example, in Germany as a global goal of reforming vocational education, the task is to teach a specialist to interact independently with an innovation-changing world of professional work [2, p. 18].

For Ukraine, this is a problem, since many domestic higher education institutions are more focused on the replication of knowledge and practical skills, rather than the broad involvement of students in scientific activities and the acquisition of innovative experience. This point has been highlighted in the economic literature and in the press. For example, O. V. Kendiukhov states that "the system of higher education, as well as the whole Ukrainian system of education, massively prepares staff for reproductive and algorithmic labor, whereas all the trends of world development and increasing competition require a creative approach and initiative in all spheres of economic activity " [3].

The same situation is observed in some other post-Soviet countries. Thus, S. S. Naboichenko, noting the strict regulation of the educational process, the excessive detailing of the curricula in the Russian Federation, which allow freedom of action in a very limited framework, observes that under such conditions "it is impossible to ensure the acquisition of innovative education that meets the requirements of time – requirements for successful implementation of the tasks of transition to the knowledge economy. After all, studying at higher education institutions today is impossible without a creative search of new knowledge, that is, the organic combination of the processes of generating new ideas and their "materialization" in the heads of future specialists, the preparation of whom in this case becomes innovative. "[4, p. 7].

High-quality human intellectual capital must not only be shaped, but intensively used. It should provide high returns for the carrier of this type of capital himself, the enterprise where he works, and for society as a whole. Therefore, the employment of graduates in accordance with their abilities, inclinations, knowledge, and skills acquired, that is, considering their accumulated human intellectual capital is the principal and problematic issue for higher education institutions in Ukraine. The task here is to ensure the fullest use of the opportunities of each graduate, reducing the length of his adaptation at the enterprise or organization, as well as assisting in career planning and implementation of the goals. Only in this case the conditions for the further development of graduates and the accumulation of their human intellectual capital can be created.

Based on these tasks, training at higher education institutions should guarantee that graduates, firstly, could satisfy as quickly as possible the existing requirements on the part of employers without special (long) additional training in the workplace or in the organization. At the same time, there are certain contradictions between the needs and requirements of employers and the competences of graduates, the students' ideas of their future employment and the actual conditions of their work after graduation, expected and actual wage levels. That is, at present, according to L.S. Skachkova and A. A. Sokolova, there is a mismatch between the interests of business, higher education institutions, and their graduates. In this regard, the efforts of many companies are aimed at finding "flexible, reasonable and prospective 'heads', that is, they make a choice not on the profile of the university, the specialization of university departments etc., but according to other criteria" [5]. In our opinion, all this fully applies to the state of affairs in Ukraine, which hinders the development of the national human intellectual capital and increases the costs associated with its formation.

Secondly, university graduates should be prepared for the perception of new realities, constant adaptation to rapid changes in their sphere of activity and even possible changes of this sphere according to the labor market new requirements. For this, graduates should be able to determine the need for further education and carry it out. These qualities should also be shaped when studying at higher education institutions.

Applicants who enter the university to obtain higher education already have some human intellectual capital. It consists of two parts. The first part is the natural human intellectual capital that any person possesses in a different degree as the abilities for creative activity, curiosity, which are caused by his or her genetic features. The second part

is the human intellectual capital gained as a result of pre-university education and upbringing.

S. S. Naboichenko, characterizing the process of human intellectual capital reproduction (according to the author's terminology – human capital), emphasizes the special place and role of higher education. He rightly notes that the initial stages of the future human intellectual capital formation are pre-school education, education at a secondary school, vocational and technical school. But the main stages are university and postgraduate training, retraining and advanced training for specialists who complete this process. At the stages of pre-university education "the formation of a human person takes place, its mental and physical development, early socialization, the achievement of some general and cultural level," and "at the stages of mature professionalization, the process of reproduction of human (intellectual) capital gets its completion, while opening new horizons to continue its development" [4, p. 7].

The students' human intellectual capital in the process of learning is augmented by the joint efforts of the educational process participants – both a student and a teacher. At the same time, for the formation of qualitative human intellectual capital it is necessary that students must not be taught, 'given knowledge', but that they learn how to 'take knowledge' under the direction of teachers since a person is not only a possessor but also the creator of his or her human intellectual capital.

The students' human intellectual capital can be considered a peculiar subject of labor and at the same time a product of the academic staff activities, whose efforts are aimed at developing the human intellectual capital of students. It should be noted that sometimes specialists, bachelors, masters are called the product of higher education institutions (see, for example, [1]). But they are only carriers of human intellectual capital. Higher education institutions work with human intellectual capital, the carriers of which are students who, upon graduation, obtain certain educational and scientific degrees. Each level to a certain extent identifies the stage of development of the human intellectual capital of its carrier. Therefore, the principal product of higher education is an intellectual product, namely, the human intellectual capital.

In the process of students' education the consumer value of their human capital grow. The increase in the consumer value of human intellectual capital means the accumulation of knowledge, practical skills, experience, the ability to form new ideas and identify ways to implement them, expand the possibilities for creative search and work. It will allow the carrier of human intellectual capital to receive more revenue from its activities and increase the level of satisfaction of his needs in the future. At

the same time, the company's profit and national income increase. The increase in the value of human intellectual capital is due to the costs of a higher educational institution, the student and his family.

The development of the human intellectual capital of students is an information process. It takes place on the basis of the human intellectual capital of the academic staff, who, firstly, directly teach and educate students during their contact, and secondly, provide the controlling influence on the human intellectual capital of the latter, directing their training through the specialities curricula formation, disciplines syllabi, study guides, as well as selection or creation of other sources of information. Here students and lecturers actively use scientific, technical, economic, social, environmental and other information that they receive from educational, scientific and methodological literature, the Internet, etc. Such information is a component of the intellectual capital of this and other higher education institutions, enterprises, as well as intellectual structural capital functioning at the national level.

At the same time, there are changes in the development degree of the human intellectual capital of university entrants, which manifests itself not only in their training in the field of mathematics, physics, history, modern languages, etc., but also in their ability to perceive and master the new educational material, their mental potential, inclination to a creative approach to learning, readiness to acquire new knowledge and increase their intellectual capital. It requires the introduction of appropriate changes in the educational process, its informational, organizational and material provision, etc.

In the process of education and upbringing academic staff should monitor these changes and make the necessary adjustments to their activities. They improve teaching methods, training materials, teaching aids, software and information support, and give some suggestions on general education for secondary schools with which long-term relationships are established, that is, they develop the structural and client capital of higher education institutions.

During training, not only the formation, development and accumulation of students' human intellectual capital take place. The human intellectual capital of academic staff also undergoes substantial changes. The rapid development of science and technology, computerization of production, research and lifestyles put new demands on teachers, makes them monitor changes in the field of their academic and scientific interests. It requires constant progress, improvement in obtaining new knowledge and skills, lifelong learning. This activity is an integral part of the academic staff work.

Self-improvement and interaction with students help to increase the teaching skills, to gain new experience and refine methodical techniques. All that is facilitated by the feedback between the lecturers and the students, which enables lecturers to receive information on achieving the purpose of the given subject, the need to make adjustments to the contents, volume of the material, the ratio of lectures and practical classes, students' self-learning, etc.

In addition to the experience gained by academic staff, a number of factors, including changes in science, technology, in the relevant training material, the emergence of new equipment and devices (in particular, the widespread introduction of a PC and information technologies), changes in the school level of students' training, etc., result in the improvement of teaching methods and techniques.

In addition to the human capital of academic staff, higher education institutions actively use other components of intellectual capital. The second component is structural capital, representing the intangible assets of HEIs, which are their intellectual property and could be in the form of information systems, software, databases, publications, instructions, regulations, scientific reports, etc. The most important elements of structural capital are curricula of educational programs, syllabi, academic staff lecture texts, especially from their original courses, methodological and educational materials, including textbooks, teaching manuals, texts of tests, exam assignments, descriptions of laboratory works, guidance on course and degree projects, teaching methods etc.

A library fund should also be considered an element of structural capital, although according to accounting it is not included in the intangible assets, but in the capital assets of higher education institutions. At the same time, in its essence, it is an element of intellectual capital, since educational, scientific and other literature is the data carrier. Information here is on paper framed in books and magazines, which are material objects as well as specific carriers of information.

The third component is customer (consumer) capital, which reflects the system of long, reliable and mutually beneficial relationships of higher education institutions with their customers, consumers and suppliers. At the same time, clients are students, consumers are enterprises, organizations and institutions, which permanently or periodically employ graduates of HEIs, and suppliers are secondary schools, technical schools and colleges. Partnerships (with large and well-known enterprises and organizations, authorities, public organizations, mass media) that allow to form and maintain its image and high rating are of great importance for universities.

Thus, as in any organization, enterprise, institution, etc., the intellectual capital of higher education institutions includes the following components:

- the human intellectual capital of the employees, first of all of their academic staff;
- structural capital;
- client's capital.

Besides, in contrast to organizations, enterprises, and institutions, higher education institutions have another component: the human intellectual capital of students. It should also be included in the human intellectual capital of higher education institutions, since for the period of training, the students' human intellectual capital is maintained and functioning within the framework of an educational institution. In this case, there occurs the unity of it with the human intellectual capital of academic staff, and the relationships between them are establishing that allows increasing the human intellectual capital of students.

Only a part of the intellectual capital belongs to higher education institutions. They are the client's capital and the part of the structural capital. Another part of the structural capital is the intellectual property of academic staff (authors' courses of lectures, textbooks, patents – if they are not registered or not given to a higher educational institution). Some intellectual property rights may also apply to students.

Two main components of the intellectual capital, functioning at higher education institutions, belong to academic staff and students. It is clear that the human intellectual capital of students is the most changeable one. All the actions of the educational process participants are aimed at its growth, and all the other components of the intellectual capital of higher education institutions are formed and used for solving this task.

There are forward and backward linkages between the four main components of human intellectual capital. The leading role belongs to the human intellectual capital of academic staff. They do not only form the human intellectual capital of students directly and manage the process of its growth but directly affect the other two components of the intellectual capital of higher education institutions – structural and client capital. The latter ones are either created by academic staff due to the use of their human intellectual capital (manuals, databases, long-term relationships with employers, etc.) or acquired on the side (computer programs, scientific literature, etc.).

The main task of higher education institutions is to increase the human intellectual capital of students. But students are also involved in the process of the HEI intellectual capital formation, and nowadays this

process is paid particular attention. Under the guidance of academic staff, students participate in research, and thus replenish the information bases of the higher education institution, its software and methodological support, thus increasing structural capital. During on-the-job training at enterprises, organizations and institutions students can perform some practical and research work that contributes to the development of the client's capital of higher education institutions. In addition, they can strengthen links with secondary schools, technical schools and colleges where they studied before, which also affects the client's capital of higher education institutions.

The interrelations among the main components of the human capital of HEI can be represented in this way (see Figure 1).

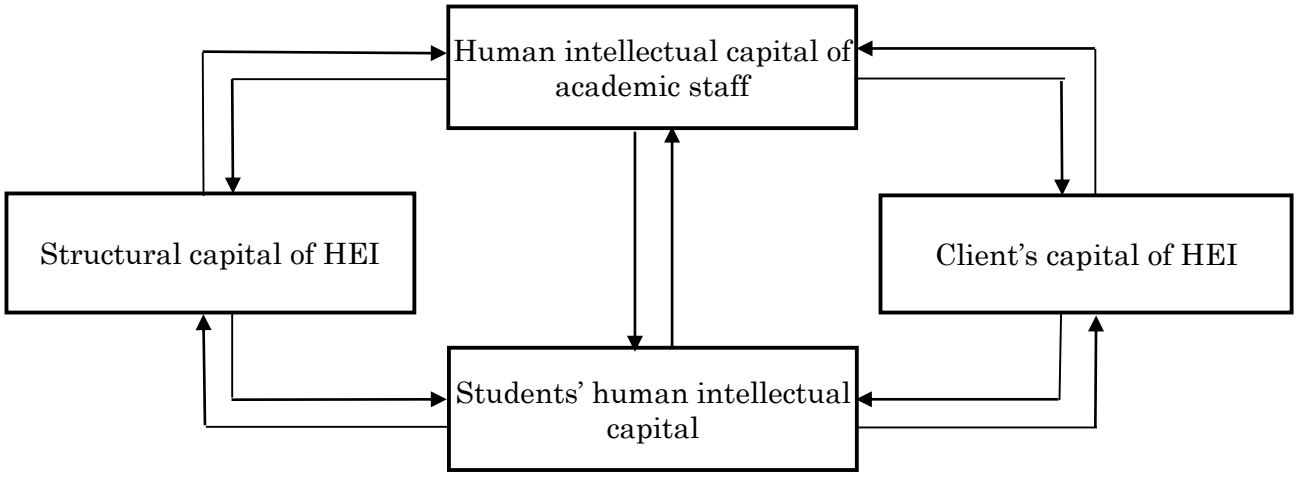


Fig. 1. Interrelations among the main components of human intellectual capital of higher education institutions

In the process of formation and development of students' human intellectual capital, in addition to the intellectual capital of higher educational institutions, playing a crucial role, their physical infrastructure is also used. It allows creating the conditions necessary for the educational process, scientific research, preservation, accumulation and search of information, work and leisure of students and academic staff. During the economic crisis, with underfunding of education in general, and higher education in particular, higher education institutions use extrabudgetary funds for the renovation and strengthening of their physical infrastructure. In connection with the decrease in the number of secondary school graduates in recent years, there is a reduction in cash inflows from individuals, and in most of the higher education institutions, this source was used to fund the physical infrastructure renovation.

Therefore, it is efficient to raise the funds of the interested enterprises for material and technical support. Necessary prerequisites for this are the development of production and enterprises and organizations' increased interest in innovations and employees of the new generation. In addition, part of the laboratory and practical classes requiring unique or rarely used in higher education institutions equipment can be carried out on-the-job. Thus, in the higher education institutions, the human intellectual capital of academic staff, using other components of intellectual capital, scientific, technical, economic, social, environmental and other information, as well as physical infrastructure, affects the human intellectual capital of students. (see Fig. 2). At the same time, further development of the intellectual capital of lecturers takes place.

The figure shows only the interrelations between the individual elements of the human intellectual capital of higher education institutions and the main factors influencing the formation and development of human intellectual capital of students and lecturers. In fact, these connections are more complicated. There are often both forward and backward links between the elements of the internal environment of higher education institutions, as well as between them and the components of the external environment. For example, the figure does not show the backward links between the physical infrastructure of universities and the human intellectual capital of students and academic staff. At the same time, the developed laboratory facilities and special software allow intensifying scientific research, which helps to accumulate the human intellectual capital of both students and academic staff.

Similarly, for the formation and development of human intellectual capital of students, as well as of academic staff, the scientific, technical, economic, social, environmental and other information that comes to higher education institutions from the external environment is widely used. It is used not only for the training and upbringing of students and the lecturers' knowledge update. This information influences the requirements for specialists, which in turn leads to the improvement of educational and qualification characteristics, educational-professional programs, curricula, syllabi, etc. That is, in addition to direct training and accumulation of human intellectual capital of academic staff, this scientific, technical, economic, social, ecological and other information is also used for the higher education institutions structural capital development. But, generating new knowledge, higher education institutions affect the expansion of diverse information themselves.

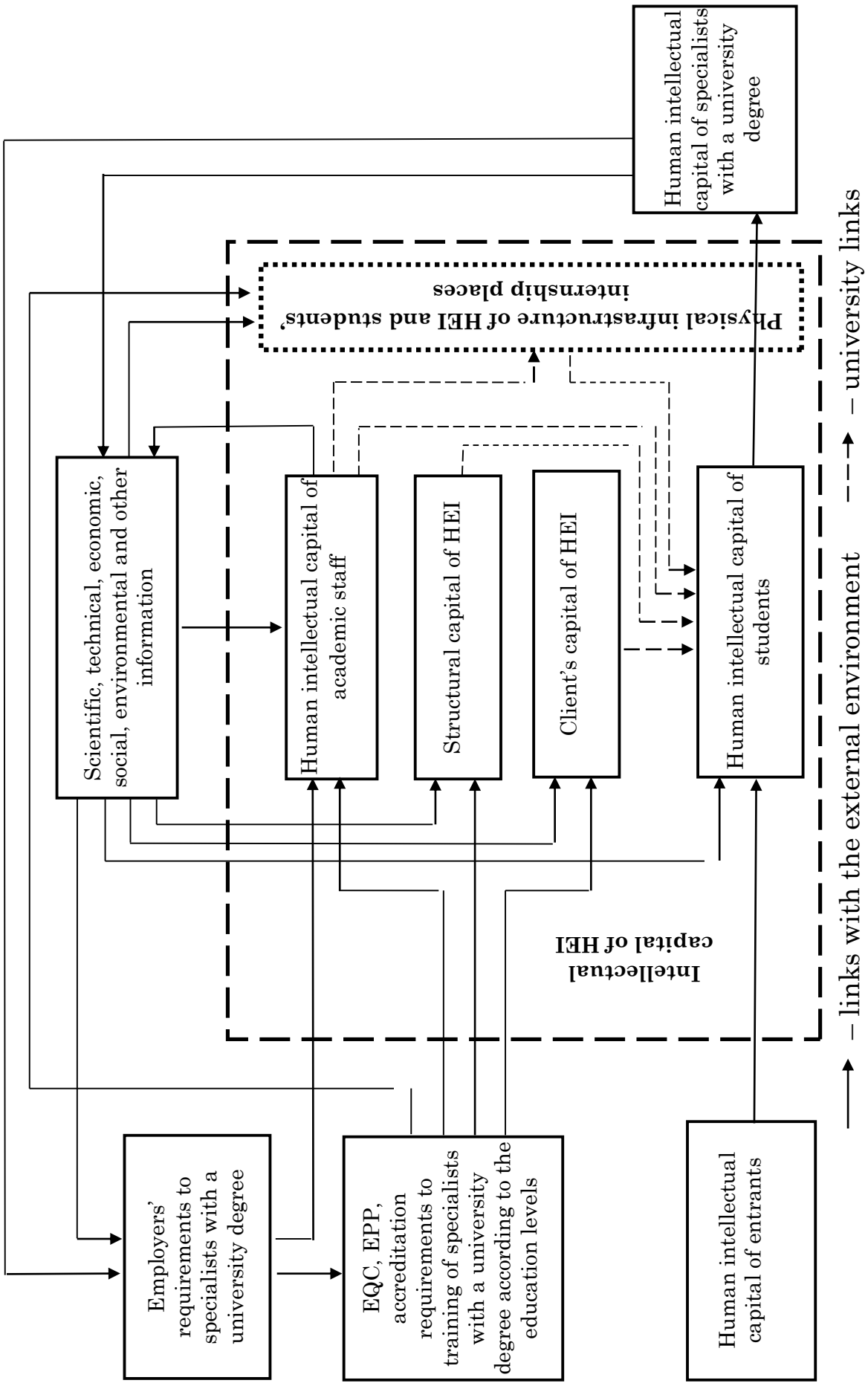


Fig. 2. The role of academic staff in the students' human intellectual capital formation

The study of the peculiarities of the students' human intellectual capital formation at higher education institutions and the management of these processes requires future investigation.. Thus, the connections between the factors influencing the students' human intellectual capital formation should be clarified and detailed as well as the peculiarities of the influence of each factor, etc. In addition, the processes of the human capital creation and development must be manageable. The diagram, shown in fig. 2, can become a basis for developing a management system for the students' human intellectual capital formation.

At present, higher education institutions are the centre where the intellectual capital of a society is formed and developed. For higher education institutions themselves, their intellectual capital is the resource they cannot exist without as they will not be able to perform their core functions. The bigger the intellectual capital, before all the human intellectual capital of the higher education institution, the more possibilities for sustainable development, successful competition and the increasing impact on the external environment it has.

References

1. Бобкова Е.В. Интеллектуальный потенциал вуза // Экономика региона (электронный научный журнал) / Е.В. Бобкова // 2007. – № 18. – Ч. 2. // Режим доступу до журн.: www.journal.vlsu.ru/index.php?id=479. 15.03.2010.

2. Зыков М.Б. Формирование и развитие человеческого и социального потенциала как содержания образования / М.Б. Зыков. – М..: ФИРО. – Вып. 9, 2008. – 60 с.

3. Кендюхов О.В. Ілюзія освіти // Дзеркало тижня. – № 44(723). – 28 листопада 2008 [Електронний ресурс] О.В. Кендюхов // Режим доступу до журн.: www. Dt.ua/3000/3300/64742/. 10.01.2010.

4. Набойченко С.С. Идентификация профессионального образования как процесса воспроизводства интеллектуального капитала / С.С. Набойченко // Инженерное образование. – 2005. – № 3. – С. 6–13.

5. Скачкова Л.С., Соколова А.А. Почему ростовские компании, вузы, выпускники не используют существующую инфраструктуру рынка труда для эффективного взаимодействия? (Рассоглосование интересов бизнеса, вузов и выпускников как основная проблема современного рынка труда) [Електронний ресурс] Л.С. Скачкова, А.А. Соколова // Режим доступу до журн.: www.sfedu..ru/career/art1.doc. 24.06.2010.

Розділ 2.

INFORMATIONAL AND MARKETING SUPPORT OF VALUE-ORIENTED MANAGEMENT AS A MEANS OF STRATEGIC ADAPTATION AND INCREASE OF COMPETITIVENESS OF ENTERPRISES

2.1. INCORPORATION OF THE VALUE-ORIENTED MANAGEMENT CONCEPT IN THE ENTERPRISE MANAGEMENT SYSTEM

OLENA ZAITSEVA
PhD in Economics, Associate Professor,
Department of Management and Marketing,
Kherson National Technical University

Rapid and poorly predicted world changes, in particular, global warming, resource depletion, negative demographic trends, military conflicts, uneven development of regions – are associated with a sharp increase in the number of side effects caused by processes that even yesterday seemed domestic, local, and now multiplied. and determine the development of modern civilization. Never before, unreasonable technological solutions did not have such irreversible consequences and did not jeopardize the existence of entire industries, as well as political turmoil on the outskirts of the world system did not affect the events in the center. The list of such effects increases and the scale of life has led the world to a new level, when the effects of side effects begin to exceed the benefits of them. Those system designs that yesterday seemed balanced and in the social, economic, cultural, and environmental spheres have become unstable today, and the explosion of interest in global ethics can be considered a deliberate attempt by scientists and practitioners to get deeper into the essence of new mechanisms for supporting, restoring and harmonious coexistence of complex social and economic systems. But even in the face of global problems, humanity thinks of the usual consumer categories, so now, as never before, a new value-oriented management thinking that takes into account the interrelation of the processes taking place in the modern world and the situation generated by technological innovations and their consequences is now needed. Today it is impossible to isolate itself from the surrounding world, because the strategy of isolation does not solve the long-term problems that arose at the present stage of development. Because isolation or confrontation is now impossible and we must move to a new level of harmonization of social relations, social responsibility of business and a conscious self-organization. These conditions actualize the need for the formation and testing in practice of innovative management concepts, in particular, value-oriented management.

The concept of value-oriented management began to emerge from the mid 80's in the United States, in the 90's it spread to Europe and Asia, and from the two thousand to become actively explored by Ukrainian scholars and used by the horizontal structures of responsible business. The concept has an interdisciplinary and integrative character and takes root in a number of related sciences: social-oriented management, informed organizational development, behavioral economics, rational consumption, ethical marketing, knowledge economy, environmental management, and others. The concept of value management was formed by Tom Peters and Robert Waterman in response to purely administrative and rational scientific approaches to building an effective organization. The paper "In Search of Excellence" appeared as a result of the research initiated by the McKinsey consulting company on the study of 43 American companies aimed at assessing the synergy of strategy, structure and management efficiency. In it, scientists identified the qualities that characterize innovative companies: value management, active actions, customer orientation, internal business, flexible horizontal structure, effective combination of discipline and freedom [1].

Subsequently, Simon Dolan and Salvador Garcia have argued that value management and effective HR policies provide higher return on investment than new technologies, research, competitive strategy and quality control. They have proven that MBI and MBO management can not ensure the organization's harmonious success and emphasize that combining the beliefs and values of the company owners with the values of its employees and consumers is a vital source of competitive advantage [2]. Henry Hemel, a spokeswoman for the School of Intelligent Organizational Development, also identified outdated forms and management practices and emphasized their modernization. He noted that the modern management model, in the center of which control and efficiency, does not meet the requirements of the modern world, where the driving forces of success in business are ethical values, adaptability, enthusiasm and creativity. The author researched the experience of "the elite of pioneers of modern management," which challenged management dogmas and determined the value principles that need to "engage in the DNA of each company" [3]. And the Stockholm School of Behavioral Economics further described the "images" of value-ethical organizations and emphasized the need for responsible relations with the environment and good faith with consumers [4]. In this context, researchers at the Harvard High School revealed the peculiarities of conscious organizations, focused on a strategic approach to corporate values, a sense of community, and revealed the importance of personal satisfaction from work, happiness and internal

emptiness. Based on these studies, many countries and the United Nations are developing new indicators for the development of society and national economies, in particular, HDI (Human Development Index) and GNH (Gross National Happiness is gross national happiness indicator) [5].

Ukrainian researcher Valery Pekar considered value-oriented management in the context of the lack of hierarchies, collective leadership, and openness. He stressed that in a modern organization it is not necessary to manage the structure, but to determine the directions of relations [6].

Thus, the researchers of all the above-mentioned scientific approaches conclude that the value of value-oriented management is unquestionable and is determined by the ability to take into account the present and future effects of the life of business and society and form the value priorities of the open environment of trust and partnership [7,8]. Therefore, the purpose of this study is to formulate a model and determine the scope of value-oriented management, as well as establish the levels of its incorporation into the overall management system.

Compared with important changes in geopolitics, technologies, lifestyles, communications, we are witnessing that management transforms very slowly. Of course, in practice, flexible supply chains, CRM-systems for customer relationship management, custom interfaces for ERP systems have been adapted and proved, and there are B2C electronic trading platforms that are needed today for customer-oriented business and automated almost all business processes. However, most modern hierarchies, traditions and rituals of management differ a little bit from those used in the first corporations. Thus, organizational management structures have become more horizontal, managers are more trained, budgets for market research and training are increasing, but strategy development, career advancement, general management and administration are carried out within the classical hierarchy. However, despite the fact that at present, in most enterprises there is no structured and systematic process of applying innovations in management, breakthroughs in management technology have allowed some bold brands to reach new frontiers of achievements and gain long-term market gains. This is due to the fact that top management has made a strategic decision to implement the concept of value-oriented management in the enterprise management system.

According to [7,9] and in the authors' interpretation, the concept of value-oriented management for incorporation into an enterprise management system can be represented as a three-tiered model, in which three values are distinguished (Fig. 1).

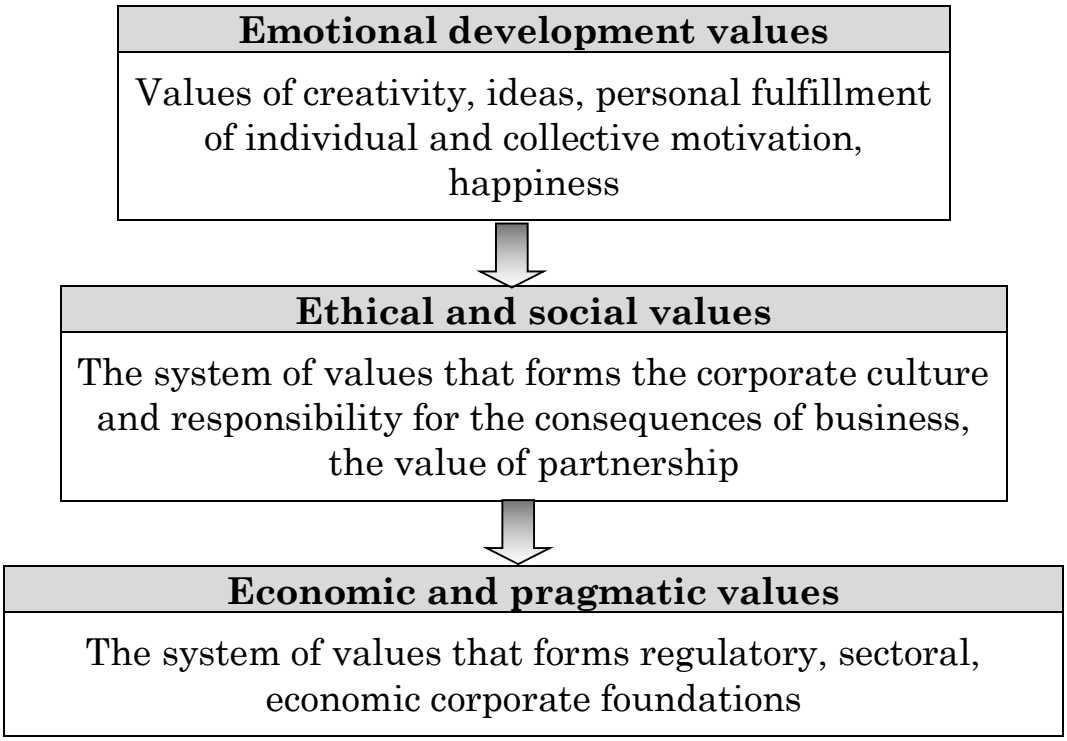


Fig. 1. Model of value-oriented management

1. The economic-pragmatic measurement of value-oriented management reflects the values of efficiency, standards, administration, which are necessary for the life of the enterprise; realization of the basic functions of management: organization, planning, control and accounting; optimization of business processes; introduction of IT technologies.

2. The ethical and social dimension of value-oriented management ensures the harmonization of the company's values with the values of integrity, respect, loyalty, and responsibility; defines the style of behavior in the territory of the business location, in particular, the disclosure of the technological policy of the enterprise (resource-saving technologies, reuse and utilization of waste, environmental safety of production); ensures introduction of socially significant products and services into the assortment portfolio of the enterprise; open partner relationships with contact audiences; reputation in society; corporate philanthropy.

3. Emotion-developing measurement of value-oriented management reflects the so-called genetic code or corporate memory of the enterprise; self-knowledge, self-development, emotional "upbringing" and staff development. These values provide new opportunities for collective action and are consistent with such universal values as trust, freedom, happiness; the synchronization of the goals of forming a creative "collective brain" is carried out; the spirit of the team and individual talent of the individual are harmonized as much as possible; the living organizational mechanism becomes conscious and thriving.

Summing up, it can be stated that the use of the value-oriented management model makes companies and enterprises recognizable and iconic, as the significance of such enterprises is determined not only by their book value, but also includes the assessment of intangible assets, reputational capital and the wealth of corporate knowledge.

The presented results of the study of the components of the concept of value-oriented management can become the basis for the formation of the scientific base, further development and design of specific management tools for incorporating this concept into the system of general management of enterprises.

References

1. Том Питерс, Роберт Уотерман. В поисках совершенства. Уроки самых успешных компаний Америки. – М.: Альпина Паблишер, 2011. – 528 с.

2. Саймон Долан, Сальвадор Гарсия. Управление на основе ценностей. Корпоративное руководство по выживанию, успешной жизнедеятельности и умению зарабатывать деньги в XXI веке. – М.: Претекст, 2008. – 320 с.

3. Хэмел Г. Будущее менеджмента / Гэри Хэмел [при участии Билла Брина]; пер. с англ. [Виталий Мишучков]. – М.: BestBusinessBooks, 2013. – 280 с.

4. Морган Г. Образы организации / Гэрэт Морган; пер. с англ. [Ирина Матвеева, Роман Самуненков]. – М.: МИФ, 2008. – 504 с.

5. Киган Р., Лейхи Л. Культура для каждого: как стать организацией осознанного развития / Роберт Киган, Лайза Лейхи [при участии Мэтью Миллера, Энди Флеминга, Деборы Хелсин]. – М.: МИФ, 2016. – 319 с.

6. Пекарь В. Разноцветная экономика / Валерий Пекарь [Електронний ресурс]. – Режим доступу: http://pekar.in.ua/SD%20Economics.htm

7. Zaitseva, O.I. Management of conscious adaptive organizations in the context of socioeconomic changes and financial turbulence / N.S. Tanklevska, Yu.Ye. Kyrylov, O.I. Zaitseva // Науковий вісник Полісся. – 2017. № 4 (12). Ч. 1. – С. 36-39.

8. Zhosan, G. The substantiation of the strategy of social responsibility of the enterprise with the aim of providing efficiency of its activities / O. Harafonova, G. Zhosan, L. Akimova // Marketing and Management of Innovations, 2017, № 3, pp. 267 – 279.

9. Горфинкель, В. Я. Корпоративная социальная ответственность / В. Я. Горфинкель, Н. В. Родионова. – М.: Издательство Юрайт, 2017. – 570 с.

2.2. UNIFIECATION OF APPROACHES TO THEORETICAL RESEARCHES OF ENTERPRISES COMPETITIVENESS

INNA SHEVCHENKO
PhD in Economics, Associate Professor,
Kharkiv National Automobile and Highway University

With the emergence of market relations and the formation of an open competitive environment, domestic enterprises were faced with the need to ensure competitiveness. The researchers pay considerable attention to the study of the theoretical foundations of ensuring the competitiveness of domestic enterprises, the initial stage of which is to identify the essence of this category. The purpose of the study is to unify the approaches to theoretical studies of the competitiveness of enterprises.

Applying monographic and historical methods, as well as content analysis, we will examine the evolution of the definition of the essence of the category of "enterprise competitiveness" in the post-Soviet, transformational and modern periods (Table 1). According to the results of the theoretical study, we distinguish the following approaches to the identification of the essence of the category of "enterprise competitiveness": "competitiveness as an opportunity/ability/capability" ([1], [10-16], [19-21], [25-28], [31], [35], [37], [39-42], [46], [49-50], [54-57], [59-60], [62], [65-67], [69]); "Competitiveness as adequacy/competence" ([2], [17], [29]); "Competitiveness as a characteristic" ([3], [8], [22], [34], [36], [47-48], [53], [68]); "Competitiveness as an Assessment/Indicator" ([4-5], [52]); "Competitiveness as a system/mechanism" ([6], [26], [38], [43-44], [64]); "Competitiveness as a property" ([7], [9], [18], [30], [33], [45], [51]); "Competitiveness as a state/result" ([24], [58], [61]); "Competitiveness as a form of relations" ([2], [32], [63]). We are of the opinion that the competitiveness of the enterprise is its property (one of the key characteristics of the enterprise), which determines the degree of transformation of "opportunities" into "ability" and "capability".

The results of content analysis of the content elements of the category "competitiveness of the enterprise" allow us to draw conclusions:

- unequivocal recognition as a conditional "universal" content component of the definition of the essence of the category "competitiveness of the enterprise" deserves market potential as a component of the competitive potential of the enterprise. Allocation of this element is not accidental, because the competitiveness takes place only in the market conditions as a result of the competition of its participants;

Table 1.

Content analysis of content elements of the definitions of the essence of the category "enterprise competitiveness" *

Author (authors)	*Meaningful elements of enterprise competitiveness*										
	competitiveness of the goods				*enterprise competitive potential*						
	quality	quantity	price	after sales service	production potential	human potential	managerial potential	innovation and investment potential	financial potential	strategic (including adaptive) potential	market (including marketing) potential
1	2	3	4	5	6	7	8	9	10	11	12
Post-Soviet period											
Lishchyshyn O.I.	+	+	+	+	+						+
Dikan V.L.	+		+		+		+	+			+
Marenich A., Astakhova I.					+	+			+		+
Mazaraki A., Ligonenko L., Ushakova N.	+				+	+			+		+
Oberemchuk VF											+
Transformation period											
Bondarenko G.S.											+
Voronkova A.E.					+				+		+
Gavrilyuk S.P.	+		+		+	+				+	+
Dyachenko T.O.							+			+	
Akhmatova M., Popov E.									+		+
Kryvenko H.V.										+	+
Shehyns′ka N.Z.										+	+
Shynkarenko V.H., Bondarenko A.S.										+	+

Continuation of the table 1

1	2	3	4	5	6	7	8	9	10	11	12
Gritsyshyn M.										+	+
Ivanov Yu.B.										+	+
Savchuk-Polischuk T.O.											+
Shershn'ova Z.YE., Obors'ka S.V.	+				+	+	+	+	+		+
Altukhov P.L.											+
Kuz'min O.YE., Horbal' N.I.											+
Nuzhna O.A.					+	+			+	+	+
Pokropyvnyy S.F.					+	+	+		+		+
Tytarenko V.YE.	+	+	+	+					+		+
Balabanova L.V.,	+	+							+	+	+
Kholod V.V.											+
Dolzhans'kyy I.Z., Zahorna T.O.	+	+	+	+	+			+	+		+
Ivanov YU.B., Tyshchenko O.M.					+					+	+
Kamyshnikov R.V.					+	+					+
Malykhina T.I.	+		+		+			+			+
Pavlova V.A.	+				+	+	+	+		+	+
Yazvins'ka N.V.											+
Kyrchata I.M.					+	+	+	+	+	+	+
Mytsyuk S.V.	+				+				+		+
Tkachenko O.M.										+	+
Ablyazova S.A.					+	+	+	+	+	+	+
Bulakh I.V.										+	+
Hryniv L.V.									+		+
Drahan O.I.	+	+	+	+	+	+			+		+
Lupak R.L.					+				+	+	+
Misevych M.A.	+	+	+	+	+	+			+		+
Sukha I.V.					+	+		+		+	+
Tarnavs'ka N.P.	+					+	+	+			+
Antonyuk H.YA.	+								+		+
Vesperis S.Z.											+

Continuation of the table 1

1	2	3	4	5	6	7	8	9	10	11	12
Dybach I.L.					+		+				+
Kapitanets′ YU.O.					+	+	+	+	+		+
Kotlyk A.V.											+
Mykhaylova N.V.				+	+					+	+
Putsenteylo P.	+	+								+	+
Selezn′ova O.V.					+			+			+
Slobodyanyuk V.O.					+	+		+	+		+
Fatkhutdinov R.A., Osovs′ka H.V.											+
The newest period											
Yemel′yanova I. F.										+	+
Merchans′kyy V.V., Klochko V.M., Klochko I.M.	+		+	+							+
Radko V.M.	+				+	+	+	+			+
Samoylyk YU.V.					+	+	+		+	+	
Tyahunova N.M., Boyin V.O.	+		+	+							+
Cherevko D.H.										+	+
Mel′nyk S.I.					+	+	+		+	+	
Petrovych Y.M., Kryveshko O.V., Stupak I.O.											+
Yankovyi O.G.									+		+
Yokhna M.A.										+	+
Minko L.M.										+	+
Yelets O.P.	+	+	+	+	+	+	+		+		+
Danko Yu.I.	+		+		+	+	+	+			+
Klimenko I.M.	+	+	+	+	+	+	+		+	+	+
Krupina S., Yablonskaya N.	+	+	+	+	+	+	+	+	+		+
Ohota V.I., Sagaidak T.Ya.										+	+
Khalimon T.M.											+
Didenko E.O., Zhurakivskyi P.I.											+

** compiled by the author according to sources [1-69].*

- the overwhelming majority of researchers points to the importance of managing production potential as part of the competitive potential of the enterprise, since it is the technical, technological and material-technical bases of production, organization and progressiveness of the production process that determine the qualitative, quantitative and price characteristics of the goods presented on the market;

- revival of understanding of the importance of qualitative characteristics of products, services, tasks, which was partially lost during the transformation period. The importance of the price aspect of the product's competitiveness is increasing, the interest of academics has grown to additional aspects of the competitiveness of the goods, in particular, after-sales service;

- striking changes in the attitude of researchers to the importance of strategic (including adaptive) potential as a structural element of the competitive potential of the enterprise in the transformation period compared with the post-Soviet period. If during the post-Soviet period, the operation of business entities was due to inertia and the development of a set of strategies, the enterprise was considered a waste of time, then in the transformation period there was an understanding that the new conditions of economic activity required another economic behavior that would ensure the competitiveness of the enterprise, not only in the short-term, but and in the long run. It is quite logical that in the modern period the importance of this element of the competitive potential of the company continues to grow;

- in the transformation period there is a decrease in the significance of all elements of the competitiveness of the enterprise, except for innovation and investment potential. On the one hand, this attention is largely due to the lack of own funds of enterprises to ensure the normal functioning and the need to attract additional funds from external sources, and, on the other hand, to search for the sources of unique competitive advantages that can ensure the competitiveness of the product and, as a consequence, the competitiveness of the enterprise for the longest possible time;

- domestic researchers pay attention to financial potential as a component of the competitive potential of the enterprise, which is quite natural, because the financial result of the enterprise is still the main indicator of the success of its functioning. Thus, it can be argued that the financial confirmation of the competitiveness of the goods is the net income from the sale of products (goods, tasks, services), gross profit and financial result from operating activities (profit), and the competitiveness of the enterprise or net financial result (profit);

- in scientific works the discussion of the separation of managerial potential from the personnel potential remains, as heads of all levels are, on the one hand, part of the personnel of the enterprise, and, on the other hand, the decisions they make to a large extent determine the efficiency and results of the work of all other employees of the subject management. Additional justification requires the separation of managerial potential from strategic potential, since the development of all types of strategies relates precisely to the management of the company's management. We are of the opinion that it is expedient to maintain managerial potential in the structure of competitive potential as a separate component separated from personnel and strategic potentials.

Under the competitiveness of the enterprise we understand the dynamic property of the enterprise in terms of ensuring the competitiveness of products in the market and the efficiency of all types of activities as a result of the interaction of competitive potential and environmental factors in accordance with the chosen competitive strategy at a certain stage of the life cycle.

References

1. Лищишин О.І. Довідник економіста-підприємця (терміни ринкової економіки) [Текст] / О.І. Лищишин. – Львів : «Б.В.», 1992. – 176 с.

2. Дикань В.Л. Обеспечение конкурентоустойчивости предприятия [Текст] : монографія / В.Л. Дикань. – Х. : Основа, 1995. – 160 с.

3. Маренич А. Управление конкурентоспособностью предприятия [Текст] / А. Маренич, И. Астахова // Бизнес-Информ. – 1996. – № 5. – С. 23-27.

4. Мазаракі А.А. Економіка торговельного підприємства [Текст] : підручник / А.А. Мазаракі, Л.О. Лігоненко, Н.М. Ушакова. – К. : Хрещатик, 1999. – 800 с.

5. Оберемчук В.Ф. Забезпечення конкурентоспроможності підприємства: стратегічні аспекти [Текст] : автореф. дис. ... канд. екон. наук / В.Ф. Оберемчук; Київ. нац. екон. ун-т. – К., 1999. – 18 с.

6. Бондаренко Г.С. Управління конкурентоспроможністю автотранспортного підприємства [Текст] : автореферат дис. … канд. екон. наук / Г.С. Бондаренко. – Х., 2001. – 20 с.

7. Воронкова А.Е. Стратегічне управління конкурентоспроможним потенціалом промислових підприємств [Текст] : автореф. дис. … д-ра екон. наук / Воронкова А.Е.; НАН України, Інститут економіки промисловості. – Донецьк, 2001. – 32 с.

8. Гаврилюк С.П. Конкурентоспроможність підприємств на ринку туристичних послуг [Текст] : автореф. дис. ... канд. екон. наук / С.П. Гаврилюк; Київ. нац. торг.-екон. ун-т. – К., 2001. – 19 с.

9. Дяченко Т.О. Визначення конкурентоспроможності автотранспортних підприємств та стратегії її підвищення [Текст] : автореф. дис. ... канд. екон. наук / Т.О. Дяченко; Нац. авіац. ун-т. – К., 2002. – 20 с.

10. Ахматова М. Теоретические модели конкурентоспособности [Текст] / М. Ахматова, Е. Попов // Маркетинг. – 2003. – № 4(71). – С. 25-38.

11. Кривенко Г.В. Управління конкурентоспроможністю підприємств в умовах маркетингової орієнтації [Текст] : автореф. дис. ... канд. екон. наук / Г.В. Кривенко; Донец. держ. ун-т економіки і торгівлі ім. М.Туган-Барановського. – Донецьк, 2003. – 18 с.

12. Шегинська Н.З. Макроекономічний аналіз внутрішньої конкурентоспроможності підприємств в умовах ринкової трансформації економіки України [Текст] : автореф. дис. ... канд. екон. наук / Н.З. Шегинська; Львів. нац. ун-т ім. І. Франка. – Львів, 2003. – 20 с.

13. Шинкаренко В.Г. Управление конкурентоспособностью предприятия [Текст] : монография / В.Г. Шинкаренко, А.С. Бондаренко. – Х. : Изд-во ХНАДУ, 2003. – 186 с.

14. Грицишин М. Оцінка конкурентоспроможності підприємства [Текст] / М. Грицишин // Вісник Львівського університету. Серія економічна. – 2004. – Вип. 33. – С. 431-436.

15. Иванов Ю.Б. Конкурентоспособность предприятия: оценка, диагностика, стратегия [Текст] / Ю.Б. Иванов и др. – Х. : ХНЭУ, 2004. – 255 с.

16. Савчук-Поліщук Т.О. Конкурентноспроможність машинобудівної продукції на зовнішніх ринках [Текст] : автореф. дис. ... канд. екон. наук / Т.О. Савчук-Поліщук; Донец. нац. ун-т. – Донецьк, 2004. – 20 с.

17. Шершньова З.Є. Антикризове управління підприємством [Текст] : навч.-метод. посіб. для самостійного вивчення дисципліни / З.Є. Шершньова, С.В. Оборська; Київський національний економічний ун-т. – К. : КНЕУ, 2004. – 196 с.

18. Алтухов П.Л. Процессный подход к обеспечению конкурентоспособности предприятия [Текст] / П.Л. Алтухов // Вісник економічної науки України. – 2005. – № 2. – С. 3-5.

19. Кузьмін О.Є. Управління міжнародною конкурентоспроможністю підприємства [Текст] : підручник / О.Є. Кузьмін, Н.І. Горбаль. – Львів : Компакт–ЛВ, 2005. – 304 с.

20. Нужна О.А. Економічні механізми забезпечення конкурентоспроможності аграрних підприємств [Текст] : автореф. дис. ... канд. екон. наук / О.А. Нужна; Нац. наук. центр «Ін-т аграр. Економіки» УААН. – К., 2005. – 20 с.

21. Економіка підприємства [Текст] : підручник / За заг. ред. С.Ф. Покропивного. – Вид. 2-ге, перероб. та доп. – К. : КНЕУ, 2005. – 323 с.

22. Титаренко В.Є. Оцінювання та розвиток конкурентоспроможності промислових підприємств [Текст] : автореф. дис. ... канд. екон. наук / В.Є. Титаренко; Нац. ун-т «Львів. політехніка». – Львів, 2005. – 20 с.

23. Балабанова Л.В. Стратегічне маркетингове управління конкурентоспроможністю підприємств [Текст] : навч. посіб. / Л.В. Балабанова, В.В. Холод. – К. : ВД «Професіонал», 2006. – 448 с.

24. Білецька І.І. Механізм підвищення конкурентоспроможності промислового підприємства на олігополістичному ринку (на прикладі феросплавних заводів України) [Текст] : автореф. дис. ... канд. екон. наук / І.І. Білецька; Нац. гірн. ун-т. – Дніпропетровськ, 2006. – 19 с.

25. Должанський І.З. Конкурентоспроможність підприємства [Текст] : навч. посіб. / І.З. Должанський, Т.О. Загорна. – К. : Центр навчальної літератури, 2006. – 384 с.

26. Теоретичні основи конкурентної стратегії підприємства [Текст] : монографія / За заг. ред. Ю.Б. Іванова і О.М. Тищенка. – Х. : ВД «Інжек», 2006. – 384 с.

27. Камишніков Р.В. Конкурентоспроможність підприємства в системі маркетингу [Текст] : автореф. дис. … канд. екон. наук / Р.В. Камишніков. – К., 2006. – 21 с.

28. Малихіна Т.І. Управління конкурентоспроможністю підприємств машинобудування [Текст] : автореф. дис. ... канд. екон. наук / Т.І. Малихіна; Гуманіт. ун-т «Запоріз. ін-т держ. та муніцип. упр.». – Запоріжжя, 2006. – 20 с.

29. Павлова В.А. Конкурентоспроможність підприємства: оцінка та стратегія забезпечення [Текст] : монографія / В.А. Павлова. – Дніпропетровськ : Видавництво ДУЕП, 2006. – 276 с.

30. Язвінська Н.В. Конкурентоспроможність українських підприємств на ринках програмного забезпечення [Текст] : автореф. дис. ... канд. екон. наук / Н.В. Язвінська; Київ. нац. ун-т технологій та дизайну. – К., 2006. – 19 с.

31. Кирчата І.М. Оцінка конкурентного потенціалу в системі управління конкурентоспроможністю підприємства [Текст] : автореф. дис. ... канд. екон. наук / І.М. Кирчата; Приазов. держ. техн. ун-т. – Маріуполь, 2007. – 20 с.

32. Мицюк С.В. Конкурентоспроможність вітчизняної продукції: проблеми та перспективи [Текст] : автореф. дис. ... канд. екон. наук / С.В. Мицюк; Київ. нац. ун-т ім. Т.Шевченка. – К., 2007. – 20 с.

33. Ткаченко О.М. Організаційно-економічні основи підвищення конкурентоспроможності підприємств кондитерської промисловості України [Текст] : автореф. дис. ... канд. екон. наук / О.М. Ткаченко; Нац. ун-т харч. технологій. – К., 2007. – 19 с.

34. Аблязова С.А. Підвищення ефективності управління конкурентноспроможністю підприємств виноградорсько-виноробної галузі Криму [Текст] : автореф. дис. ... канд. екон. наук / С.А. Аблязова; Львів. нац. аграр. ун-т. – Львів, 2008. – 20 с.

35. Булах І.В. Оцінка конкурентоспроможності підприємства електрозв'язку [Текст] : автореф. дис. ... канд. екон. наук / І.В. Булах; Одес. нац. акад. зв'язку ім. О.С. Попова. – Одеса, 2008. – 20 с.

36. Гринів Л.В. Оцінка підвищення конкурентоспроможності підприємств харчової промисловості [Текст] : автореф. дис. ... канд. екон. наук / Л.В. Гринів; Нац. ун-т харч. технологій. – К., 2008. – 17 с.

37. Драган О.І. Забезпечення конкурентоспроможності підприємств м'ясної промисловості України [Текст] : автореф. дис. ... д-ра екон. наук / О.І. Драган; Нац. ун-т харч. технологій. – К., 2008. – 34 с.

38. Лупак Р.Л. Конкурентоспроможність торговельного підприємства та механізм її забезпечення [Текст] : автореф. дис. ... канд. екон. наук / Р.Л. Лупак; Укоопспілка. Львів. комерц. акад. – Львів, 2008. – 21 с.

39. Місевич М.А. Забезпечення конкурентоспроможності високотоварних сільськогосподарських підприємств [Текст] : автореф. дис. ... канд. екон. наук / М.А. Місевич; Житомир. нац. агроекол. ун-т. – Житомир, 2008. – 20 с.

40. Суха І.В. Вибір стратегій для забезпечення конкурентоспроможності підприємств молочної промисловості [Текст] : автореф. дис. ... канд. екон. наук / І.В. Суха; Нац. ун-т харч. технологій. – К., 2008. – 20 с.

41. Тарнавська Н.П. Управління конкурентоспроможністю підприємств: теорія, методологія, практика [Текст] : монографія / Н.П. Тарнавська. – Тернопіль : Економічна думка, 2008. – 570 с.

42. Антонюк Г.Я. Механізм забезпечення конкурентоспроможності підприємств молокопереробної галузі в умовах євроінтеграції [Текст] : автореф. дис. ... канд. екон. наук / Г.Я. Антонюк; Львів. нац. аграр. ун-т. – Львів, 2009. – 20 с.

43. Весперіс С.З. Формування організаційно-методичного забезпечення досліджень конкурентоспроможності підприємств машинобудування [Текст] : автореф. дис. ... канд. екон. наук / С.З. Весперіс; ПВНЗ Європ. ун-т. – К., 2009. – 20 с.

44. Дибач І.Л. Економічна інтеграція як засіб посилення конкурентоспроможності невеликих підприємств [Текст] : автореф. дис. ... канд. екон. наук / І.Л. Дибач; Хмельниц. нац. ун-т. – Хмельницький, 2009. – 20 с.

45. Капітанець Ю.О. Визначення та забезпечення конкурентоспроможності підприємства [Текст] : автореф. дис. ... канд. екон. наук / Ю.О. Капітанець; Терноп. нац. екон. ун-т. – Тернопіль, 2009. – 20 с.

46. Котлик А.В. Управління конкурентоспроможністю підприємства на основі процесного підходу [Текст] : автореф. дис. ... канд. екон. наук: 08.00.04 / А.В. Котлик; Харк. нац. екон. ун-т. – Х., 2009. – 20 с.

47. Михайлова Н.В. Оцінка конкурентоспроможності підприємств ресторанного господарства [Текст] : автореф. дис. ... канд. екон. наук / Н.В. Михайлова; Харк. держ. ун-т харчування та торгівлі. – Х., 2009. – 18 с.

48. Пуцентейло П.Р. Сутнісні аспекти конкурентоспроможності на різних рівнях управління економікою [Текст] / П.Р. Пуцентейло // Вісник ТНЕУ. – 2009. – № 4. – С. 32-42.

49. Селезньова О.В. Конкурентоспроможність підприємств сільськогосподарського машинобудування [Текст] : автореф. дис. ... канд. екон. наук / О.В. Селезньова; Класич. приват. ун-т. – Запоріжжя, 2009. – 20 с.

50. Слободянюк В.О. Оцінка конкурентоспроможності підприємств цукрової промисловості [Текст] : автореф. дис. ... канд. екон. наук / В.О. Слободянюк; Одес. держ. екон. ун-т. – Одеса, 2009. – 21 с.

51. Фатхутдінов Р.А. Управління конкурентоздатністю організації [Текст] : підручник / Р.А. Фатхутдінов, Г.В. Осовська. – К. : «Кондор», 2009. – 470 с.

52. Ємельянова І.Ф. Удосконалення організаційно-економічного механізму підвищення конкурентоспроможності аграрних підприємств [Текст] : автореф. дис. ... канд. екон. наук / І.Ф. Ємельянова; Луган. нац. аграр. ун-т. – Луганськ, 2010. – 20 с.

53. Мерчанський В.В. Конкурентоспроможність підприємства та управління стратегією його розвитку [Текст] : монографія / В.В. Мерчанський, В.М. Клочко, І.М. Клочко. – Х. : Вид-во Бровін О.В., 2010. – 156 с.

54. Радько В.М. Організаційно-економічне забезпечення конкурентоспроможності підприємства (за матеріалами гірничо-збагачувальних комбінатів Кривбасу) [Текст] : автореф. дис. ... канд. екон. наук / В.М. Радько; Київ. нац. екон. ун-т ім. В. Гетьмана. – К., 2010. – 21 с.

55. Самойлик Ю.В. Стратегія управління конкурентоспроможністю підприємств м'ясопродуктового під комплексу [Текст] : автореф. дис. ... канд. екон. наук / Ю.В. Самойлик; Житомир. нац. агроекол. ун-т. – Житомир, 2010. – 20 с.

56. Тягунова Н.М. Конкурентоспроможність торговельних підприємств [Текст] : монографія / Н.М. Тягунова, В.О. Боїн; ВНЗ Укоопспілки «Полтав. ун-т економіки і торгівлі». – Полтава : РВВ ПУЕТ, 2010. – 154 с.

57. Черевко Д.Г. Підвищення конкурентоспроможності молокопереробних підприємств в умовах членства України в СОТ [Текст] : автореф. дис. ... канд. екон. наук / Д.Г. Черевко; Львів. нац. аграр. ун-т. – Львів, 2010. – 20 с.

58. Мельник С.І. Проблеми формування конкурентних переваг підприємств агропромислового комплексу в ринкових умовах [Текст] : автореф. дис. ... д-ра екон. наук / С.І. Мельник; Луган. нац. аграр. ун-т. – Луганськ, 2011. – 32 с.

59. Петрович Й.М. Стратегічне управління конкурентоспроможністю промислового підприємства [Текст] : монографія / Й.М. Петрович, О.В. Кривешко, І.О. Ступак; за наук. ред. д-ра екон. наук, проф., заслуженого діяча науки і техніки Й.М. Петровича. – Львів : Видавництво Львівської політехніки, 2012. – 228 с.

60. Конкурентоспроможність підприємства: оцінка рівня та напрями підвищення [Текст] : монографія / За заг. ред. О.Г. Янкового. – Одеса : Атлант, 2013. – 470 с.

61. Йохна М.А. Інституційне і ресурсне забезпечення міжнародної конкурентоспроможності промислових підприємств [Текст] : дис. … канд. екон. наук / М.А. Йохна. – Хмельницький: Хмельницький національний університет, 2014. – 506 с.

62. Минко Л.М. Сутність і складові поняття конкурентоспроможності підприємства [Текст] / Л.М. Минко // Наукові праці Національного університету харчових технологій. – 2015. – Т. 21, № 1. – С. 86-92.

63. Єлець О.П. Сутність конкуренції та конкурентоспроможності підприємства [Текст] / О.П. Єлець // Економічний вісник Запорізької державної інженерної академії. – 2016. – Вип. 1. – С. 58-64.

64. Данько Ю.І. Теоретико-методологічне обґрунтування підходів до моделювання рівня конкурентоспроможності аграрних підприємств [Текст] / Ю.І. Данько // Інноваційна економіка. – 2016. – № 5-6. – С. 76-80.

65. Кліменко І.М. Генезис сутності та трактування поняття конкурентоспроможності підприємства [Текст] / І.М. Кліменко // Економічний вісник університету. – 2016. – Вип. 31(1). – С. 143-150.

66. Крупіна С. Система управління конкурентоспроможністю підприємства [Текст] / С. Крупіна, Н. Яблонська // Науковий вісник Одеського національного економічного університету. – 2016. – № 4. – С. 133-143.

67. Охота В.І. Чинники підвищення конкурентоспроможності підприємства сфери послуг [Текст] / В.І. Охота, Т.Я. Сагайдак // Бізнес Інформ. – 2016. – № 2. – С. 193-197.

68. Халімон Т.М. Формування та оцінка потенціалу конкурентоспроможності підприємства [Текст] / Т.М. Халімон // Економічний вісник Запорізької державної інженерної академії. – 2016. – Вип. 5(2). – С. 35-39.

69. Діденко Є.О. Модель управління конкурентоспроможністю підприємства / Є.О. Діденко, П.І. Жураківський // Ефективна економіка: електронне наукове фахове видання. – 2017. – № 5 [Електронний ресурс]. – Режим доступу: http://www.economy.nayka.com.ua/?op=1&z=5590. – Заголовок з екрану.

2.3. INFORMATION SUPPORT METHODOLOGY OF CONSTRUCTION OF TREND MODELS OF ECONOMIC DYNAMICS

MARHARYTA SHARKO
D.Sc. (Economics), Professor,
Kherson National Technical University

With the development of information technology, the role of economic indicators, which are the basis of conclusions about the current and predicted state of production, is changing. This is especially pronounced in the conditions of innovative transformations and dynamic changes in the external environment and their impact on the sustainable functioning of production [1-3]. Economic dynamics is a series of indicators of production activity at its various stages of development, including at different time intervals: days, weeks, months, quarters, years, etc. The interrelation and interdependence of economic indicators often obscures existing trends in economic growth or decline in production, which can be distinguished by their decomposition into separate components, indicating causal relationships and identifying the main components of economic dynamics.

Existing methods for constructing trend models are based on the extrapolation of graphical dependencies of time series in the predicted time intervals [4,5]. Of course, the accuracy of such a graphic extrapolation and economic forecast is generally low, because determined by the scale of construction of the analyzed dependencies, in addition, graphic extrapolation is applicable only in the conditions of monotonously changing dynamics of the analyzed economic indicators. Various anomalies and jumps in changes in economic indicators are either excluded from consideration, or they introduce additional errors that drastically reduce the quality of forecasts [2].

The elimination of these shortcomings is possible with the use of information technologies for collecting, processing and analyzing indicators of economic dynamics [6]. For this there are a number of computer programs implemented in the systems STATISTIKA, MATLAB, MATCAD, etc. [7,8]. When extrapolating the forecasting of economic dynamics on the basis of series using trend models, the following main steps are performed (Fig. 1).

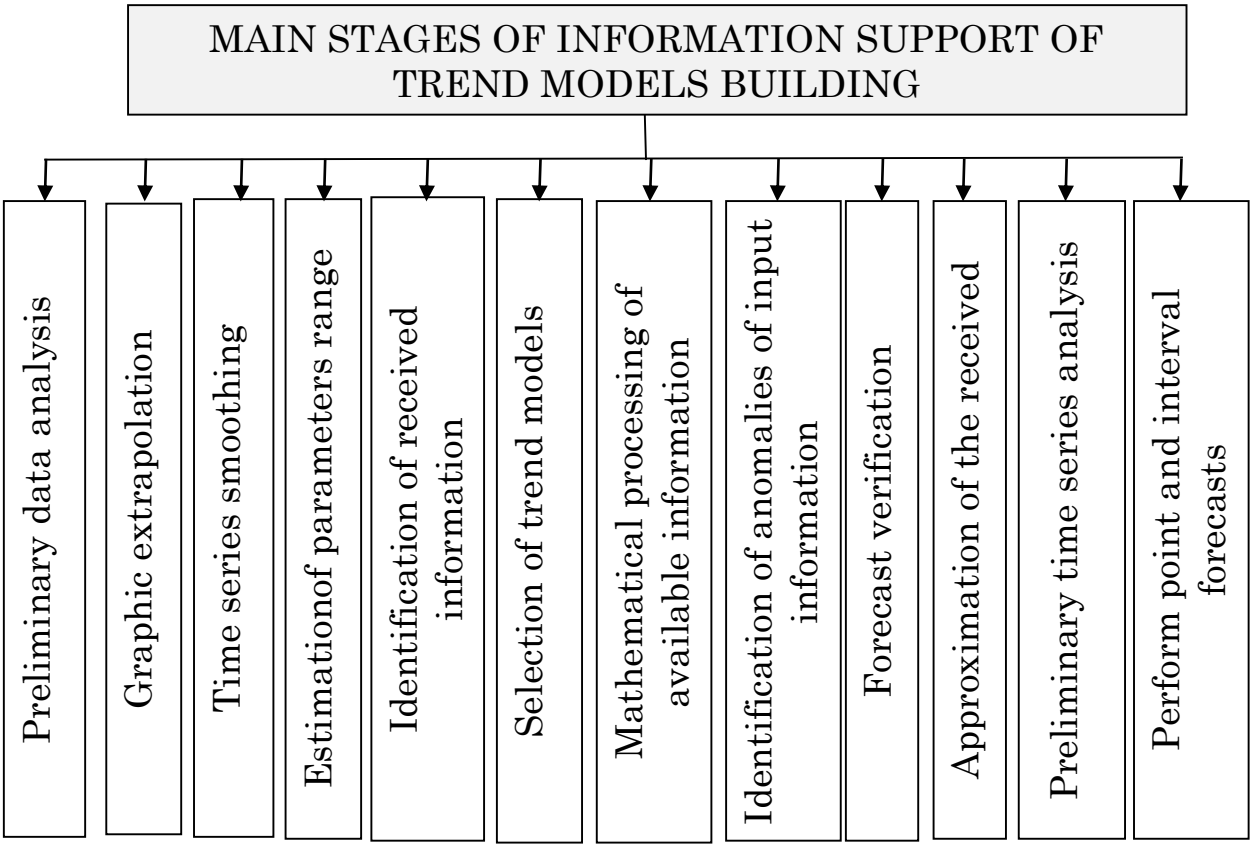


Fig. 1. The main stages of forecasting economic dynamics based on time series using trend models

At the same time, attention should be paid to volumes and quality, since its disadvantage does not allow to ensure high reliability of forecasts, and its surplus does not allow identifying the main development priorities, since there is an opportunity to choose insignificant and uninformative indicators for trend analysis, but only are their indirect manifestation. The information space should cover such elements of forecasting, which can be further disseminated in the form of patterns, relationships and relations that operate in the initial and past periods of time. The purpose of such predictions is to obtain as far as possible reliable information about impending events in the future.

The selection of information should cover the values of economic indicators at different times of the time series. The number of such values of the analyzed indicators over time should be as large as possible, since the accuracy of forecasts and the adequacy of the noted development trends depend on this [9–12]. Such a preliminary analysis of the data intended for building trends should include variations in their changes and assessing the range of numerical values of the analyzed economic indicators, since minor fluctuations are often commensurate with the effect of extrapolation and errors in determining the input data. In these cases, when building

forecasts, the composition of the analyzed indicators should be changed in order to select characteristics of a range of values around an average value.

Excessive variability of the analyzed characteristics of the predicted indicators can also be an obstacle to the development of future development forecasts, since preliminary trends of a priori information are not visible. Therefore, it makes no sense to perform mathematical processing of input data.

Preliminary analysis of data intended for the construction of trend models of economic dynamics, in addition to estimates of the scope of the analyzed parameters in different periods of the time series, should take into account the stability and continuity of information to determine the numerical values of trend points. Interruptions in the flow of information on certain dates of economic dynamics may affect the quality of forecasting, since it is at these points of the gap that useful information may turn out. The structuring of the requirements for preliminary analysis of data intended for extrapolation of time series is presented in Fig. 2

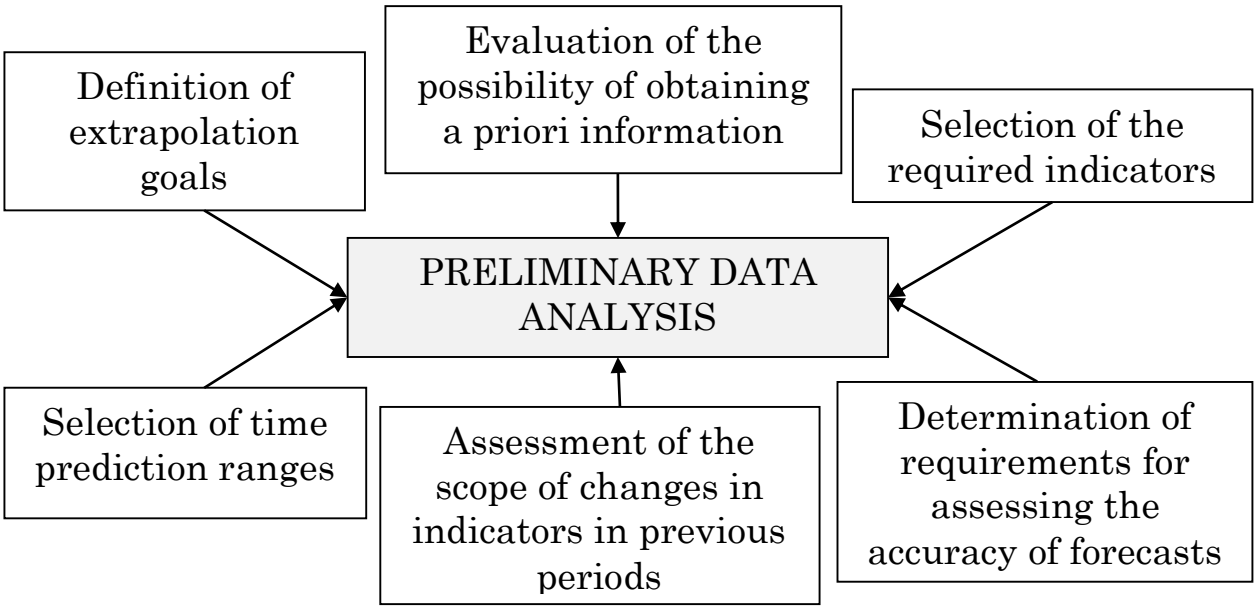


Fig. 2. Structuring the requirements of preliminary analysis of data intended for extrapolation of time series

An equally important point in the economic forecasting of time series is the choice of trend models, identification, approximation and interpolation of the obtained dependencies between fixed points of the time series (Fig. 3).

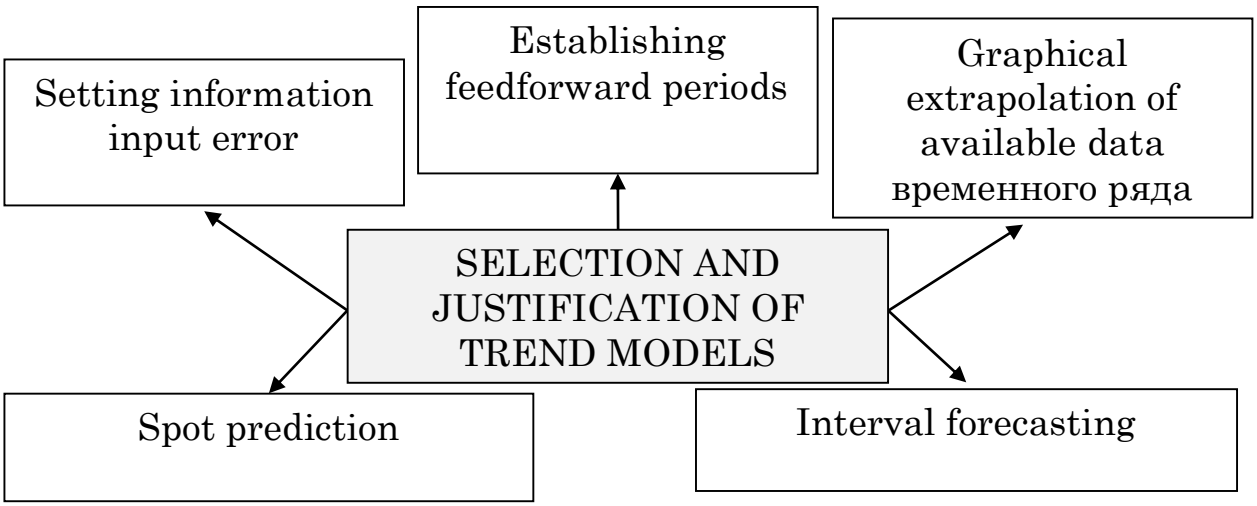


Fig. 3. The choice of trend models of economic dynamics

In addition to ensuring the order of receipt of information for filling economic indicators, their stability and sustainability should be maintained, i.e. The analyzed data cannot be changed due to some circumstances and clarifications.

The main trend models of economic dynamics are point and interval forecasting. Point forecasting provides for obtaining a strictly defined analyzed value with a certain permissible error at various points in future development, characterized by lead-time periods $t = n + 1$; $t = n + 2$, etc., where n is the value of the analyzed indicator at the last point of the dynamic series. When interpreting graphically, such prediction elements are depicted as dots in trend dependencies.

The error of the point forecast lies in the basis of interval trend models. Of course, for different points in the time series of the analyzed economic indicators, such an error will be different due to the difficulties of obtaining adequate input a priori information. Its averaging reduces the accuracy of forecasting, taking into account the maximum values reduces the quality of forecasts, since the estimates become too rough, and the minimum error values of the input information and point estimates of extrapolation are valid only for an extremely limited number of indicators that have a given value of the scatter of various quantities.

Interval trend models more adequately describe the existing time dependencies of the analyzed input economic indicators. A useful tool for building trend models is a preliminary graphical extrapolation, which makes it possible to more clearly assess the scope of the characteristics of the indicators being analyzed at different points in the time series and evaluate the possible trends of their changes in the future.

The next step in building trends in economic dynamics is the mathematical processing of the available information, the main tasks of which are presented in Fig. 4.

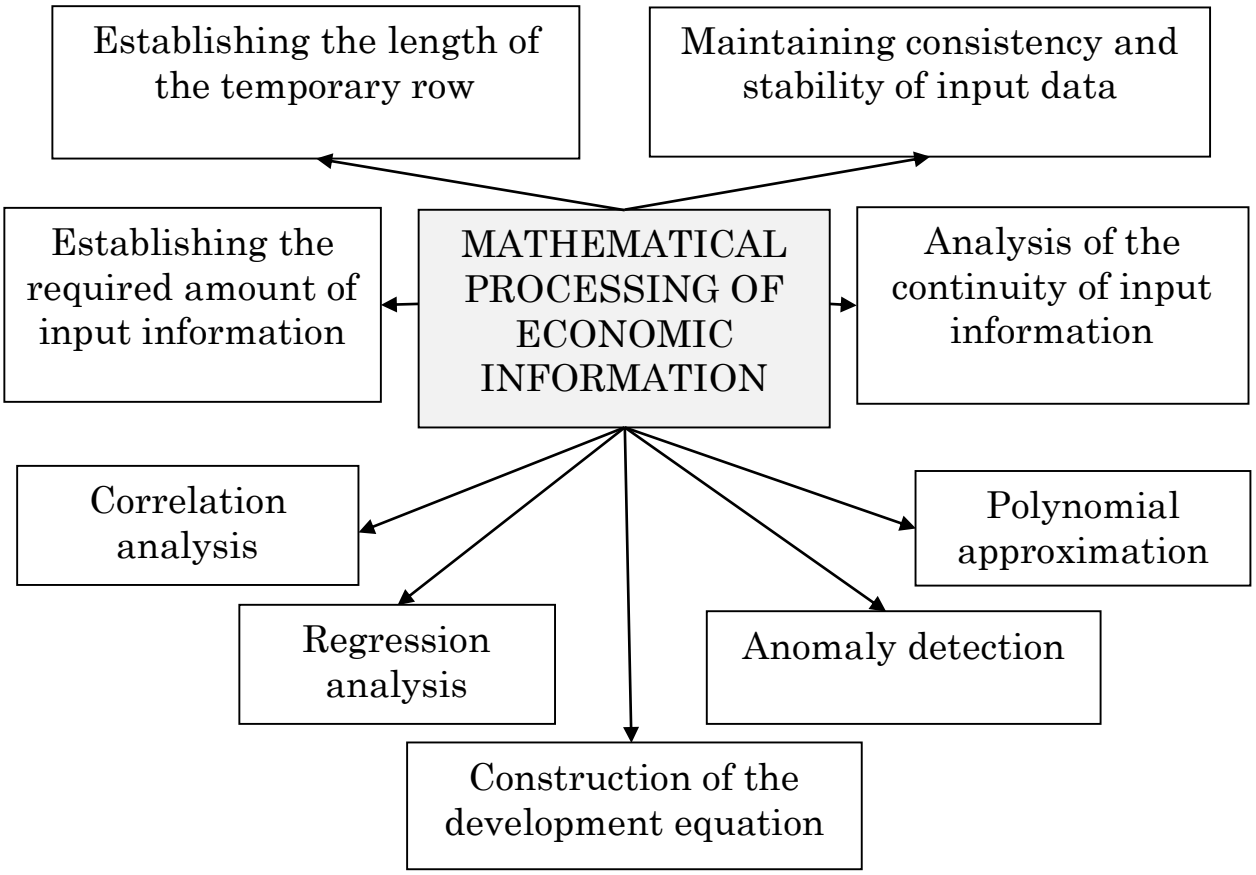


Fig. 4. Tasks and means of mathematical processing of economic processing in the construction of trends

The construction of trend lines requires, in its ultimate meaningful interpretation, the derivation of an equation of developmental laws. In this case, if the dependence is close to linear, a correlation and regression analysis is applied with the establishment of a tightness of connections between the analyzed values of the predicted indicator and the determination of the numerical coefficients of the resulting equation. If the dependence obtained is different from the linear, a polynomial approximation is applied.

$$x_i = x_0 + x_1 t + x_2 t^2 + x_3 t^3 + \dots x_n t^i,$$

where x_0 – figure x_i under $t = 0$;

t – time interval report of values of economic indicators;

x_n – the subsequent values of the economic index at the time t^i.

It is necessary to dwell separately on the choice of the time lag of the analyzed economic indicators and the intervals of advance, characterized by the reliability of the forecast in the foreseeable time interval of the

forecasting interval. The length of the time series of input information intended to fill the meaningful interpretation of economic indicators should also be optimized. Optimization of this operation consists in the fact that if the period of a series of economic dynamics is short, one cannot find the tendency of development of the analyzed indicators. A very long time series can cover periods with different trends, and therefore, averaging of trends over a large time interval is not feasible, since its description with the help of one growth curve does not yield positive results.

With more complex forecasting of cyclically changing economic indicators to be analyzed, it is necessary to choose periods from the middle of the first to the middle of the last cycle.

The optimal length of the period of anticipation of the trends of economic dynamics in the mathematical processing of the time series of the analyzed indicators is chosen separately for each economic phenomenon, taking into account the statistical variability of the data under study on the basis of the content judgment of the stability of the phenomenon. This length does not exceed one third of the volume of data for the rows of annual observations, and for quarterly and monthly series it is two years. Polynomial approximation is carried forward with a trend of one and a half or two years.

The stage of mathematical processing of input information in the construction of trend models of economic dynamics includes the establishment of emissions or anomalies of values of economic indicators in different periods of the time series. Anomalies, the origin of which cannot be explained, can significantly distort the existing patterns and trends of development; therefore, their presence requires substantial methodological study. The preliminary analysis of time series aims to identify developmental anomalies by reusing information about the numerical values of the time series at the anomalies point obtained from various sources. This allows you to eliminate the possible inaccuracies of the input information and smooth the time series of the analyzed economic indicators.

The anomalous value of economic indicators of the time series, which are not eliminated by clarifying information about the specific values of economic indicators obtained from various sources of statistical reporting, is subjected to a study of the causal relationships of their occurrence and possible inaccuracies in their reflection and presentation for further analysis. A natural way of reflecting them for further mathematical processing is to exclude them from the general sequence of the sequence of events. However, the verification of forecasts is significantly reduced, since at the same time, part of the information is lost and the general idea of

reality is distorted. Conducting trend lines through anomalous points is also unacceptable due to the fact that the prediction stability based on the analysis of previous trends does not remain. In order to take into account the existing order of the sequence of economic indicators in the analyzed indicators, it is necessary to draw a trend line not through the extremes of anomalies, but through a certain range of their possible changes, or through the average value of the amplitude of oscillations of the analyzed indicator at this point.

When extrapolating forecasting of economic dynamics using trend models, the final stage is verification of the forecast is very important. Verification of the predictive model is a set of criteria, methods and procedures that allow assessing the quality of the forecast obtained on the basis of a multivariate analysis. Verification of trend models is reduced to the comparison of calculated results with the corresponding data and laws of economic development.

This measure of the quality of predictions k can be calculated by the formula

$$k = \frac{p}{p+q},$$

where p– the number of forecasts confirmed by actual data;

q – number of forecasts not confirmed by actual data.

The standard root-mean-square error of estimating the predicted indicator Sŷ is determined by the formula:

$$S_{\hat{y}} = \sqrt{\frac{\sum(y_t - \hat{y}_t)^2}{n-k}}$$

where y_t – the actual value of the time series level for time t;

$\hat{y}_t$ – the calculatated estimate of the corresponding indicator for the model (for example, by the equation of the growth curve);

n – number of levels in the source row;

k – number of model parameters.

The basis for forecasting economic indicators in the context of changing external environments is the construction and analysis of trends, which are a constant steady change in the economic process over a certain period of time. A trend only correctly reflects the economic development process when its components make up a sequence of homogeneous quantities.

Modeling and forecasting the economic indicators of trends in current changing conditions are considered to be urgent tasks in the study and management of processes in complex physical, economic, social and ecological systems. Thanks to forecasting, it is possible to play various

scenarios of actions, to make high-quality, scientifically based management decisions, to develop tactical and strategic steps to eliminate the situation that has arisen.

References

1. Шарко М.В., Шмулевич П.В..Структуризация входной информации при формировании и управлении информационным потенциалом предприятий / М.В. Шарко, П.В. Шмулевич // Соціально-економічний розвиток регіонів в контексті міжнародної інтеграці. – 2016. – №23(12). – С. 157-161.
2. Экономико-математические методы и прикладные модели / под редакцией В.В. Федосеева. – М.: ЮНИТИ, 1999. – 146 с.
3. Прогнозування економічних процесів: навч. посібник /Марасанов В.В., Щербина О.В., Димов В.С., Забитовська О.І. – Херсон: Колос, 2007. – 46с.
4. Гусарина Н.В. Оцінка загальної кількості інформації для складання прогнозів адекватних змінам зовнішнього середовища в умовах невизначеності / Н.В. Гусаріна // Економічний дискурс. – 2018. – Вип. 1 – С.98-105.
5. Sharko M., Burenko J., Gusarina N. Modeling of the management of the information potential of complex economic systems under conditions of the risk / M. Sharko, J. Burenko, N. Gusarina // Technology audit and production reserves. – 2017 – Vol. 2/4(34) – P.14-19.
6. Гусаріна Н.В. Моделювання та прогнозування процесів економічного розвитку в умовах динамічних змін зовнішнього середовища / Н.В. Гусаріна, М.В. Шарко // Бізнес-інформ. – 2018. – №6. – С.166-172.
7. Копосов Г.О. Сучасні проблеми функціонування й детермінанти інноваційного механізму регіонального розвитку / М.В. Шарко, Г.О.Копосов // Регіональна економіка. – 2005. – №1. – С. 14-23.
8. Светуньков И.С. Самообучающая модель краткосрочного прогнозирования социально-экономической динамики [Електроний ресурс] – Режим доступу: http://ivan.svetunkov.ru/science/files/correction.pdf
9. Піскунова О. В. Застосування системних характеристик у моделюванні динаміки основних економічних показників функціонування малого підприємства / О. В. Піскунова О. В. // Бізнес-інформ. – 2011. – №5 – Т.1 – С. 99 – 102.
10. Войнаренко М.П. Формування системи попередження, прогнозування і подолання банкрутства промислових підприємств / М.П. Войнаренко, І.В. Троц // Економіка: реалії часу. – 2015. – № 4 (20). – С. 272–278. – [Електронний ресурс]. – Режим доступу: http://economics.opu.ua/files/archive/2015/n4.html.
11. Садовникова Н.А. Анализ временных рядов и прогнозирование / Н.А. Садовникова, Р.А. Шмойлова – М.: МФТУ, Синергия. 2016. – 152 с.
12. Зайцева О.І. Шляхи попередження ризиків в управлінні виробничим потенціалом підприємства // Вісник Хмельницького національного університету. – Серія «Економічні науки». – 2016, № 5, Том 2. – С. 39-43.

2.4. MARKETING ASPECTS OF INDUSTRIAL DEVELOPMENT

OLENA LEPOKHINA
D.Sc. (Finance), Professor,
Head of Department of Marketing,
International University of Business and Law,
Kherson, Ukraine

The use of various types of marketing in geographically industry development is necessary for the effective management of the region. This requires the development of principles, provisions and necessary parameters for the effective interaction of various subjects of management.

The decline in production in the industry is due to general economic reasons. The rates of decline in mechanical engineering are higher compared with other leading industries. In addition to general economic reasons for the decline in production at the present stage, industry-specific reasons are added. In European countries, there are such tools to stimulate regional industrial development.

I. The main instrument of regional policy is always an investment or development program, a multi-year program developed in accordance with the logic of strategic planning. These are agreements between different state bodies that participate in general financing and each of which agrees to make a certain contribution to the implementation of various types of regional development programs.

II. At a more general level, it is worth noting that in many countries (even if imbalances between regions are not significant), the need to optimize and properly use public investment determines the need for better coordination and synergy between investments. Investments are carried out at the expense of different sources of financing by all participants of the development process (state, regional and local authorities) in a certain territory. This is a form of planning and coordinating regional development.

III. At the same time, there are other approaches to solving regional problems. In most countries, the volume of financial assistance for national programs depends on certain problems (economic, social, territorial) in some regions compared to the others. Examples of such programs can be seen in the countries of Scandinavia, Great Britain, France, the Netherlands, Germany, Croatia, the Czech Republic, Bulgaria and the like. In some countries, special programs are adopted to support specific regions ("special territorial programs") for example, mountain or island regions in

Croatia, sparsely populated regions in Scandinavia and others [2].Methodical tools for managing sustainable socio-economic development of the regions of Ukraine Koritko T.Yu. proposes to consider as an integral assessment of the level of potential of sustainable regional development The problem of socio-economic development of the regions of Ukraine has become extremely acute in recent years. The consequences of the financial and economic crisis, the imbalances in the potential capacities of the regions, the transformation processes that took place in Ukraine, led to changes in all parameters of socio-economic development.

"Changes in the economy, which were accompanied by a reduction in industrial production, a drop in the standard of living of a significant part of the population, a critical decrease in the efficiency of the national economy, affected the entire economic space and the economic systems of the regions. Numerous destabilizing factors of development have been formed in the regions. Instability has become a characteristic feature of their condition. The study of the socio-economic potential of industries is one of the basic problems of state development. The determining factor in this process is to identify the factors and study the conditions for improving the efficiency of the formation and use of the existing socio-economic potential, identifying promising ways of its development, based on modern market mechanisms, regional policies and government regulation processes. The following local potentials are distinguished in the composition of the socio-economic potential of an industrial region.

1) by types of economic resources: natural resource potential; labor potential;

2) by field of activity: entrepreneurial potential; production capacity; financial potential; economic potential; social development potential; investment potential; innovation potential;

3) by the areas of use: foreign economic potential; domestic economic potential "[2].

In determining the necessary parameters for the effective interaction of various subjects of management, their activities are evaluated. In assessing the development of a region, the quantitative and qualitative indicators of the socio-economic system are compared with the values necessary for the sustainable functioning of the region. The implementation of the assessment of the socio-economic potential of sustainable regional development goes through certain phases. The conclusion about the sustainable or unsustainable development of the socio-economic regional system should be made on the basis of an analysis of all aspects, prospects for development or existence. In this case, as evaluation criteria, it is advisable to determine the degree of use of the socio-economic potential of

sustainable regional development. The selection of assessment indicators is one of the most crucial stages in the process of assessing the socio-economic potential for the sustainable development of a regional system. This assessment of the functioning of the regional system is carried out to develop the necessary proposals and activities aimed at increasing the potential of the region. For territorial and sectorial management, it is proposed to analyze three levels: micro, meso) with three sublevels: municipal, regional, district) and macro. At each level (sub-level), territorial and sectorial aspects of management are highlighted. The following types of marketing are used as basic tools: territorial marketing, industry marketing, and investment marketing. For the effective integration of marketing identified "points of contact" of various marketing tools. At each level (sublevel) of management, using the methods of territorial and branch marketing, the territorial and branch competitive positions of the corresponding management objects are formed, evaluated and analyzed. A quantitative assessment of the qualitative levels of the socio-economic potential of sustainable regional development has been proposed as follows.

The first level is (90–100) absolute stability, the region is in a state of absolute equilibrium for all components and, accordingly, to all assessment criteria. The second level is (75–89) relative stability, the region is quite successful, but there are difficulties that are being overcome, as adaptation mechanisms work.

The third level is conditional stability, which includes:

- sublevel A – (50–74) “permissible instability” in the presence of chronic violations of the most important parameters of individual functional potentials;
- sublevel B – (25–49) “unacceptable instability” in the presence of chronic disturbances of most parameters of all functional potentials;
- sublevel B – (0-24) “crisis”, when the parameters of all components reached critical values.

Each level (sublevel) of management includes 5 stages. At the first stage of management, the processes of territorial and industry marketing are implemented to determine and evaluate the corresponding competitive positions. At the second stage, a PEST analysis of environmental factors is carried out, and investment proposals are being developed for territorial and sectorial development. At the third stage the complex of investment marketing is formed. Its main goal is to search for investors. At the fourth stage, the investment proposals on the basis of the official application of investors are finalized to the level of investment projects, the corresponding agreements are concluded with them. At the fifth stage of the operation of the management system, standard procedures for monitoring the

implementation of investment projects and programs are carried out. The analysis of the causes of deviations, the adjustment of program documents aimed at coordinating the interaction of all elements of the control system. The fifth stage ends with the control of management efficiency. The cycles of functioning are repeated. The final integral assessment of the level of socio-economic potential of sustainable regional development is carried out on the basis of the data obtained using the compliance scale and it is concluded that the level of functioning is qualitative.

The crisis has led to an increase in the number of financially unstable enterprises in the industry, this is explained not only by objective reasons, but also by the inability of management to effectively manage the enterprise, timely detect problems and take necessary measures to eliminate threatening influences from the external environment. The considered approaches to assessing the socio-economic development of the region made it possible to formulate a methodical approach that will allow directing efforts towards achieving the desired production, financial and economic results, which will result in achieving sustainable development of socio-economic potential in the future" [4,5].

"The leading role in ensuring the socio-economic development of Ukraine belongs to industry. Industrial enterprises are the basic elements of many vital areas of the state. In particular, such: in the economic it is the basis of value formation; in the budget it is sources of filling; in the scientific and educational – development levers; in the social it is the place of realization of human capabilities and the provision of means of subsistence; in tax it is sources of income; in financial it is money multipliers [3]. An analysis of the development of the machine-building industry in recent years shows that it has been unable to withstand the financial and economic crisis. The financial consequences of the crisis for domestic machine-building enterprises are manifested in the growth of debts and inability to carry out financial support for production and business activities, a lack of financial resources and the growth of overdue payables, a decline in sales, and the like. General schemes of tools (instruments) of macro- and micropolitics, which were developed by H. Armstrong and D. Taylor, based on European practice, are shown in Fig. 1 and fig. 2 [1, p. 97-98]. Macro and micro tools are used by both central governments and regional administrations, local governments. Accordingly, the first is largely applied by the center, the second by the regional administrations. This instrumental orientation does not at all exclude that the center for the implementation of its tasks will influence specific objects, and the regional authorities will apply tax, credit, price levers of influence over the entire economy of the region.

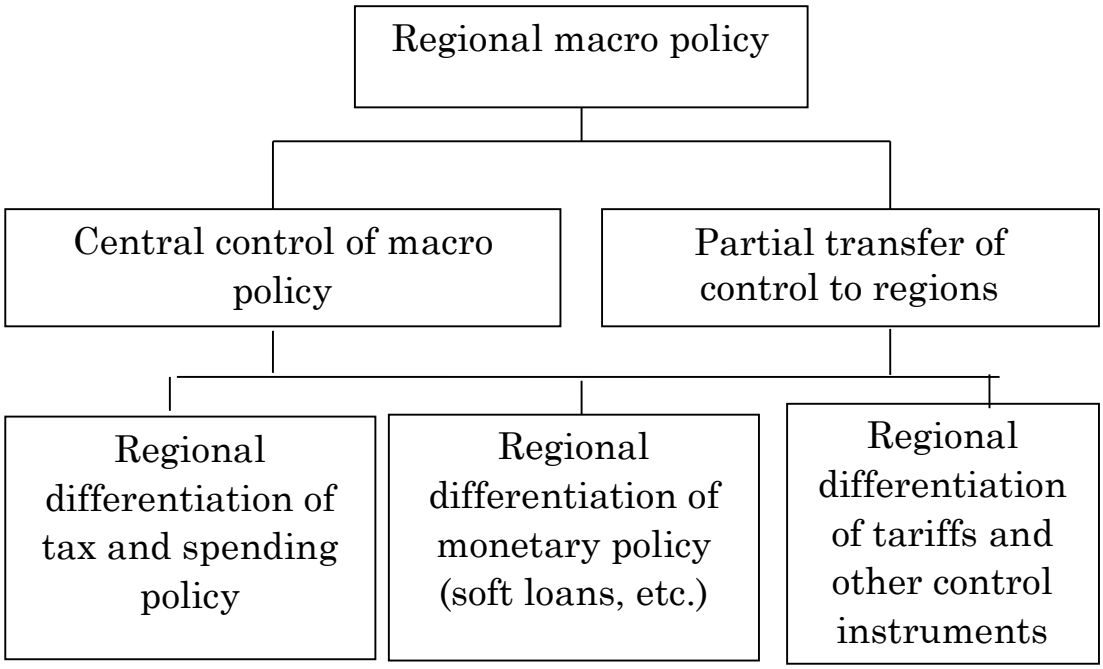


Fig. 1. Means of regional macropolicy

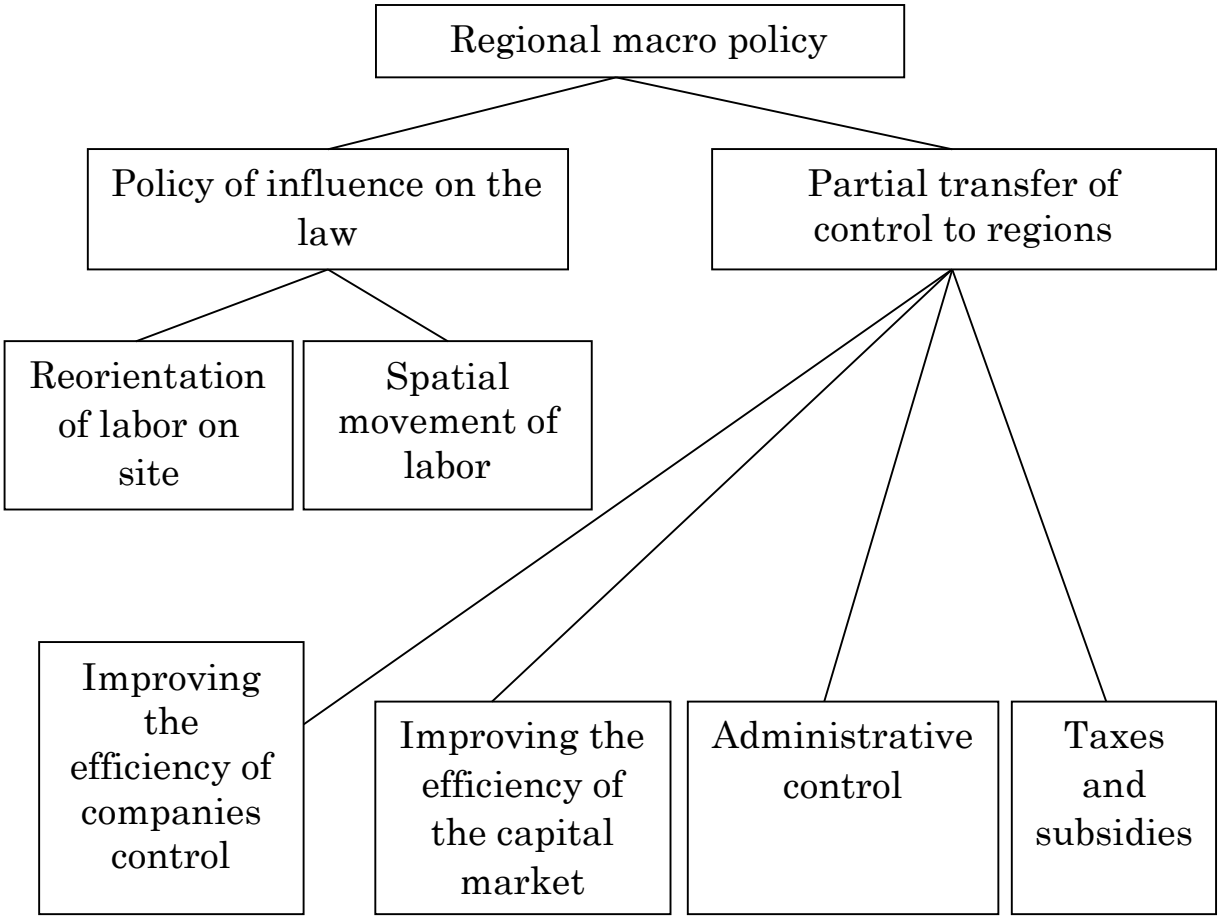


Fig. 2. Means of regional micropolicy

The mechanism for managing the development of the industry provides for organizational regulatory tools, that is, a set of technical, organizational and economic means, methods, techniques, guidelines (recommendations), modeling of economic processes, legislation, regulations, standards, and the like. The systematic approach to the development and implementation of tools can be used in improving management at all levels of management. The effectiveness of the use of tools includes the mechanisms of the micro level, meso level, macro level, method (global). Strategic planning and forecasting occupies a special place among modern mechanisms of regulation of regional socio-economic development. They are carried out on the basis of a regression analysis of retrospective and justification of promising trends in the development of the region, taking into account the latest world achievements and accumulated experience.

Table 1

Regional profile of the partial characteristics of the provision of the main types of agricultural machinery * pieces

Region (oblast)	Tractor, X_1	Freight and cargo-passenger cars X_2	PlowsX_3	CultivatorsX_4	HarrowsX_5	SeedersX_6
Vinnytsia oblast	9686	6257	3782	4892	22243	4644
Volyn oblast	2217	1611	754	821	1301	749
Dnipropetrovsk oblast	9599	5576	3829	6337	12053	5596
Zhytomyr oblast	3124	2217	1058	1176	3625	1264
Zakarpattia oblast	412	160	133	78	120	111
Zaporizhzhia oblast	8160	4811	3392	5620	9566	5511
Ivano-Frankivsk oblast	1664	1133	502	544	910	563
Kyiv oblast	8338	6626	3099	3530	10784	3497
Kirovohrad oblast	9216	5312	4421	6348	20738	5519
Lviv oblast	2252	1352	749	828	1283	777
Mykolaiv oblast	6945	3770	2780	5051	11291	4359
Odesa oblast я	8869	5292	3793	5445	12005	5107
Poltava oblast	10215	7047	3863	5703	15599	4481
Rivne oblast	1495	1064	451	464	1048	527
Sumy oblast	4992	3429	1537	1859	10427	2013
Ternopil oblast	2878	1946	996	1273	2499	1317
Kharkiv oblast	8841	5499	2901	4845	13396	4658
Kherson oblast	5859	2807	1980	3782	7567	3073
Khmelnytskyi oblast	4395	3255	1550	1812	6650	1816
Cherkasy oblast	6954	5166	2881	2953	13655	3192
Chernivtsi oblast	1188	567	325	417	753	399
Chernihiv oblast	5435	4239	1481	1785	5234	2002

The main task of the regression analysis is to determine the influence of factors on the effective indicator (in absolute terms). For this, it is necessary to select and substantiate an interconnection equation that corresponds to the nature of the analytical stochastic dependence between the studied characteristics.

The regression equation shows how, on average, the resultant attribute (Vx) changes under the influence of a change in factor characters (Xi). In general, the regression equation can be represented as follows:

$$Yx = f(x1, x2., Xn), \quad (1)$$

where Yx – dependent variable;

Xi – independent variables (factors).

Depending on the number of variables, different types of regression analysis are distinguished. If the variable is always the same, then there may be one or several variables. On this basis, two types of regression analysis are distinguished: paired (simple) regression analysis and regression analysis based on multiple regression, or multifactorial. Due to the nature of the relationship, linear and non-linear functions can be used in the regression analysis.

To determine the nature of the dependence and, accordingly, constructing a regression equation, it is advisable to use graphical or tabular methods. The procedure for developing a forecast regarding the use of analytical trend alignment consists of the following steps:

1) the choice of the shape of the curve, which reflects the trend;

2) the definition of indicators that quantitatively characterize the trends of change;

3) assessment of the reliability of forecast calculations.

Since engineering provides technical means of agricultural production, then as a dependent variable of the regression model, we take the value of gross agricultural output, which will indirectly display benchmarks of the strategic development of agricultural engineering. Let us determine the most important factors influencing the change in regional gross agricultural output using the correlation matrix. According to the results of calculations. This shows that by 97% it is possible to assert that the variation of regional gross agricultural output depends on the indicators of provision with basic types of agricultural equipment. And other factors contribute to the variation of the other 3% of gross agricultural output.

After analyzing the marketing aspects of sectoral development, you can make conclusion that essential factors for sectoral economic growth should be: implementation of research and development, introduction of innovations that will contribute to the development and competitiveness of both the regions and the state as a whole. Activities in the direction of the development of scientific and technical potential need to be implemented in regions that have experience in creating knowledge-intensive and high-tech products and technologies. Marketing regulates a complex network of relationships and interactions of participants in the innovation process. The marketing aspects of the innovation policy of the region are in many respects capable of determining the economic interest of economic entities in introducing fundamentally new technologies. An equally important task of the regional sectoral economic policy is to increase the capacity of the management personnel of central and local executive bodies and local self-government bodies regarding programming, monitoring and financial control of sectoral development programs.

References

1. Иванов В.Н., Иванов А.В., Доронин А.О. Управленческая парадигма XXI века / В.Н.Иванов,А.В. Иванов, А.О Доронин.: Учебное пособие для вузов. – Т. 1. – М,: МГИУ, 2002. – 180 с.

2. Куйбіда В.Регіональна політика: правове регулювання. Світовий та український досвід /Василь Куйбіда, Анатолій Ткачук, Таня Забуковець-Ковачич. – К.: Леста, 2010. – 224 с.

3. Пономаренко В. С. Стратегія розвитку підприємства в умовах кризи: Монографія / В. С. Пономаренко, О. М. Тридід, М. О. Кизим. – Х.: ВД "Інжек", 2003. – 328 с.

4. Черномазюк А. Г Сучасні тенденції розвитку вітчизняного машинобудування та його ресурсні детермінанти / А. Г Черномазюк, В. В.Стадник // Вісник Запорізького національного університету, 2010. – №2(6). – С. 91-99.

5. Зайцева О.І., Жосан Г.В. Впровадження соціально-етичного маркетингу в систему адаптивного управління підприємствами в умовах усвідомленого споживання // Науковий вісник ужгородського університету. – Серія «Економіка». – 2018. – Вип. 1(51). – С. 74-78.

2.5. FEATURES OF COMMUNICATION TOOL AS A MEANS OF STRATEGIC ADAPTATION OF THE ENTERPRISE

ALONA SOFIIENKO
PhD in Economics, Associate Professor,
Department of Management and Marketing,
Kherson National Technical University

OLENA VOSKRESENSKA
PhD in Economics, Associate Professor,
Department of Management and Marketing,
Kherson National Technical University

VICTORIA BETINA
Postgraduate,
Department of Management and Marketing,
Kherson National Technical University

The progressive development of interactive technologies has the greatest impact on the communication sub-mix of the marketing complex of modern producers of goods and services. The diversification of possible spheres of marketing influence on sellers and end-users of products requires from modern enterprises of different fields of business to study not only the structure and market conditions of commodity markets, but also the market of tools of advertising and communication influence not only on consumers, but also on the relevant commodity markets. This market is special because it is characterized by a costly supply, and therefore requires special methods and approaches to operate on it. He needs to study the addressees of advertising and communication impact, on the one hand, and the characteristics of consumers advertising and communication product, on the other hand. Under such conditions, the study of issues related to the identification of the features and problems of the functioning of the advertising and communications market requires in-depth study.

Trends in the advertising and communications market of Ukraine and the world are being explored by many scholars and practitioners, and the interest in this market is growing every year. The authors of the paper [1] studied trends and shaped the forecast of progressive development of national and world advertising markets against the backdrop of globalization of world markets. In article [2] the features of the influence of

information and communication technologies as "information capital" on the global space of information flows are considered. The authors of the articles [3; 17, p.345] consider the disadvantages and advantages of marketing communications tools, their efficiency and factors in their selection when developing a company's promotion complex in certain areas of business. A detailed study of the dynamics and components of the domestic advertising market and, separately, the direct marketing market for the period 2007-2015, as well as the market of marketing services for the period 2007-2016 gg. [4]. The article [5] is devoted to the study of the conditions and efficiency of using various tools of the communication complex taking into account the peculiarities and problems of the functioning of domestic agro-industrial enterprises. The authors of the article [16] found that effective influence of the marketing communications policy of the company on the behavior of potential consumers is possible with the use of integrated marketing communications. It is proved that under the conditions of developed market relations, goods or services become highly profitable mainly due to the actions of marketing communications that create their reputation. It has been established that under such conditions, domestic companies should create individual marketing programs using integrated marketing communications to promote products, taking into account the requirements of modern consumers, which will greatly increase their competitiveness.

The more highly competitive the business is, the more dynamic is consumer loyalty to industry products (mobile communications, e-commerce). Such a characteristic feature of a certain modern age segment of consumers requires further research and greater detail of marketing communications, especially when planning. This necessitates further improvement of the well-known distribution of consumer and seller interaction at the ATL and BTL level. Priority of each of these levels remains for discussion, therefore, it is necessary to study the features and determine the priorities of the development of the Ukrainian advertising and communication market.

An expert assessment of the volumes and structure of the advertising and communications market of Ukraine for the period 2013-2017 took place, traditionally, with its division into two parts, one of which is the media market and the second non-market market [6]. The media market is the largest part, with a growth of 42.8% and 6 percentage points respectively. The small market gradually lost its market share by reducing its volumes by 25.4% in 2016 and by 11.7% in 2017 compared to 2013. The assessment of individual segments of these parts of the market provided an opportunity to state:

- regarding the media market: the unstable dynamics of the specific weight of segments "TV advertising", "radio advertising", "UN Media"; The highest share is characterized by the high-value segment of "TV advertising" (from 43.4% to 45.1%); the share of the rather cheap segment of the "press" decreased considerably, namely from 21.9% to 8.3%; the share of the segment "digital advertising" has considerably increased (from 18.1% to 26.7%); the most stable is the segment "advertising in cinemas", although it remains among the smallest segments along with the segment "radio advertising";
- regarding the market of marketing services: steady growth of the largest segment of "trade marketing" from 33% to 43.6%; consistently significant reduction of the share of the smallest segment of "non-standard communications" from 10.1% to 3.2%; the stability of the share of direct & loyalty marketing and consumer marketing segments.

Consumers are more loyal to the principle of "I see, I hear and then buy". That is, consumer loyalty is changing, if the manufacturer prolongs the time of proof and perception of the communication information. The less it is necessary to "strain" for the associative work of the consumer's brain for the purpose of a multivariate representation of the proposed product or service, the more loyal is the consumer's attitude. A multi-hour understanding of advertising with the need and purchase of goods is very tedious to the modern consumer.

Trade marketing solves the problem of ensuring effective interaction between the subjects of the marketing channel from the manufacturer to the buyer through the use of certain tools (discounts, bonuses, awards for sales staff, contests, promotions). Some call this marketing semi-marketing, because it specializes in the process of buying, and not the consumer, and therefore is an instrument for switching from the 4P model to the 7P model [7]. This segment of the advertising and communications market of Ukraine took the leading position during the period under review and in 2017 it had a share of 43.6%.

The global market is characterized by a significant leadership of the Direct marketing and Loyalty marketing segment, even in comparison with the advertising segment, which enables the dominance of this segment and the Ukrainian advertising and communications market. This requires the improvement of the communication interaction of the manufacturer with the indirect consumer (distribution), the direct existing or new consumer and, especially, in the markets of commodities of mass demand. However, in the market of marketing services of the advertising and communications market of Ukraine in 2017, the sector of consumer marketing did not occupy the largest share. According to the author [5], the level of access to the

Internet among adult Ukrainians has reached 60%. Such a characteristic of potential recipients of advertising and communication influence not only the possibilities of domestic enterprises offering advertising and communication products, but also restrains the development of a market-specific segment "digital advertising". This indicator lags behind the similar indicator of adult inhabitants of Europe by almost 20 percentage points. Taking into account the data of tab. 1 it can be concluded that domestic enterprises still have a significant potential for unused opportunities, the realization of which requires

Table 1

Comparison of the level of use of marketing communication tools by enterprises*

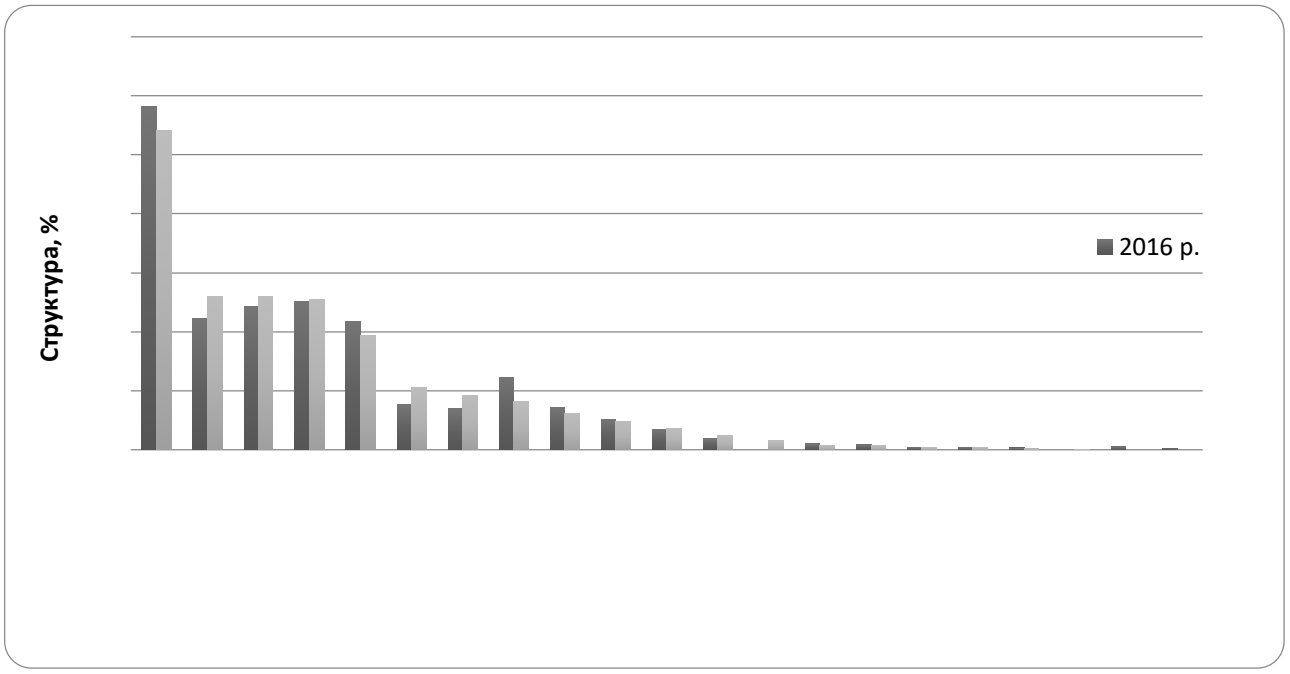
Impact communication tools	Share of enterprises-users, %		
	in Ukraine	in Europe	in developed countries
1. Internet access	91	97	no information available
2. Own official website	31	75	90
3. Social networks	12	36	60
4. Blogs and microblogs	4	13	30

** Made by the authors according to [5].*

The smaller the gap between the levels of access of consumers and manufacturers to the market segment of "digital advertising", the more effective will be the implementation of the communication product both in the market of a certain country and on the world market.

Branding is a significant influence on the effectiveness of interactive communications, which today is regarded by scientists as brand communication [8]. The author believes that building branding communications should take into account that a certain part of the target audience agrees to pay more for goods and services that are sold under well-known brands. The brand itself is an integrative element of the system of marketing communications, since it combines the purpose (the formation of needs), the process (goal realization) and the result (the formation of consumer loyalty) [9, p.98]. The brand is known for long-term communication with consumers and acquires certain characteristics that are the subject of evaluation by renowned global research organizations. For example, in the Forbes magazine's rating of the most expensive brands of the world in 2016, experts took into account the value of each brand and profit of companies over the past three years. In the first place, the brand Apple, the second and third brands are Google and Microsoft, respectively. Coca-Cola, Facebook, Toyota, IBM, and others [8, p.100] also play a leading role in the ranking. According to the annual rating of MPP Consulting

«BelBrand 2016-TOP 100 Ukrainian brands» and «BelBrand 2017-TOP 100 Ukrainian brands», which was made at the cost of Ukrainian brands, there were some changes in the positioning of brands in the domestic product market and services market [10, 11]. The brand value was determined taking into account the coefficients (investment, geographic, technological, competitive) of the composite financial index and the coefficient of the unique brand identifier. In fig. 2 presents the structure of the market of Ukrainian brands in the dynamics. The leader was non-alcoholic products, although there was a decrease in the cost of its brands by 4 percent. The decrease was observed in the following sectors: confectionery (by 8.3%), financial services (by 31.5%), dairy products (by 12.1%), fuel and energy (by 4.5%), tourism (by 9.4%), jewelery (by 11.4%), restaurant and hotel services (by 5.8%), chemical products (by 15.2%), insurance (by 30.7%). The largest decrease of the indicator was found in the sectors whose products (services) are characterized by passive demand.



** Made by the authors according to [10, 11]*

Fig. 1. The structure of the Ukrainian brands market

The result of the development of a competitive environment among the numerous retail trade objects is the current growing trend of retail chains with their own private label (private label). This is explained by the fact that these networks communicate directly with consumers, study their preferences, change them, seasonal peculiarities of demand, and, therefore, are able to respond quickly to changes [12]. The total sales of private trademarks in the world exceeded 380 billion euros. According to

INFOLine, their share in global trade by 2020 may increase from 22% to 30% [13]. A private trademark does not require large-scale advertising, promotions, marketing research, and therefore it is less costly and therefore increases the efficiency of marketing activities of the trading company. Various discounts and special offers from various different occasions have taught the whole generation of consumers to make purchases mainly during the period of sales. In addition, the reduction by many manufacturers of advertising costs to 30% of the budget for the promotion of goods has led to a weakening of their venture capital, and geometrically progressive expansion of families and the limits of trade marks their individuality [14]. The offer of a private trademark (inexpensive commodities of mass demand) finds its consumers in the low-priced and mid-market segment of the market. Less than the competitors-manufacturers price with sufficient quality of goods is the main tool in the market struggle. This limits the survival options of small and medium-sized commodity producers to a variant of narrowing the range to one product for one target consumer in the untapped segment of the market [12]. Therefore, the assessment of the brand and its role in the effectiveness of marketing activities of the company acquired a new tint. Namely, participation in the brand competition some kind of a private trademark, which is mainly "umbrella brand". That is, any brand may become a brand if the conversion process is expedient, taking into account its cost, position, priority and efficiency. According to the ***Forbes*** magazine, the signing by Ukraine of an association agreement with the European Union and the parties also touched upon the issue of the protection of trademark rights. The prohibition on the use of certain geographical names in trademarks requires some action from many Ukrainian agricultural and food industry producers, where the place of origin of the goods is indicated in the trademark. Such changes require some time, finance, intellectual effort, marketing research, and so on. With the understanding of this, a ten-year transitional period for alcohol producers and a seven-year transition period for cheese producers [15] were passed by law. In the conditions of open access to the electronic database of applications for trademarks and commodity producers, it will be necessary to use the "umbrella" brand strategy for the formation or maintenance of the image. The image of an enterprise of any branch is formed by means of a certain advertisement, which should take into account how much the name of the enterprise (which will be recognized by the manufacturer) and the name of the product or trademark is different. In this regard, there is even a grouping of enterprises, which we can present in the form (Fig. 2).

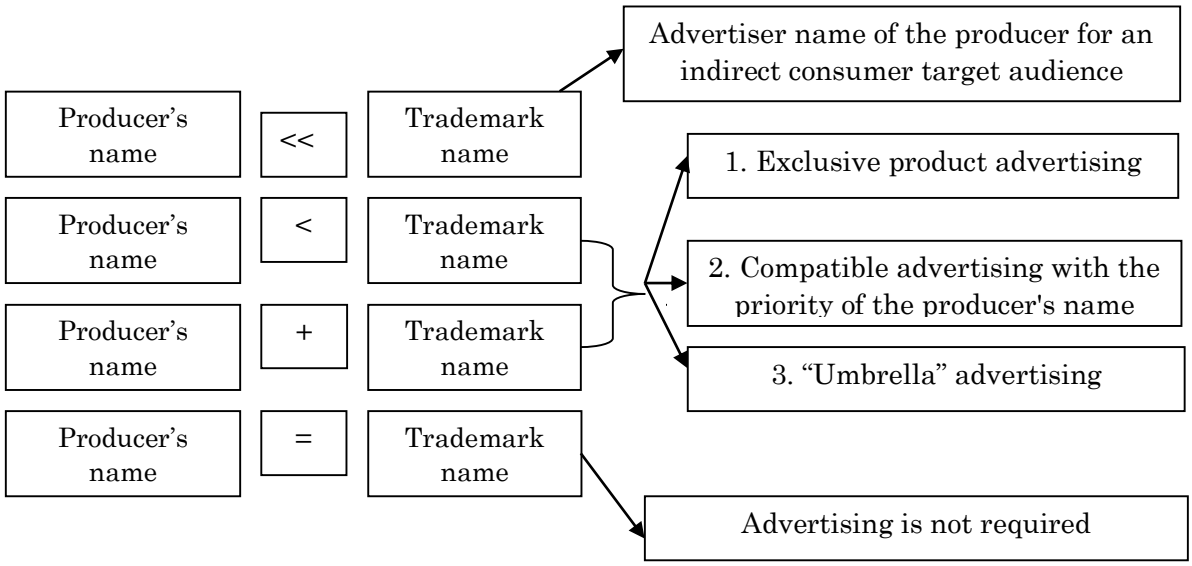


Fig. 2 Variants of grouping the names of manufacturers with trademarks of goods for determining the priorities in advertising communications (own development)

Such grouping options will allow you to decide on strategic decisions about the expediency and the period of use of separate tools of the communication sub-mix of the enterprise marketing complex.

Today's contenders for the production of goods under the recycled trademark are applicants for the development of new strategic decisions on product promotion on the market with the need to explain this to consumers. This requires additional financial costs and time consuming to identify known traders under new trademarks. It is even more difficult to forecast the effectiveness of marketing in these circumstances. Therefore, in our opinion, commodity producers are better to use "umbrella" vertical or horizontal integration to achieve the effect of scale in marketing activities. So you can save on tracking research and advertising, which in turn will enable you to establish a competitive price in the Ukrainian "mature" market.

References

1. Тенденції розвитку світового та українського рекламних ринків / Н. І. Горбаль, С. Б. Романишин // Вісник Національного університету "Львівська політехніка". Менеджмент та підприємництво в Україні: етапи становлення і проблеми розвитку. – 2013. – № 778. – С. 147-151. – Режим доступу: http://nbuv.gov.ua/UJRN/VNULPM_2013_778_23

2. Поплавський М. Трансформація комунікаційних технологій в інформаційному просторі / М. Поплавський // Український інформаційний простір: Науковий журнал Інституту журналістики і міжнародних відносин Київського національного університету культури і мистецтв / Гол. редактор М. С. Тимошик. – Число 2. – К.: КНУКіМ. – 2014. – С. 10 – 15. – Режим доступу: lhttp://ijimv.knukim.edu.ua/zbirnyk/2_1/1-Poplavskyy.pdf

3. Хамініч С. Ю. Маркетингова комунікаційна політика як складова маркетингової діяльності підприємств / С. Ю. Хамініч, К. В. Мартиросова, П. М. Сокол // Економічний простір. – 2016. – № 107. – С. 250-259. – Режим доступу: http://nbuv.gov.ua/UJRN/ecpros_2016_107_26.

4. Дослідження сучасного стану рекламного ринку України / Поклонська Л. С. // Технологический аудит и резервы производства. – 2016. — № 4/5(30). – С. 4 – 13. – Режим доступу : http://nbuv.gov.ua/UJRN/Tatrv_2016_4%285%29__2

5. Кузик О.В. Сучасні виклики маркетингової комунікаційної політики / О.В. Кузик // Науковий вісник НАТУ України. Серія економічна. – 2017. –Випуск 27. – №2. – С. 116-120. – Режим доступу: http://nltu.edu.ua/nv/Archive/2017/27_2/27.pdf

6. Об'єм рекламно-комунікаційного ринку України 2017 та прогноз об'ємів ринку 2018. Експертна оцінка Всеукраїнської рекламної коаліції. – [Електронний ресурс]. – Режим доступу: http://vrk.org.ua/ad-market/

7. Чем же занимается трейд маркетолог? – [Електронний ресурс]. – Режим доступу: http://www.marketch.ru/marketing_marginalia/what-is-involved-in-trade-marketing

8. Яненко Я. Сучасні бренд-комунікації: соціалізаційний аспект. / Яненко Я. // Прикладні комунікаційні технології. Образ. – 2016. – Випуск 4 (22). – Режим доступу: www.visnyk-econom.uzhnu.uz.ua/archive/6_2.../24.pd

9. Мельничук Л. С. Бренд та його роль у процесі організації ефективних маркетингових комунікацій / Л. С. Мельничук // Науковий вісник Ужгородського національного університету. – 2016. – Випуск 6. – частина 2. – С.96-98. – Режим доступу: http://www.visnyk-econom.uzhnu.uz.ua/archive/6_2_2016ua/24.pdf

10. MPP Consulting BelBrand 2016 – TOP100 Belarusian Brands. – [Електронний ресурс]. – Режим доступу: http://mppconsulting.com.ua/ukrbrand/ukrbrand2016.pdf

11. MPP Consulting BelBrand 2017 – TOP100 Belarusian Brands. – [Електронний ресурс]. – Режим доступу: http://mppconsulting.com.ua/ukrbrand/ belbrand2017.pdf

12. Privat Label: Точка отсчета. Заголовок з екрану. – Електронний ресурс]. – Режим доступу: http://www.gbs.com.ua/ru/company/articles/22.html

13. Власна торгова марка роздрібного торговельного підприємства. Заголовок з екрану. [Електронний ресурс]. – Режим доступу: http://studme.com.ua/18860313/ marketing/sobstvennaya_torgovaya_marka_roznichnogo_torgovogo_predpriyatiya.htm

14. Кривешко О.В. Торгова марка як стратегічна маркетингова конкурентна перевага підприємства. Заголовок з екрану. – [Електронний ресурс]. – Режим доступу: http://business-inform.net/pdf/2011/11_0/169_171.pdf

15. Як позначиться Угода про асоціацію з ЄС на українських торгових марках. Заголовок з екрану. – [Електронний ресурс]. – Режим доступу: http://forbes.ua/ua/opinions/1376869-yak-poznachitsya-ugoda-pro-asociaciyu-z-es-na-ukrayinskih-torgovih-markah.

16. Воскресенська О.Є. Комунікативна політика як складова комплексу маркетингу / Маркетингове реагування на глобалізаційні виклики: колективна монографія // під ред. д.е.н., професора Г.Г. Савіної. – Херсон: ПП Вишемирський В.С., 2015. – С. 179-195.

17. Зайцева Е.И., Фурсов А.Н. Event-маркетинг в системе интегрированных маркетинговых коммуникаций предприятия // Молодежь в науке и предпринимательстве: сборник научных статей VII междунар. форума молодых ученых / под науч. ред. к. э. н. доц. А. П. Бобовича. – Гомель: учреждение образования «Белорусский ТЄУПК», 2018. – С.343-346.

Розділ 3.

MANAGEMENT OF SOCIO-CULTURAL ACTIVITIES AND MARKETING TOOLS OF FASHION BUSINESS AND BEATY INDASTRY

3.1. AGREE IN THE CHOICE OF MARKET COMMUNICATIONS BY ENTERPRISES OF THE INDUSTRY OF BEAUTY

VIKTORIYA SHUKLINA
Ph.D. (Economics), Associate Professor,
Department of Management and Marketing,
Kherson National Technical University

OLENA SHEVCHENKO, VOLODYMYR ZABORA
Lecturers, Department of Fashion Busines,s
Kyiv National University culture and arts

One of the most important tendencies of the modern economic development of Ukraine is the complex multilevel transformation of the economic system with the growing role of the service sector. It is transformed into a prestigious link that promotes employment, competitiveness of products and the state, economic growth in line with the globalization challenges of the world economic system. Inadequate regulatory regulation, outdated material and technical base, inadequate subordination to changing conditions in the sectoral markets, low motivation lead to the migration of specialists in all spheres of service provision, complicating their development. Despite the influence of negative factors and the economic crisis, the Ukrainian market of services has a growing tendency with the least losses in hospitality, telecommunication, IT and everyday spheres.

The complex and controversial area of services is BEAUTY INDUSTRY of Ukraine, which requires detailed programs of different levels to overcome the lack of salon specialists, low professional level beginners, free functioning of the shadow market homeworkers, outflow of aesthetic cosmetology clients abroad, lack of standards for spa services and other. Formation and implementation of the strategy of transition of the Beauty Industry enterprises to the innovation-investment model of marketing will facilitate the activation of the provision of virtually all types of services, since there is a close relationship and interdependence between them. The application of a scientific approach to the choice of marketing communications will be able to realize significant prospects for their effective promotion on the market.

The problems of the marketing theory of services and aspects of marketing communications in the market of services were considered by

Western scholars: W. Arens, F. Kotler, R. Judd, E. Johnson, W. George, C. Lovelock, E. Gummesson, K. Gronrus, K. Bove, M. B. Bitner, C. Weinsberg, J. Traut, T. Levitt, R. Lusch, S. Vargot, D. Coe, L. Berry, V. Zeithel, P. Parasurman, J. Bernet, E. Langard, P. Eigley, J. Hicks and others. Marketing aspects of advancement in the market of services have already become the object of research for many Ukrainian scientists: A. Voichak, A. Sidorov, L. Romanenko, A. Ishchenko, M. Matveyev, V. Gerasimchuk, T. Obolenskaya, T. Lukianets, V. Malchenko, L. Shulgina, E. Roman, L. Tkachenko. Despite the fact that a rather wide interest in the sphere of marketing of services and, in particular, marketing communications has been revealed, a number of actual problems with their choice are not sufficiently disclosed in the scientific literature.

The purpose of this publication is to establish consistency in the choice of marketing communications by enterprises of the salon industry of various typical features. To achieve the purpose of the article, first of all, the content of the term "consistency" should be defined. In the economic dictionary [1] it is the provision of something conforming to something, unity with something; the establishment of conformity, the unity between something: the coordination of actions, the coordination of positions. Authors Korjagin S.V., Korjagin M.V. and others [2,4-5,7] considering the planned marketing complex draw attention to the need for the application of the principle of coherence, which requires a comparison of each element of the complex with other elements (quality product is the relevant advertising, packaging, service). Scientists Markina I.A., Taran-Lala O.M., Gunchenko M.V. determine that the tasks of enterprises should be directed, first of all, to the implementation of such a principle of controlling as coherence, which will facilitate the establishment of internal co-operative ties, the improvement of communication systems, and increase the level of quality management [3]. Kupchak P.M., Cherednikov O. A. pay attention that the coordination of functions and levels is a prerequisite for achieving the main goal of the management system. The group of authors [4,7,8-9] refers to the general principle that is inherent in all types of policies, the principle of conformity, as synonymous explanations indicate "coherence", which means the coherence of action between institutions, interested policy actors and consumers to achieve a common goal. I. P. Buleyeyv, N.Yu. Bryukhovetska, focus on the need to ensure the consistency of the communications system as a condition of compliance with the harmonized world requirements for its organization.

Most scholars determine the essence of the practical application of service marketing services [4,6,7-9] in the provision of services that must be oriented towards the consumer, on demand, on the continuous

alignment of production opportunities and advancement to market requirements [2-3,7-9]. Striy L.O. considering the role of marketing management notes that the enterprise management on the principles of marketing (including consistency) can maximize sales, ensure in the market conditions not only the survival, but also the prosperity of the enterprise services, should "offer the consumer not services but solutions to its problems"; to apply tactics and strategy of active adaptation of production of services to market requirements with simultaneously coordinated influence on the market through marketing coverage of all links in the chain of promotion to the consumer [5]. Butenko N.V. considers one of the main tactical tasks of marketing to create new services, harmonization of their properties with the needs of the market; while marketing of market segmentation provides the opportunity to find such means of communication, which are actually consistent with the target market and the strategy of the service company [7].

Thus, in the context of the presented study, consistency as a coherent property (consistency of opinion, consistency of choice) should be understood as the measure of the impact of the choice of specific marketing communications on the possibility of implementing a general strategy of promoting the salon industry of certain typical features in the market. In accordance with the above, the following task on the way to achieving the goal of the study is defined generalization of the theory of beauty salons classification, knowledge and understanding of which will be of practical benefit also for managers of the salon industry enterprises.

Beauty industry, salon business, beauty-business, centers of aesthetics, beauty and health, SPA-salons, beauty and wellness industry, beauty clinics, hairdressing salons, beauty laboratories, universal hairdressing salons, men's barber shops are far away incomplete list of names that are used in various spheres and at different levels where the language of the participants of the market of beauty or salon industry of Ukraine comes to mind. Consider the essence of the underlying enterprise, namely the concept of "beauty salon" [9]. The overwhelming majority of authors identify the beauty salon as an institution engaged in cosmetic services with the provision of relevant services [1.9-10]. The basis of cosmetic services at the same time is two factors, which are their main indicator: main (appearance), additional (health); they are directed exclusively on the appearance of man and cannot affect the body and human health. Due to the obsolete legislation that does not have time for the development of the industry, beauty salon workers face problems with a contract with the customer or in matters relating to the implementation of their activities under the law. The result of the service provided (even if

it is properly rendered) may not be in line with the customer's expectations, since the notion of beauty is exclusively subjective, and in order to achieve a certain result, the procedure takes time or a set of procedures is required. That is why, when concluding a contract for the cosmetic services, it is necessary to explain in detail all the peculiarities and to agree the expected result and possible risks, which should be written in the act, as confirmation of the provision of information to solve problems in the future.

According to the Classification of Economic Activities (NACE) of Ukraine, the Class 93 "Individual services" is separated by code 93.02.0 "Services of hairdressing salons and beauty salons", which combines these enterprises with a list of hairdressing services. Therefore, the list of basic services of the typical salon industry company is the following [18-9]: *massage* is a set of techniques of mechanical and reflex action on tissues and organs, both hands and special apparatuses through air, water or other environment; *manicure* is care of fingers, cleaning, polishing, nail polish; pedicure is care of the feet and toes (cleansing and polishing of nails, removal of corns); *hair dyeing* is a process in which a special dye is applied, which can change the natural color or shade; *eyelash extension* is a way to increase the amount of natural eyelashes and give them an attractive effect; *permanent makeup* is the introduction of a special pigment in the upper layers of the dermis to create a steady figure on the face to emphasize, highlight, correct, improve some facial features or simulate normal makeup; *haircut* is shortening of hair, the haircut process consists of methods, operations, sections, a certain style; coloring is coloring of hair with separate strands; hair removal is stripping of hair on separate skin areas; *kriolifting* is a procedure in the field of anti-aging skin care programs based on the effects of low temperatures; *mesotherapy* – is injection technique for rejuvenation and healing, peeling or exfoliation removal, exfoliation of the upper layer of the keratinous skin to improve the appearance; *solarium* is a specially equipped cabin for dosed exposure to ultraviolet lamps, that is, dosed tanning of the skin in order to improve its appearance; *shaving and cutting* of beards and mustaches and so on.

According to the classic definition, the hairdressing salon is an enterprise that provides services for the people for hair care (haircut, curling, hair styling, coloring, peeling and other types of work with dyes, shaving and cutting of beards and mustaches, etc.) equipped specially for this purpose indoors; which additionally provide such types of services: manicure, pedicure, cosmetologist, makeup artist and solarium. According to the current standards, depending on the range and quality of services provided, the hairdressers are the following types: hairdresser; hairdresser salon; hairdresser's suite. Beauty salon is a facility engaged in cosmetic

services for men and women; the same services are salons of hair and SPA, dealing mainly with the faces and bodies of people. Therefore, in the future under the study of beauty salons (as the enterprises of the salon industry) should be understood barbershops, beauty salons, spa salons, beauty centers, centers of aesthetics and beauty with the appropriate list of services [3,9].

Salon industry is a dynamic system in which beauty salons are divided into types, categories, classes by appropriate features, commonly accepted criteria, rather than abstract speeches or desires of owners. Classification means the relation of a particular institution to a certain class by a number of features. Customers of any beauty salon prefer to one or another salon, focusing in 34% of cases on emotions, and 66% on logic, convenience of location, advertising or advice of friends. Compliance with the criteria does not guarantee the high quality of service and its high result. By category, beauty salons can be:

1) "open" means for everyone; it is practically all available beauty salons, their client base is dynamic;

2) "closed" serves a certain category of people (employees of a large company, residents of a condominium or cottage village, tenants of the business center); the number of their clients is static.

The type of beauty salon is the most amorphous concept in the classification, because many beauty salons combine their activities with medical components, sports clubs, fitness centers and even from the cafe. The typology is based on several criteria, in particular on: the size of the premises, the volume of investments. The decisions of the owners are displayed both on the signs and on the format of the company itself from simply hairdressers, beauty salon to health complex, labs of beauty, which belong to different types of enterprises.

The beauty salon class directly depends on more important criteria: the amount of investments, the level of professionalism of employees, the class of equipment, interior, the attractiveness of the surrounding area, and others. There are no clear boundaries of the transition of one class to another. Increasingly there are adjacent classes (such as economy class with business class elements). Such a division focuses on beauty salons on a financial subgroup ranging from hairdressing in the distant area to the elite salon designed to serve highly-secured clients. On the Ukrainian beauty market there are 4 classes of salons depending on the offered services, location, pricing policy and brands of used means and equipment:

- econom (40-50% share) – average bill 80-200 UAH;
- odinary (25-30% share) – average bill 200-800 UAH;
- luxury (10-15% share) – average bill 1000-1500 UAH;

- VIP (10-15% share) – average bill over 2000 UAH.

The proposed classification has another version submitted by other authors [8,10], with the separation of three main classes: econom, business, luxury; with the allocation of five classes: econom, business, prestige, luxury, VIP.

The basic class of beauty salons for a set of services is represented by small beauty salons, in the assortment of which is a limited set of daily services provided, sometimes with small additions for residents of the surrounding areas, fast service. Most often in salons of this class serviced students, employees, workers, pensioners. Middle-class beauty salons provide an extensive assortment of services (including body care, massage, solarium) to a fairly high level; emphasis on an individual approach for each middle class customer; with a location on crowded streets and shopping and entertainment centers. This class more often includes beauty studios with a fairly high professional level of masters with regular clients with an individual visit schedule and service features. The highest class is represented by luxury beauty salons, which provide the maximum range of services that can be added and at the request of the client. In addition, the increased requirements for the quality of services, the availability of personal highly professional advisers, the ability to process individual style. Their location does not matter – clients of this level are willing to spend some time on the road in order to get the desired result; often customers do not choose salon, namely the wizard. Important is the interior of the cabin, the level of service and the availability of additional pleasant bonuses in the form of coffee, tea and other moments of attention. The most versatile configuration is a network of salons that can be represented by beauty salons of different classes.

The division into classes takes into account the appearance of the staff, qualifications of professionals, the proposed service and the download of beauty salon customers. At the same time, in the broad sense, the service is understood not only services such as tea, coffee, etc., but also the level of comfort that is appreciated throughout the cabin: in the waiting area, in offices, in work areas.

The corresponding client-oriented level of service is provided by the corresponding class of interior design, including the choice of furniture, thought-out engineering solutions, such as high-quality ventilation, temperature mode of air to create a comfortable atmosphere in each zone. Accordingly, price policy varies considerably: the luxury class provides for the highest prices, even for simple services, due to the maintenance of people of high standard of living, which emphasize the presence of the prestige of their social status. It should be understood that this

characteristic of the class of beauty salon is relative: one can make a mistake, categorizing exclusively for the prices of services; the exclusive level of prices in the VIP-salon does not always mean their "over-the-top", it's exclusive, that is, some services may be free.

Today's tendency of the national market of beauty salon services is sticking the class, matching the choice in everything: it's senseless to make an expensive design in an econom class salon, it will not add the necessary number of customers to justify such costs; pretending to be a prestigious class, it's unacceptable not to have branded clothes for the staff [8].

The combined characteristics of beauty salons in classes are presented in Table 1. This classification is appropriate to use as a tool for evaluating any beauty salon, in addition, if the need for restyling/reengineering own enterprise, to develop a program of crisis management, a marketing tool is needed for the analysis of the surrounding competitive environment in order to identify potential competitors and create their own original business project.

The list of characteristics can be expanded, in the context of this study it is proposed to add "marketing communications".

The most common definition of marketing communication is the following: it is one of the four elements of the marketing mix, which is an integrated set of communication tools that is used to send messages from the manufacturer or service provider to the target markets [4-6, 8-10, 11-12]. Marketing communication covers any activity of the salon industry, aimed at informing, persuading, reminding consumers and the market as a whole about their services and their activities. The necessity of functioning of the salon industry in the conditions of the overcrowded market, the rapidly changing economic situation, and diligence on the part of potential clients, persuades owners of beauty salons to constantly maintain consumer interest by using unique means of marketing communications within the framework of effective communication policy. Such conditions affect the beauty salons of all classes and types, but they have different levels of financial sustainability and different time to adapt to change. The peculiarity of developing the marketing communication strategy for beauty salons is the need to inform clients about the abolition of their offerings from similar ones on the market. When forming a complex of marketing communications should take into account the peculiarities of consumer behavior of the permanent and potential customers of each individual beauty salon, it is important to clearly identify the target audience. Selective advertising messages can affect the perception of services by different segments of the target audience. In this context, the use of marketing communications is a complex that targets both customers and professionals.

Table 1

Beauty salons Characteristics by classes

Клас / Characteristics	Econom	Business	Prestige	Luxury	VIP
Basic customers	Any	Middle managers; housewives	Top managers, wealthyhousewives	Elite	Bohemia
Service level	Smiling staff	Minimum standard of service	Maximum standard of service	Individual service. Customer's dossier	Closed salon with VIP service
Relative price level	Low	Moderate	Middle	High	Exclusive
Service package	Only the most in demand	Standard	Standard+ Exclusive	Preferably Exclusive	Any preferences
Level of qualification of specialists	Specialists trainees	Experienced specialists	Contest winners	«Stars»	«Maestro»
Staff Appearance	Tidy	Standard-inexpensive uniform	Standart corporate style	Individual brand identity	Expensive identity
Parking	No	Spontaneous near the salon	Places nearby	Own, video surveillance	Private closed with a service system
Facade	Do not scare the client	Option of inexpensive designer	Stylish design	Elegant design	A little noticeable, expensive signboard on an elite building
Main element of outdoor advertising	Prices	Services and brand names	Services and quality	Status and brand	No
Interior design	Clean, compact	Interiors for services	Nice, comfortable	Club atmosphere	Exclusive original
Investment package	Starts from 300 $/м^2	Starts from 600 $/м^2	Starts from 900 $/м^2	Starts from 1500 $/м^2	More than 1500 $/м^2
Average annual load, %	60-80	50-60	30-50	10-30	Actual demand

Integrated marketing communications is the concept of sharing all types of communications, based on the goals of the salon industry, providing a synergy effect and achieving efficiency that cannot be achieved through the use of certain types of marketing communications [10]. It is

useless to spend money on passive advertising such as mock-ups and standard custom-made articles in the press. The chance that a potential client will see the information at the right time is small, against the high cost of newspaper and magazine advertising, the cost of which is a loss. Instead, creative couture business cards are distributed at every opportunity, write masters to participate in professional contests, participate in citywide promotions as a partner or sponsor. Effective advertising works much more efficiently for the salon industry and can significantly expand your customer base and enhance the cognition of the beauty salon [3-4]. Internet projects will be effective on the condition of daily control, the elimination of spam on the pages, continuous updating of information, announcements of the activities being carried out. The results are a description of beauty services, with photos and customer reviews; communication in city forums and third-party sites. System of bonuses or accumulative discount cards is expedient to use in order to increase customer loyalty. Informative advertising is needed to inform clients about new services or about the feature of the renewed salon service for the formation of primary demand.

To activate the "female radio" as a tool for improving the cognition of the beauty salon for a limited period, you can run an advertising action in the style of Take a friend to the manicure and get the care of eyebrows as a gift". To inform clients about the action, there is enough small banner or stretch at the entrance to the beauty salon. The appearance of man and inner content under the influence of beauty services is an endless source of inspiration for creating images that have an impact on customers.

A limited budget for low-class beauty salons is an incentive to find new marketing communications. Competitions organized in the beauty salon and social networking give aways allow you to increase the audience, attract new customers, and improve account performance such as the number of subscribers, keynotes and comments [10]. Calls can be different: "Tag a friend," "Do a repost", "Write a comment," "Like" or "Do the action combination" and get the prize. Occasionally, events are carried out using barter: beauty salons are combined with showrooms, perfumery stores and jointly offer the whole "beauty day" as a prize for the winner or for her and her friend. The announcement of the happy hours of the beauty salon in social networks and the announcement of the events are excellent ways to attract and retain the audience through the challenge of constant interest and excitement in women, the effect of the accident, and the competition (which will soon be recorded for the procedure), and a certain amount of discounts. In addition, providing discounts for the next visit to the beauty salon for posting a photo with a review: tells the salon to its subscribers,

and the salon makes the reader a discount as a token of gratitude. A fair and very pleasant exchange, a tool for creating an honest feedback base, as the client is unlikely to heat up on a place where he did not like and chase the discount on services that leave much to be desired. Experience has shown that positive feedback often affects consumer choice of beauty salon and creates a positive communication field. The considered marketing communications of the salon industry companies combine five main means of influencing the target segments of the market: advertising, sales promotion, personal sales, public relations, direct marketing, which are important to use in an integrated format. Limited working capital, expensive credit funds, rapid change in the economic environment prevents the rational choice and use of marketing communications beauty salons. To solve the problem, it is proposed to coordinate the choice of marketing communication tools with the class of the salon industry enterprise, as shown in Table 2 below.

Table 2

An example of matching the choice of marketing communications with the class of salon industry enterprise

Class / Means of marketing communications	Econom	Business	Prestige	Luxury	VIP
Main element of outdoor advertising	Prices	Services and brand names	Services and quality	Status and brand	-
Integrated Marketing Communications (IMC)	IMC with low-budget funds	IMC with partners	IMC	IMC with high-budget funds	IMC
Sponsorship	Own internal events	Partner external events	City events	City and regional events	National events

Under this approach, the salon industry will, according to the results of a coordinated choice, have the optimal set of means of marketing communications and rational motives that will meet the specifics of the activity, the target market and financial opportunities for their application.

Features of the functioning of the salon industry, have a large number of "know-how" of the means and technologies that are used for the first time. Legislation allows you to use only those procedures that have already passed the test, so in marketing communications it is necessary to inform

clients, obtaining a certificate or permission, which will help maintain a reputation. It should be understood that the most expensive advertising company will be ineffective if the staff is rude, angry, unfriendly. The beauty salon industry has specifics through the emergence of personal relationships with the client and emotional contact. Adding positive emotions to the atmosphere can be done through the appropriate interior design, vivid color accents, well-processed photographs of regular customers in a prominent place, vases with candies for visitors to the likes of an individual company. To further develop the enterprises of the salon industry, it is necessary to solve a complex of problems regarding the formation of favorable conditions for the activity; creating an economic, legal and marketing environment; application of the partnership mechanism to stimulate promising activities in the field of beauty services. The proposed approach of the coordinated choice of marketing communications by the enterprises of the salon industry is a practical tool for solving the problems of forming their optimal complex and appropriate rational communication policy in order to effectively promote the market. The direction of further researches is determined by modeling of the process of coordination in the choice of marketing communications by different classes of enterprises of the salon industry and the elaboration of the effectiveness of this process.

References

1. Специфика комплекса маркетинга и маркетинговых коммуникаций в сфере услуг. Электронный ресурс. Режим доступа: http://eup.ru/Documents/2006-07-12/43002-4.asp

2. Корягіна С. В. Маркетинговий аудит. Навч. посібник. С. В. Корягіна, М.В. Корягін. — К.: Центр учбової літератури, 2014. — 320 с. Електронний ресурс. Режим доступу: https://pidruchniki.com/1066120663060/marketing/sutnist_metodika_auditu_sistemi_marketingovogo_planuvannya

3. Маркіна І. А. Контролінг для менеджерів. Навч. посібник. І. А. Маркіна, О. М. Таран-Лала, М. В. Гунченко. — К. : Центр учбової літератури, 2013. — 303 с.

4. Шукліна В. В. Аналіз теорії маркетингу невиробничої сфери / В. В. Шукліна // Вісник Донецького національного університету. – Серія: Економіка і право.– №2.–С.125-137

5. Стрій Л. О. Сутність та принципи маркетингового управління / Л. О. Стрій, І. С. Агієва // ОНА зв'язку ім. О.С. Попова. Економічні науки / Електронний ресурс. Режим доступу: http://www.rusnauka.com/23_SND_2008/Economics/26369.doc.htm

6. Шукліна В. В. Особливості нейромаркетингу в розширенні споживацької аудиторії / В. В. Шукліна // Соціально-економічний розвиток регіонів в контексті міжнародної інтеграції. — Херсон, — 2014. — №2(13). – С. 44-53.

7. Бутенко Н. В. Основи маркетингу: навчальний посібник / Н. В. Бутенко. – К. : Видавничо-поліграфічний центр «Київський університет», 2004. – 140с. Електронний ресурс. Режим доступу: https://buklib.net/books /21857/

8. Грин М. Менеджмент салона красоты: Как создать и сделать успешным бизнес в салоне красоты / Мартин Грин; пер. с англ. Е.Моисеевой.– М.: РИПОЛ, – 2006. – 192с.

9. Кузнецов М. Суперприбыльний салон красоты. Как преуспеть в этом бизнесе / Кузнецов М., Иванов Е. – Из-во: Вершина, 2016.– 460с.

10. Кохан С. Продвижение услуг с помощью интегрированных маркетинговых коммуникаций в салонном бизнесе. Красота PRO. – 2016. — № 3. – С. 10-11.

11. O.I. Zaitseva, S.V. Nechaev. Use of marketing technologies as an intangible asset in the context of business efficiency / Науковий вісник Полісся. – 2016. – № 4(8). – С.229-234.

12. Зайцева О.І., Жосан Г.В. Впровадження соціально-етичного маркетингу в систему адаптивного управління підприємствами в умовах усвідомленого споживання // Науковий вісник ужгородського університету. – Серія «Економіка». – 2018. – Вип. 1(51). – С. 74-78.

3.2. ORGANIZATION OF THE FASHION SHOW AS A MARKETING TOOL OF COMMUNICATION POLICY IN FASHION INDUSTRY

LYUDMYLA DYKHNYCH
PhD, Associate Professor,
Department of Fashion Business,
Kyiv national university of culture and arts

NATALYA VLASENKO
PhD, Associate Professor,
Department of Management and Marketing,
Kherson National Technical University

LYUDMYLA POPOVA
Lecturer, Department of Fashion Business,
Kyiv National University culture and arts

In the modern world, marketing penetrates deeply into all spheres of life [1,2], including the socio-cultural sphere and the fashion market, which is very specific, unstable and requires special management tools [3]. In order to keep the existing ones and attract new consumers, manufacturers resort to using various marketing communications. The relevance of this

topic is due to the fact that the attention of fashion houses to the technologies and tools of marketing communications in promoting their products in the fashion industry has increased significantly. At the same time, some new fashion houses, wishing to promote their brand to the market, not understanding or underestimating the advantages of the show, resort to aggressive marketing methods of promotion. In the works of G. Bruma, M. Gundarin, S. Katlip, V. Korolko, A. Senter, D. Yadin, F. Jeffkins, the key communication technologies of the fashion industry are considered, but a number of issues are insufficiently studied and require research. Therefore, the goal of the work is to consider the organization of a fashion show as a marketing tool of communication policy.

In the marketing complex, a special role is played by communication, personnel, product, price and sales policies. In this case, the communication policy comes to the fore because of:

First of all, the presence of a specific clothing code (from the English dress code) for various social strata primarily serves to position the individual in the "friend-or-foe" coordinate system. Successful fashion marketing is always tuned to the perception by the consumer of social significance and the situation in which this or that clothing is used.

Secondly, a tight time frame in which fashion exists. The variability of fashionable images leads to the fact that any efforts to promote new images should be made in advance, taking into account the world fashion calendar, with constant forecasting of trends. The only constant in the fashion world is its constant change.

Third, it is the inextricable link between fashion and art. It is known that the models of clothing belonging to the haute couture category are made from materials of the highest quality, high-tech or traditional, using at least 70% of manual fabric processing.

Fourth, the main condition for the successful functioning of the fashion business is the attention to the consumer. Today, the global fashion industry no longer dictates what to wear, how to look. Designers draw new ideas by actively borrowing styles and trends. Combinatorics, variability and responsiveness are key components of the success of modern fashion marketing, based on the constant assessment of consumer desires.

Marketing communication policy is implemented using an appropriate process [4, 5], the logical sequence of which consists of the following elements (Fig. 1):

- Sender (source of information) – an enterprise that offers its goods (services) and sends relevant information about them, addressing it to its target market;

- Coding – the transformation of thoughts, judgments, impressions, knowledge into a symbolic, convenient for the consumer and effective in terms of communication tasks form;
- Appeal – a set of characters and the moment of their transfer to the target market;
- Means of disseminating information – channels of communication (connection) with the target market and specific information carriers;
- Decoding – the decoding of the message, in which the symbols arrive through communication channels and acquire specific meaning for the consumer;
- Recipient – a consumer to whom specific information about the goods (services) of the enterprise is transmitted;
- Backlash – customer feedback, their actions as a result of receiving and decoding a call;
- Feedback – part of the response that the recipient informs the sender;
- Obstacles – possible unwanted or unrecorded interventions in the marketing communication process.

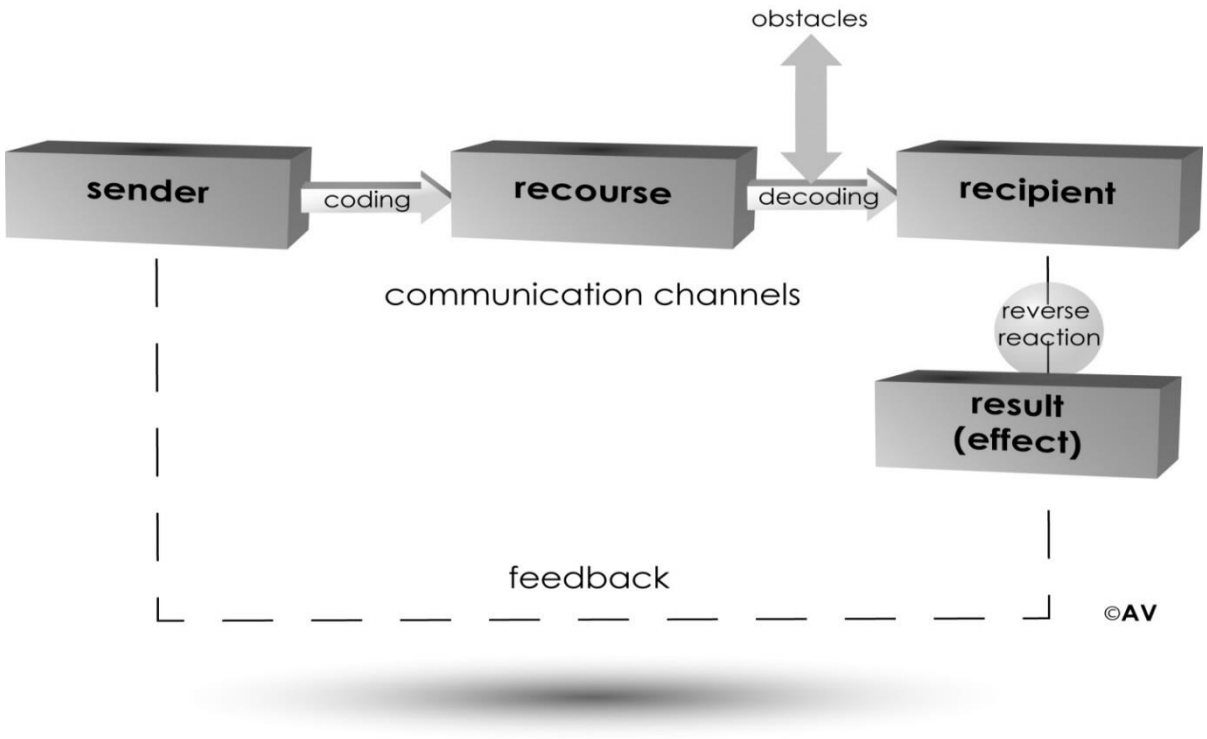


Рис. 1. Процесс маркетинговой коммуникации

Fashion industry is one of the few industries where needs are created from scratch. Fashion is a factory for the production of desires. If traditional marketing is intended to prove that this product meets this need better than others, then it is more and more difficult to fashion. This is a world of dreams and desires. Consequently, the fashion industry has its own

specifics, the basis of which lies in the very concept of "fashion", which is viewed through the prism of several aspects: economic, artistic, cultural, and sociological.

Features of marketing in the fashion industry are reflected in such aspects as: a socially significant factor; taking into account the features of the market during the rapid change of collections limited number of brands actually recognized in the fashion world.

Figure 2. Types of marketing communications

A prerequisite for the successful functioning of designer brands in the fashion market is the presence of a complex of marketing communications, which includes both standard communication tools (Fig. 2) and specific ones characteristic only for the fashion business [4]. The specificity of communication tools used in the fashion market is determined by the traditions prevailing in this market, the nature of the relationship between the players and their target audiences, as well as the peculiarities of the fashion business in general. All the tools of marketing communications used in the fashion business can be divided into two groups according to their importance [5,6]. Despite the fact that basic communications are traditional for the fashion business and are used by most designer brands, depending on the marketing goals of the designer brand, it is possible to replace some basic communication, auxiliary and vice versa. The complex of utilized communications, depending on the goals of marketing a designer brand, is presented in Table1.

Table 1

Communication Classification

Objectives pursued	Types of communications	
	Main	Auxiliary
Informational	Fashion show	Personal sales
		Visual merchandising
		Printable advertisement
	Advertising in magazines	Fashion video
		Media Advertising
	PR	Printable advertisement
		Outdoor advertising
		Internet advertising
Convincing	Personal sales	PR
		Printable advertisement
		Direct marketing
		Product Placement
	Fashion video	Visual merchandising
		Media Advertising
		Printable advertisement
	Printable advertisement	Outdoor advertising
		Internet advertising
		Package
		Informal opinion
Reminding	Advertising in magazines	Direct marketing
		Printable advertisement
		Fashion video
		Specific Forms of Impressions
		Personal sales
		Sales Promotion (seasonal discounts)
		Product Placement
	PR	Visual merchandising
		Media Advertising
		Printable advertisement
		Outdoor advertising
		Internet advertising
		Package

Speaking of fashion, in addition to data on the target audience, you need to take into account the specifics of a particular industry. In the process of choosing clothes, people primarily rely on visual data, therefore, among the main marketing communication tools of designer brands, the main place is occupied by the show. Many countries have their own national weeks of haute couture and ready-to-wear, the most authoritative are the shows in Milan and Paris, as well as in New York and London. With the show, traditionally begins the “life” of a fashion product created by

designers, and within the framework of communication goals there may be a task not only to convey information about the new fashion product to the target audience, but also to inform the fashion world about the new designer (designer brand). Impressions of collections are, first of all, an element of marketing communication activities. By investing money in the organization of the show, the fashion house receives a lot of free advertising, including TV reports, photos in newspapers and magazines, and so on. In the case of a successful show, the brand may forget about the cost of advertising for the whole year, and public relations (PR) activities will take effect. The shows are closely connected with the advertising strategy of the product and convey to the audience a complete image of the fashion house. For example, despite the negative forecasts of analysts, the Gucci house in 2016 increased its sales by 17% thanks to a successful show, which was the first increase in sales since 2012. Thus, the primary task of fashion house marketing specialists is to create such "coding" so that the public could say: "They have offered something fashionable this year. And this, of course is remarkable that it are they indeed".

The shows are organized before all other communication tools and are a theatrical performance with the participation of 30-100 models dressed in a new collection of the season (at or independently from fashion weeks). Such events should be held at least twice a year in honor of the emergence of new collections. At the same time, the more such events and the more luxurious and original they are (for example, the presentation of the new FENDI collection on the Great Wall of China), all the better, since today it is not just a demonstration of clothing, but an indicator of the company's success, its image and an important component of the business. In the show, there is always certain logic for the presentation of models, for example, from morning toilets to evening ones, as well as accompanying music, special make-up and hair styles of models, light direction, corresponding to the concept of the collection. The show is traditionally a private event, tickets are not included in the free sale, the design house itself is engaged in the selection of spectators, as well as sending out invitations, press accreditation. Sometimes there are open shows "for everyone." The presence at the show of the designer is mandatory. There are also unplanned fashion shows. For example, Chanel House has planned to acquire a new client group American fashionistas and divert their attention from the familiar and familiar New World corporations. The "Metropolitan Opera" has become a natural ally of the Chanel House. Fashion House donated 250 thousand dollars, financed a dinner and a fashion show to collect charitable funds. Both partners were in absolute

gain: “Metropolitan Opera” for the evening raised $ 1.2 million, and “Chanel” received the desired access to a new market.

The combination of elements of different types of art: music, theater, and light when organizing a fashion show contributes to a more complete disclosure of the aesthetics of designer brands, forms the emotional attitude of the public to the brand, says the season’s stylistic credo. You can safely talk about the unique features of the show as a specific type of marketing communications in the fashion business, namely, the synergistic effect of the fashion show, which reinforces the design concept of the brand. Only after the show of the new collection begins massive advertising campaigns, the purpose of which is to inform and replicate new fashionable images.

There are several formats of shows that are widely used in the fashion industry, which differ in the scale of the organization of the event, the intellectual and material resources invested and the target audience:

1. The dramatized fashion show is a high-budget show with decorations, the best models, a well-thought out atmosphere of the show program. The work of art at such shows is often the entire show. In 2001, Viktor & Rolf staged a fashion show "Black Hole", which amazed the public by presenting a collection consisting entirely of black clothes, dressed in models painted in black. At the same time, it was absolutely dark in the hall, and the only source of light was the spotlight, which beats from behind the podium and illuminates the models from behind, leaving only their silhouette visible. Designers announced the reason for such an unusual presentation is the desire to transform a two-dimensional image into a three-dimensional one by adding shadows. In 2004, the American brand Esprit held a show in Taipei, where the walls of the tallest skyscraper in the world, 508-meter Taipei, were used as the catwalk. Fifteen models in sports outfits from Esprit, holding on to specially fixed ropes and insured with seat belts, made their way 47 meters above the ground in front of the amazed public. Only large and well-known fashion brands can afford such a show, but the result of its holding fully covers all costs. Thus, according to the information of the Right Angle Group Company, “every 20-minute fashion show worth 500 thousand dollars brings coverage only in American fashion magazines, equivalent to advertising in the amount of 7 million dollars”.

2. Defile – this is the most traditional type of display on the catwalk, on which the designer's logo is located, the audience sits around. The collection is commented by a designer or commentator. Defile is accompanied by music written for the show, emphasizing the concept of the collection (for the first time music was used by J. Paken in 1914 to show the Tango collection). Nowadays, some designers create collections already under the music written for their collection. Soundtracks to fashion shows

instantly become super hits. So W. Houston in Kraftwerk remixes sounded on the Bottega Veneta fashion show.

Fashion parade is a less formalized form of shows held in a club, restaurant or boutique that does not require a podium. Models move around the room, giving the opportunity to explore the collection. Sometimes price signs are attached to clothes. The musical accompaniment comes in the background.

Trunk Show comes from the English expression "a demonstration from a suitcase", which in the era of traveling salesmen meant the display of goods in a literal sense from a suitcase for retail customers. Some principles of such an organization have been preserved to this day. Most often, the show is arranged at a point of retail sales, lasting 2-3 days, by the beginning of the shows there is a special delivery of fashion products from factories, which allows guests to buy things cheaper. Such an organization allows you to submit a designer collection without restrictions on the style, color, size, which could be made by a retail store. Clothing is placed on brackets with hangers, the principles of merchandising, as a rule, are not obligatory. Models show clothes at certain hours, and at certain times a designer or art director of the brand appears on the trunk show. Trunk-show allows you to recoup the costs of organizing events and maintain customer interest in those designers who cannot afford massive advertising campaigns.

The form of organizing shows is becomes complicated year by year. If at the beginning of its existence fashion shows of haute couture were held in the premises of the houses themselves, with the invitation of high-quality audience, today the question of the venue of the show is of fundamental importance for the collection. The 2000 Chanel show was held in a swimming pool, the transparent podium was set just a few centimeters above the water surface, creating the complete illusion that the models literally walk on water. This technique gave the public the opportunity to fully concentrate on the collection, without being distracted by the details of the interior. In the case of the 2001 Christian Dior collection, shown at the Gare d'Austerlitz train station, on the contrary, the real steam train and fantastic scenery were to highlight the exotic ethnic motifs played in the collection became full participants of the fashion shows. The modern fashion market is specific and unstable, and the use of a number of marketing tools makes it possible to most accurately determine consumer preferences and form loyalty. It is the show that is the main communication tool used by designer brands for informational purposes. The peculiarity of the show as a marketing tool is to provide a synergistic effect of the fashion show, reinforcing the design concept of the brand.

References

1. Фиск П. Маркетинг гений / П. Фиск, пер. с англ. – СПб.: бест бизнес букс, 2007. – 451 с. Аренс У.Ф., Современная реклама. / У.Ф. Аренс, М.Ф. Вейголд, К. Аренс. – М.: Эксмо, 2011. – 877 с.
2. Андреева А.Н., Богомолова Л.Н. Маркетинг роскоши: современные стратегии: монография./ А.Н. Андреева, Л.Н. Богомолова. – СПб.: Издательский дом Санкт-Петербургского государственного университета, 2007. – 335 с.
3. Смит П. Коммуникации стратегического маркетинга. / П. Смит, К.Бэрри, А. Пулфорд, пер. с англ. – М.: Юнити-Дана, 2001. – с.523
4. Голубкова Е.Н. Маркетинговые коммуникации. / Е.Н. Голубкова. – М.: Дело и Сервис, 2012. – 259 с.
5. Андреева А.Н. Дизайнерские бренды в фэшн-бизнесе. – 2-е изд. – Спб.: Издательский дом Санкт-Петербургского государственного университета, 2008. – 229 с.
6. O.I. Zaitseva, S.V. Nechaev. Use of marketing technologies as an intangible asset in the context of business efficiency / Науковий вісник Полісся. – 2016. – № 4(8). – С.229-234.

3.3. VIRAL CHANGES IN THE FASHION INDUSTRY ENTERPRISES

OLGA GARAFONOVA
D.Sc. (Economics), Professor,
Department of Management,
Kyiv National Economic University
named after Vadym Hetman

OLENA IASYNSKA
Professor,
Department of Fashion Business,
Kyiv National University culture and arts

ANNA ZHOSAN
Ph.D. (Economics), Associate Professor,
Department of Management of Organizations,
Kherson State Agrarian University

The fashion industry remains a constant source of growth of the entire world economy, and also makes a significant contribution to the development of many national economies. The role of the designer, as an entrepreneur, is not only the timely creation of a new collection, but also the effective management of the business. Of course, combining the two areas of activity (artistic and commercial) is a challenge, especially for new

companies. This article is devoted to the analysis of the peculiarities of doing business in the sphere of creating designer clothes and shoes in the fashion industry market. The article presents statistical data and trends in the development of the market of designer clothes and shoes, considered from the perspective of the analysis of the prospects of this market. Specificity of the industry is considered from the point of view of its influence on doing business.

The essence of the principle of virus changes comes down to «infectious behavior» which extends on people around. People reach such point where everything new seems like a long-accepted norm – and for this purpose, a very small group of employees demonstrating such behavior is enough.

Besides, the feasible help in promoting of new tendencies is brought by rather small groups of people who promote spread of "infection" and the main motive of changes.

The fashion, popularity and viral infections have much in common. Eventually, the fashion is the same infection, but it consists only of the ideas and habits.

Viral changes are not just a radically different way of perceiving that, due to what organizations are, but also an opportunity to understand where changes come from and why they «come to stay».

Kauis Petronius at the age of 65 wrote: «We spared no effort in training ... but every time, as soon as something began to happen to us in terms of team action, teachers quickly rearranged us in a different way. Later, I realized that if any new situation arises, people tend to regroup, and this can be an excellent way to create the illusion of progress, and at the same time a source of confusion, a drop in efficiency and demoralization».

In «The Prince», Machiavelli wrote: «There are no more difficult task, no more dangerous behavior and no more uncertain success than an attempt to take the lead in implementation of a new order of things».

In conversations about management, no other phrase occurs as often as the popular saying «people are used to resist change». Repeating it, like parrots, we, eventually, begin to believe sincerely in its immutability.

Three main and most frequent reasons of carrying out of unsuccessful changes are below:

1. the wrong arrangement of accents – instead of people's behavior, the emphasis is made on technology;

2. the wrong assumptions concerning changes in behavior – it is considered that they have just to «appear» as a result of transition to new processes;

3. the fussing situation in collective during that period (as it usual happens) when at the same time and in parallel the set of initiatives and processes proceeds to each other at once.

In the real world each person is connected to any other person.

Everyone believes that he is surrounded by the small world that at the same time is truth and lie:

- truth, because each person has a communication with the finite Universe, because of which there is a sense of «smallness»;
- lie, because if to apply the principle of six levels of division, the person is much closer to any other person, than it is possible to imagine.

Naturally, «six levels / the small world» means that this is only your personal perception. In reality, there are many other «small worlds» in the contact list, they are also clusters of people with «strong connections».

The first important aspect in the viral change is the language. It performs four overlapping roles, being:

1. an obvious means of establishment of communication with other people
2. a tool of display of the future and visualizing of changes, advantages as a result of the actions and prices of doing nothing
3. framing: the creation of intellectual and communications which act as «borders» or «cards» of changes
4. the central part of one of the best mechanisms of social learning: stories.

There are also unpleasant news: contrary to popular belief, people do not really know how to use the greater part of the richest vocabulary that is provided to them for performance of daily functions on management and the management, including management of changes. It turns out that they are shaking the air. However, if people learn how to transfer their words into behavioral changes, they will learn much more about what it is need to do (to do = to expect = to manage = to measure = to move forward).

In the daily tasks of leading a company or managing change initiatives, people invariably use labels and words that are not well suited to bringing everyone and everything to the same firm (and which has no branch) road. If you are interested in making changes, you must first of all attend to cleaning your vocabulary.

The contagious force of a new behavior or character that ultimately leads to global changes within the organization depends on three variables:

1. The presence of a contact between «infecting» people and those who adopt this «infection». As well as in a case with spread of epidemic diseases, people, susceptible to a disease, should be in contact with the diseased.

2. The numbers of people communicating with each other. With the increase in the number of interacting people, the probability of a critical mass exceeding the threshold value increases, due to which the nature of the behavioral changes becomes visible.

3. Sufficient number of people with a low threshold of perception. In these «small worlds» there should be a sufficient number of people with a low threshold of perception, which, most likely, simply copy or reproduce the new behavior of their colleagues.

The principles of viral changes in the organization include:

1. The constant use of methods of behaviorism for rooting of the new principles of behavior.

2. Life in new conditions – behavior is a «living organism», it spreads through imitation and other social forms of imitation.

3. «Sowing» – designing and creating initiatives that de facto lead to the formation of new principles of behavior.

4. Delimitation – drawing up a plan of behavior, which includes aspects of behavior that can not be discussed.

5. Strengthening – the use of behavioral techniques to strengthen the current fundamental principles of behavior.

6. Designing the future. The definition and outline of a plan for success and defeat.

7. Transformation of the norms of behavior of individual employees, groups of employees and management representatives in accordance with the developed plan of the future company.

8. Check of the current structure of the organization, the existing schemes, identification of the principles of behavior contributing and interfering the development of the company.

The short description of types of people that are capable to help with carrying out any initiatives of virus character is given below.

1. Initiators, instigators and activists. These are well known for their ability «to move everything forward», whenever possible to call into question the developed status quo, to stimulate processes and sometimes to cause irritation.

2. «Mirrors». People in literal sense «look at them» in search of signs of approval or on the contrary – disapproval of the acts.

3. «Communication centers». They have a big network of communications with everyone, they are trying to direct the organization in the right course, having an excellent idea of all the pitfalls and secret paths. Very often (which, incidentally, is not necessarily) these people work in the company already quite long time.

4. Just uneasy people (in good sense of this word). They constantly combine disappointment with the current situation and at the same time – the aspiration to change something to the best, to correct something.

It is necessary to remember while implementation of virus management:

- Behavior defines the culture, and in any way not on the contrary.
- It is necessary to think about culture as of a terminal point of a route.
- You should think about culture as about starting point only when you are engaged in visualization of the future.
- Thinking has to be «short-term»: what changes in behavior can be carried out now in order to give the course of «infection»?
- While describing your own culture you can use any labels if they seem to you adequate to a situation, however don't forget that behind each label there has to be the manner of behavior.
- For achievement of real changes it is necessary to concentrate on behavioural changes, but not on change of processes. New culture has to grow in behavior, but not in processes.
- Allocate any new orders, desirable or undesirable, and try to define «viral relationships» between them.
- When carrying out any cultural changes try to build the approach both on the traditional principles of change management, and on features of virus changes. Make sure that you see a difference between the involved levers, approaches, players and the centers of concentration of efforts. And only after that make the choice.

15 dominant statements, through which people seek to escape from the processes of viral changes, and also reveal their weaknesses are given below.

1. «Large-scale changes need large-scale actions». Viral changes rely on the incomparable power of a small set of levers – behavioral changes that can generate huge changes, while acting not linearly, but spreading them throughout the structure.

2. «Only changes at the very top guarantee changes within the organization». «Changes at the top» are naturally more than desirable, but for the manifestation of viral changes this is not the determining factor.

3. «People resist changes». Viral changes have proved that those features of behavior that cause resistance eventually disappear, being replaced by alternative behaviors.

4. «Cultural change is a slow and very painful procedure». Viral changes have proved that if cultural changes do not manifest themselves in the shortest possible time, then something goes wrong.

5. «Everyone should participate in the changes». Viral changes take advantage of the ability of internal communication networks to work effectively with all staff, while the most ineffective option is the principle "tell this to everyone you meet. Since the organization probably has a small but close-knit group of strongly connected people with high influence, it's easiest to contact them directly, rather than to arrange «broadcasting».

6. «Information exchange and training are the key components of change». Viral changes do not argue with this statement, but the main emphasis needs to be made on the specifics of behavior.

7. «New processes and systems will create new, necessary principles of behavior». Viral changes indicate the unreliability of this premise. In order to be able to work with new processes and systems, new behavior is necessary.

8. «People differ in rationality, and react only to logical and rational requests for change». Viral changes suggest that only behavioral changes are important, and they are possible only in case of purposeful development of specific features of behavior.

9. «It makes no sense to carry out changes in an individual division of the company, if the rest of the staff does not take part in this». Viral changes spread «infection» through internal social networks.

10. «It is necessary to sideline sceptics and opponents of changes». The method of virus changes dictates: hold the judgments, prepare for surprising results, and, first of all, don't charge-off the assets so quickly.

11. «It is better to see the picture of changes, looking downwards». In the process of viral changes, the initial vision can come directly from top management, but it does not obey the laws of universal gravitation.

12. «After carrying out changes the period of stability and unity is necessary». Virus changes provide the mechanism for existence in intervals between separate changes and creations of the new principles of behavior becoming the norm.

13. «Short-term victories are tactical in nature, but as a rule they do not give real changes». The main doctrine of viral changes is that small changes can lead to significant consequences; it is quite natural that short-term victories simply become part of the overall picture.

14. «In any case, losses are inevitable – some people simply do not accept change; it is necessary to isolate such people and do something with them». Viral changes are based on abandoning seemingly obvious assumptions. Those people who eventually decide to leave, you can not only find out what "went wrong". Based on their words, it can be concluded that some processes are proceeding too well, and that some people simply do not have the ability to adapt to them.

15. «People who have not been particularly adherent to the norms in force will show themselves even worse in terms of making changes». Viral changes use completely different approaches for creating «norms». Avoiding normative behavior, people very often find themselves at the top.

This concept can be so effective that, having learned new principles of organization and change management, you will never return to the former.

If you are covered by a common «infection», you will want to spread new principles to others, infecting other employees of the organization.

To combat the «infection» you can try the principle «only not for ten years!» Or «our director would not like it».

If you do not fight «infection», you quickly become its carrier and distributor.

Viral changes, without doubts, will help you to achieve success in any organization. You will be able to create fashion for success, to lay the foundation of prosperity and to create such working situation that people, going to bed on Friday evening, will dream of morning of Monday.

References

1. Гольдштейн Г. Я. Основи менеджменту: Навч. посібник. – Таганрог: ТРТУ, 2003. – 103 с.

2. Дерев'яго І.П. Менеджмент. – Мінськ: ТетраСистемс, 2008. – 128 с.

3. Діденко В.М. Менеджмент: Підручник. – К.: Кондор, 2008. – 584 с.

4. Івасенко А.Г. Менеджмент: Навч. посібник. – Новосибірськ: НДТУ, 2001. – 97 с.

5. Комарова Н.В. Теоретические основы менеджмента – М.: Доброе слово, 2005. – 64 с.

6. Ладанов И.Д. Практичный менеджмент: Психотехника управления и самотренировки. – М.: Корпоративные стратегии, 2004. – 496 с.

7. Tanklevska, N. S. Management of conscious adaptive organizations in the context of socioeconomic changes and financial turbulence / N. S. Tanklevska, Yu. Ye.Kyrylov, O. I. Zaitseva // Науковий вісник Полісся. – 2017. № 4 (12). Ч. 1. – С. 36-39.

Розділ 4.

ANTI-CRISIS MANAGEMENT AND TRAINING OF COMPETITIVE TOURISM PROFESSIONALS

4.1. SYSTEM AND COMPETITIVE POTENTIAL IN IMPROVING THE LEVEL OF ANTI-CRISIS STABILITY OF TOURISM ENTERPRISES

IULIIA DZHERELIUK
PhD, Associate Professor,
Department of Management and Marketing,
Kherson National Technical University

The main problems of functioning of modern tourist enterprises in the conditions of severe competition are their dependence on the influence of market conditions and insecurity by means of protection against the influence of negative factors of the environment. In the conditions of high dynamism and uncertainty of the external environment, market transformations, intensification of competition, the growing pace of consumer demand changes in relation to the quality of tourist services, the issues of increasing the crisis-proof stability of the enterprise in a competitive environment are becoming topical.

The papers of such leading foreign and domestic researchers as I.O. Blank, V.O. Vasilenko, A.P. Gradov, A.G. Gryaznova, T. S. Klebanova, L. O. Ligonenko, O. I. Maslak, A. O. Tereshchenko, Z. E. Shershnev and others are devoted to the theoretical and methodological and principles of anti-crisis economic activity of the enterprise. Problems of sustainability of enterprises were investigated in the papers of L. Yu. Basovskiy, O. V. Brolilo, K. S. Grigoryan, D. S. Kondaurova, A. L. Pustueva, A. V. Semenenko, V. M. Yachmeneva, M. S. Yashin and others. Theoretical problems of the formation and use of the potential of the enterprise are considered in the works of well-known foreign and domestic scientists, such as O. I. Honchar, T. O. Baban, O. E. Babina, N. S. Krasnokutska, I. M. Repin, O. S. Fedonin. The conducted analytical review of the work showed that the analyzed sources did not pay attention to the issue of the adoption of management decisions to increase the level of anti-crisis sustainability of tourism enterprises, taking into account the system-competitive potential.

The company's anti-crisis stability is a complex characteristic that reflects the ability of the enterprise to maintain in the long run a gradual improvement of the competitive position in the market under the influence of a combination of exogenous and endogenous factors of the emergence of

a crisis in a competitive environment [1]. The overall anti-crisis stability of an enterprise is a complex concept characterized by a system of indicators that reflect the internal anti-crisis stability of the enterprise and its interaction with the external environment. The author has formed an integral system of indicators for assessing the level of anti-crisis sustainability of the tourist enterprise, which is used in planning, accounting and analysis of tourism enterprises, which is a prerequisite for the practical application of this assessment. As a result of the calculations, 14 evaluative indicators, which describe the level of provision of external and 31 indicators, which describe the level of ensuring the internal anti-crisis stability of the tourist enterprise, were selected. In the course of the study, we have adapted a universal methodological approach to measuring the length (norm) of a vector and the angle between vectors before evaluating the anti-crisis stability of the enterprise, according to the basic requirements of the integrated assessment, including the information completeness and adequacy of the use of interrelated indicators of subjective assessment [2, p. 16]. Determination of the value of a competitive position gives an opportunity to quantitatively determine its level of growth, that is, to assess the level of systemic provision of anti-crisis stability of the enterprise. The indicator of the competitive position of the company in terms of providing anti-crisis stability is a vector, its same spatial position in the coordinate system characterizes the level of systemic provision of anti-crisis stability of the enterprise in a competitive environment. The equidistance of the vector from each coordinate will correspond to a high level of system security of the company's anti-crisis stability. The approach of this vector to one of the coordinates will indicate the high level of provision of one component and neglect of other components of crisis-proofing. The indicator of the competitive position of the company in terms of providing external anti-crisis stability is estimated in the space of three dimensions: assessing the level of external anti-crisis stability in relation to partners, competitors and consumers (demand); the indicator of the competitive position of the company in terms of providing internal anti-crisis stability should be evaluated in the space of the following dimensions: assessing the level of operational, marketing and innovation, financial-investment, personnel, information and management components.

The level of systemic provision of anti-crisis stability of the enterprise is determined by the deviation of the vector of the competitive position of the enterprise from the vector of the competitive position of "absolutely anticrisis-resistant" enterprise by the levels of ensuring anti-crisis stability. An important aspect of the systemic provision of anti-crisis

stability of enterprises is to take into account the ability of the enterprise to realize the positive opportunities that have already been developed to achieve the desired result. The value characterizing capabilities is called potential, which is why its formation should be considered as a key element of the systemic provision of crisis-resistant enterprises.

The given analysis of theoretical approaches to the substantial content of the concept "enterprise potential" has shown that the category is associated with the categories "resources", "opportunities", "abilities", but almost all definitions do not take into account the ability of the subject to non-crisis functioning and timely adaptation to changing environmental conditions. Interpretation of the potential of an enterprise as an ability to achieve certain results is close to the concept of the use of opportunities, but their identification is incorrect [3, p. 31]. Under the "ability of the enterprise to understand its features, which are subjective conditions for the successful implementation of a particular type of activity" [4, p. 114], and "the possibility is the presence of conditions conducive to something, circumstances that help for some reason" [5]. Domestic enterprises operate in complex socio-economic conditions, in the uncertainty and dynamism of the external environment [6]. Under these conditions, they use these or other possibilities, applying their abilities and forming management competencies. That is, the ability to shape the preconditions for changing the competencies of the enterprise in accordance with changes in its external and internal capabilities. Basic competencies determine the extent to which the ability to use existing capabilities is realized. Therefore, we suggest that system-competitive potential of the enterprise be determined through static and dynamic capabilities. According to the classical definition, "dynamic capabilities are the potential of the firm in integrating, creating and reconfiguring internal and external competences in order to respond to changes in the environment" [3, p. 43]. Consequently, the main purpose of static abilities is the realization of positive opportunities to increase the level of systemic provision of anti-crisis stability and the indicator of a competitive position that has already been developed and exists at the enterprise. Dynamic abilities should provide a search for new opportunities in the future.

Therefore, based on the above, we consider it expedient to interpret system-competitive potential of the enterprise as a complex of the company's capabilities to provide the desired result of the systemic provision of anti-crisis stability and competitive position in terms of the level of anti-crisis stability in the long term under the influence of a combination of exogenous and endogenous factors of the emergence of a crisis in a competitive environment.

An assessment of the system-competitive potential of the enterprise, which is considered in two aspects: in terms of raising the level of systemic provision of anti-crisis stability (P_{Y_S}) and increasing the competitive position in terms of anti-crisis stability ($P_{Y_{CP}}$), we propose to determine as follows:

$$P_{Y_S} = Y_{S_{(\max)}} - Y_{S_{(\min)}}, \quad (1)$$

$$P_{Y_{CP}} = Y_{CP_{(\max)}} - Y_{CP_{(\min)}}, \quad (2)$$

where P_{Y_S} – the potential for raising the level of systemic security of the company's anti-crisis stability;

$P_{Y_{CP}}$ – the potential for increasing the competitive position by providing a level of anti-crisis stability of the enterprise;

$Y_{s(max)}$ – the maximum rate of growth of the systemic level of anti-crisis stability of the enterprise for a certain period;

$Y_{CP(max)}$ – the maximum rate of growth of a competitive position in terms of providing anti-crisis stability of the enterprise for a certain period;

$Y_{s(min)}$ – the minimum growth rate of the systemic level of anti-crisis stability of the enterprise for a certain period;

$Y_{CP(min)}$ – the minimum rate of growth of a competitive position in terms of providing anti-crisis stability of the enterprise for a certain period.

The desired value of the systemic level of anti-crisis stability and competitive position in terms of anti-crisis stability is built in order to imagine what direction to move, what actions need to be performed to achieve the goal of providing anti-crisis sustainability of the enterprise. The desirable value of the level of system security of the anti-crisis stability ($S_{t+1}^{(cal)}$) and the competitive position in terms of anti-crisis stability ($CP_{t+1}^{(cal)}$) in the future period ($t+1$) is determined as follows:

$$S_{t+1}^{(cal)} = (P_{Y_S} + Y_{s(t)}) \cdot S_t, \quad (3)$$

$$CP_{t+1}^{(cal)} = (P_{Y_{CP}} + Y_{CP(t)}) \cdot CP_t, \quad (4)$$

where S_t – the level of system security of the crisis-proof enterprise in the investigated period;

CP_t – an indicator of a competitive position on the level of anti-crisis stability of the enterprise in the investigated period;

$Y_{s(t)}$ – the growth rate of the systemic level of anti-crisis stability of the enterprise in the investigated period;

$Y_{CP(t)}$ – the rate of growth of a competitive position in terms of providing anti-crisis stability of the enterprise in the investigated period.

The tourist industry is super-profitable in the modern economy, but in Ukraine, its development is inert and under the influence of various threats; therefore, determining the possibilities for increasing the level of systemic provision of anti-crisis stability of the tourist enterprise is an important task. And the more precise the possibilities of raising the level of anti-crisis stability of the enterprise, the more sure the leadership is carried out. To confirm the validity of theoretical work on increasing the level of anti-crisis stability of enterprises, taking into account the system-competitive potential of their testing, conducted on the example of tourist enterprises of Kherson, which are similar in aggregate of such parameters of management: by the level of formation of anti-crisis stability; approximately the same range of services; approximately equivalent resource support; the same environment. The preferred value of the competitive position and the level of systemic provision of the foreign anti-crisis sustainability of tourist enterprises in 2018 taking into account the use of the upper boundary of the system-competitive potential is given in Table 1.

Table 1

Calculation of the desired value of the competitive position and the level of systemic security of the foreign anti-crisis stability of tourist enterprises

Enterprise	$Y_{CP(min)}$	$Y_{CP(max)}$	$P_{Y_{CP}}$	$Y_{CP(2017)}$	CP_{2017}	$CP_{2018}^{(cal)}$
«Azimut \«Азимут»	1,0013	1,2717	0,2704	1,0013	0,4510	0,5735
«Aquavita»	0,7232	1,2232	0,5000	1,0523	0,3722	0,5778
«Tur Plaza»\«Тур Плаза»	0,7841	1,4679	0,6838	1,1058	0,4128	0,7387
«Kvytky po Yevropi» \«Квитки по Європі»	0,8051	1,2496	0,4445	1,2442	0,3521	0,5946
«Voyazh»\«Вояж»	0,7948	1,4712	0,6764	1,1442	0,4262	0,7759
Enterprise	$Y_{s(min)}$	$Y_{s(max)}$	P_{Y_s}	$Y_{s(2017)}$	S_{2017}	$S_{2018}^{(cal)}$
«Vokrug Sveta Tours» \ «Вокруг Света Tours»	0,8511	1,1022	0,2511	0,9039	0,7302	0,8434
«Voyazh»\«Вояж»	0,7573	1,0549	0,2976	0,7573	0,5763	0,6079

Source: calculated by the author

The preferred value of the competitive position and the level of systemic provision of the internal anti-crisis stability of tourist enterprises in 2018 taking into account the use of the upper bound of the system-competitive potential is given in Table 2.

Table 2

Calculation of the desired value of the competitive position and the level of system support for the internal anti-crisis stability of tourist enterprises

Enterprise	$Y_{CP(min)}$	$Y_{CP(max)}$	$P_{Y_{CP}}$	$Y_{CP(2017)}$	CP_{2017}	$CP_{2018}^{(cal)}$
«Aquavita»	0,7929	1,4430	0,6501	1,0380	0,4534	0,7654
«Tur Plaza»\«Тур Плаза»	0,7647	1,2927	0,5280	1,0336	0,4833	0,7547
«Tourmapa»	0,7786	1,4607	0,6821	0,9997	0,3983	0,6699
«Voyazh»\«Вояж»	0,8541	1,6013	0,7472	1,1344	0,4507	0,8480
Enterprise	$Y_{s(min)}$	$Y_{s(max)}$	P_{Y_s}	$Y_{s(2017)}$	S_{2017}	$S_{2018}^{(cal)}$
«Vokrug Sveta Tours» \ «Вокруг Света Tours»	0,8946	1,1791	0,2845	0,9268	0,7625	0,9236
«Aquavita»	0,9344	1,0935	0,1591	0,9344	0,7772	0,8499
«Tur Plaza»\«Тур Плаза»	0,7927	1,1385	0,3458	0,7927	0,6620	0,7537
«Kvytky po Yevropi» \ «Квитки по Європі»	0,9059	1,2038	0,2979	0,9059	0,6929	0,8341
«Key Tour»	0,9568	1,0022	0,0454	0,9941	0,7536	0,7834

Source: calculated by the author

System-competitive potential of the company can be used to improve the competitive position of the levels of anti-crisis stability and systemic anti-crisis to ensure stability, and knowing the threats can develop measures for their prevention. Taking into account the interests and demands of consumers, market conditions, travel companies are trying to provide anti-crisis stability in a competitive environment for both long-term and short-term prospects. The more precise the possibilities of increasing the company's crisis-proofness, the more sure the current management is carried out, the more effectively the problems are solved. Holding back analysis estimates the desired value and competitive position of the anti-crisis system to ensure the stability of the system of performance indicators, reveals the most significant problems of tourism enterprises towards providing high capacity long-term preservation of a given growth rate of the anti-crisis system to ensure stability. Thus, analytical support desired value of anti-crisis system to ensure stability and competitive position of importance in terms of anti-crisis viability with regard to the upper landmark system-competitive potential to determine possible trends and relationships anticrisis components provide stability and increases flexibility and quality management solutions for the basis of the identification of "bottlenecks" and the justification of a set of measures aimed at increasing the level of anti-crisis stagnation those enterprises.

The forgoing argued position to prove the objective need to improve the viability of anti-crisis system-based competitive potential and determine what actions are prioritized management coordination and

matching resources, competencies of the company. Coordination is revealed not only in the coherence of resources and competencies of the enterprise, but also their coherence with the competitive environment.

References

1. Dzhereliuk I. O. The system approach to the assessment of anti-crisis sustainability of the enterprise / G. G. Savina, I. O. Dzhereliuk. – Науковий вісник Полісся. – 2018. – № 1(13). – Ч. 2. – С. 36–40.

2. Сталий розвиток регіонів України / науковий керівник М. З. Згуровський. – К. : НТУУ «КПІ», 2009. – 197 с. [Електронний ресурс]. – Режим доступу: http:// activity.wdc.org.ua/ukraine/Isd_ukr-2400dpi-10.pdf.

3. Гончар О.І. Управління потенціалом підприємства за умов євроінтеграції : дис. … доктора екон. наук : 08.00.04 / Гончар Ольга Іванівна. – Хмельницький, 2015. – 424 с.

4. Краснокутська Н. С. Потенціал підприємства: формування та оцінка : Навчальний посібник. – К : ЦНЛ, 2005. – 352 с.

5. Новий тлумачний словник української мови / [уклад. М. Ґедзь та ін.]. – К. : Аконіт, 1999. – Т. 3. – 457 с.

6. Zaitseva O.I. / Scientific and methodological approaches to the incorporation adaptation potential in enterprise management system strategic / O.I. Zaitseva, V.O. Betina // Науковий вісник Полісся. – 2017. – № 1 (9). ч. 2. – С.158-161.

4.2. UKRAINIAN CONCEPT OF TRAINING OF COMPETITIVE SPECIALISTS IN THE TOURISM SPHERE UNDER CONDITIONS OF TRANSITION TO THE MARKET OF QUALIFICATION

OLGA LYUBCHUK
D.Sc. (Public Administration), Professor,
Department of Tourism,
State Higher Educational Institution
«Pryazovskyi State Technical Unuversity»

YULIIA YARCHENKO
PhD in Historical Sciences, Associate Professor,
Department of Tourism,
State Higher Educational Institution
«Pryazovskyi State Technical Unuversity»

The modern labor market makes new demands on a graduate of a higher educational institution: a high level of intellectual, communicative, moral qualities that contribute to successful self-organization activity. The

problem of staffing requires a revision of modern high school education with a focus on the quality of training competent professional specialists, taking into account the creative possibilities that can work in varying and non-standard conditions. In the innovation segment, highly specialized knowledge, nderstanding of domestic and foreign experience in the professional field, the ability to analyze information from various sources become more popular. The qualifications market also places high demands on the qualities of workers associated with creativity and creativity. The existing system of professional training requires modernization to meet the criteria of the new paradigm. Today, not one of the graduates is ready to immediately get involved in work at an innovative enterprise. Practically all of them need additional vocational education, internships, and on-the-job training.

In terms of the transitional educational space functioning, innovative personnel are trained and an innovative culture is formed in the conditions of individual high education institutions that have become a part of the innovative educational infrastructure in the case of an innovative partnership between government, business and science. The development of innovative educational space implies the further development of educational infrastructure (business incubators, regional scientific and educational complexes, technology parks) as an integral innovative infrastructure, which includes educational institutions, organizations, institutions, associations that carry out innovative educational activities and provide services for its implementation, develop and implement innovative educational programs and projects; contribute to the spread and improvement of the innovation culture of the individual, which requires the identification of its components, the growth of innovative educational potential [1]. Innovative development of higher education should be based on the principles of training specialists for a person-centered economy, on the basis of which systemic changes should be made, in particular, on the principles of advanced education, designing innovative development, public participation in educational development, continuity of education, strategic investment, innovativeness of the educational environment [2, 3, 4].

The innovativeness of education in the leading countries of the world is realized due to the organizational and financial conditions of university teaching, among which, first of all, the following should be highlighted:

- accreditation mechanism, denoting the goals, competencies, methods of the educational program as a whole, and not for each course, which allows more flexibility on the set of courses, the volume and content of each of them;

- great opportunities (including financial) and strict requirements for the scientific work of university teachers, which allows them to be not only up to date with fresh scientific developments, but also to include innovative moments in reading courses at the bachelor's level;
- much more attention and rigid control mechanisms of independent work of students, allows them master the newest results and technologies of scientific work, as well as learn the very "procedures" of scientific research in the course of reading courses;
- "personality" of the professor and his personal responsibility for the quality of training opens posibilities for initiatives without detriment to the quality of teaching;
- a link between education and career, which makes students pragmatically approach to the choice of a place of study, a specialty and courses, and the system of education will respond flexibly and quickly to the needs of the development of production.

Understanding the progressive role of education in social development, it's quite natural to set and strive so that the innovation policy of each national university with a target orientation is a growth policy educational technologies and including risk in scientific activities.

The Ukrainian concept of training should meet the following requirements of the European and world labor market: focus on the needs of the individual of the future specialist, and not of society; providing a choice of training courses and practices at all levels of education; contributing to the formation of desire, the disclosure of opportunities and awareness of the need to form new skills and abilities within the chosen profession; the acquisition of new professions during the life. In addition, it is necessary to take into account the experience of developed economies in the creation and operation of the International Network of Quality Assurance Agencies in Higher Education, INQAAHE, which uses generally accepted criteria for assessing the quality of higher education. We believe that the Concept should include consideration of the following issues: the conceptual framework for the training of modern specialists of each educational and qualification level based on the competency approach in accordance with the requirements of the qualifications market; mechanisms of interaction in the system "association of employers – system of higher education – research institutes"; modeling of development processes – bringing "professional standards – educational and professional standards – educational qualification characteristics – educational and methodological support" based on monitoring and feedback.

Standards of higher education are the basis for assessing the educational and educational qualification level of citizens, regardless of the

forms of higher education. Compliance of educational services with the standards of higher education determines the quality of educational and scientific activities of higher educational institutions. The system of standards of higher education consists of the state standard of higher education, industry standards of higher education and standards of higher education of higher educational institutions. According to Article 15 of the Law of Ukraine "On Education", state education standards set requirements for the content, scope and level of educational and vocational training in Ukraine. They are the basis for assessing the quality of higher education and vocational training, as well as the quality of educational activities of higher educational institutions, regardless of the form of education. The qualification of a specialist is determined by the level of education and specialization. Industry standards of higher education of a new generation are based on a single methodological basis for applying the competence approach to the design of standards.

The concept of "competence" includes not only cognitive and operational-technological components, but also motivational, ethical, social, behavioral aspects (results of education, knowledge, skills, a system of value orientations). In the formation of competence, the decisive role is played not only by the content of education, but also by the educational environment of higher educational institutions, the organization of the educational process, educational technologies, including independent work of students, and the like. Competence includes knowledge and understanding (theoretical knowledge of the academic field, the ability to know and understand), knowledge of how to act (practical and operational application of knowledge in specific situations), knowledge of how to be (values as an integral part of the way of perception and life with others in a social context). It is the subject area in which the individual is well-informed and in which he\she is willing to perform activities. Competence is an integrated characteristic of personality traits, the result of training a university graduate to perform activities in certain professional and social-personal subject areas (competencies), which is determined by the necessary volume and level of knowledge and experience in a particular activity.

For the purposes of the National Qualifications Framework, the term qualification is used in the following meaning: competence /competences is the ability of a person to perform a certain type of activity, which is expressed through knowledge, understanding, skills, values, and other personal traits.

The educational qualification characteristic of a graduate of a higher education institution (EQC) is an industry regulatory document that

summarizes the content of higher education, reflects the goals of higher education and vocational training, determines the place of a specialist in the structure of industries of the state economy and the requirements for his competence, other socially important properties and qualities. This standard is a component of industry standards of higher education, which summarizes the requirements of the state, the global community and consumers of graduates to the content of higher education. EQC reflects the social order for specialist training, taking into account the analysis of professional activities and requirements for the content of higher education by the state and individual customers of specialists. EQC defines sectorial qualification requirements for social and production activities of university graduates in certain specialties of a certain educational qualification level and state requirements for the properties and qualities of a person, which has received a certain educational level of the relevant professional direction. The personality quality of a graduate of a higher educational institution is an integral set of personality characteristics, which determines the content of socially significant and professionally important personality traits, which ends a higher education institution and manifests itself in the form of the level of formation of a system of competencies. Comparative analysis of modern foreign educational systems and technologies and scientific developments of domestic teachers has led to the conclusion that the main ways of developing the education system is to constantly update the content of higher education in order to better meet the needs of society, including future ones, and focus on ensuring the competitiveness of graduates on the labor market, which provides for the formation of students' professional and socio-personal qualities, allowing them reach their full intellectual potential.

The quality of education of university graduates also reflects the ability to meet social requirements with social norms; be responsible for their socially important decisions in accordance with the fulfillment of future social and professional roles; satisfy the desire of social status and prestige.

The work of a specialist is associated with a particular technology or is an element of this technology. In the conditions of permanent scientific and technological revolution, the life cycle of modern technologies becomes less than the period of professional activity of a specialist. Under these conditions, the formation of the ability of a specialist on the basis of an appropriate fundamental education to restructure the system of his professional activity with regard to socially significant goals and regulatory restrictions that is, the formation of the personal characteristics of the future specialist becomes dominant in education.

The quality of training a specialist in tourism is characterized by the quality of solving typical tasks, indicators of the success of professional and social activities. The in-depth level of training of service sector specialists is provided by a set of selective fundamental and special disciplines, current and final exams using advanced learning technologies and knowledge control, as well as the development of an individual trajectory of becoming a specialist. Competitiveness of specialists in tourism is provided by a set of selective fundamental and special disciplines that are implemented by a specific higher education institution in accordance with the concept of training these specialists taking into account the specifics of training in competing universities, monitoring demand in the modern labor market, and the choice of students themselves. Therefore, the variable part of the training of tourist personnel can be meaningfully filled in different ways. In addition, in accordance with a certain variable part of the preparation, a modern tourism specialist acquires unique social skills:

- make management decisions based on current legislation, taking into account their impact on the rights of members of the development team and understanding of personal responsibility for their consequences;
- use the methods of interpersonal communications, observing the norms of tolerance, be able to adapt to different conditions of effective work and interact in different situations of professional activity, apply effective technologies of hospitality;
- take into account the peculiarities of culture, ethics, religion, psychology of the personality of tourists when solving conflict situations;
- to ensure the protection of personnel and business facilities in accordance with applicable regulations in emergency situations.

To ensure the effectiveness of the implementation of the tasks of educational and vocational training, which are defined in the educational qualification characteristics, the selection of applicants requires their abilities and preparedness in the form of a system of knowledge and skills defined by the standard of secondary education. Prerequisite is the knowledge of the state language.

The competitiveness of a specialist in tourism at the educational qualification level “bachelor” also depends on the individual psychological characteristics of the future specialist. There are the following requirements for the individual psychological characteristics of a specialist:

- neurodynamics: there are no special requirements, but individuals with an emotionally stable, labile nervous system prevail;
- daily biorhythmic: undifferentiated biorhythmic type,
- psychomotor activity: hand-eye coordination;
- sensory-perceptual sphere;

- memory: good operational, verbal-logical memory;
- attention: concentration, stability, distribution, switching;
- thinking: the flexibility of the analytical mind;
- intelligence: verbal intelligence prevails;
- emotional – volitional sphere: good volitional regulation of mental processes;
- character traits: attentiveness, diligence, diligence, responsibility.

The emergence of a specialist in tourism in the process of mastering a profession with unique personal qualities and skills in accordance with the requirements of the profession is a prerequisite for the formation of competitiveness of the future specialist services in the modern labor market, in particular the market qualifications.

The competitiveness of tourist personnel of the educational and qualification level "specialist" presupposes the formation of certain socio-personal, general scientific, instrumental and professional competencies. General scientific competencies determine the following: basic knowledge of the fundamentals of philosophy, psychology, sociology, which contribute to the development of a common culture and socialization of personality, aptitude for aesthetic values, knowledge of national history, economics and law, understanding of the causal relationships of social development and the ability to use them in professional and social activities; basic knowledge in the field of fundamental and applied mathematics, the ability to apply them in research and professional activities; basic knowledge of scientific and methodological foundations in the field of informatics and modern information technologies; the ability to apply them in the integration of information products.

The general scientific competencies include the following: the ability to conduct independent research activities (analysis, comparison, systematization, abstraction, modeling, validation of data, risk assessment, etc.), the willingness to generate and use new ideas; methodological knowledge and research skills that accomplish the tasks of research, management and innovation activities; ability to learn independently during life, to ensure personal and professional development. The training of information technology specialists for the qualifications market, taking into account the further development of scientific and technological progress, requires the involvement of new categories of professional standard developers; expanding sources for professional standard educational competencies.

References

1. Любчук О.К. Теоретико-методологічні засади функціонування та розвитку механізму державного управління неперервною освітою в Україні та її регіонах : автореф. дис. ... д-ра наук. з держ. упр. : 25.00.02 / Донецький державний університет управління. – Донецьк, 2011. – 40 с.

2. Сірий Є. В. Інноваційний розвиток освіти в Україні: розгортання проблеми та засадницькі орієнтири. *Актуальні проблеми соціології, психології, педагогіки:з*б. наук. праць Київського національного університету імені Тараса Шевченка. Спецвипуск «Менеджмент у вищій школі України: адаптація до Європейського контексту». – Вип. 11. – Київ. 2010. – С.65-77. URL: http://www.socd.univ.kiev.ua/sites/default/files/library/elopen/aktprob.11.65.pdf.

3. Зайцева Е.И. Формирование осознанных адаптивных организаций высоких достижений в условиях рыночной самоорганизаци / Е.И. Зайцева, С.В. Нечаев, В.О. Бетина // Молодежь для науки и экономики: разработки и перспективы: сборник научных статей VI международного форума молодых ученых / редкол.: С. Н. Лебедева [и др.]; под науч. ред. к. э. н. доц. А. П. Бобовича. – Гомель: учреждение образования «Белорусский торгово-экономический университет потребительской кооперации», 2017. – С.145-147.

4. Зайцева Е.И. Интерактивные технологии обучения и селекции специалистов в условиях поведенческой экономики / Г.Г. Савина, Е.И. Зайцева, В.О. Бетина // Forsight-management: best world practice of development and integration of education, science and business (24-30th October, 2017 Georgia, Tbilisi Ivane Javakhishvili Tbilisi State) [Materials I International Scientific and Practical Conference] – Tbilisi: Publishing house Veshemyrskyi, 2017. – С. 30-34.

Розділ 5.

TRENDS OF MODERN TECHNICAL INNOVATIONS IN TRANSPORT

5.1. FEATURES OF THE CONSTRUCTION AND THE NEED FOR TESTING DP-SYSTEMS

DMITRY NAGOVSKY
PhD, Associate Professor,
Kherson State Maritime Academy

In the modern world, electrical installations are present on any vessel: from power supply to communications and navigation equipment, alarm and monitoring systems, engine operation for pumps, fans or winches, to propulsion systems. Vessel electric propulsion is a developing field of technology that imposes new requirements on personnel qualifications, as well as on the laws governing the automation object, namely, DP systems. As DP ships become more sophisticated and sophisticated, issues of safety, reliability, and integration with the navigation system, power plant, ship automation, propulsion, and other consumers become more important. To reduce these risks, regulators, class societies, and independent consultants constantly review advances in rules and regulations, as well as testing and verification techniques. In this context, the security and verification mode for DP systems can be considered as an example that should be followed for other critical control systems. Successful operation of DP vessels increasingly depends on the enhanced integrated functionality of software control systems. Consequently, software-related problems, often in combination with hardware and/or human errors, can lead to delays in building the vessel, downtime during operation, reduced revenue for customers, increased cost and reduced security.

The use and operation of propulsion systems in the vessel motion systems, as well as DP systems, gives rise to a number of advantages and problems, ranging from the end nodes to the highest levels of control. Due to the simplicity of the design, the end nodes do not cause major problems and their failure to seriously affect the management process cannot, due to the “spare moves” prescribed in the control laws at the top level. Therefore, issues of appearance, prediction and troubleshooting at the level of automation of propulsion systems are open and relevant.

Examples of dynamic positioning systems (DP) are: DNV [1], ABS [2] and LRS [3]. Also, the International Maritime Organization (IMO) has developed recommendations [4] to provide an international standard for DP systems for all types of new ships. Considering that DP ships often work in different parts of the world, such standardization provides a useful tool for defining local rules and regulations, determining levels of security

requirements, redundancy requirements and operations for ships with DP. Hardware and software requirements in DP systems are closely related to the level of redundancy (redundancy). Redundancy refers to the ability of a component or system to maintain or restore its function when one error occurred. This property can be obtained by installing multiple components, systems, or alternative ways to perform a function.

DP system consists of components and systems that work together to ensure a sufficiently reliable position to maintain. The required reliability of such systems is determined by the consequences associated with the loss of the possibility of maintaining a position. The stronger the consequences, the more reliable the DP system should be. To achieve this philosophy, requirements were grouped into three different classes of equipment. The class of equipment depends on the specific DP operation, which may be governed by government rules and regulations or in agreement between the operating company DP and their customers. A brief description of the various classes is given below.

Class 1. For equipment class 1, a loss of position can occur in the case of a single malfunction, i.e. DP control system does not require redundancy.

Class 2. For equipment class 2, loss of position does not occur in case of a single malfunction in any active component or system. The DP control system must have redundancy in all active components, for example, hardware must consist of at least two independent computer systems with self-monitoring functions, as well as redundant data transfer mechanisms and interfaces. DP 2 should have at least three independent systems of position coordinates and three sensor systems for measuring vertical movement, three gyrocompasses and three wind sensors.

Class 3. Same as class DP 2, with additional redundancy requirements in technical solutions and physical device.

To ensure operation, DP2 (DP3) class system should include a so-called “Impact Analysis” function, which, in turn, would check whether the vessel will remain in a predetermined position in the event of the most severe single failure.

From a security point of view, DP system can be considered as four different subsystems. Each subsystem can be further recursively divided into sub-subsystems. For example:

- Lv.1: Energy system; Lv.2: Power generation, power distribution, drives, etc.;
- Lv.1: Propulsive system; Lv.2: Main screw, tunnel trasters, azimuthal trasters;
- Lv.1: Sensor system; Lv.2: Gyroscopes, Positioning systems, wind sensors.

Thus, the reliability of each subcomponent may depend on the level of redundancy, and the reliability and availability of the entire system can be calculated using statistical methods. Each component can be characterized by:

- The failure rate λ determines the maximum number of failures per million hours;
- The average time between failures (CBMO), for one component is given:

$$CBMO = \frac{1}{\lambda} \quad (1)$$

- Total downtime T_d, including average repair time (CBP);
- Availability, state of readiness, A, is defined as:

$$A = \frac{CBMO}{CBMO + T_d} \quad (2)$$

The above characteristics are indicated for each component or each level in the reliability analysis and will characterize the power plant as a whole at the top level.

The concept of electrical energy backup and propulsion installation can be based on the necessary ability of the vessel to maneuver and move after system failures. In commercial courts, these requirements are determined by national and international law and determined by classification societies using various classification symbols. A typical redundancy scheme for a DP 2/3 class rig is shown in Figure 1.

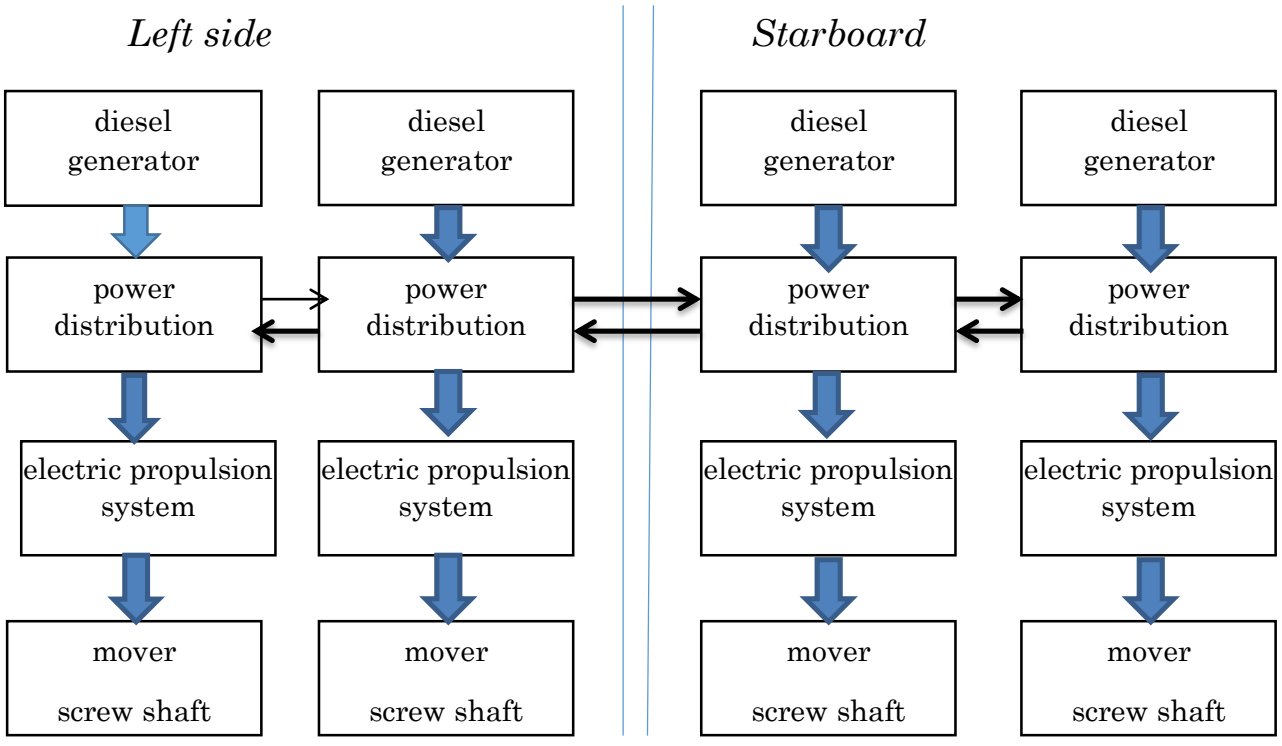


Fig.1. Redundancy scheme for a DP 2/3 class rig

In Figure 1, each unit is a part of a system that is prone to single failure. At a higher level of management, the concept of redundancy is different and is achieved by duplicating control systems in hot standby mode. A ship management system should follow the same principles of redundancy and separation as the electrical system. This is mainly achieved by designing the ship management structure as a mirror image of the power plant, as shown in Figure 2.

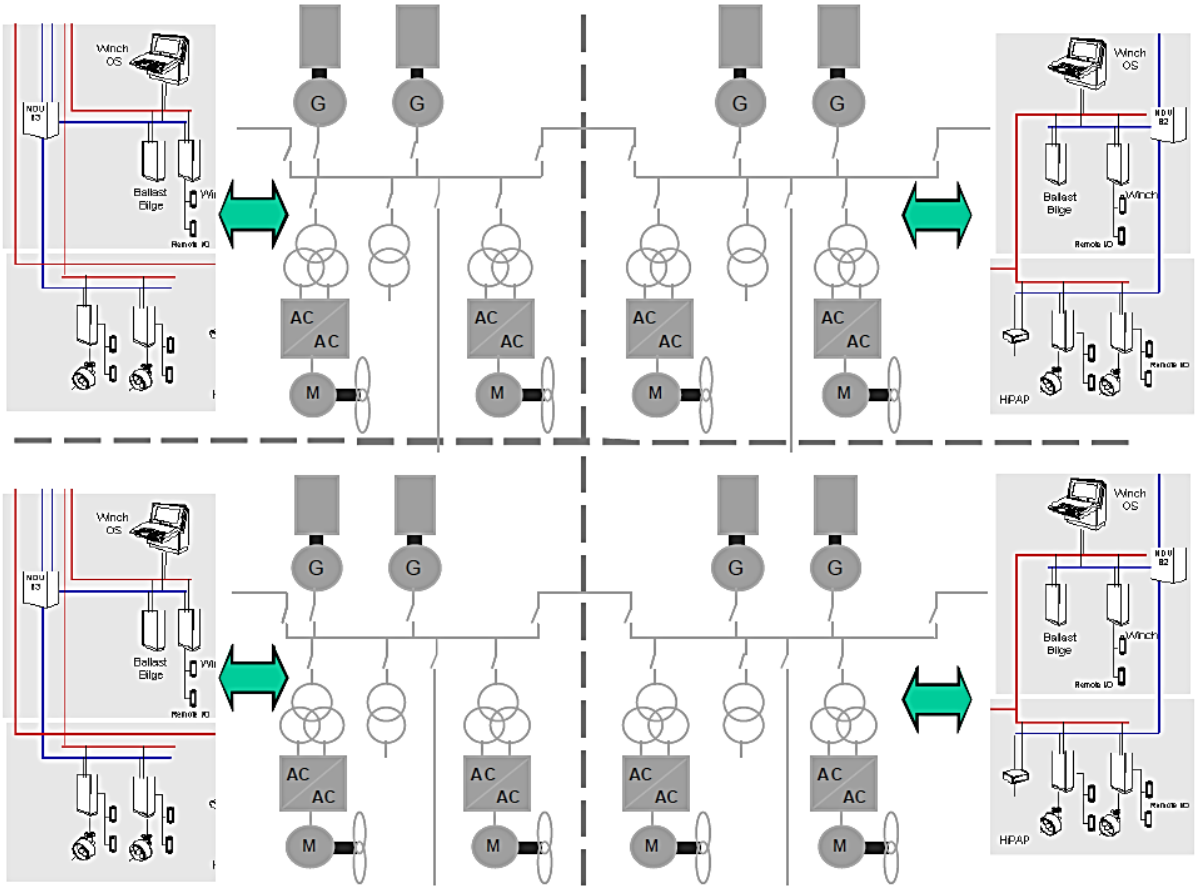


Fig.2. Mirror structure of the propulsion unit

The cost of making changes to a technical solution at the initial stage of the project is small, but as the project progresses, the cost of changes to the technical solution increases significantly. Minor changes in the system can lead to project delays and huge additional costs during commissioning.

During the design phase, the reliability of the system can be carefully examined using various reliability methodologies to detect design errors and thereby minimize risk. There are various methods for assessing the reliability of such complex systems. One common technique is Failure Mode and Post Failure Analysis (FMEA). This is a method of high-quality reliability for the systematic analysis of each possible failure mode in the system and determining the final effect for this system, mission and

personnel. This analysis can be extended by a criticality analysis, a quantitative procedure that evaluates failure modes according to their probability and consequence. For such solutions, the use of simulators is proposed. The simulator can use models of different accuracy to restore the real physical properties of a dynamic system.

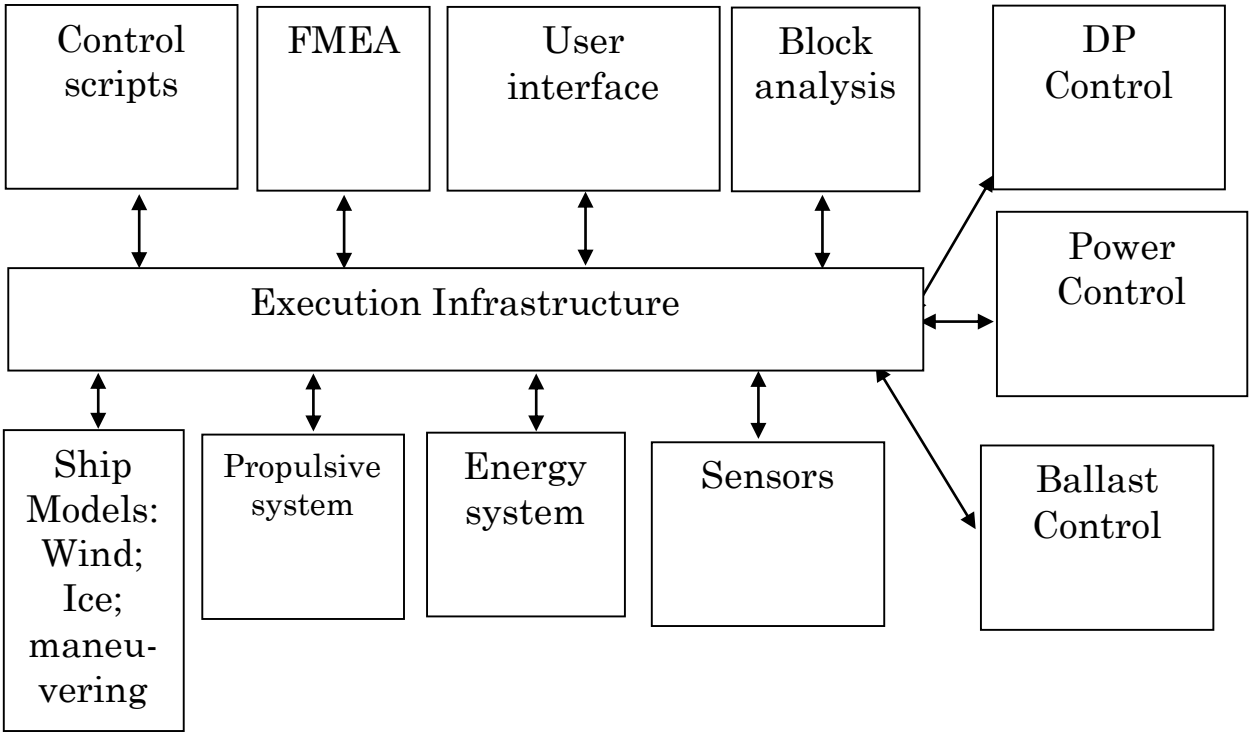


Fig.3. Block diagram of the simulator

In order to operate frequently simplified or equivalent models of fast dynamic systems are used, such as power electronics, complex systems, such as multidimensional finite element models (FEM) and panel methods of hydrodynamics must be used. The reduction and simplification of the model must be carried out with care, so that important structural information and properties of a dynamic system are not lost. The core of such a simulator is the model of technological installations or simulation models, which give the necessary detailed description of the dynamics, systems and components of the vessel and its environment (see. Fig. 3). Other parts of the simulator are control systems, coupled with sensor modules and actuators. Control systems can be a DP system, tracking controllers and autopilots, local thrust controllers, crane control systems. Such simulators are recommended to be developed using MATLAB / SIMULINK. This makes the development of new modules more user friendly. In order to reduce risks, independent testing of third-party hardware-integrated (HIL) simulators is required for extensive software testing and testing of DP systems on several seagoing vessels. The main

idea is to test and test computer software using a simulator for a vessel that can simulate the dynamic response of a vessel, engine and propulsion system, sensors, coordinate systems of position, power, power generation, distribution and other relevant equipment. The simulator is connected via network or bus interfaces to the target control system, so that all relevant feedback signals and commands are simulated. In order to achieve the goal of testing, the simulator is able to simulate a wide range of realistic scenarios, defined by the operating modes, operational tasks and the single, general mode and multiple failure mode, to verify the correct functionality and performance during normal, anomalous and faulty conditions. HIL testing can be carried out at several stages of operation or modification. Timely testing of software and components of DP systems allows you to avoid problems during the operation of the vessel. The use of such systems in real time for the automatic control of the vessel's position is an urgent scientific task.

References

1. Det Norske Veritas (DNV). Rules for Classification of SHIPS Newbuildings, Special Equipment and Systems. Additional Class, Part 6, Chapter 7: Dynamic Positioning Systems (DP). Norway, July 2010.

2. American Bureau of Shipping (ABS). Guide for Thrusters and Dynamic Positioning Systems. New York, US, 1994.

3. Lloyd's Register of Shipping (LRS). Rules and Regulations for the Classification of Ships. Part 7, Chapter 4: Rules for the Construction and Classification of Dynamic Positioning Systems Installed in Ships. UK, 1997.

4. IMO Guidelines for Vessels with Dynamic Positioning Systems, IMCA, DYNAMIC POSITIONING CONFERENCE October 15 October 15-16, 2013.

5.2. MICROCONTROLLER VESSEL ENERGY SAVING SYSTEM

HALYNA DOSHCHENKO
PhD, Associate Professor,
Kherson State Maritime Academy

During the ship power plants automatizing, the reliability and efficiency of equipment operation increases, productivity increases and working conditions are improved for the crew, and so crew number is reduced. Recently, the navy has been widely used microprocessor control systems (MPCS) which can significantly increase and improve:

1. Safety of navigation and reliability of the mechanisms;
2. Working conditions of the crew and productivity;

3. Technical and economic operational characteristics of the vessel.

The cooling system of ship generators is designed to remove heat from engine parts that are prone to heating with hot gases and to maintain acceptable operating temperatures, thermal stability of the oil and optimal conditions for the working process. Depending on the design of internal combustion engines (ICE), the amount of heat removed to the coolant is 15–35% of the heat released during the combustion of fuel in the cylinders.

In liquid cooling systems of sea transport piston engines, coolant circulates in a closed circuit, and heat is dissipated into the environment through an air-cooled cooler. The vessel energy saving system ENERGY SAVING SYSTEM (ESS), manufactured by HYUNDAI, allows the use of seawater overboard to cool ship generators. This system also controls the temperature of the low-temperature sea and freshwater circuit, as well as the position of the installed 3-way valve, and controls the rotational speed of the main seawater cooling pump so that it can save the required power consumption for the operation of the main cooling water pump. Figure 1 shows the scheme of the microcontroller vessel energy saving system ESS [1].

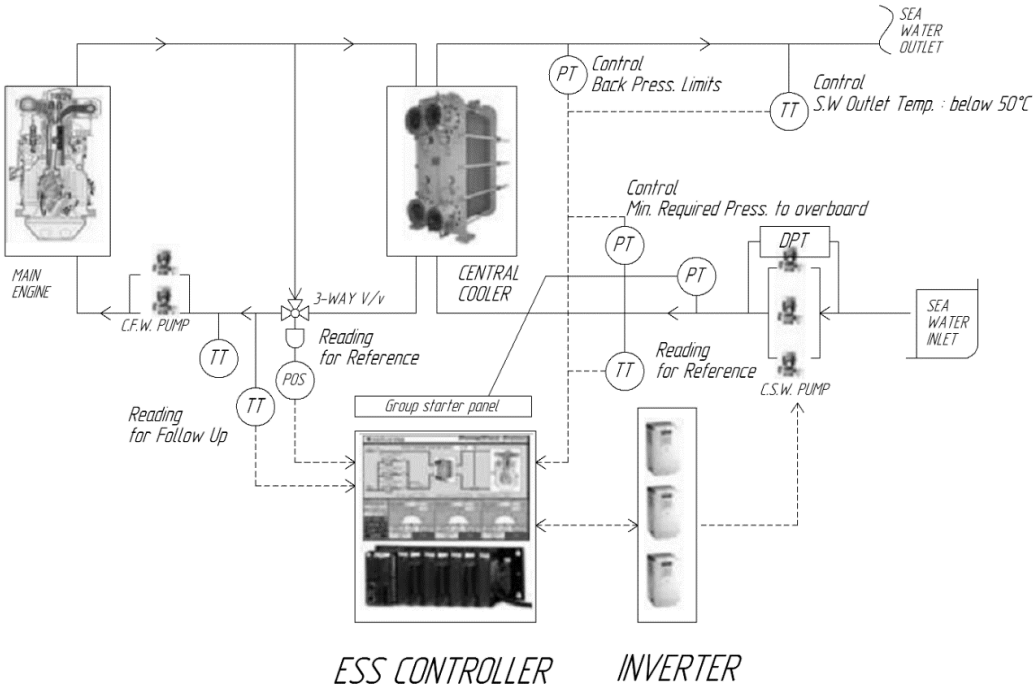


Fig. 1. Scheme of the microcontroller vessel energy saving system (ESS)

The temperature of the cooling water is controlled by thermometers mounted on the drain pipes of the cylinder caps and should be approximately the same for all cylinders and comply with the instructions for maintenance of the engine. When cooled with sea water, its temperature at the outlet of the system should be no higher than 50 ° C in order to avoid

intensive scale deposits. When cooling water enters the diesel below 15 ° C, it is heated to a temperature not lower than 25 ° C. For this, part of the heated water from the drain pipe is passed through a special pipeline with an adjusting valve (the latter is opened) into the pump receiving pipe and mixed with cold water, as a result, the temperature of the water entering the engine cooling system rises.

To reduce thermal stresses in the cooled parts of the engine, improve the combustion process of the fuel and reduce the coking of the piston rings, they strive to ensure that the temperature difference between the water entering and leaving the engine is small (7–15 ° C for closed systems and 10–20 ° C for flowing systems). As a result of using the ship's ESS energy saving system, the operational cost of the used fuel in the ship as a whole decreases, since it saves the energy consumption for cooling the exhaust water after cooling the ship generators. For most vessels, such system was developed with a sea temperature set at 32° C, but the sea water temperature may be lower than estimated, therefore the heat capacity of these additional devices is not effective. In the case of a central cooling system, the central chiller f.w (a kind of auxiliary machine) can cool to a given value of 36° C. In other words, the central chiller f.w has a larger temperature value and an installed 3-way valve, which will be open from the bypass side.

At the same time, the central cooling system of the vessel is not effective because the main seawater cooling pump always operates at 100%, regardless of the actual temperature of the seawater. Thus, it is obvious that it is necessary to launch the ESS system, which can provide fuel savings for the entire ship as a whole. For pumping fresh water into a closed cooling system, three pumps are used, and for seawater, three vertical single-stage centrifugal pumps, that is, one for each pump. The ESS system consists of a controller and an inverter, pressure transducer sensors and a temperature sensor. Figure 2 shows the algorithm of the energy saving system (ESS) [1].

ESS CONTROLLER. The ESS controller determines the temperature of the seawater entering and leaving the system, the pressure of the main suction/discharge cooling of the seawater pump, pressure, temperature and the position of the 3-way valve [2]. The ESS controller compares the temperature values with the specified value, and then it exchanges the received data with the inverter. If the ESS CONTROLLER does not work, the ESS will not control the entire system. In this case, the system will operate as in the previously considered vessel cooling system automatically. So, the ESS will not transmit signals to the central water cooling system on the vessel, and as a result there will be no advantages in operation.

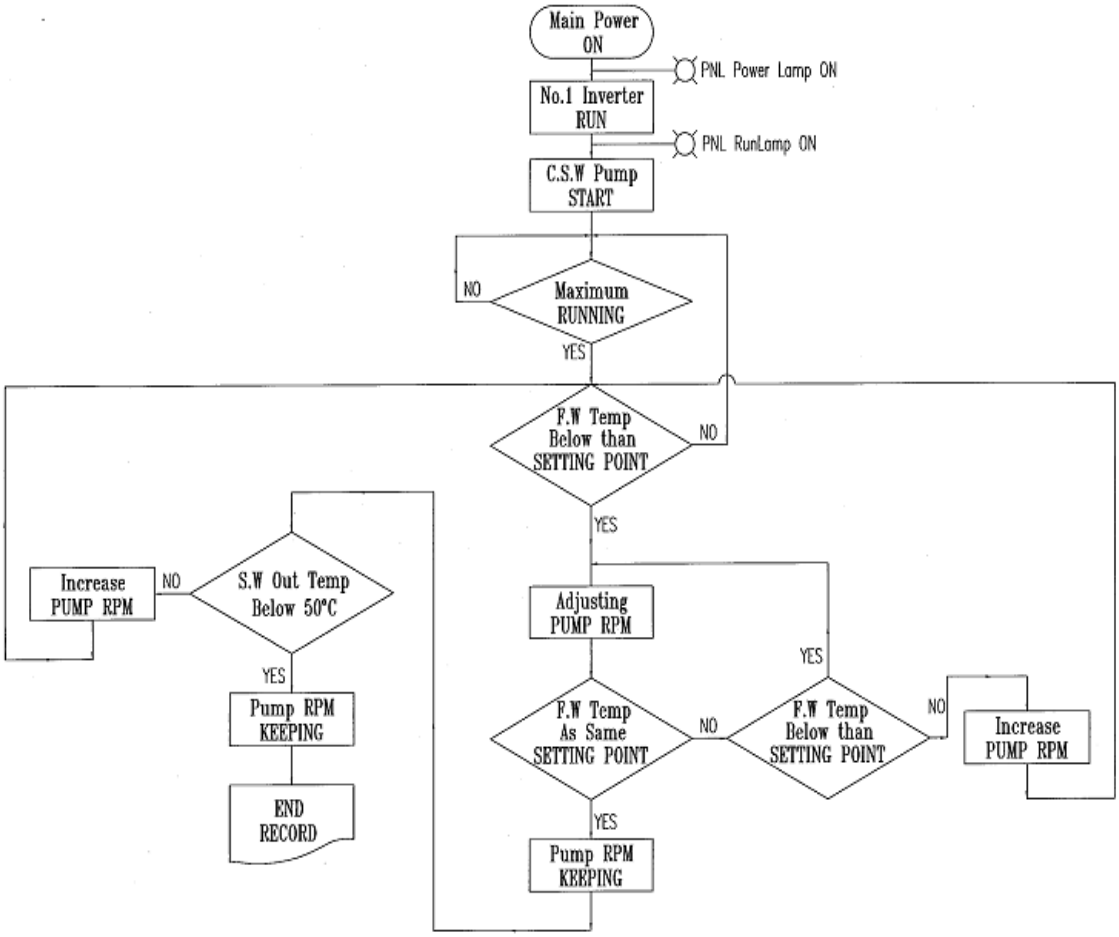


Fig. 2. Algorithm of the energy saving system (ESS) operation

INVERTER. The inverter communicates with the ESS controller, and then with the help of the microcontroller, the PLS controls the cooling motor of the water pump. The DONG HWA inverter is equipped with automatic energy saving and thus, it minimizes energy loss during actual load changes using the optimal flow control method. In the event of an inverter fault, the pump automatically switches to standby mode ESS. It uses a power source with a voltage within the allowable input range of the inverter.

Differential pressure transmitter. This transmitter is mounted on the main seawater cooling pump. It controls the discharge and suction pressure of the main cooling water pump, and then it directs the change in the pump speed in case of emergency situations.

Pressure transducer. This pressure sensor is installed on the side of the pump and out of the central part of f.w. cooler and works in the mode of discharge of the main cooling sea water. It controls the rotational speed of the cooling water pump and also controls the minimum temperature of the sea water overboard.

Temperature transmitter (S.W Side). This temperature transmitter is installed in the seawater input/output line. It controls the temperature

of the seawater and controls its values with the S.W In/Out buttons, as well as controls the minimum flow of seawater with the S.WOW button.

Temperature Sensor – (F.W Side). This temperature transmitter is installed on the FRESH WATER OUTLET line. It controls the temperature of F.W Out and also controls the minimum water flow rate of S.W.

The ENERGY SAVING SYSTEM (ESS) has several advantages:

- safety of the inverter malfunction. In case of an inverter fault, the pump automatically switches to standby mode of the ESS. In addition, the system constantly maintains efficiency.
- safety of the controller malfunction. If the ESS CONTROLLER does not work, the entire ESS system cannot control the operation of the system as a whole. And the system turns into a previous vessel cooling system automatically. So, ESS does not offer the advantage of a central cooling system for a vessel.
- reduction of indicators such as: greenhouse gas emissions, inrush current, destruction of high-frequency waves.
- control of the system is carried out for adjustable frequency/speed, and linear control of the pump itself is carried out.

Figure 3 shows the power scheme of the shipboard system for monitoring the cooling of seawater outboard water. Frequency converter, which is shown in Fig. 3, is used to change the frequency of the current, which allows you to control and regulate the speed of synchronous or asynchronous motors by creating the required frequency at the output of the voltage converter. The frequency converter is used together with an asynchronous motor, converting the frequency of the alternating current to the required parameters in automatic mode. The frequency converter controls the speed of electric motors in a continuous process of their work.

Using the ship microcontroller system of energy saving ESS, it is possible not only to fully automate production processes, but also to achieve significant energy savings up to 50%.

If both contactors in the power supply circuit of the motor are switched on simultaneously, a short circuit will occur. To exclude this case, the electrical circuit, which is shown in Fig. 3 is equipped with an automatic interlock system (INTERLOCK), which prevents the supply of power through the circuit to the electric motor. The locking system is regulated both mechanically and electrically [3].

In the considered case, this is done as follows: when the MC11 contactor is closed (without an inverter), the auxiliary contacts open the power supply circuit to the MC12 relay, which prevents simultaneous power supply to the electric motor. So in the mode of operation of the inverter, when the MC12 contactor is closed, the auxiliary contact breaks

the power supply circuit to the MC11 contactor which flows through the pump controller (SMC505 pump controller).

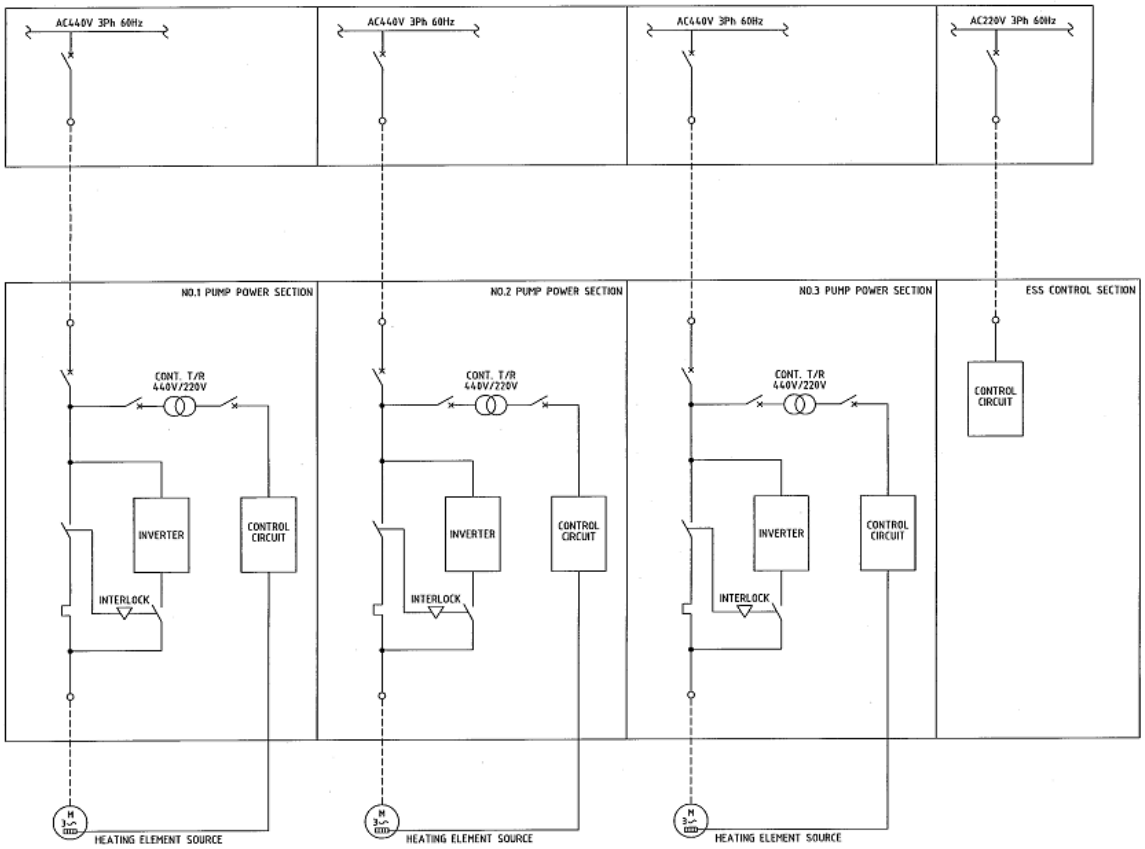


Figure 3. Supply circuit of the vessel cooling control system of outboard seawater

The control circuit (CONTROL CIRCUIT) is a set of elements whose main task is to safely start the motor in operation, adjust the speed of rotation, braking and stop the motor. Electric switching devices, such as automatic and non-automatic switches, contactors and magnetic starters, are used to control the electric drive. Circuit breakers, fuses and thermal relays are used to protect motors from abnormal operating conditions (overloads and short circuits). The basis of the ESS system is a microcontroller (PLC), which compares the temperature of the supplied seawater with the temperature setpoint, then it communicates the data with the inverter. As a result, the operating cost of the used fuel of the vessel is reduced.

The ESS microprocessor-based energy-saving system allows reducing of contamination using the provided automatic flushing function. The system provides 100% high-speed flow of water for cleaning in a short period of time. The flow rate of water creates turbulence, which takes pollution overboard, which allows the system to be operated for quite a long

time without modernization and major repairs [1]. The article describes the characteristics of the vessel energy saving system ESS, which allows to control the temperature of sea and fresh water at low temperature, the position of the 3-way valve and the speed of the main seawater cooling pump so that it can save the necessary power consumption for the operation of the main seawater cooling pump.

References

1. Energy Saving System Green ESS manual (vol II). HYUNDAI HEAVY INDUSTRIES CO., LTD. Korea, 2015. – 394 P.

2. Data showing the increasing consumer consideration of diesel and hybrid vehicles provided by CNW Research [Electronic resource]. – Available at: http://www.cnwmarketingresearch.com

3. Zhilenkov A. Investigation performance of marine equipment with specialized information technology [Text] / A. Zhilenkov, S. Chernyi // Energy Procedia. – 2015. – Vol. 100. – P. 1247–1252. doi: 10.1016/j.proeng.2015.01.490

5.3. DIAGNOSTICS AND MONITORING OF THE SHIP'S HULLS TECHNICAL STATE

OLGA ZAVALNIUK
Ph.D., Associate Professor,
Kherson State Maritime Academy

VOLODYMYR NESTERENKO
Senior Lecturer, captain,
Kherson State Maritime Academy

INNA ZAVALNIUK
Ph.D., Associate Professor,
Kherson State Maritime Academy

ANDRIY NIKOLAEV
Cadet,
Kherson State Maritime Academy

OLEKSANDR MOZGOVOY
Specialist, Scientific Production
Enterprise Ltd «Mechanical Engineering»

The proper technical state of the ship hull structures during their operation should ensure the safety of navigation and the safety of the transported goods. The problems of increasing maritime safety and

environmental protection of the marine environment is closely linked. Accidents of sea vessels due to the destruction of hull structures (structural break, holes, cracks) and accompanying spills of fuel and other petroleum products particularly affect the marine environment and atmosphere. Currently, the situation in shipping, particularly in Ukraine, has developed in such a way that many merchant ships have developed their calculated resource or are close to its exhaustion, but continue to be operated [1]. Such vessels, as a rule, were calculated with sufficient reserve of strength, but the problems of determining the boundary of reliability and safe operation of ships, as well as their residual resource, remain relevant in the future.

The ship's hulls technical state [2] is a set of parameters that determine the strength, rigidity and impermeability of the hull (hull structures), prone to change during operation. Considering the effect on the hull of the three main types of loads [3]: in quiet water, on the waves or on the interaction with ice, most scientists – leading experts in the field of ship's strength, in their work are basically unanimous in their opinion about the location of the critical zones of ship hulls. So according to the damage statistics [3], more often places of increased mechanical stresses, residual deformations or cracks appear in the middle part of the hull. The systematic occurrence of structural damages in the area of the ship's midship frame during cargo and ballast operations is emphasized in the paper [4]. The study [5] notes that a particularly large number of structural damages are observed on ships operating under difficult meteorological conditions and places are located in a quarter of the ship's length from the fore and aft perpendicular are the critical zones of the ship's hull. According to [6], the places of increased mechanical stresses are mainly the cross sections of the hull, close to the ship's midship. Stresses also increase significantly in designs with sharply variable cross sections (for example, the area of transition of the deck to the superstructure). Also, because of the slamming (hydrodynamic loads that have the impact character), the critical zones can be concentrated in the area of the flat bottom section and the beginning of the bilge [7], and the residual deformations from the ice loads cover the entire bilge, rising even above the level of the second floor bottom [8].

According to the recommendations of the International Maritime Organization and the leading Classification Societies for the fitting of the Hull Stress Monitoring Systems for improving the safe operation of ships [9-11], all bulk carriers of 20,000 dwt and above should be equipped with automatic monitoring systems of the ship's hull technical state. However, for various reasons, shipowners evade from installing such equipment on their ships. World-famous manufacturers of leading maritime countries

have developed a number of systems for automatic monitoring of the ship's hull technical state [12-15].

The mechanical stresses sensors of the ship hull are the main components of such systems installed according [10] in its middle part and in places that are a quarter of the vessel's length from the fore and aft perpendiculars. As strain gauges, as a rule, tensoresistors [16] or fiber-optic strain gauges [17] are used. Along with this, the means of control mechanical stresses of ferromagnetic steel structures, based on magnetic methods of nondestructive testing, are quite widely used [18]. It is obvious to use here the magnetic properties of the ferromagnetic ship's hull in order to determine in it the mechanical stresses in order to evaluate according their magnitude the technical state and reliability of the ship's hull during its operation.

Usually traditional methods and means of diagnostics [19] are directed to the search for already developed defects and in their purpose can not prevent sudden fatigue damages of the controlled structure. At present, a fundamentally new method of structural diagnostics has been developed and successfully implemented in practice [20-22], based on the use of the phenomenon of metal magnetic memory (MMM method). This method combines the potential possibilities of non-destructive testing and fracture mechanics, and as a result, it has a number of significant advantages over other methods in the control of industrial objects and structures [21].

The purpose of the research is the experimental determination of stress concentration zones in ship hull structures to control the general hull strength in real time and to automatically monitor the ship's hull technical state during its operation. To achieve this purpose, it was necessary to solve the following tasks:

- to choose experimentally the bearing elements of the ship hull most suitable for control of the ship's overall strength;
- using one of the methods of nondestructive testing, to determine the stress concentration zones of ship hull structures.

During the repair work on the m/v «LEDA» of «river-sea» type at the Kherson shipyard participants of the research and training laboratory «Expert assessment and monitoring of the general hull strength for ensuring of maritime safety» at the Kherson State Maritime Academy (Kherson, Ukraine) together with the specialists of Scientific Production Enterprise Ltd «Mechanical Engineering» (Dnipro, Ukraine) carried out the control by the MMM method [21] of the stress-strain state of the ship hull in order to determine zones of concentration stresses which can be dangerous for the further operation of the vessel.

It is known that the main sources of damage in the operated structures are stress concentration zones (SCZ), in which the processes of corrosion, fatigue and creep develop most intensively. Consequently, the definition of the SCZ is one of the most important tasks of structural diagnostics. The processes preceding the operational damage are changes in the properties of the metal (corrosion, fatigue, creep) in stress concentration zones. Accordingly, the magnetization of the metal reflecting the actual stress-strain state of the operating structures changes.

The MMM method is a non-destructive testing method based on recording and analyzing of the distribution of own magnetic scattering fields on the structures surface in order to determine stress concentration zones, defects, heterogeneity of the metal structure and welded joints. Own magnetic scattering field is a magnetic scattering field that appears on the structure surface in zones of stable slip bands of dislocations under the influence of working or residual stresses or in zones of maximum heterogeneity of the metal structure on new structures.

For structures as well as for welded joints, the MMM method [20-22] is based on the detection of own magnetic scattering field occurring in zones of residual stress concentration after their production and cooling in the Earth's magnetic field. So in the process of manufacturing any ferromagnetic structures (welding, melting, forging, thermal and mechanical treatment), the mechanism of formation of a real magnetic texture occurs simultaneously with crystallization upon cooling, as a rule, in the magnetic field of the Earth. In places with the greatest concentration of crystal grate defects (for example, dislocation clusters) and the heterogeneity of structure, domain walls are formed with the appearance on the structure surface in the form of lines of changing the sign of the normal component of the own magnetic scattering field. These lines correspond to the cross-section structure (part) with the maximum magnetic resistance and characterize the zone of maximum the metal structure heterogeneity and, accordingly, the zone of maximum stress concentration.

The MMM method in the process of controlled structures diagnostics in comparison with other methods has the following advantages [20]: it does not require the use of magnetizing devices. As the complexity of control, this method refers to express methods, so it becomes possible to carry out a complete control of the investigated design. The main task of control by the MMM method is the determination of the most dangerous areas and nodes at the control object, which are characterized by SCZ are sources of damage development.

Thus, during the repair work on the m/v «LEDA», control was carried out by the MMM method of the ship hull stress-strain state. The control was carried out using the stress concentration meter ИКН-1М-4 in two stages: when the ship was in the dry dock and when the ship was on still water. During the first stage, the control was carried out on the following elements of the hull structure: horizontal keel; main deck port side; main deck starboard; upper deck (hatch coaming) port side. During the second stage, control was carried out on the following elements of the hull structure: main deck port side; main deck starboard; upper deck (hatch coaming) port side; upper deck (hatch coaming) starboard.

During the first stage, it was impossible to control the upper deck (hatch coaming) on the starboard side due to the so-called «magnetic dirt», which was formed after preliminary measurements with a coercivity meter. During the second stage, control along the horizontal keel was not possible due to the presence of the vessel on water.

The control by the MMM method is carried out over the maximum and average values of the gradient $dH\text{p}/dx$, where dx is the minimum distance between two neighboring measurement points of the field $H\text{p}$. The value of the gradient is automatically determined as the modular difference $|\Delta H\text{p}|$ divided by the discrete distance Δx between two neighboring measurement points, which is set when the device is preset. Kmax is the magnetic stress intensity factor characterizing the limiting state of a metal. Km is the integral characteristic of the actual state of the metal, corresponding to the level of elastic (plastic) deformation.

General arrangement plan of the research m/v «LEDA» (main deck) is shown in Figure 1.

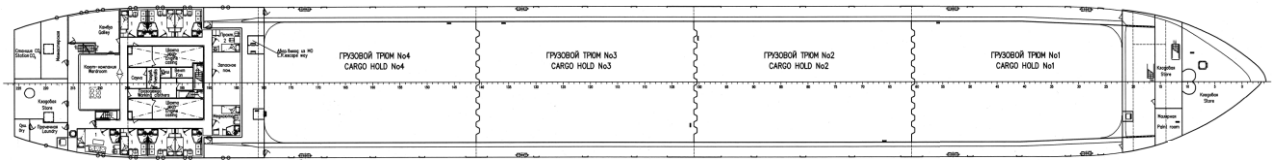


Figure 1. General arrangement plan of the research m/v «LEDA» (main deck)

During the measurement, the data was recorded in mms format files, which were imported from the ИКН-1М-4 device into a database in the form of a structured set of microfiles at the end of measurements. Then, the statistical data were processed using a specialized program for processing the results of control by the method of magnetic memory of metal – «ММП-Система v3.0» («Энергодиагностика» [20]).

Computerized processing of magnetometric control data under steady-state conditions was carried out with the purpose of clarifying the sections

coordinates of the structure under study with magnetic field anomalies, the danger level of defects and the general stress state of the structure.

Figure 2 presents comparing diagrams research results of m/v «LEDA», obtained in dry dock and on still water (main deck, starboard, Kmax and Km parameters). The average value for all scans is Kmax = 14.526. The average value for all scans is Km = 2.066.

Generalized comparing histogram research results of m/v «LEDA» are presented in Figure 3. Gray color indicates the results obtained in dry dock; black color indicates the results obtained on still water.

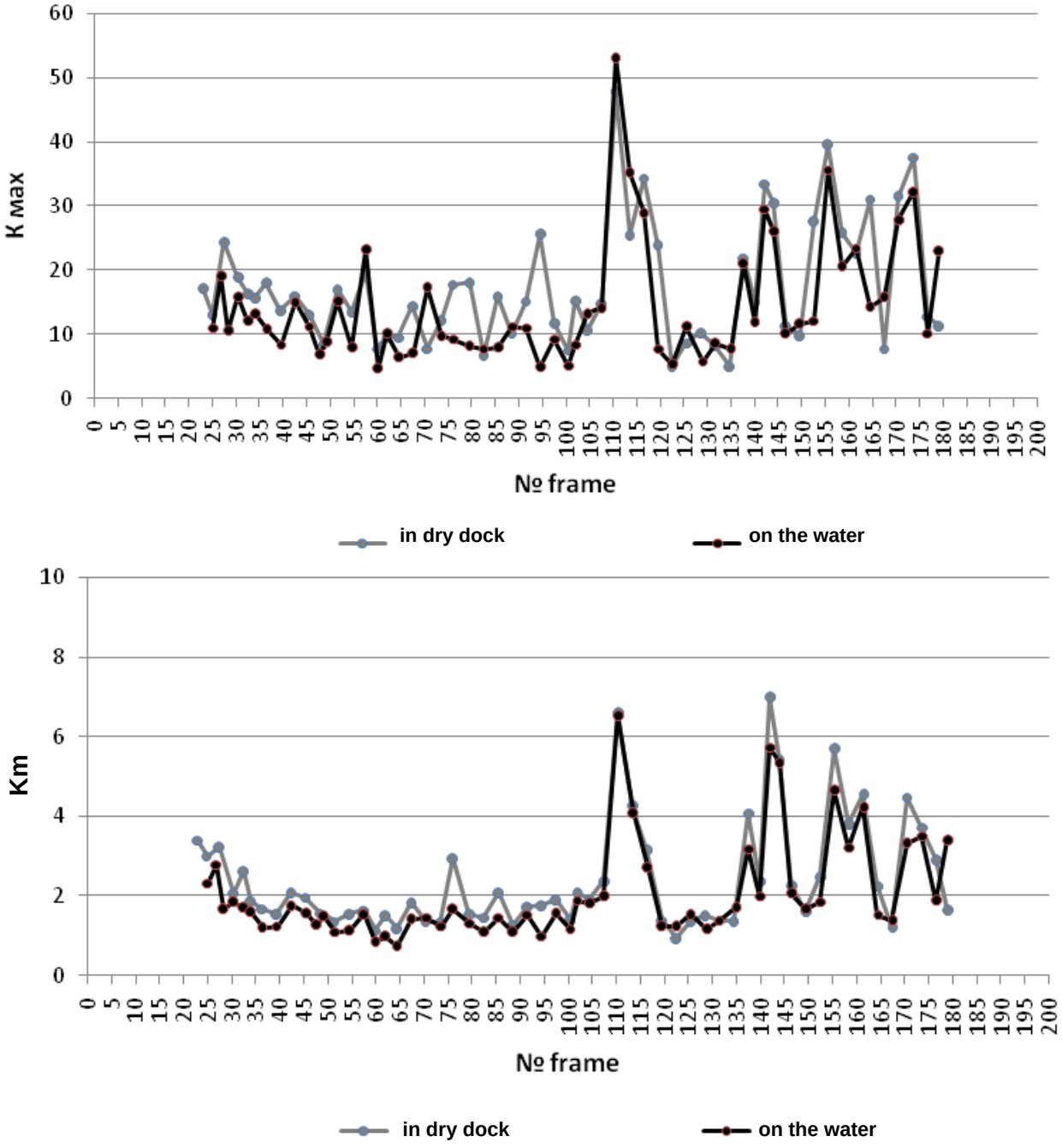


Figure 2. Comparing diagrams research results of m/v «LEDA» (main deck, starboard, Kmax and Km parameters)

During the measurements, it was found that after moving ship from the «bogies» in the dry dock to the water, the residual stresses (main deck starboard, hatch coaming port side (PS)) decreased, and in the port side area of the main deck the residual stresses increased many times (table 1).

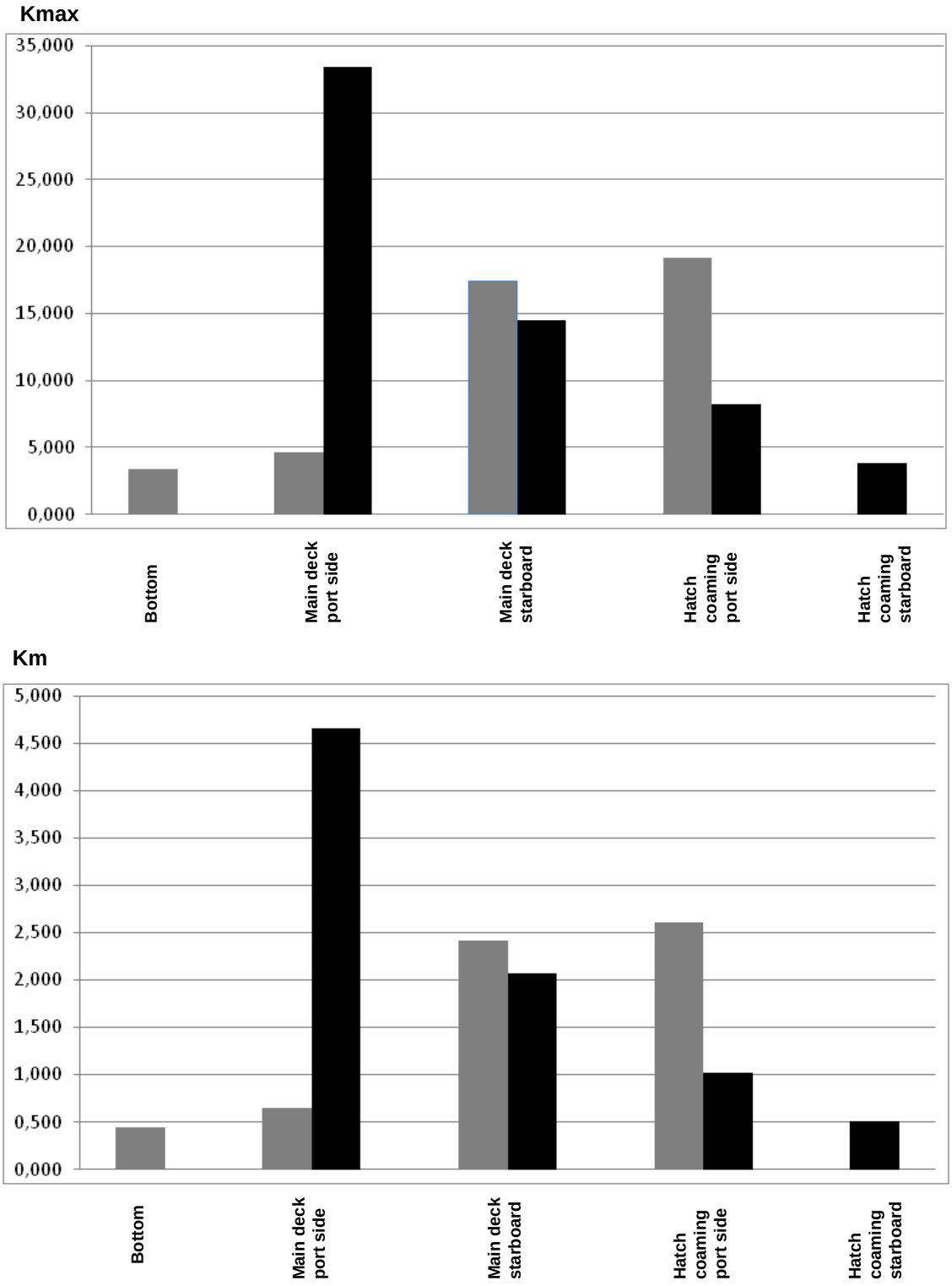


Figure 3. Generalized comparing histogram research results of m/v «LEDA» (Kmax and Km parameters)

Table 1

Research results of m/v «LEDA»

	Main deck starboard		Hatch coaming PS		Main deck port side	
	Кmax	Km	Кmax	Km	Кmax	Km
In dry dock	17,436	2,423	19,122	2,614	4,665	0,649
On still water	14,526	2,066	8,224	1,018	33,356	4,656

Conclusions. 1. Technical control of m/v «LEDA» of «river-sea» type was carried out by the magnetometric method for the presence of areas with an increased concentration of mechanical stresses while the research ship was being kept at the Kherson shipyard for scheduled repair.

2. The control was carried out in two stages: the first, when the ship was in a dry dock; the second, when the ship was floating near the pier.

3. During the measurement of residual stresses by the magnetometric method it needs the absence of strong electromagnetic radiation sources within a radius of 25 m because this distorts the results of control. An abnormal increase of informative parameters in the area of the main deck port side is due to the presence of external powerful sources of electromagnetic interference on a nearby vessel during the measurement.

4. It is necessary to control the vessel during loading, in order to study the effect of uneven load distribution on the mechanical stresses emerging in the ship hull. Also in the future, it is necessary to control the vessel with cargo on the «raid», in order to study the «real» weight distribution of the ship, which is the most approximate situation to the real operating conditions of the ship.

References

1. The Registrov book of ships [Electronic resource]. – Klasifikatsiyne partnership The register shipbuilding of Ukraine. – Access mode: http://www.shipregister.ua/. – 09/16/2015.

2. Tomashevsky, V. T. Mechanical Engineering. Encyclopedia. Calculation and design of machines. Section IV. Ships and ships. T. IV-20. Design and construction of ships, ships and ocean equipment. KN. 2 [Text] / V.T. Tomashevsky, V.M. Pashin, V.L. Alexandrov and others; by ed. V.T. Tomashevsky, V.M. Pashin. – SPb.: Polytechnic, 2004. – 882 p.

3. Maksimdzhi, A.I. Captain on the strength of the hull: Reference [Text] / A.I. Maksimdzhi. – L.: Shipbuilding, 1988. – 224 p.

4. Pavlenko, L.V. Features of the operation of bulk carriers: studies. Manual [Text] / L.V. Pavlenko, L.A. Kozyr. – Odessa: LATSTAR, 2002. – 80 p.

5. Barabanov, N. V. Damage and ways to improve ship structures [Text] / N. V. Barabanov, N. A. Ivanov, V. V. Novikov, G. P. Shemendyuk; 2nd ed., Pererab. and add. – L.: Shipbuilding, 1989. – 256 p.

6. Bilokurets, A. O. Kervitsvtvo zaovlennya ship inside and that sea voyage [Text] / A. O. Bilokurets. – Kyiv: Shipbuilding Registrar of Ukraine, 2015. – 32 p.

7. Rawson, K. J. The ship girder. Basic Ship Theory [Text] / K. J. Rawson, E. C. Tupper. – Oxford: Elsevier Butterworth-Heinemann, 2001. – P. 177–236. doi: 10.1016/b978-075065398-5/50009-1

8. Vhanmane, S. Estimation of ultimate hull girder strength with initial imperfections [Text] / S. Vhanmane, B. Bhattacharya // Ships and Offshore Structures. – 2008. – Vol. 3, Issue 3. – P. 149–158. doi: 10.1080/17445300802204389

9. Common Structural Rules for Bulk Carriers [Electronic resource]. – International association of classification societies, 2006 – Available at: http://www.iacs.org.uk/ – 16.09.2015.

10. MSC/Circ.646. Recommendations for the fitting of Hull Stress Monitoring Systems [Electronic resource]. – International marine organization. – Available at: http://www.imo.org/ – 16.09.2015.

11. Investigation Report on Structural Safety of Large Container Ships, September [Electronic resource]. – Nippon Kaiji Kyokai (Class NK), 2014. – Available at: http://www.classnk.or.jp/ – Title from the screen.

12. Hull Stress Monitoring System «HULLMOS» [Electronic resource]. – The official website of company ROUVARI OY (Finland). – Available at: http://www.rouvari.fi/ – 16.09.2015.

13. The fiber optic hull stress monitoring system «SENSFIB» [Electronic resource]. – The official website of company Light Structures AS (Norwegian). – Available at: http://www.lightstructures.no/ – 16.09.2015.

14. Hull Condition Monitoring System «HMON» [Electronic resource] / The official website of the WEIR-JONES GROUP (Canada). – Available at: http://www.weir-jones.com/ – 16.09.2015.

15. Integrated Marine Monitoring System [Electronic resource]. – The official website of the BMT Scientific Marine Services (USA). – Available at: http://www.scimar.com/ – 16.09.2015.

16. Ştefănescu, D. M. Handbook of Force Transducers [Text] / D. M. Ştefănescu. – Springer Berlin Heidelberg, 2011. – 612 p. doi: 10.1007/978-3-642-18296-9

17. Krohn, D. A. Fiber Optic Sensors: Fundamentals and Applications [Text] / D. A. Krohn, W. MacDougall, A. Mendez. – Society of Photo-Optical Instrumentation Engineers, 2014. – 317 p. doi: 10.1117/3.1002910

18. Miroshnikov, V. V. Control of the hull strength of the vessel [Text] / V. V. Miroshnikov, O. P. Zavalniuk, V. B. Nesterenko. – Kherson: Grin D. S., 2015. – 108 p.

19. Klyuev, V.V. Non-destructive testing and diagnostics: Reference book / Klyuev VV, Sosnin F. R., Kovalev A. V. and others; Ed. V.V. Klyuev. 2nd ed., Corr. and add. – M.: Mashinostroenie, 2003. – 656 p.

20. Dubov A.A. The principal differences of the method of metal magnetic memory from other known magnetic methods of non-destructive testing. Results and prospects of development of the method / A.A. Oaks // NDT Territory. – M.: Spektr Publishing House LLC, 2016. – № 2 (18). – P. 64-68.

21. DSTU 4857: 2007 Zvarni z'ednannya uschatkuvanya nd construction. Magnetic method of metal. Zagalnim vimogi.

22. Dubov, A.A. Method of magnetic memory of metal and control devices: studies. allowance / Dubov A.A., Dubov A.A., Kolokolnikov S.M.; Ed. A.A. Dubova. 5th ed., Rev. and add. – M.: LLC "Spektr Publishing House", 2012. – 395 p.

Розділ 6.

FINANCIAL STRATEGY FOR THE DEVELOPMENT OF ECONOMIC SYSTEMS

6.1. ANTI-CRISIS MANAGEMENT IN THE ENVIRONMENT OF MULTIFACTORIAL RISK FOR FINANCIAL SYSTEM OF AGRIBUSINESS ENTERPRISES

NATALIYA TRUSOVA
D.Sc. (Finance), Professor
Tavria State Agrotechnological University,
Melitopol, Ukraine

In the conditions of the formation of the new financial system, most of the subjects of economic activity revealed the inability to change systematically the development of future events in relation to financial activity. A deep understanding of risk as an element of anti-crisis management in agribusiness has an effective component-financial losses that endanger the financial system of agrarian enterprises with corresponding consequences for the economy. The most common positions associate risk with the possibility of danger or loss, lack of profits, the probability of occurrence of an adverse event, uncertainty of financial results, overcoming the uncertainty of situational choice of events. At the same time, the optimistic expectation is inherent in the very definition of the phenomenon of threat in the environment of probable risk, taking into account the possible positive result for covering financial expenses and limiting the parameters of the formation of financial resources [15, p. 220].

High dynamic changes of causal relationships between factors and financial performance in the financial system of agribusiness enterprises complicate the use of formal methods of risk assessment based on the extrapolation of past and traditional methods of statistical modeling. The process of making financial decisions leads to a situation of information that characterizes the respective risk parameters in determining the future of the financial system [16, pp. 50]. From the standpoint of evaluating multifactorial events, classical probabilistic descriptions, except for concentration in typical and recurring situations, imply an unacceptable limit to the number of possible outcomes [9].

For example, we consider the possibility of using the most widespread method for assessing the risk situation based on the theory of games. We are talking about methods for determining the optimal behavior in the management of systems, which is characterized by the presence of a conflict situation. The formalization of the content description of the conflict is a

mathematical model that includes two sides with opposing interests. The most common are games of two players; games of three or more participants are less explored due to difficulties in obtaining a decision.

The most common case of calculations involves a finite number of options for choosing solutions $C_1,...,C_m$ (each variant corresponds to the result $r_i, i=1,...,m$), one has to find the variant with the highest value of the result $-\max r_i$. As r_i is accepted as profit, net income, profitability, another integral indicator of financial efficiency of management it is expedient to apply the criterion:

$$C_0 = \{C_{io} | C_{io} \in C \wedge r_{io} = \max_i r_i\}, \quad (1)$$

The multiplicity of possible solutions is described by a matrix:

$$R = \left| r_{iy} \right|_{\substack{i=1,...,m \\ j=1,...,n}}, \quad (2)$$

Next, in search of the most optimal solution, target functions are introduced according to the following criteria, for example:

1. Minimax criterion: $C_0 = \{C_{io} | C_{io} \in C \wedge r_{io} = \max_i \min_j r_{ij}\}$, (3);

2. Gambling: $C_0 = \{C_{io} | C_{io} \in C \wedge r_{io} = \max_i \min_j r_{ij}\}$, (4);

3. Sevige criterion: $C_0 = \{C_{io} | C_{io} \in C \wedge r_{io} = \min_i r_{io}\}$, (5);

4. Neutral player criterion: $C_0 = \{C_{io} | C_{io} \in C \wedge r_{io} = \max_i \frac{1}{n} \sum_{j=1}^{n} r_{ij}\}$, (6)

and other criteria (Bayes-Laplace, Hodge-Lehman, Germier, etc. [13]).

However, the financial system of agribusiness enterprises is represented by a set of reciprocal financial ties in the aggregate of its elements, the behavior of which depends on the random deviation of a number of factors. Thus, the game as a simplified formalized model of the real situation can describe only the problem of business choice ($r_{io} = \min_j r_{ij}$, or $r_{io} = \max_j r_{ij}$, or $r_{io} = \min_i \left[\max_j (\max_i r_{ij} - r_{ij}) \right]$, or $r_{ir} = \frac{1}{n} \sum_{j=1}^{n} r_{ij}$). In addition, the theory of games does not address the question of methods for assessing and measuring the value of alternatives. The consequence of this is the unreliability of most assumptions in describing the game, the presence of several principles of optimality in solving the same problem.

Figure 1 depicts a composition of methods for estimating the environment of multifactorial risk in the financial system of agribusiness enterprises.

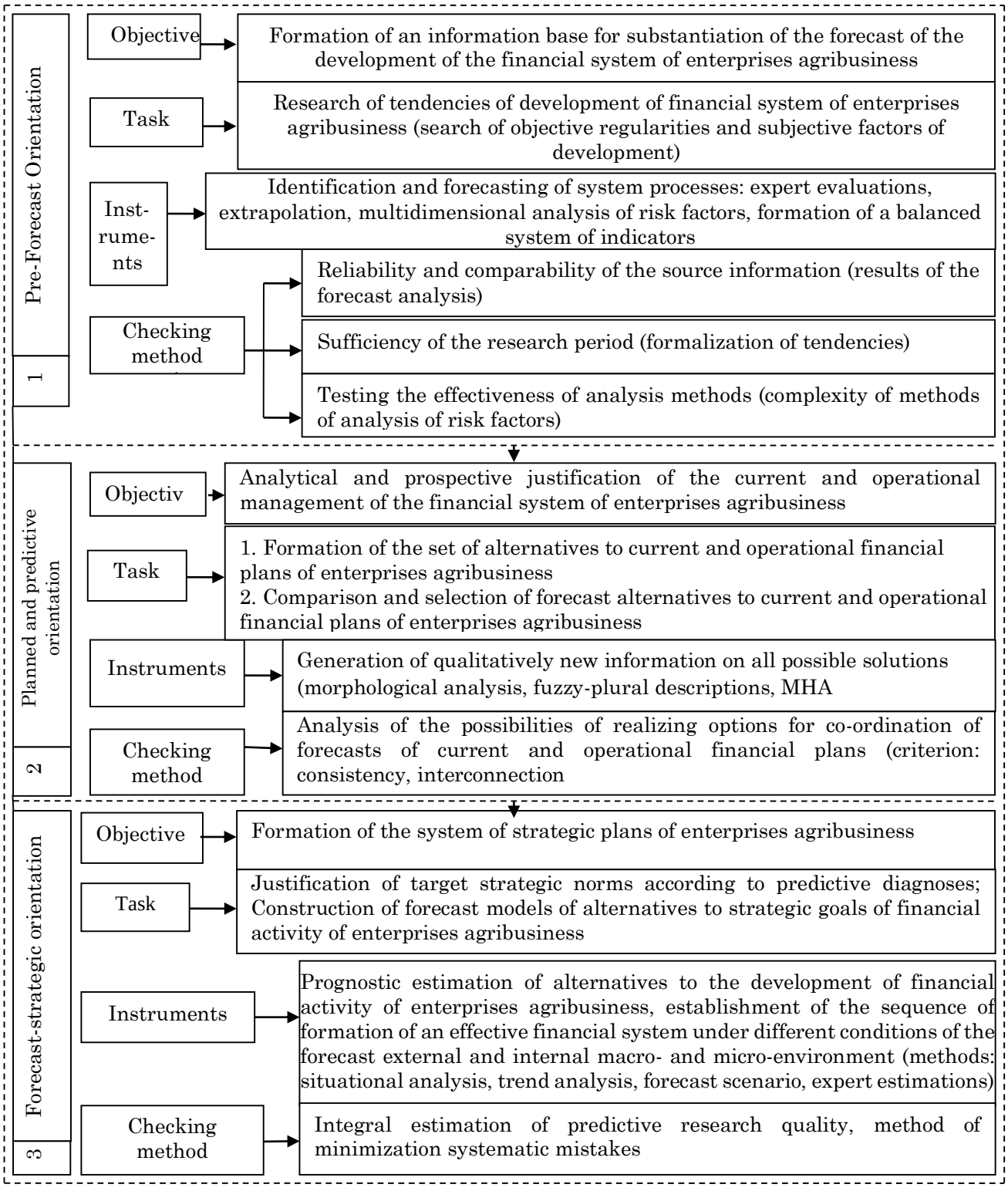


Fig.1. Composition of methods for estimating the environment of multifactorial risk in the financial system of agribusiness enterprises

Source: author's research

In the tasks of assessing the risk situation, the Analytic Hierarchy Process [3] is also successfully used, which is a «systematic mathematical procedure for hierarchical representation of elements that determine the essence of a particular economic problem» [17, p. 280]. The hierarchy analysis method (MHA) is based on the principle of identity and includes the synthesis procedures for obtaining priority criteria and finding alternate solutions. The method differs by the possibility of representing a complex problem in the form of a tree of alternatives; prioritization by expert survey; calculation of priorities relative to an arbitrary top of a decomposition tree. The main method of describing an area and its structure is the decision tree method. It is for normative forecasting, which allows considering any investigated system as a complex one that consists of individual interconnected elements and assess the relative importance of these elements. Based on the decision tree method, we will map the structure of the financial forecast. As a general goal (tree top) we accept the possibility of introducing risk forecast of the financial system of agribusiness enterprises of Steppe zone of Ukraine.

Methodology of assessment of multifactorial risk is based on the initial value-financial losses which are presented as a function of a combination of factors that affect prognosis indicator parameters through the financial system. With expert research variable risk factors are generated and a new database is formed to assess the overall value of variables. The logic of forming a coherent system of macro and microeconomic assessment is embodied in the results of this research, which is environment of multifactorial risky in the financial system by quality criteria of agribusiness enterprises expert assessments that are based on the method of multivariate smooth, harmonic instruments of Theil-Veyge and Holt-Winters [14, p. 125].

In order to determine the set of variants of the system combination, a discriminant function is introduced:

$$\lambda_1 = f_1 Y_1 + ... + f_k Y_k, \tag{7}$$

Each combination group was evaluated in two ways, the first one showed affiliation $Y_k[\lambda_i(a_i, b_i, c_i, d_i)]\text{to}\, Q_n \in A$, and the other $Y_k[\lambda_i(a_i, b_i, c_i, d_i)]$ to $R_n \in B$. The first method was evaluated on the total cumulative interest, that is, which total percentage is given by the factors of the variables, and the second method shows the distribution of the coefficient of consistency of the answers of experts ($K_{узг} = 1 - \mu_i$) calculated on the basis of the coefficient of qualitative variation μ_i:

$$\mu_i = \frac{k}{k-1} \cdot \frac{(\sum_j f_{ij})^2 - \sum_j f_{ij}^2}{(\sum_j f_{ij})^2}, i = \overline{1, m}; j = \overline{1, N}, \tag{8}$$

where, k – number of places occupied by *i-a* sign; f_{ij} – number of experts who assigned *j-th* place to the *i-th* criterion; m – number of ranked attributes; N – number of interviewed experts.

Variants of evaluation of multifactorial risky in the financial system of agribusiness enterprises are carried out on the basis of the results of expert evaluation on the criterion of similarity, the risk zone, coefficient of coherence, origin of influence, cross-activation of basic and superstructural factors. Interpretations of the position of specialists of the investigated enterprises were preceded by the estimation of their relative homogeneity by the *k-medium* method, designed to distribute observation to a given number *k(k<n)*.

The concept of homogeneity is formed by the distribution of the type of observation:

$$Q(S) = \sum_{j=1}^{k} \sum_{X_i \in S(j)} d^2(X_i; \overline{X}(j)), \quad (9)$$

where, $S = (S^{(1)}, S^{(2)}, ..., S^{(k)})$ it defines the distribution of observations $X_1, X_2, ..., X_n$ on *k-classes*; $\overline{X}(j) = \frac{1}{n_j} \sum_{X_i \in S(j)} X_i$ – this is the destination center of the j-class, n_j – the number of elements in j-class; $d^2(X_i; \overline{X}(j)$ – is the square of the Euclidean distance X_i from the observation to the destination center $\overline{X}(j)$.

Thus, (9) will correspond to the average level of intra-group observation of distribution, which characterizes S.

The procedure for distributing the type of observation includes several stages of multidimensional smoothing of data. Using the software «Data Mining», the final distribution S of the studied set of observations for *k-classes* is carried out in accordance with the rule of minimum distance with respect to the destination centers $X = X^{(n-k)}$ (observation X_i belongs to the class j_0 if $d(X_i; \overline{X}(j_0)) = \min_{1 \le j \le k} d(X_i, \overline{X}(j))$.

The studied agribusiness enterprises, based on the indicators of the state of financial system (its signals), were divided into four groups (Tab. 1).

The first group (cluster 2) included six companies with an equal level of risk and the best signals of the financial system. These are enterprises with significant investment potential, high profitability and other indicators with positive growth dynamics during 2016-2017. The second group formed a cluster 4, which has six stable companies. The indicators of the state of financial system of agribusiness enterprises show relatively acceptable dynamics of financial development, but unbalanced production activities for two years. Signals of the financial system on cost recovery,

lack of reserve capital indicate a threat of loss of financial stability in the event of the emergence of risk factors of financing.

Tab.1.

Distribution of agribusiness enterprises according to the indicators of the state of financial system

Group of enterprises with equal level of risk (1)	Group of enterprises with a stable level of risk (2)
$x_1^{\downarrow}, x_2^{\uparrow}, x_3^{\uparrow}, x_4^{\uparrow}, x_5^{\downarrow}, x_6^{\downarrow}, x_7^{\uparrow}, x_8^{\uparrow},$ $x_9^{\uparrow}, x_{10}^{\uparrow}, x_{11}^{\uparrow}, x_{12}^{\uparrow}, x_{13}^{\downarrow}, x_{14}^{\uparrow}, x_{15}^{\uparrow}, x_{16}^{\uparrow}$	$x_1^{\uparrow}, x_2^{\uparrow}, x_3^{\uparrow}, x_4^{\uparrow}, x_5^{\downarrow}, x_6^{\downarrow}, x_7^{\downarrow}, x_8^{\downarrow},$ $x_9^{\uparrow}, x_{10}^{\downarrow}, x_{11}^{\uparrow}, x_{12}^{\downarrow}, x_{13}^{\uparrow}, x_{14}^{\downarrow}, x_{15}^{\uparrow}, x_{16}^{\downarrow}$
Group of enterprises with a shaky risk (3)	Group of enterprises with high risk (4)
$x_1^{\uparrow}, x_2^{\downarrow}, x_3^{\uparrow}, x_4^{\uparrow}, x_5^{\uparrow}, x_6^{\downarrow}, x_7^{\downarrow}, x_8^{\downarrow},$ $x_9^{\downarrow}, x_{10}^{\uparrow}, x_{11}^{\uparrow}, x_{12}^{\downarrow}, x_{13}^{\uparrow}, x_{14}^{\downarrow}, x_{15}^{\downarrow}, x_{16}^{\downarrow}$	$x_1^{\uparrow}, x_2^{\downarrow}, x_3^{\downarrow}, x_4^{\downarrow}, x_5^{\uparrow}, x_6^{\uparrow}, x_7^{\downarrow}, x_8^{\downarrow},$ $x_9^{\downarrow}, x_{10}^{\downarrow}, x_{11}^{\downarrow}, x_{12}^{\downarrow}, x_{13}^{\uparrow}, x_{14}^{\downarrow}, x_{15}^{\downarrow}, x_{16}^{\downarrow}$

Source: author's research

Cluster 3, which brings together ten companies and characterizes the decline in the stability of their financial development, forms a vulnerable group.

In addition, these enterprises with existing production facilities have a high degree of concentration of attracted financial resources, including the share of long-term loans. In the context of the financial crisis, these signals correspond to the unstable state of solvency of agribusiness enterprises, due to the high sensitivity to the influence of external macro- and micro-exposures. However, for the relative profitability of enterprises there is an opportunity to cover operating expenses. The last group (cluster 1) (a high risk or lost stability) has three enterprises which activities are characterized by significantly weakened indicators of the state of financial system (indicators below the limit or regulatory, which tend to decline over two years), the high degree of wear of the main means and operating profitability. This grouping provided the search for causes of destabilization of the financial system in the investigated enterprises. The study of the influence of each risk factor relative to the level of the state of financial system of a certain group of enterprises is presented in Tab. 2.

The risks associated with changing the external macro-profile are combined factors that demonstrate the lack of a systemic link between government agricultural financing programs and the majority of enterprises agribusiness.

Tab.2.

Estimation of variants of multifactorial risk in the financial system of agribusiness enterprises

The risk zone	Activation, system solution	Expert assessments			Investigated enterprises		
		Criteria of similarities	*Cum.* %	$C_{coherence}$	Criteria of similarities	*Cum.* %	Average value
Exterior macroenvironment	BF1× SF1 $\lambda_1 a_1 \in R_1 \in B$	$Y_1^1(\lambda_1 a_1)$	18.2	0.44	$Y_1^1(\lambda_1 a_1)$	15.9	0.28
		$Y_2^1(\lambda_1 a_1)$	28.4	0.38	$Y_2^1(\lambda_1 a_1)$	28.6	0.25
	BF1× SF2 $\lambda_2 b_1 \in R_1 \in B$	$Y_1^1(\lambda_2 b_1)$	16.4	0.38	$Y_1^1(\lambda_2 b_1)$	15,1	0.33
		$Y_2^1(\lambda_2 b_1)$	18.6	0.35	$Y_2^1(\lambda_2 b_1)$	22.6	0.32
	BF1×SF3 $\lambda_3 c_1 \in R_1 \in B$	$Y_1^1(\lambda_3 c_1)$	14.5	0.48	$Y_1^1(\lambda_3 c_1)$	20.9	0.35
		$Y_2^1(\lambda_3 c_1)$	24.7	0.38	$Y_2^1(\lambda_3 c_1)$	33.5	0.33
	BF1× SF4 $\lambda_4 d_1 \in R_1 \in B$	$Y_1^1(\lambda_4 d_1)$	20.8	0.39	$Y_1^1(\lambda_4 d_1)$	19.7	0.33
		$Y_2^1(\lambda_4 d_1)$	30.9	0.28	$Y_2^1(\lambda_4 d_1)$	25.8	0.30
The inner environment	BF2× SF1 $\lambda_1 a_2 \in R_2 \in B$	$Y_1^2(\lambda_1 a_2)$	17.4	0.36	$Y_1^2(\lambda_1 a_2)$	11.8	0.29
		$Y_2^2(\lambda_1 a_2)$	27.9	0.33	$Y_2^2(\lambda_1 a_2)$	17.2	0.27
	BF2× SF2 $\lambda_2 b_2 \in R_2 \in B$	$Y_1^2(\lambda_2 b_2)$	14.8	0.42	$Y_1^2(\lambda_2 b_2)$	24.6	0.28
		$Y_2^2(\lambda_2 b_2)$	26.9	0.33	$Y_2^2(\lambda_2 b_2)$	35.8	0.26
	BF2× SF3 $\lambda_3 c_2 \in R_2 \in B$	$Y_1^2(\lambda_3 c_2)$	18.3	0.31	$Y_1^2(\lambda_3 c_2)$	14.1	0.28
		$Y_2^2(\lambda_3 c_2)$	28.2	0.38	$Y_2^2(\lambda_3 c_2)$	23.8	0.28
	BF2× SF4 $\lambda_4 d_2 \in R_2 \in B$	$Y_1^2(\lambda_4 d_2)$	19.6	0.42	$Y_1^2(\lambda_4 d_2)$	16.1	0.36
		$Y_2^2(\lambda_4 d_2)$	30.7	0.39	$Y_2^2(\lambda_4 d_2)$	29.5	0.34
External microenvironment	BF3× SF1 $\lambda_1 a_3 \in R_3 \in B$	$Y_1^3(\lambda_1 a_3)$	18.9	0.38	$Y_1^3(\lambda_1 a_3)$	13.7	0.30
		$Y_2^3(\lambda_1 a_3)$	26.1	0.31	$Y_2^3(\lambda_1 a_3)$	21.9	0.29
	BF3× SF2 $\lambda_2 b_3 \in R_3 \in B$	$Y_1^3(\lambda_2 b_3)$	22.3	0.37	$Y_1^3(\lambda_2 b_3)$	18.8	0.35
		$Y_2^3(\lambda_2 b_3)$	34.9	0.45	$Y_2^3(\lambda_2 b_3)$	31.1	0.32
	BF3× SF3 $\lambda_3 c_3 \in R_3 \in B$	$Y_1^3(\lambda_3 c_3)$	15.2	0.38	$Y_1^3(\lambda_3 c_3)$	16.1	0.39
		$Y_2^3(\lambda_3 c_3)$	20.9	0.35	$Y_2^3(\lambda_3 c_3)$	28.2	0.25
	BF3× SF4 $\lambda_4 d_3 \in R_3 \in B$	$Y_1^3(\lambda_4 d_3)$	11.4	0.29	$Y_1^3(\lambda_4 d_3)$	23.8	0.35
		$Y_2^3(\lambda_4 d_3)$	19.8	0.28	$Y_2^3(\lambda_4 d_3)$	37.5	0.31

Source: author's own calculations

This factor has a high matching factor ($C_{coherence} = 0.39$, $Cum. = 20.8\%$), which is formed in the plane of separation of a significant proportion of enterprises from the implementation of the strategy and state agricultural development programs, which forms «60% of the consumption fund and

provides employment». The coefficient of coherence of external macro-risks relative to the financial system, the value of which equals 0.28, describes the parameters of the restriction on the formation of financial resources of agribusiness enterprises by attracting external borrowings in the financial market, inflation rates, and the cost of loans. It should be noted that the financial crisis of 2016-2017 has had a lesser impact on lending to large agribusiness enterprises (agroholdings), the production process of which includes the stages of harvesting, storage, processing and export of agricultural products. For example, for small and medium enterprises in 2017 in general, it became crucial in the sense of continuing existence due to reduced funding, the growth of price disparity and high taxes.

For enterprises of the first group with equal level and the best signals of the financial potential, as well as the two groups – with a stable level of risk, indicators of the state of financial system, which indicate a relatively acceptable dynamics of financial development, were more important than predictable tendencies of the domestic financial market and the inflation rate ($C_{coherence}$ = 0.43; 0.32). Concern is caused by possible decrease of market value of enterprises, loss of financial resources due to reduction of investment projects, new wave of redistribution of property in agribusiness.

Internal risks have formed the main factors – the possibility of covering production costs (compared to the amount of social expenditures) ($C_{coherence}$ = 0.42) and limiting the parameters of the formation of financial resources at the expense of domestic sources ($C_{coherence}$ = 0.39). The first factor is associated with a decrease in current costs, due to reduced salary and material consumption of products. It is believed that this can only be achieved by increasing productivity, introducing innovative technologies into production, and thus creating an effective material base for the investment attractiveness of enterprises and financing their activities. The second factor is caused by the shortage of own current assets, which, according to the expressed position of specialists-agrarians, is complicated by the achievement of break-even production ($C_{coherence}$ = 0.36), which is relevant for all groups of agribusiness enterprises. According to experts, the prospect of this factor is disappointing, as the formation of financial reserves at the expense of their own sources will depend directly on the lack of external financing.

Risk factors act as an unordered set of features that collectively reveal and formalize the financial paradigm. Moreover, the factor events of the external and internal environment in the field of managerial influence are integrated with the risk-set, and thus, the phenomenon of multivariate risk situations. The risks identified by the classification criteria are analyzed from the standpoint of information security, depth of research and

developed system of indicators of evaluation. The interaction of heuristic procedures for assessing risk factors creates a plurality of flowcharts of their combined solution in constructing predictive models [16, p. 49].

Forming lines of measuring the risk in the financial system allowed of the agribusiness enterprises to use quantitative and qualitative characteristics without limiting their possible relationships to bring alignment asymmetry of financial losses, and as a result, provide the most promising area of information processing through a combination of methods of multivariate analysis of factors. This is especially true for the system of exchange of credit information, when selecting indicators of the state of financial system of business entities in the field of agriculture. Large-scale research should become the basis for financial monitoring, development of financial forecasting systems. Participation in independent expert research and the position of agribusiness enterprises should be recognized at system of state strategic management by indicators of the sector-specific development benchmarks.

References

1. Barry, P.J., (1984). Risk management, USA, Iowa State University Press.
2. Buyanov,V.P., Kirsanov,K.A., Mihaylov, L.M., (2001). Riskologiya: upravlenie riskami [Risk study: Risk Management], Moscow, Exam.
3. Caati, T., (1993). Prinyatie resheniy. Metod analiza ierarhiy [Decision-making. Method for analyzing hierarchies], Moscow, Radio and communication.
4. Drucker, P., (1997). The Effective Decision, *Harvard Business Review*, Jan-Feb.
5. Donecj, L.I., (2006). Ekonomichni ryzyky ta metody jikh vymirjuvannja [Economic risks and methods of measuring them], Kyiv, Center for Educational Literature.
6. Granaturov, V.M., (2002). Ekonomicheskiy risk: suschnost, metodyi izmereniya, puti snizheniya [Economic risk: essence, measurement methods, ways of reducing], Moscow, Case and Service.
7. Harrison, F., (1999). The Managerial Decision-Making Process, Boston, New York: Houghton Mifflin Company.
8. Jastremsjkyj, O.I., (1992). Modeljuvannja ekonomichnogho ryzyku [Modeling of economic risk], Kyiv, Lybidj.
9. Nedosekin, A.O., (2000). The application of the theory of fuzzy sets to the problems of financial management*, Audit and financial analysis,(2).* Retrieved from http://www.cfin.ru/press/afa/.
10. Prosvetov, G.I., (2005). Prognozirovanie i planirovanie: zadachi i resheniya [Forecasting and planning: tasks and solutions], Moscow, Publishing house: RTD.
11. Rayzberg, B.A., (1992). Predprinimatelstvo i risk [Entrepreneurship and risk], Moscow, Knowledge.
12. Robinson, L.J., Barry, P.J., Klibenstein, J.B., (1984). Risk attitudes: Concepts and measurement. In Ed. Barry P.J. (ed) Risk management in agriculture, Iowa State University Press, 11–30.

13. Sharpe, W.F., (1964). Capital Asset Prices: A Theory of Market Eguilibrium under Conditions of Risk, *Jornal of Finance,* (3), 425–442.

14. Tanklevska, N.S., Kovaljova A.O., (2016). Fundamentals of the strategy of financial support of agricultural enterprises, *Scientific herald of Uzhgorod National University. Series "International Economic Relations and World Economy"*, Vol.7, 123-127.

15. Tanklevska, N.S. Approaches to the formation of the mechanism of financial security of the social sphere, *Collection of scientific works of the Tavria State Agrotechnological University (economic sciences)*, Vol. 3(35), 220-225.

16. Tanklevska, N.S. Conceptual approaches to the formation of financial policy of the region's economic growth, *Bulletin of Kharkiv National Agrarian University named after. V.V. Dokuchaev. Series of Economic Sciences*, Vol. 1, 47-51

17. Vitlinsjkyj, V.V., Verchenko,P.I., Sighal,A.V.Nakonechnyj,Ja.S. (2002) Ekonomichnyj ryzyk: ighrovi modeli [Economic Risk: Gaming Models], Kyiv, KNEU.

6.2. FINANCIAL INSTRUMENTS FOR THE IMPACT ON THE DEVELOPMENT OF BUSINESS ENTITIES

NATALIYA TANKLEVSKA
D.Sc. (Finance), Professor
Kherson State Agrarian University

The impact on the development of the national economy and its individual entities is carried out through financial instruments based on the relevant structural elements of the financial mechanism. The combination of the elements of the financial mechanism is its "design", which is activated by setting the quantitative parameters of each element, that is, the definition of rates and rates of withdrawal of funds, the volume of funds, the level of expenditures, etc. The purpose of the financial mechanism ultimately comes down to the financial support and financial regulation of economic and social processes in the state.

Based on the systematization of different approaches to the definition of the structure of the financial mechanism, taking into account the specifics of the functioning of agrarian enterprises, in the financial mechanism of sustainable development of agrarian enterprises. Seven main elements can be distinguished: the subsystem of financial policy, financial methods, financial levers, legal, normative and informational support, financial policy, as can be seen from the structure of the financial mechanism proposed by us. In this case, the financial mechanism operates effectively if all its constituent parts function. However, the state can provide them with financial policy [1].

Many factors influence the dynamics and effectiveness of financial instruments. They can be divided into two large groups: objective and subjective. Objective factors include:

- increasing the role of the state in supporting the development of priority sectors of the economy;
- state financial policy of Ukraine;
- priorities of economic policy;
- transition to market conditions of management;
- food security of the country;
- fulfillment of Ukraine's obligations in the international arena (WTO membership, EU requirements);
- the need for structural adjustment of the national economy;
- support of entrepreneurial activity in the agrarian sector;
- financing of priority sectors of the national economy.

Subjective factors are:

- level of professional competence of executive and legislative staff;
- political positions of employees in executive and legislative structures of power;
- level of corruption (presence of ethical norms of behavior);
- availability of legal, normative and information base;
- availability and level of qualification of financial and crisis managers at agrarian enterprises.

The combined effect of these groups of factors significantly influences the effectiveness of the use of financial instruments. Let us consider the most important components of it in more detail and give them a general scientific-theoretical description.

In economic practice, financial forecasting has long been used as one of the financial methods, which allows for predicting the development of economic processes for the future. The process of forecasting as scientific prediction, besides knowledge of economic laws, still requires scientific orientation and intuition. In this regard, financial forecasting is a far more sophisticated financial method than financial planning. If financial forecasting is a strategy for developing state finances in a certain perspective, then financial planning is tactical ways to achieve this perspective. From reliable financial forecasts, not only the quality of the implementation of current financial plans, but also the duration of their operational implementation will depend.

According to O. Kyrylenko, financial planning is the activity of drawing up plans for the formation, distribution and use of financial resources at the level of individual economic entities, their associations, branch structures, territorial units and the country as a whole. The

financial plans specify the main proportions of the distribution of the created value through satisfaction of their own production needs, directing part of the funds to pay taxes and mandatory fees, stimulating workers, investing temporarily free funds, etc. [2].

The main tasks of financial planning should include:

1) determination of the volume and sources of financial resources in all centralized and decentralized funds, their distribution between material and intangible spheres;

2) stimulation of production growth;

3) the concentration of financial resources on the most important on-line economic and social development of the state;

4) linking the main parameters of financial plans with all other indicators of the plan of economic and social development, ensuring the balance of material, labor and financial resources:

5) determination of financial relations between economic entities and the financial and credit system.

According to I. Petrovskaya, the main principles of financial planning should be considered: the scientific validity of the plans, which implies the balance of all financial, material and labor resources: the objective-purpose principle, which involves the definition of a specific purpose of financing, ensures the purposefulness of the use of financial resources [3].

In financial planning, an important role is assigned to the application of modern methods, namely:

1) the method of coefficients (involves the implementation of financial calculations based on the definition of the appropriate coefficients; the lack of this method – does not stimulate the rational use of material and monetary resources, as an example: a comparison of achievements of the past period with tasks of current plans);

2) normative method (financial indicators are calculated on the basis of progressive norms and norms of formation and use of financial resources of the state);

3) balance method (allows balance of sources of financial resources with material, including – raw materials and labor resources).

Financial planning actively influences the whole process of planning the national economy. Futhermore, if the state has achieved the conformity of the produced gross domestic product in cash and in kind, there is no discrepancy in the production and financial indicators, and the most balanced material, labor and financial resources, this indicates the high efficiency of using financial planning as a leading financial method. Financial planning makes it possible to maximize internal reserves of production growth and consider them when planning targets. It has the

property of actively influencing the entire reproduction process. In this case, conditions are created to control production and distribution. In financial planning, it is important to apply the principles of scientific substantiation of the indicators of the plan and ensure their stability, the use of progressive norms and norms, mathematical methods and electronics. In the conditions of development of market relations in the financial planning, it is necessary to apply a budgeting system.

Formation, adoption of the budget of the enterprise and further control over its use are called budgeting. The budgeting procedure is a norm for foreign companies and in recent years for Ukraine. In modern conditions, enterprises cannot work effectively if budgeting is not synchronized with the dynamics of economic development. Formation and approval of the budget – the most time-consuming part of the entire planning cycle, while more than 50% of enterprises do not take into account business planning at all when forming the budget. The most important tasks that are solved through budgeting are:

- planning of operations that ensure the achievement of the goals of the enterprise; coordination of different business (as types of economic activity) and structural divisions;
- operational refreshment of the deviations of the actual results of the activities of enterprises and its structural subdivisions from the goals set, the identification and analysis of the causes of these deviations, timely and reasoned decision-making on regulatory measures;
- effective control over the expenditure of financial and material resources, providing planned discipline; assessment of the implementation of the plan by the financial reporting centers and their managers;
- encouraging managers of financial reporting centers to achieve the goals of their divisions; coordination of the interests of the workers of the enterprise [4].

According to I. Blank [5], budgeting as a financial technology consists of:

1. Technologies of budgeting, which include types and forms of budgets; indicators (system of financial and economic indicators, based on which budgets form); the procedure for consolidating budgets into the consolidated budget of the enterprise.

2. Organizations of budgeting, which foresaw the formation of the financial structure of the enterprise (determine the centers of financial responsibility – objects of budgeting); budget regulations; stages of the budget process: the schedule of document circulation; systems of internal normative documents (provisions, job descriptions, etc.)

3. Use of information technologies, which allow developing various scenarios of the future financial state of the enterprise (or individual business), efficiently collecting, process and consolidating the actual data required for budget control.

There are five stages of setting the budgeting system at the enterprise (Fig. 1). The purpose of the 1st stage (the formation of the financial structure) – to develop a model structure, which allows you to establish responsibility for the implementation of budgets and control the sources of income and expenditure. At the 2nd stage (creation of the structure of budgets) determine the general scheme of formation of the consolidated budget of the enterprise. As a result of the 3rd stage (development of methods and procedures of management accounting) form the accounting and financial policies of the enterprise, that is, the rules for the management and consolidation of accounting, production and operational accounting in accordance with the restrictions adopted in the compilation and monitoring (monitoring) of budget execution. The purpose of the 4th stage (development of the planning regulations) is to determine the planning, monitoring, and analysis of the reasons for non-fulfillment of budgets, as well as the current budget adjustments. At the 5th stage (implementation of the budgeting system), they compose operating and financial budgets for the planned period, conduct a scenario analysis, adjust the budgeting system based on the analysis of its compliance with the needs of the enterprise.

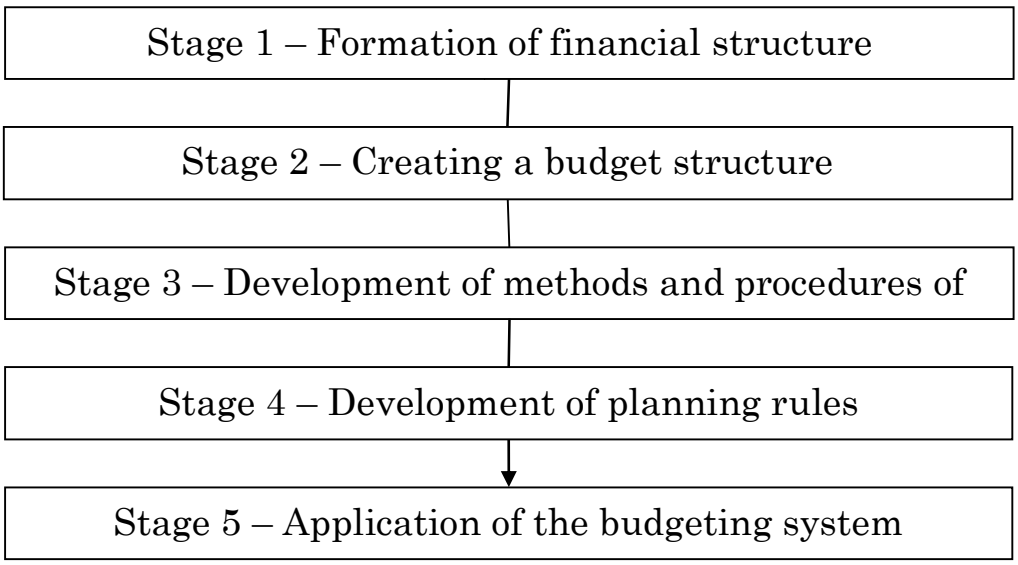


Fig. 1 Stages of setting up the budgeting system

The success of the introduction of a system of budgeting in agricultural enterprises depends on the dense elaboration of all regulations and procedures for the compilation and control of budget execution, as well

as the level of qualification of the managers responsible for budgeting. In any case, at the time of implementation at the enterprise there should be a carefully weighed system of management accounting.

Conditions of efficiency of the budgeting system:

- Methodological and methodological basis for the development, control and analysis of the budget;
- an effective technology for approval of a business plan that is developed at the highest level of the enterprise, with the budgets that are formed "from the top down", their consolidation and control over their implementation;
- integrity and authenticity of data when they are transferred from bottom to top;
- access to operational data on the state of business;
- competent specialists who are ready to support the budget process;
- automation of calculations [4].

The effectiveness of budgeting determines the efficiency of the enterprise as a whole. At the same time, the introduction and use of budgeting helps to identify and classify many of the problems of enterprises that have not been known before.

When executing financial plans, there is a need for operational management as an activity related to the need for intervention in distribution processes in order to eliminate disproportions, overcome bottlenecks, timely redistribution of funds, and ensure achievement of planned results. Both in the preparation of financial plans and in their implementation, as well as at the end of certain periods, financial control is carried out to verify the correctness of the cost allocation and the redistribution of the gross national product for the respective funds of funds and their use for the intended purpose. Financial control is a prerequisite for the smooth, efficient and gradual development of the economy as a whole country, as well as individual industries and enterprises.

Savchuk V. states that financial control, as one of the functions of financial management, is a special activity of the respective structures in relation to verification of the formation and use of financial resources funds in the process of creation, distribution and consumption of gross domestic product in order to assess the validity and effectiveness of decision-making and the results of their performance at enterprises, in industries and in the state as a whole [6].

From the definition of the essence of financial control it follows that its object are the processes of formation and use of funds of financial resources. The subject of control is the carrier of control functions with respect to the control object. He, as a rule, is determined by the legislation

of the state, normative legal acts of the subjects of financial activity. Types, forms and methods of financial control are presented in Fig. 2

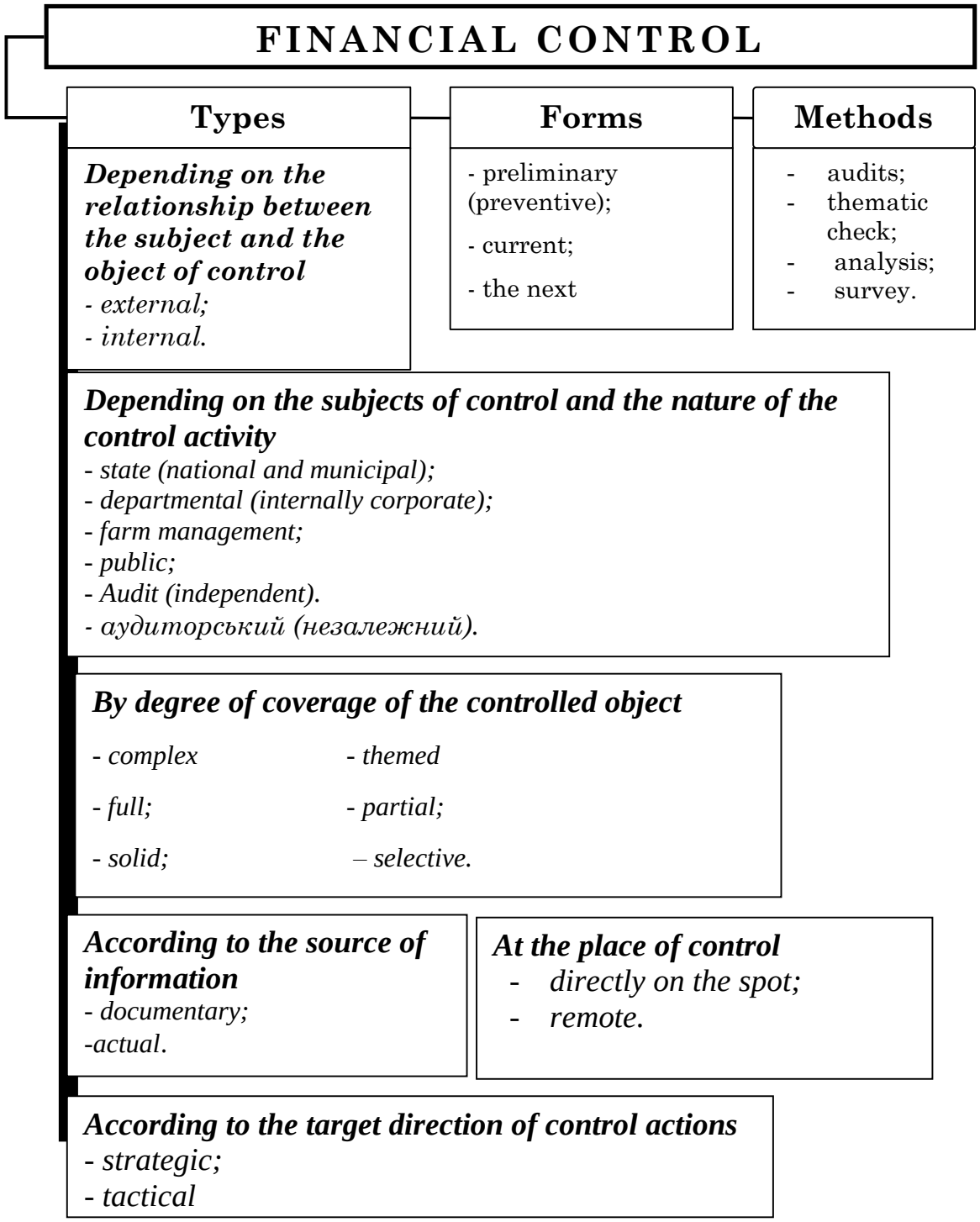


Fig. 2. Types, forms and methods of financial control

We share the views on the definition of the most important principles of financial control: independence; publicity; preventive (preventive); effectiveness; regularity; objectivity; all-embracing character.

Oparin V. proposed the classification of financial control, depending on the subjects of control, which distinguishes between such types of: state, departmental (intracorporate), internal economic, public and audit (independent). At the same time, state financial control involves state and municipal control [222]. The main feature of the national control is that it is non-departmental, conducted in relation to any subject, regardless of his departmental membership and subordination. This control is carried out by state bodies of legislative and executive power and special state bodies of control [7].

The subjects of the national financial control are the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, the National Bank of Ukraine, the Accounting Chamber, the Ministry of Finance of Ukraine, the State Department of Financial Monitoring, the State Fiscal Service, the State Audit Office, the State Treasury of Ukraine, the State Commission on Securities and Stock the State Property Fund of Ukraine, the authorized executive body in the field of regulation of financial services markets, as well as the directorate of state extra-budgetary trust funds and other central and local executive bodies.

Subjects of departmental financial control are control and audit services of sectoral ministries, departments and other higher authorities. Departmental financial control extends to subordinate enterprises, organizations and institutions. The functions of departmental financial control include: verification of the legality of economic and financial transactions; control over the use of material and financial resources; verification of saving of funds and material values; the correctness of accounting, as well as the reliability of accounting reporting; conducting inspections at subordinate enterprises and organizations.

The internal financial control is carried out by the economic services of enterprises, organizations, institutions (accounting, financial department, etc.), and in private enterprises by their owners. Object of control – economic and financial activity of the enterprise itself and its structural subdivisions. Directly to the chief accountant is responsible for the correct organization of accounting, timely compilation of accounting, correct and timely transfer of payments to the budget and centralized targeted state funds, for the purposeful and efficient use of budget allocations. In joint-stock enterprises, internal control is carried out by control and revision commissions.

Public financial control is exercised by public organizations (parties, movements, trade union organizations). It can be conducted by groups of specialists, which are created under the committees of the Verkhovna Rada, commissions of the Soviets of People's Deputies, as well as directly

at enterprises. An audit is an independent, commercially-based financial control.

Depending on the timing, the following forms of financial control are distinguished:

- preliminary, carried out before financial transactions;
- current, conducted in the process of financial transactions (transfer of taxes, fees, formation of funds, payments, etc.);
- the next, which is carried out after the end of certain periods, based on the results of the month, quarter, year.

Methods of financial control, as specific ways of receiving it, include audits, case studies, surveys, and the continuous monitoring of financial activities. The prerequisite for ensuring the effectiveness of financial control is the optimality and systematic action of the controlling bodies. In other words, financial control can not be effective if it does not cover all spheres of the circulation of financial resources. In Ukraine, in fact, outside of it there are funds remaining at the disposal of business entities when granting them tax privileges, compliance with social guarantees of employees, and so on. In order for the legal basis of financial control to meet the needs of economic development and the level of developed countries, the need to develop a concept for improving the state financial control and adoption of the Law of Ukraine "On Financial Control in Ukraine" has risen.

Along with the consolidation of the legal framework of the activities of the supervisory bodies, strict professional standards are mandatory for those who are checked and those who check. In developed countries, professional requirements for control are fixed in standards developed by competent organizations and specialists within the framework of the current legislation. In Ukraine, control activities should also be carried out in accordance with the regulations – a system of control procedures that should be standardized in order to ensure uniform understanding and use by both controlling bodies and controlled entities. Implementation of the system of distribution and redistributive relations takes place using the methods of financial provision of economic entities. Ospishcheva V. considers the main of them:

- budget financing as a provision of funds from the budget on irreversible terms;
- lending, that is, the provision of funds on the principles of turnaround, payment, timeliness and security;
- self-financing as a reimbursement of expenses of economic entities for the main activity and its development at the expense of its own sources (the principle of self-financing allows the attraction of credit resources);

- lease (leasing) involves the transfer of property for use for a certain fee and for a certain period;
- investing as a process of investing money in one or another object, with the expectation of increasing their value, as well as obtaining additional income [8].

Financial regulation of activity is primarily due to taxation, as the deduction of part of the income of enterprises and organizations, as well as of the population and the directing of these funds to the budgets and state target funds to meet state needs. In a market economy, the use of administrative methods of influence is too limited, and therefore the main emphasis in the regulation of the economy is on taxation [9].

Financial regulation is an integral part of state regulation of the economy. Since the 1930's, active involvement of state authorities in economic development has been observed in most developed countries of the world. Accelerated by the Second World War, the resource crisis of the industrial society, the destruction of the world colonial system and the bipolar political opposition of the socialist camp and countries with the market structure of the economy, the problems of economic development in all developed countries over the past 40-50 years have already been directly resolved by methods of state regulation, targeted programming, active organizational and economic mechanisms of development (creation of special economic zones, etc.). Sufficiently successful attempts of state regulation of economic development in developed capitalist countries had an objective basis – an increasingly high level of socialization of labor through the formation and development of monopolies, including state monopoly. The main instrument of socio-economic development as a managed process in a market economy is the economic and legal mechanism of state regulation, which includes both the system of privileges and subsidiary financial means of development, as well as a set of regulations and measures aimed at limiting certain unsatisfactory consequences of economic activity. In the theory of financial regulation of the economy there are two principal approaches:

1. Orthodox Keynesian. which has received widespread expansion in the first decades after the global economic crisis of 1929-1933. The basis of this method is the thesis of the self-sufficient effect of free enterprise, which heals the economy – "the invisible hand of the market", which is based on the idea of A. Smith about self-regulation of a market economy. This is a moderately-inflationary model of financial stabilization, or rather, a model of development with projected inflation. In accordance with this model, inflation becomes manageable, its creation potential is used for the priority purposes of economy. The main goals here are to support "effective" demand

"and" full "employment by increasing government spending, wage limitation, information and cyclical tax policies. In accordance with the canons of economic theory – it is Keynesianism. The foundations of modern western "post-industrial" society in its classical form in the USA were created on the basis of the recipes of this model of development.

2. The theory of neo-liberalism or monetarism. The main focus of this theory is the use of various financial measures, in the main reduction of financial payments from the state budget for social measures (education, health care), liberalization of foreign trade, freedom of pricing, restriction of the governing economic role of the state. The basic principle of this concept is to intensify the policy of monetary and financial stabilization – a minimum of financial allocations from the budget in order to force the economy to work on the basis of self-reproduction mechanisms. This is monetarism in its purest form [7].

The ideas of monetarism are based (almost always) not on the development of production, but on the application to manage the cycle of economic reproduction of various financial measures. Among them, the priority is to reduce financial payments from the state budget, which leads, ultimately, to insufficient financing of national programs of health care, education, and demographic regulation. As a result, fertility is decreasing, the access of wide sections of the population to the services of health care institutions, education, culture and recreation is limited. The use of labor is reduced; there appears and becomes a proliferation of unemployment with a simultaneous reduction in production. At the historic stage of the statehood of Ukraine, the ideas of monetarism played a key role in the government's financial policy towards the development of the national economy.

The comparison of the main provisions of these two areas of financial regulation is presented in Table 1.

At the same time, in developing countries and countries that are on the path to market transformation, cheap labor is one of the main factors that due to their proper loading and use, they may also become the "locomotive" of economic development.

In analyzing the methods of reforming the economy proposed by the International Monetary Fund (IMF), one can not but take into account the fact that the IMF was created in 1944 in the Bretton Woods as an organization for regulating foreign exchange relations between the states that had founded it. In subsequent years, the main task of this organization was the need to neutralize so-called derivatives – paper money not backed by physical production. As a rule, derivatives arise in the process of functioning of stock exchanges at the stages of "overheating" of the economy

of developed countries. In relation to the "post-Soviet" countries and countries of the Third World, the model of the economy of the midshipman nature was used and applied (from Maquiladora – use of "local" cheap labor for less requirements to labor safety and to environmental safety for the production of consumer goods of low quality).

Tab. 1.

The basic principles of the liberal concept and the concept of state regulation

Substantive provisions	Liberal concept	Concept of state regulation
Roles of the state in the economy	The minimum of interference, function – creation and enforcement of laws	Active state regulation, including prices; government procurement, budget support for priority sectors, widespread use of tax and other benefits
Monetary policy	Fighting inflation and budget deficits, hard money regulation	Moderate inflation over a number of years as a result of structural deformations and a certain monopolization of the economy, reducing budget deficits is not an end in itself.
Foreign-economic policy	Open economics: regulation of foreign economic relations only with the help of tariffs, consistent reduction of import tariffs	Protection of domestic commodity producers: high tariffs on imports, use of quotas and export-import licenses
Ownership and privatization	Priority of private ownership, including land ownership, high privatization rates, protection of owners' rights	Multilevel economics, high share of the state sector, restriction of private ownership of land (its sale and purchase)
Structural and investment policy	Structural shifts are a consequence of the market, reliance on private and foreign investment, public investment – only in infrastructure and social facilities	Structural shifts are a consequence of the market, reliance on private and foreign investment, public investment – only in infrastructure and social facilities
Social policy	Addressing social support, job creation and earning conditions is recognized as more important than individual social guarantees. Stimulates the development of private pension funds and insurance companies	State guarantees of a certain standard of living and employment, relying on state pension provision and state social insurance

As a result, countries that have widely used the recommendations of the IMF, economic development has received "colonial" coloring: for

example, in Chile 85% of exports – raw materials; in Brazil – 40% of the population attend school less than five years, and half of them are less than a year; In Mexico, 18% of the able-bodied population of the working age lost their jobs in very short terms: in Russia and Ukraine, about 60% of the population were at the end of the XXth at the beginning of the XXI century under the poverty line. Significantly due to this low in our country the index of human development, which it has recently taken (data in 2001) 74 place among the countries of the world.

In general, Ukraine is typical, except income poverty, the so-called "poverty Opportunity", when even people with middle and high-income country is unable to provide a high quality of life (nutrition, education, health, recreation, a healthy lifestyle in general). According to domestic experts, about 17 million Ukrainian citizens belong to the "marginal" – groups of people with minimal marginal living conditions (includes also "new poor", whose share is high enough for people with higher education, mental workers (teachers, engineers, physicians, tutors, etc). Problems of the formation of marginalized groups (strata) are due to institutional transformations that accompany the restructuring of the country's economic system.

In general, financial regulation is carried out through:

1) a system of norms and norms – characterize a certain level of provision of expenditures, different types of expenditures of financial resources (rates, rates of deductions of taxes, payments to the budget, other deductions to extrabudgetary funds);

2) Limits – certain restrictions on the use of state budget funds, enterprises (salaries, bonuses, scholarships, for economic needs) or population;

3) financial reserves – temporarily withdrawn from circulation financial resources mobilized in special funds for their future vyko¬rystannya upon the occurrence of unforeseen situations (wars, natural disasters, etc.) [9].

Financial regulation involves two methods of distribution:

- the surplus, when the distribution is carried out in elements, among which one is productive – the balance, while the others are determined on the basis of independent calculations;
- tax, when the entire amount of profit is distributed according to statutory rates and terms.

Financial regulation is related to the regulation of distribution processes at the macroeconomic and microeconomic levels. Financial regulation implies a policy of so-called "shock therapy", which has had some positive effects in Poland, Hungary, the Czech Republic, and Slovakia. The

main measures of shock therapy are: liberalization of prices; liberalization of the labor market; export liberalization; reform of the taxation system; reduction of budget deficit; privatization; formation of the capital market: restrictive monetary policy.

The failures of "shock therapy" in Ukraine had a very real reason, namely, an attempt to "embed" market relations into a management structure that was not originally intended to function in a market environment. Managed structural economic transformation, including – institutional (primarily – peretvoren¬nya ownership in the organization of production, state and mistse¬vomu management in the financial system, investment and innovation) be preceded by wide introduction of market relations in the relationship between economic entities. Consequence of "shock therapy" 1991-1992 pp. Ukraine, instead of the expected production pozh¬vavlennya, was almost complete collapse of the national economy as territorial and economic complexes lost their main lever of development – handling, in a time when the possibility of self-development were limited due to lack of experience, lack re¬sursiv, including: .ch – financial, and most importantly – the torn territorial eco-nomic links with the economic objects remaining in the territory of other CIS countries, and even at the level of national commodity producers.

Hyperinflation, the degradation of a number of labor-intensive sectors of the economy, which lost the necessary state control (first of all, medium, precision, agricultural and transport machine-building, radio-electronic and light industry, etc.) and the creation of the shadow economy sector, where more than a third was produced, led to the socio-economic crisis. In the country, the distribution was open – about 10% according to the methodology of the International Labor Organization (data of 2000), and hidden (according to various estimates, in the second half of the 1990s) – 25-30% of unemployment. One of the most negative consequences of "shock therapy" in Ukraine was almost complete freezing of financial resources of the population, minimizing their personal income.

Certain signs of stabilization (in 1998-1999 pp.), And then economic growth in 2009-2012 pp. testify to the fact that the market relations are able to give a tangible economic effect only when there is a corresponding organization of production activities of a society with developed structural and infrastructural elements, as well as financial resources and developmental leverage, the link between which is ensured appropriate industrial, market, social and institutional infrastructure.

You should also pay attention to the essence and characteristics of financial methods. Thus, M. Carlin defines the financial method as a means of influencing financial relations in the economic process. Financial

methods operate in two directions: the management of the movement of financial resources and market-based commercial relations, associated with changes in costs and results, material incentives and responsibility for the efficient use of funds. The effect of financial methods is manifested in the formation and application of monetary funds [10].

An analytical approach to the definition and evaluation of the most important financial methods of the financial mechanism of the organization of economy allows us to distinguish the following methods: planning (forecasting); investment; lending; financing; pricing; taxation; economic calculation; fund formation; insurance; discounting.

According to A. Podderyogin, each of these financial methods has a certain set of financial levers. For example, leverage, such as leasing, leasing, factoring, transfer, franchising, etc., is used in the lending method; methods of pricing are – prices, exchange rates, exchange rates, wages, interest, etc. [11].

Specific forms of implementation of the processes of distribution and redistribution of the created value are financial leverage, which are the means of action of financial methods. Krupka M., Drobozina L., Yuri S. and others. These include: taxes, compulsory fees, depreciation rates, norms for spending on budget institutions, rent, interest on loans, subsidies, subsidies, subventions, incentive funds, fines, penalties, bonuses, etc. The feature of financial leverage is that they are based on the consideration of the economic interests of the state, enterprises, organizations, people [7, 12].

Among all financial levers, a special place is occupied by taxes and fees, through which the state mobilizes funds to perform its functions, as well as affects and encourages entrepreneurial activity, promotes investment activity, determines the proportions of accumulation and consumption, provides rationality The use of limited natural resources, etc. The taxation system in Ukraine is underway in the process of reforming, reducing the tax burden on producers, granting privileges to investors and exporters of finished products, ensuring simplicity in tax collection, avoiding double taxation, and increasing liability for tax payments [13].

One of the directions of the state's influence on the pace of social restoration is the establishment of depreciation rates, the definition of methods for calculating depreciation, the use of accelerated depreciation to promote the development of scientific and technological progress. In this case, the scientific substantiation of the sizes of the rates of depreciation becomes significant because both their significant increase and the decrease has negative consequences. By elements, financial leverage is divided into financial norms, norms, limits, reserves, incentives – they are also called financial leverage.

Gaiduckiy A., Pasechnik Yu. And other researchers, financial norms are divided into four groups. The first is the rules that are centrally approved by the legislative and executive authorities: rates and minimum wages, scholarships, rates of taxes, fees and deductions. The second group includes rules based on material needs. These are the norms of food expenditure in pre-school and other educational and healthcare institutions, norms of spending on medicines, lighting, heating, etc. The third group consists of the norms determined by the ministries and other central executive bodies. This is, in particular, the norm of a significant part of the expenditure of budgetary institutions. The fourth group consists of norms and norms characterizing the proportions of economic and social development, it is the least investigated [14].

One of the directions of the state's influence on the pace of social reproduction is the establishment of rates of depreciation, the determination of depreciation methods, and the use of accelerated depreciation to promote the development of scientific and technological progress. In this case, the scientific substantiation of the sizes of the rates of depreciation becomes significant because both their significant increase and the decrease has negative consequences. Among all financial levers, a special place is occupied by taxes and fees with which the state mobilizes funds to perform its functions, as well as affects entrepreneurial activity, promotes investment activity, determines the proportions of accumulation and consumption, ensures the rational use of limited natural resources, etc. [15, 16].

Limits are a certain constraint on costs in the interests of the state, entrepreneur or citizen. Reserves should neutralize the impact of unpredictable factors that may arise in the future. According to K. Pavlyuk, the main methods of forming financial reserves are:

- budget (creation of a reserve fund in each budget);
- sectoral (creation of reserves at the level of ministries, branches, departments);
- self-supporting (formation of financial reserves of enterprises, organizations, institutions);
- insurance (creation of funds of insurance organizations) [17].

Financial incentives include the use of both material incentives and economic sanctions. To incentives, L. Kravchenko refers to incentive funds that come from profit, budget financing of effective areas of development of the national economy (including subsidies to enterprises whose activities are important for the economy), financing from state funds of state programs, structural adjustment of the economy, preparation and professional development of personnel, research works, environmental

protection measures [18]. But in the absence of centralized financial resources, the amount of funds sent to meet these needs is limited. Incentive funds from the profit of agrarian enterprises create the necessary incentives for the achievement of better economic results, since these funds are the main source of funds for the material stimulation of workers, meeting social needs and industrial development. Determining the priority of one or another direction of using net profit is solely an internal matter of the enterprises themselves.

Considering special financial privileges, S. Yuriy emphasizes that they promote the creation of favorable conditions for certain economic entities and are used mainly in the form of full or partial exemption from taxes, the application of differentiated rates of taxation, the exclusion of certain amounts from taxable income, the right to conduct accelerated depreciation [12]. At the same time, the market mechanism provides for the creation of equal conditions for activities for all business entities, and therefore the list of benefits in taxation should not be significant.

Financial leverage occupies an important place in financial sanctions as special forms of organization of financial relations, designed to increase the liability of economic entities in fulfilling their obligations (contractual terms, taxes and fees, etc.). At the same time, in the market conditions, the role of financial sanctions increases significantly. The most widespread among them is a fine and a fine. Fine is a measure of material influence on the perpetrators in violation of legislation, agreements or operating rules. Penalty – applied in case of untimely execution of monetary obligations and accrued for each day of delay.

Thus, the effectiveness of financial instruments depends on the effectiveness of using its individual elements. Only the complex application of all financial instruments can ensure the qualitative development of business entities.

References

1. Trusova N. Systemic factors of projected financial potential of business entities / N. Trusova //Economic annals – XXI. – 2016. – № 161(9-10). – PP. 61-65.

2. Tanklevska N.S. Teoretychni aspekty orhanizatsiyi finansovoho planuvannya na pidpryyemstvi / N.S. Tanklevska // Tavriys′kyy naukovyy visnyk. – 2009. – Vyp. 67. – S. 161-166.

3. Petrovska I.O. Finansy (z elementamy statystyky finansiv). [Navchal′nyy posibnyk] / I.O.Petrovs′ka, D.V.Klynovyy – K.:TSUL –2002. – 300s.

4. Tanklevska N.S. Metodychni pidkhody do vprovadzhennya systemy byudzhetuvannya na pidpryyemstvakh / I.V. Honcharenko, N.S. Tanklevska // Visnyk Sums′koho natsional′noho ahrarnoho universytetu, seriya «Ekonomika i menedzhment». – 2010. – Vyp. 5/2 (40). – S. 64–68.

5. Blank Y.A. Fynansovyy menedzhment: Uchebnyy kurs / Y.A.Blank – K.: Nyka-Tsentr, 2001. – 528 s.

6. Savchuk V.P. Stratehyya + Fynansy: uroky prynyatyya byznes-reshenyy dlya rukovodyteley / V.P. Savchuk − K. Companion Group, 2009. − 352 s.

7. Oparin V.M. Finansy (zahal′na teoriya): [Navch. posib.] / V.M. Oparin – K.: KNEU, 1999. – 164 s.

8. Finansy: kurs dlya finansystiv: Navch. posibnyk / za red. V.I. Ospishcheva − K.: Znannya, 2008. − 567 s.

9. Tanklevska N.S. Osnovni pidkhody shchodo udoskonalennya finansovoyi polityky / N.S. Tanklevska // Visnyk L′vivs′koho natsional′noho ahrarnoho universytetu. Ekonomika APK. – 2009. – № 16 (1). – S. 40–44.

10. Karlin M.I. Finansy zarubizhnykh krayin: [Navchal′nyy posibnyk] / M.I. Karlin – K.: Kondor, 2004. — 384 s.

11. Finansy pidpryyemstv: Pidruchnyk / Za red. A.M. Poddyer′ohina – K.: KNEU, 1998. – 353 s.

12. Finansy: vyshkil studiyi. Navchal′nyy posibnyk / Za red. d.e.n., prof. Yuriya S.I. − Teropil′: Kart-blansh, 2002. − 357 s.

13. Tanklevska N.S. Udoskonalennya derzhavnoyi finansovoyi polityky / N.S. Tanklevska // Naukovo-teoretychnyy ekonomichnyy zhurnal «Produktyvni syly Ukrayiny». – 2009. – №1 (005). –S. 56–61.

14. Pasichnyk YU.V. Byudzhetnyy potentsial ekonomichnoho zrostannya v Ukrayini: [Monohrafiya] / YU.V. Pasichnyk – Donets′k: TOV "Yuho-Vostok, LTD", 2005. – 642 s.

15. Trusova N. Restrictions of financing the budget deficit of Ukraine / N. Trusova, S. Kalchenko, V. Tsap, V. Ternovsky, O. Levchenko// International Journal of Economic Research. – 2017.– Vol. 14. – №14. – PP. 353-364.

16. Trusova N. Debt burden of the financial system of Ukraine and countries the Eurozone: policy of regulating of the risks / N. Trusova, S. Karman, M. Tereshchenko, Yu. Prus // Espacios. –2018. – Vol. 39. – № 38. – PP. 238-254.

17. Pavlyuk K.V. Byudzhet i byudzhetnyy protses v umovakh tranzytyvnoyi ekonomiky Ukrayiny: [Monohrafiya] / K.V. Pavlyuk. − K.: NDFI, 2006. − 584 s. − Bibliohr.: S. 554-580.

18. Kravchenko V.I. Mistsevi finansy Ukrayiny / V.I. Kravchenko – K.: Znannya, 1999. – 487 s.

6.3. THE ORETICAL BASES OF FORMING OF STRATEGY OF FINANCIAL PROVIDING OF AGRICULTURAL ENTERPRISES

ALINA KOVALYOVA
PhD student,

NATALIYA TANKLEVSKA
scientific advisor, D.Sc. (Finance), Professor
Kherson State Agrarian University

On the modern stage of agricultural enterprises, development activity of ponderable value an effective and rational management acquires financial resources, especially in part of the financial providing.

Financing of agricultural enterprises is a difficult and at the same time necessary constituent for successful development of the enterprises and maintenance of them at the competition level. Most enterprises ran into the problem of defect, heavy availability to all types of their resources. At the inequality of the prices on an agricultural produce, capital goods and raw material, power mediums, it is difficult to the agrarian enterprises to manage and provide stable development and financial firmness of the general industry. For this reason development of strategy of the financial providing of agricultural enterprises is the main basis for the choice of alternative of determination to reach the best orientation of the financial activity, the right choice of direction of organization of financial relations both out of limits and in the inside of an enterprise and maximal appreciation of value of the definite enterprise.

In the conditions of market relations, there is a necessity to determinate the tendencies of the financial state of agricultural enterprise, and conscious scientifically reasonable perspective foresight of directions of development of production, orientation in financial possibilities and prospects of achievement of the put aims at changeable terms of environment. The effective instrument of successful conduct of economic activity is development of the financial strategy. Financial strategy must be oriented to the financial stability, maintenance and the capital, getting the profit and to determine the best orientation of the financial activity, as the aim at the economy of all types of charges, on mobilization of capital to support the productivity, research, marketing and other strategies, on the maximal appreciation of the enterprise value [1, p.72; 2, p.42].

Gudz' O., Kindratska G., Bilyk M. distinguish two directions of the financial strategy interpretation: in the wide and narrow understanding.

The American economists such, as R. Clarke, V. Wilson, R. Danes and S. Nado consider that financial strategy outlines the picture of development of enterprise in the future, determining her "…as the long-term course of financial politics, counted on a prospect that envisages decision of monumental tasks of enterprise". However, it exists and the narrowed understanding of setting of financial strategy says that it is taken only "to the use of own and attracted external financial resources for the achievement of strategic competitive edge" [3, pp.98-99; 4, p.246].

Financial strategy is: 1) a complex of the events sent to the achievement of perspective financial goal; 2) the qualitatively certain, generalized model of financial actions of organization, that must be realized for the achievement of the set aims by means of coordination and allocation of the resources; 3) long-term aim of activity of enterprise, state, society that represents basic principles to the financial politics and choice of the financial providing of realization of corporate management; 4) trajectory of long-term motion of financial resources, conditioned by perspective tasks that come out from the accepted financial politics [5, p.61; 6, p.239].

Thus, Tanklevska N., Bila O., Chuy I., Boychyk I., Sheremet O., Filina G. mark that financial strategy – the of long lasting course of financial politics, counted on a prospect, that envisages decision of monumental tasks of certain economic and social strategy [7, p.27; 8, p.74; 9, p.93; 10, p.122; 11, p.13]. Other position have Blank I., Synchak V., Krushynska A., Pylypenko I., Gerasymchuk Z., as following they distinguish that financial strategy is one of the major types of functional strategy of enterprise, that provides all basic directions of development of its financial activity and financial relations by forming long-term financial goals, choice of the most effective ways to reach them, adequate adjustment of sources of forming and directions to use all possible financial resources at the change of terms of environment [12, p. 104; 13, p.82; 14, p.334; 15, p.58].

In the advanced study Gudz' O. distinguishes that financial strategy plays an important role in the process of making an effective action of mechanism of providing of agricultural enterprises financial resources in relation to providing of permanent and stable increase of their efficiency and profitability [16, p.326]. Thus, Nagorna O. marks that the essential basis of financial strategy – there is strategy of the financial providing, the aim of that consists in providing of corresponding profitability, solvency, financial firmness and financial stability of the definite enterprise. Strategy of the financial providing presents a complex program of actions, that is sent to providing of "set of aims", tasks, principles of forming and effective use of financial resources, methods and sourcing that is counted on perspective development and increase of competitive edges of enterprise, taking into account the specific of industry [17].

Strategy of financing is making the plan to get means for the future development, expansion, creation of enterprise or other business [18, p.192]. Sakhno Y. marks that financial strategy is strategy of providing of the enterprise by monetary resources [19, p. 288-289]. We disagree with this idea, so as a conclusion we may say that financial strategy and strategy of the financial providing are different things. To our opinion, financial strategy this is a wider concept that means the long-term planning, organization and conduction of successful financial activity. Financial strategy is the constituent piece of the general strategy of each enterprise. Strategy of the financial providing of agricultural enterprise is a difficult process that includes a search, bringing in, mobilization and allocation of material and non-material resources from all possible sources, and development of events of the use of present money, for the effective functioning of enterprise. This strategy is basis of creation of financial potential agricultural enterprises.

It is expedient to define that the choice of aims of strategy in direct ratio depends on the selected list of basic approaches of the financial providing of agricultural enterprise, oriented to perspective development. The article of development of certain approach of strategy of the financial providing of enterprise is creation of such terms of the financial providing enterprises that will assist the increase of level of profitability and improvement of basic productivity and financial indexes as well. Taking this into account, Nagorna O. distinguishes approaches that predetermine the achievement of the strategic aims of the financial providing: approach of the gradual development; stabilizing approach; inertia approach; protective or anti-crisis approach [17]. We consider that these strategy approaches of the financial providing can be adapted to the approaches of the financial providing of agricultural enterprises.

Thus, Martynenko M., and Ignatyeva A. from their side distinguish the consumer-oriented approach [20, pp. 178-179]. However, Saukh I. distributes two other approaches. These approaches are so-called: approach of the block-module restructuring (based on the cooperation of the system of the resource providing, management and skilled potential) and approach of functional structuring its internal potential)[21, p.259]. We think that the mentioned approaches can be adopted by the approaches of forming of strategy of the financial providing. However, Dovgan' L., Karakay Yu., Artemenko L. distinguish four close ways of strategy development: main strategic approach, approach called "delegation of plenary powers", the general approach (collaborating), the initiative [22, pp.256-257].

Tanklevska N. distinguishes the basic stages of the financial strategy form, those are: determination of general time on that financial strategy; strategic aim forming of financial activity; development of the financial

politics in relation to the separate aspects of financial activity; a specification of indexes of financial strategy during the periods of its realization; estimation of the worked out financial strategy [7, pp.285-286].

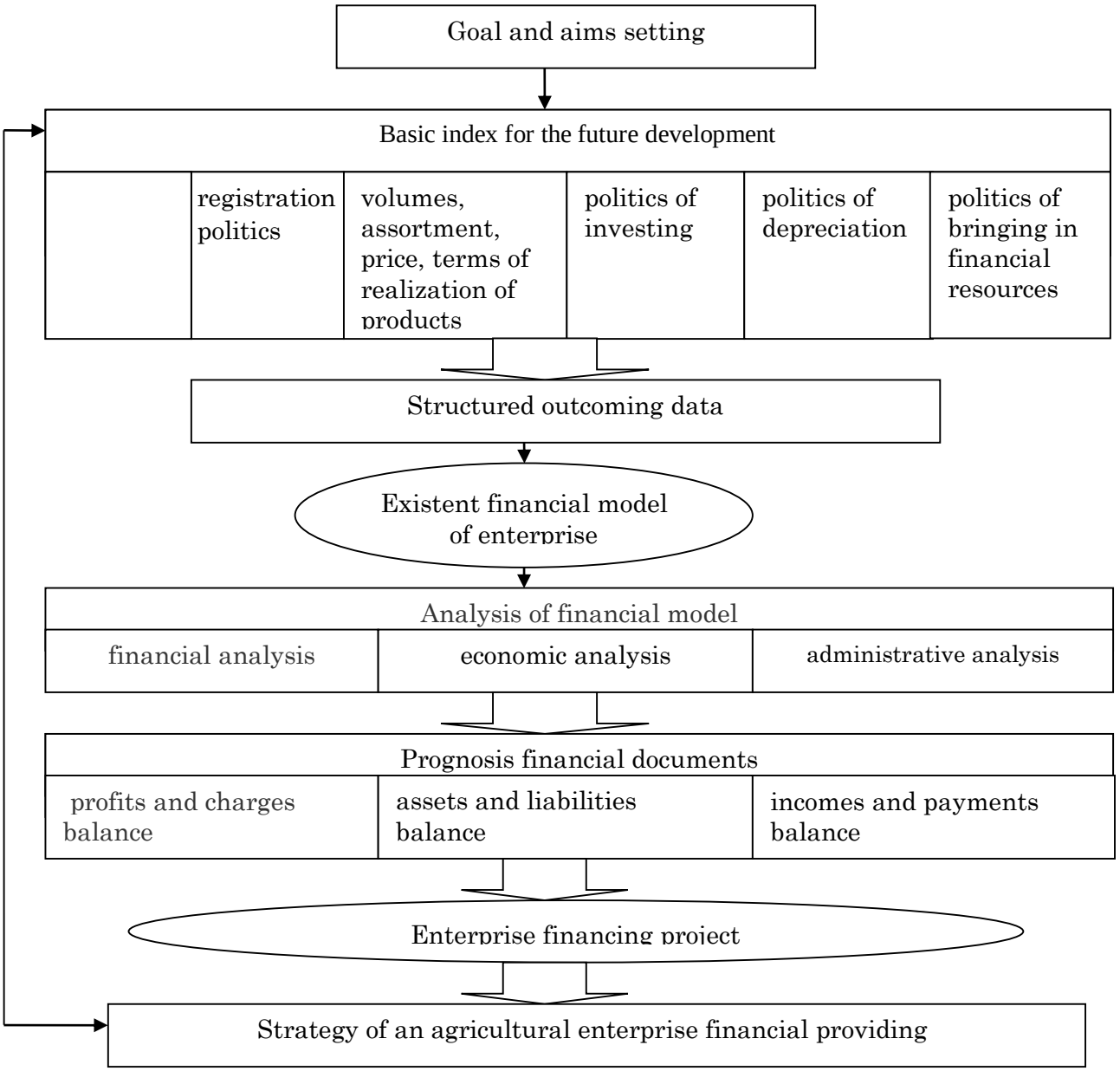


Fig.1 **Algorithm of development of strategy of he financial providing**

Source: it is formed by an author from data [24, p.201; 25, p.107; 26, p.164].

Blank I. marks that the process of forming of financial strategy of enterprise comes true due to the next basic stages: 1. Determination of general period of forming of the financial strategy. 2. Forming of the strategic aims of the financial activity. 3. Development of the financial politics for definite departments. 4. A specification of indexes of financial strategy is after the periods of her realization. 5. Estimation of the worked out financial strategy [23, pp.349-352].

So, Kostyrko L., Kostyrko R., Temnikova N. distinguish the following stages of enterprise forming strategy : estimated, as far as worked out financial strategy comports with general strategy of the enterprise; express-diagnostics for the estimation of strengths and weaknesses of the financial activity of the enterprise; the main choice of the financial strategy comes true on the basis of the complex estimation of the potential firmness and risk level; the steady development choice is based on the results of the potential firming diagnostics; estimation of the efficiency of financial strategy realization of the enterprise is based on the evaluation of collaboration effect and quality descriptions of financial strategy. Such estimation comes true on the next parameters; forming of mechanism of realization of financial strategy of steady development [24, p.200].

Effective realization of financial providing strategy is based on the effective development of the introduction of financial strategy of definite enterprise that comes true after such stages as following (Pic. 2).

Fig. 2 **Stages of the financial providing forming strategy**

Source: it is worked out by an author from data [13, p.94; 12, p.115; 27,p.163;28, pp.13-16]

Thus, strategy of the financial providing of agricultural enterprise is a difficult process that has a research, bringing in, mobilization and allocation of the material and non-material resources from all possible sources, and development of measures of the use of the present money, for the effective functioning of the enterprise. It follows to pay attention to feature of application of this strategy domain, so as it is related to high risk level of agricultural production, by its seasonality. From those approaches we define: gradual development approach; stabilizing approach; inertia approach.

References

1. Berdnikova T. (2007) Analiz ta diagnostyka finansovo-gospodars'koyi diyalnosti pidpryyemstva [Analysis and diagnostics of financially-economic activity ofenterprise], – Russia, Moscow, INFRA-M.

2. Dovbnya S., Naydovs'ka A., & Khyt'ko M., (2011) Strategiya pidpryyemstva [Strategy of the enterprise] – Dnepr: NMetaAU, – vol. 1.

3. Gudz' O. (2013) "Financial strategies of providing of competitiveness of enterprise" Financial space. No. 4(12). – pp. 98-99.

4. Kindratska G., Bilyk M. (2007) Finansova strategiya organizatcii: napryamy udoskonalennya metodyky rozroblennya [Financial strategy of organization: is directions ofimprovement of methodology of development], Natcionalniy Universytet "L'vivs'ka politekhnika", L'viv, Ukraine.

5. Venger V. (2009), Finansy [Finances], Tcentr uchbovoyi literatury, Kyiv, Ukraine.

6. Zagors'kyy V., Vovchak I., Blagun I., Chuy I. (2006), Finansy [Finances], Znannya, Kyiv, Ukraine.

7. Tanklevs'ka N. (2010) Finansova polityka stalogo rozvytku agrarnykh pidpryyemstv Ukrayiny: teoriya, metodologiya, praktyka [Financial politics of steady development of agrarianenterprises of Ukraine: theory, methodology, practice], Aylant, Kherson, Ukraine, no. 27, pp. 285-286.

8. Bila O., Chuy I. (2012), Finansy [Finances], Magnoliya 2006, L'viv, Ukraine.

9. Boychyk I. (2006), Ekonomika pidpryyemstv [Economy of the enterprise], Atika, Kyiv, Ukraine.

10. Sheremet O., Demyanenko I., Bagats'ka K., (Eds.) (2013) Finansy dlya finansystiv [Finances are for financiers], Tcentr uchbovoyi literatury, Kyiv, Ukraine.

11. Filina G. (2009) 2nd ed., Finansova diyalnist subyektiv gospodaryuvannya [Financial activity of the ménage subjects], Tcentr uchbovoyi literatury, Kyiv, Ukraine.

12. Blank I. (2008), Finansoviy menedzhment [Financial management], El'ga, Kyiv, Ukraine.

13. Synchak V., Krushyns'ka A. (2013), Finansoviy menedzhment [Financial management], Khmelnitskiy universytet upravlinnya ta prava, Khmelnitskiy, Ukraine.

14. Ryasnykh I. (2010) Osnovy finansovogo menedzhmentu [Bases of the financial management], Akademvydav, Ukraine.

15. Gerasymchuk Z., Vakhovych I. (2007), Finansoviy menedzhment [Financial management], Nadstyrya, Lutsk', Ukraine.

16. Gudz'O. (2007) Zabezpechennnya finansovymy resursamy silskogospodars'kyh pidpryyemstv: teoriya, metodologiya, praktyka [Providing of

agricultural enterprises financial resources: theory, methodology, practice], Doctor's thesis, 08.00.04, Kyiv, Ukraine.

17. Nagorna O. (2009) Strategiya zabezpechennya pidpryyemstv komunalnogo gospodarstva: sutnist' ta osoblyvosti [Strategy of the financial providing of enterprises of communal economy : essence and features], "Efektyvna ekonomika", "Effective economy", 9, available at: http://www.economy.nayka.com.ua/?op=1&z=1385.html.

18. Grynyova V. (2004) Finansy pidpryyemstva [Finances of the enterprise]. – 2nd ed., Znannya-Pres, Kyiv, Ukraine.

19. Sakhno Ye., Ponomarenko S., and Dorosh M. (2013), Menedzhment malykh ta serednikh pidpryyemstv [Management of small and middle enterprises], Kondor-Vydavnytstvo, Kyiv, Ukraine.

20. Martynenko M., Ignatyeva I. (2006) Strateghichnyy menedzhment [Strategic management], 178-179, Karavella, Kyiv, Ukraine.

21. Saukh I. (2015) Finansovyy potentcial pidpriyemstva: pryntsypy ta osoblyvosti yogo formuvannya [Financial potential of the enterprise: principles and features of its development], no.1, 259, Biznesinform, Kyiv, Ukraine.

22. Dovgan' L., Karakay L., Artemenko L. (2009) Strateghichne upravlinnya [Strategic management], 256-257, Tcentr uchbovoyi literatury, Kyiv, Ukraine.

23. Blank I. (1998) Slovnik-dovidnyk finansovogo menedzhera [reference dictionary-book of financial manager], 1st ed., Nika-Tcentr, Kyiv, Ukraine.

24. Kostyrko L., Kostyrko R., Temnikova N. (2014) Strategichnyy finansovyy menedzhment [Strategic financial management], 200-201, Noulidzh, Lugansk, Ukraine.

25. Rozumovych N. "Development and realization of the competition-oriented financial strategy of machine-building enterprises", Vysnyk HDU, vol. 3., no. 6., p.107.

26. Datsenko G. V. (2005) "Theoretical aspects of forming of financial strategy in the system enterprise activity adjusting", Vysnyk Khmelnitskogo natcionalnogo universytetu, vol. 2., no. 5., p. 164.

27. Nemtcov V., Dovgan' L. (2001) Strategichniy menedzhment [Strategic management], UVPK, Kyiv, Ukraine.

28. Sayenko M. (2006) Strategiya pidpryyemstva [Strategy of the enterprise], 13-16, Naukova dumka, Ternopil', Ukraine.

6.4. THE UNITED TERRITORIAL COMMUNITIES' FINANCIAL RESOURCES FORMATION OF UKRAINE

LUDMILA ALESCHENKO
PhD student,
Kherson State Agrarian University

The role of united territorial communities (UTC) in ensuring the interests of citizens in all spheres of life in the respective territory is very important nowadays. The reform of local authorities and territorial power organization on the principles of decentralization, the conceptual

framework of which was approved in 2014, and the practical realization began in 2015, was among the most effective and most visible of the proclaimed strategic reforms of the Government of the country. The decentralization reform aims at creating a modern system of local self-government in Ukraine based on the European values of the development of local democracy, giving territorial communities the powers and resources that will ensure local economic development, providing the population with high-quality and affordable public service [2].

In Ukraine, the practical realization of the process of uniting territorial communities began in mid-2015. In 2016, significant progress was made in the formation of UTC – their number increased by 2.3 times. Thus, at the beginning of 2017, there were 366 UTCs in Ukraine, which combined 1,740 local councils. After the adoption of a number of normative and legislative acts, the problematic issues of the association were settled, the process of forming an UTC received a new reason to activation. So, by the end of May 2017, 413 UTCs were established in Ukraine, which combined 5258 settlements. The largest amount of UTC was created in Ternopilskyi (36 UTC), Dnepropetrovskyi (34 UTC), Zhytomyrskyi (32 UTC), Khmelnytskyi (26 UTC), Lvivskyi (25 UTC), Vinnytskyi and Zaporizhskyi (24 UTC) regions. The total share of the first three of these regions is a quarter (24.6%) of all UTCs of the country. At the same time, some regions are significantly behind in the process of UTC formation, among them Kiev (2 UTC), Kharkivskyi and Zakarpatskyi (5 UTC) regions [1].

The practical process of forming united territorial communities constantly reveals problematic issues requiring legislative or regulatory settlement. So, in 2016, the Cabinet of Ministers of Ukraine adopted a resolution "On Amending of the Methodology for the Formation of Capable Territorial Communities", which resolves the issue of making changes to the prospective plans for the formation of territories communities of regions, the submission of such changes to the Government's consideration, as well as the official confirmation of the composition of the UTC included in the relevant long-term plan [6].

A significant improvement in the legislative regulation of the formation of capable territorial communities took place in 2017:

- the law "On Amending to Some Legislative Acts of Ukraine Concerning the Voluntary Adoption of Territorial Communities" was adopted. The law introduced the procedure for voluntary adherence to the already established UTC, the requirements for recognizing it as capable are specified. The law should help to form the UTC in accordance with the approved Perspective Plans, since it assumes that if the UTC council refuses to consent to the accession of another territorial community on its

initiative, the Cabinet of Ministers of Ukraine can cancel the decision to recognize such a community capable;

- the law "On Amending Certain Legislative Acts of Ukraine Concerning the Peculiarities of the Voluntary Association of Territorial Communities Located on the Territories of the Adjacent Regions" was adopted. The law introduced a mechanism for the creation of an UTC, which included territorial communities of neighboring administrative districts and the possibility of creating an UTC, the center of which is a city of oblast significance, and the procedure for the first local elections in such UTCs;

- the law "On Amendments to Some Laws of Ukraine Regarding the Status of the Village or Settlement Head " was adopted. The law improved the functioning of the institute of heads of the UTC, clarified the legal status of the heads, defined their powers and forms of accountability and responsibility to the community and the local council of the UTC. The law defines the concept of the community by introducing amendments to the law of Ukraine "Local authorities";

- the law "On Amendments to Some Laws of Ukraine on Acquiring the Authorities of Village, Settlement, City Heads" was adopted, which amended the laws of Ukraine "On Local Authorities" and "On Local Elections" regarding the regulation of the issue of obtaining the authority of the village, settlement, city heads;

- the Cabinet of Ministers of Ukraine adopted a resolution on the system of local authorities remuneration. The resolution provides: significant increase of local authorities official salaries, they are coordinated with official salaries of civil servants; the establishment of allowances for high achievements in village, settlement councils and their executive bodies; the ordering of wages in village, town councils and their executive bodies representing the UTC; clarification of the order of bonuses, the establishment of allowances;

- the Cabinet of Ministers of Ukraine adopted the Order "On Approval of the List of Capable United Territorial Communities in which the first elections of deputies of the village, settlement, city council and corresponding village, town, city head in 2016". The Government has approved a list of capable united territorial communities for regulatory and legal support for the transition to direct intergovernmental relations with the State Budget of Ukraine of the united communities, in which the first local elections in 2016 took place;

- On June 6, 2017, the Law of Ukraine "On Amendments to the State Budget of Ukraine for 2017 Law" (concerning the funding for local elections), which regulates the issues of financial provision of local elections, including the first local elections in Ukraine, was adopted;

- On February 9, 2017, the Verkhovna Rada of Ukraine adopted the Law "On Local Authorities work". The law introduces fundamentally new principles of service in local authorities, creates legal backgrounds for: status regulation of an official of a local authorities; increasing prestige and ensuring equal access to work in local authorities; promotion of career growth; new wage model; introduction of mechanisms for preventing corruption; raising the level of social and material protection of officials, etc [5].

However, on March 21, 2017, the President of Ukraine returned the above-mentioned law for re-examination with his proposals, in particular, concerning:

1) application in determining the salaries amount of officials as the calculated value of the subsistence minimum established for employable workers by 1 January of the calendar year;

2) the distribution of the procedure for admission of citizens of Ukraine to work in local authorities based on the results of the competition for the employment of deputies village, settlement and city heads. The main scientific and expert administration and the Committee for State Construction, Regional Policy and Local Authorities of the Verkhovna Rada of Ukraine supported the first and rejected the second proposal. On May 16, 2017 the law was sent for revision to the profile committee of the Verkhovna Rada of Ukraine [6].

The introduction of the management policy decentralization should become an effective factor in stabilizing the socioeconomic situation, overcoming the contradictions between different levels of power and increasing the effectiveness of using budgetary funds at all levels of government. The main objectives of decentralization in the medium term are to complete the formation of capable territorial communities throughout the country, to strengthen the institutional and resource capacity of communities, to introduce strategic planning for the development of the UTC, to develop community infrastructure and to improve the quality of the entire spectrum of public services to the population.

Further successful implementation of the territorial organization and local authorities' reform on the basis of decentralization requires improving the legislative and regulatory support for the reform. In particular, it is necessary:

- to resume work on the draft law on amending the Constitution of Ukraine on decentralization, which should improve the constitutional base for the functioning of the new territorial organization system and the state administrative and territorial organization system;
- adopt a basic law "On the administrative and territorial structure of Ukraine", which defines the principles of state policy in this area, the a

new administrative and territorial structure construction, unified requirements and criteria for administrative-territorial units of all levels, clear procedures for the creation and liquidation of administrative-territorial units, the order of establishing and changing their borders, etc.;

- prepare and adopt a new version of the Law of Ukraine "On Local Authorities in Ukraine", improving the functioning of a full local government at various levels, the redistribution of powers in the system of local authorities and between local governments and state bodies of executive power;
- adopting the law "On local referendum", because with the adoption of the Law of Ukraine" On Ukrainian Referendum" in 2012, the legal mechanism for holding a local referendum was lost, which is a form of solving the issues of local importance by the territorial community;
- to amend the law "On Cooperation of Territorial Communities" on the introduction of a procedure for the accession of territorial communities to existing cooperation agreements;
- to amend the Law "On Regulation of Urban Development" to include in the list of documents on spatial planning at the local level the plan of the united territorial community, which will include functional separation of the territory, the formation of engineering and transport infrastructure, improvement of the territory [7].

Today, we need to study the issue of raising funds for the development of rural areas and the stable provision of state financial support for the voluntary unification of territorial communities.

In 2016, the subvention from the state budget to local budgets for the formation of the united territorial communities' infrastructure was 1 billion UAH, which was distributed among the 159 UTC budgets (proportionally to the area of the community and the number of rural population in such a territorial community with equal weight of both of these factors). In 2017, the amount of the subvention for the UTC infrastructure formation was in the amount of 1,5 billion UAH, while financing from the general fund of the State Budget was only 0,5 billion UAH, and the remaining 1 billion UAH – from the special fund. These funds were distributed between 366 UTCs, each community received less money than last year [8].

The rapid increase of the UTCs' number without a proportional increase in the amount of the subvention for infrastructure development will reduce the motivation of communities for unification and their opportunities for socio-economic development, and consequently, worsen expectations from reforms. Therefore, an urgent problem is the improvement of the mechanism of state financial support for the voluntary unification of territorial communities and the provision of stable sources of such support.

Today, there is almost no proper staffing of the united territorial communities' local authorities, there is a lack of qualification of local government employees to perform new functions. In particular, this leads to inefficient use of financial resources of territorial communities, failure to master the state subventions for the development of communities.

Local governments of rural UTCs are often unable to prepare qualitative investment projects for obtaining state support and international assistance, and are not prepared to implement strategic planning and programming of community development. In our opinion, solving this problem lies in the area of service professionalism in local authorities, the introduction of effective programs for the training of employees of local authorities, providing them with the necessary advisory and methodological assistance from the executive authorities and financing the training of specialists in higher education institutions.

The investment attracting into the united territorial community is necessary, first of all, for the introduction of innovative components in various spheres of the economy and socio-cultural development of the territories, replacement of old, unproductive productions whose products are not competitive.

The experience of the search and attraction of funds for socio-economic development of territories is studied, for example, in the united territorial communities in the Kherson region. For example, Prysyvaska UTC of Chaplinskyi District actively searches for investors and partners; in particular, it cooperates with Global Community in the DOBRE Program "Decentralization Brings Best Results and Effectiveness", which directs most of its technical and financial assistance to the local level, creating additional opportunities to community to manage resources more efficiently, increase the quality of public services, stimulate the development of the local economy and increase the attractiveness of citizens [9].

The above-mentioned community also uses international technical assistance from the USAID's "Support for Agrarian and Rural Development project", which is being implemented by the United States of America's "Chemonics International", with the financial support of the United States Agency for International Development (USAID) [10]. The project is planned to:

- the assistance in the development and implementation of local strategies for economic development in agriculture and projects to improve market infrastructure;
- the increasing of agricultural products value;
- the job creation;
- the raising of rural incomes and improving the quality of life in the community;

- the full use of the capacity of local authorities and target groups to implement rural development models based on the leadership of rural communities.

The work of the UTC of the Kherson region in the project "Public Dialogue – Cooperation of local authorities of the united territorial communities for development" funded by the program "Support to Democracy" of the Republic of Poland is successful and effective. During the project, new knowledge and skills will be disseminated to improve public and administrative services in communities. Effective for UTC is participation in the project "Application of Evaluations in Effective Society Management" (partners – Democratic Society East Fund, Warsaw; East Ukrainian Center for Public Initiatives, Kyiv), which is sent to local authorities of united communities and whose purpose is the improving the management potential of communities by assessing the results of their activities and financial support.

The attraction of funds for international financial assistance for the development of UTC also occurred through the signing of memorandums on cooperation in innovation and research production with public organizations and institutions, in particular, the Regional Center for Economic Research and Business Support Fund, the Institute of Intellectual Investments for free joint consultations and development of recommendations to ensure the competitiveness of individual communities in the Kherson region. The cooperation with the British Council in the framework of the Active Citizens project on joint financing of social initiatives is effective, attracting all possible resources for the development of the community: the resources of local authorities, targeted donor programs, sponsorship and business. The creation of a universal co-financing mechanism will create additional resources and better coordination among the various financing. For example, Prysyvaska UTC for the Small Grants Program of the Global Environment Fund, operating under the Strategic Initiative " The associated benefits of access to low carbon energy " received 771,4 UAH for thermomodernization of buildings, reconstruction of heating systems for pre-school educational institutions and community schools.

Thus, the signing of cooperation memorandums will help attract investments in the innovative development of humanitarian, social, environmental, energy and production projects for community development.

To attract additional investments in the development of UTC, as the experience of the work of the united territorial communities in the Kherson region, it is advisable to participate in regional investment events, regional investment fairs, economic and investment forums (for example, in the

Tavriyski skylines, Nova Kakhovka). As far as the development of investment projects, UTC in these events should be presented as a separate exposition. To ensure this business, in addition to preparing a techno-economic study for the investment project (proposal), it is advisable to produce presentation advertising materials and ensure the presence of representatives of business operating in a certain territory at the events.

In order to increase the investment attractiveness of the territory, communities should:

- to develop promising programs for the development of UTC and tools for their implementation with the support of the scientific institutions of the region;
- to form a positive image of the community and promote it among potential investors;
- to provide development of investment support infrastructure;
- to determine the priorities and needs of the territories in effective investments, to prepare investment proposals and projects;
- to create favorable conditions for doing business and investing the fund to the UTC economy by different types of ownership;
- attract promising foreign investors;
- to use all possible mechanisms and tools within the current regulatory framework to promote the process of investing on a transparent and civilized basis;
- monitor investment activity and stimulate investment attraction to solve socio-economic development problems of the community, especially priority ones;
- to provide appropriate information to potential investors with all available means.

The main priorities for attracting investments in the community are:

- the implementation of energy- and resource-saving technologies in the social-domestic sphere of rural areas;
- the involvement of innovative techniques and technologies in all branches of the economy of the region territorial communities (first of all, in agricultural production, industry, services);
- the implementation of projects related to the development of tourism and recreation;
- the development of the processing industry in the agro-industrial complex;
- the rational and efficient use of non-renewable resources, first of all, minerals and mineral waters;
- the development of communication and infrastructure components, including roads, other transport communications, communication systems, etc.

In order to ensure sustainable development of communities, the main areas of activity of local authorities in the investment process should be:

- the priority directions determination of foreign and domestic investments attraction by carrying out a comprehensive analysis of the socio-economic status and investment potential of the territory;
- the participation in the development and promotion of high priority investment projects for the community;
- the assistance to business entities in the development of investment projects and the search for investors for their implementation.

The search for investors should be done by the following ways:

- the participation in international exhibitions, economic and investment forums with the business involvement of all forms of ownership;
- the ensuring the information about the community and investment projects (proposals) in the Internet;
- the usage of international, interregional contacts of community members.

Taking into account the experience of attracting investors, in order to create an attractive investment image of the united territorial communities, we offer the following practical measures:

1. The distribution of information on the territory attractiveness for investors – the preparation and publication of "business cards" UTC, villages and settlement, advertising, billboards.
2. The formation, provision of open access and periodic updating of investment databases and innovation projects, resources, real estate, land plots, objects of unfinished construction that may be involved in the implementation of investment projects.
3. The establishment and maintenance of relations with public organizations, mass media.
4. The development of interregional cooperation.
5. The establishing of contacts, partnerships on the permanent basis, reaching agreements on community participation in fairs, exhibitions, presentations.
6. The ensuring of community participation in the targeted state regional programs implementation.
7. The informing the potential investors about the possibility of directing funds to the social and economic needs of the community, preserving the existing infrastructure, creating new productions and services, and creating additional jobs.

So, the main sources of receiving funds for the social and economic development of the united territorial communities are: international technical assistance, the State Fund for Regional Development; additional

subventions from the state budget to local budgets for the formation of the community infrastructure, the receipt of local taxes from business entities.

Taking into account the factors of increasing the investment attractiveness of the territories, introducing the proposed measures to form their attractive investment image, determining the main priorities for attracting investments in communities, will contribute: the self-sufficiency of territorial communities; effective use of their available resources; increasing the level of population employment at the place of residence; innovative-investment direction of development; optimal coordination of needs, resources, innovative techniques and technologies and their direction to solving priority problems of UTC, which, in the end, will become the basis for their permanent development.

References

1. On Approval of the Concept of Reforming Local Authorities and Power Territorial Organization in Ukraine: Order of the Cabinet of Ministers of Ukraine dated April 1, 2014 No. 333-p. Official portal of the Verkhovna Rada of Ukraine [Electronic resource]. – Access mode: http://zakon4.rada.gov.ua/laws/show/333-2014-%D1%80.

2. Gurgula T.V. Financial support of the territorial communities' capacity: problems and ways of their solution / Scientific announcer of Mukachevo State University. – The Economics Series. – Publ. 1 (7). – P. 132-136.

3. Malik M.Y. Status and problems of sustainable development of rural territories / M.Y. Malik // Transformation of agriculture and rural areas: collection of scientific articles / Gen. ed. Gubeni Yu. E. – L.: LNAU, 2010. – 416 pp., P. 69-76.

4. Storonianska I.Z. Financial support for the territorial communities' development in the context of administrative-territorial reform / I.З. Storonianska, A.O. Pelechatyi / Regional Economics. – 2014 – № 3. – P. 228-238.

5. Website of the State Statistics Service [Electronic resource]. – Access mode: http://www.ukrstat.gov.ua.

6. Ukrainian Cities Association [Electronic resource]. – Access mode: http://www.auc.org.ua/novyna/pro-problemy-obyednannya-terytorialnyh-gromad-na-zasidannipravlinnya-kyyivskogo-rv-amu

7. Local budgets due to 4 months of 2017 results [Electronic resource]. – Access mode: http://reforms.in.ua/ua/novyna/miscevi-byudzhety-za-pidsumkamy-4-h-misyaciv-2017-roku.

8. Decentralization and Local Authorities Reform: Results of the Second Wave of the Sociological Survey / Kyiv International Sociology Institute [Electronic resource]. – Access mode: http://www.slg-coe.org.ua/wp-content/uploads/2016/12/Analitychnyi.

9. The Grigorivskyi Village Council of Prysyvaska UTC site [Electronic resource]. – Access mode: http://grygorivska-gromada.gov.ua.

10. Self-centered decentralization: which regions are most optimistic about reform? / The National Reforms Council Site [Electronic resource]. – Access mode: http://reforms.in.ua/ua/novyna/decentralizaciya-na-vlasnomu-dosvidi-v-yakyh-regionah-naybilshpozytyvno-ocinyuyut-reformu

Розділ 7.

INNOVATIVE DEVELOPMENT OF THE NATIONAL ECONOMY

7.1. CONDITION AND PROSPECTS OF DEVELOPMENT OF THE NATIONAL INNOVATION SYSTEM OF UKRAINE

ALLA RUSNAK
Doctor of Economics, Associate Professor,
Professor of the Department of Economics
Kherson Branch of Admiral Makarov National Shipbuilding University

At the present stage of development of the global economy, where the level of development of innovative and high-tech activities determines the level of security and competitiveness of the country, more and more countries pay considerable attention to the sound management and development of a balanced, correct strategic approach to the organization of the innovation system. The development of these lines of research led to formation of the concept of the National Innovation Systems (NIS).

The National Innovation System of Ukraine is aimed at ensuring the effective implementation of the innovation process from new knowledge to production of new competitive high-tech products or services with high added value. Today, the National Innovation System in Ukraine is inefficient and characterized by significant disadvantages, including inconsistency of state policy, imperfection of the legislative framework in terms of stimulating innovation activity, separation of science from economic practice, lack of proper innovation infrastructure and mechanisms for commercialization of scientific and technological developments, disproportions in staffing the innovation process. Therefore, the substantiation of the measures that will allow realizing an effective National Innovation System in Ukraine is relevant.

It is important to create a permanently functioning national innovation system taking into account all factors of the condition of the national socio-economic environment [1, p.179].

According to the opinion of the experts of the Organization for Economic Cooperation and Development (OECD), the National Innovation System is a set of institutions of private and public sector that, individually and in the process of interaction, condition the development and dissemination of new technologies, create the prerequisites for the development and implementation of state innovation policy. Hence, the NIS is a system of interconnected institutions that promote the generation, accumulation, transfer of knowledge, skills and technologies which determine the level of innovation competitiveness of the state [2].

The National Innovation System, in accordance with the Concept for the Development of the National Innovation System, approved by the Cabinet of Ministers of Ukraine by Decree No. 680-r dated June 17, 2009, is a set of legislative, structural and functional components (institutions) involved in the process of creating and applying scientific knowledge and technologies, and determine the legal, economic, organizational and social conditions for ensuring the innovation process. The National Innovation System includes such subsystems as follows: state regulation, education, knowledge generation, innovation infrastructure and production [3].

According to P.M. Tsybuliov, such a definition of the NIC cannot serve as a reliable basis for development of the NIS model of Ukraine, since it does not include such subsystems as the implementation of innovative products, as well as the external innovation environment. The author stresses that the subsystem "education" is superfluous, because it is a separate self-sufficient system. There are also no relationships among the subsystems, as well as no peculiarities of the system are taken into account, which are related to the transition of Ukraine from the planned to the market economy [4, p. 6].

Scientists propose the following variant of the National Innovation System: a complex of institutes involved in the production, transfer and use of knowledge; firms and networks and communications created by them; scientific system; elements of market infrastructure; macroeconomic policy and forms of state regulation; system of education and vocational training; commodity markets, market for factors of production, labor; system of financing of innovations. The structure-forming blocks of this system are called industrial enterprises, scientific and technical sphere and innovative infrastructure [5, p. 26].

The National Innovation System is, on the one hand, a set of interconnected organizations (structural units) involved in the production and commercialization of scientific knowledge and technologies within national boundaries: small and large organizational structures (companies, universities, laboratories, technology parks and incubators, on the other hand, a complex of institutes of legal, financial and social character, which provide innovative processes and rely on national customs, traditions, cultural and political peculiarities [6, p. 193].

According to A. O. Olefir, Ukraine has not yet created a National Innovation System, as evidenced by some paired relations, such as: "state – science" or "state-business", as a result of which there is no relationship among public and private research organizations, among research organizations and production sphere, and the scientific sphere turns out to be isolated from the sphere of practical activity in most cases [7, p. 207].

The current characteristic of the subsystems of the National Innovation System of Ukraine and the main problems of their functioning are presented in Table 1.

Tab.1.

Characteristic of the subsystems of the National Innovation System (NIS) of Ukraine and the main problems of their functioning

Subsystems of the NIS	Composition of the subsystem	Characteristic	Main problems of functioning
State regulation	Legislative, structural and functional institutions	Cabinet of Ministers of Ukraine, Ministry of Education and Science of Ukraine, Ministry of Economic Development and Trade of Ukraine, National Committee for Industrial Development, Innovationы Development Council of the CMU	Poor effectiveness of the mechanism for coordinating actions between state authorities, industry, private business, higher education institutions, scientific institutions
Education	Higher education institutions and research and production enterprises	287 institutions of higher education, in which 1369.4 thousand students study. Professorial and teaching staff of the high school amounts 137.9 thousand persons.	Insufficient research funding for
Knowledge generation	Scientific institutions and organizations that create scientific knowledge and technologies	The number of employees involved in the implementation of research and development – 97,912 persons, among which Doctors of Sciences – 7091 persons, candidate of sciences (doctors of philosophy) – 20208 persons	Unsatisfactory state of the material and technical base of scientific establishments and research institutes; suspension of financing of works under state target programs; unreadiness of scientific researches for commercialization
Innovative infrastructure	Production and technological, financial, informa-tional and analytical, expert and consulting components and innovative struc-tures of other types.	Ukrainian Institute of Scientific and Technical Expertise and Information, regional centers of scientific and technical information	Reduction of the number of scientific and technical information organizations and institutions; destruction of the system principles of the organization and functioning of scientific and technical information
Production	Organizations and enterprises	Number of industrial enterprises engaged in innovation activity – 834 units (18.9% of the total number)	Poor innovative activity of enterprises; low share of public financing of inno-vation costs; orientation of the main branches of the domestic industrial complex to low-tech production and export of raw materials

The legal basis of the National Innovation System in Ukraine is formed by a complex of laws of Ukraine among which are "On priority directions of development of innovation activity in Ukraine", "On priority directions of science and technology development", "On innovation activity", "On scientific and scientific and technical activities", "On higher education", "On state regulation of activities in the sphere of technology transfer", "On special regime of innovative activities of technology parks", "On scientific parks", "On industrial parks" and special laws aimed at supporting the development of industries (aircraft engineering, shipbuilding, space industry, etc.).

The system of administration of the National Innovation System is not yet integral and is distributed between the Ministry of Education and Science of Ukraine (it coordinates such subsystems: education, knowledge generation, partly innovative infrastructure, namely, activity of scientific and technological parks) and the Ministry of Economic Development and Trade of Ukraine (it coordinates such subsystems: production, state industrial and investment policy and partly innovative infrastructure, namely, activity of industrial parks). In addition, the Ministry of Economic Development and Trade of Ukraine implements investment policy and keeps a register of investment projects, and the Ministry of Education and Science of Ukraine, which implements innovation policy, maintains a register of innovation projects. But none of these institutions is responsible for the effectiveness of innovation development as the only representative of state power, as defined by the Law of Ukraine "On Innovation Activity" [8].

In the presence of a strong human resource potential of scientists, most universities have insufficient research funding, which holds back the qualitative level of implementation of the results of scientific and technical and innovation activities. In 2016, 70.3% of the professional scientific potential carried out researches in natural and engineering sciences, 7.6% – in medical sciences, 7.3% – in agricultural sciences and 14.8% – in social sciences and humanities.

Over the past decades, favorable conditions for the development of science and the promotion of innovation have not been created. It resulted in a rapid reduction of scientific institutions and the collapse of public research institutes, especially in the industrial sector.

Science works today within the sixth wave of innovation, and enterprises, at the best case, are within the third wave of innovation with elements of the fourth and fifth wave of innovation. As the world's history shows, the first steps of the modernization of the domestic economy should be carried out with the participation of the state and cannot take place only under market conditions. Effective research activity in Ukraine can only be

owing to the demand of Ukrainian or foreign business, which operates in Ukraine.

In Ukraine, the innovative activity of industrial enterprises remains at a very low level for many years – in 2016 only 18.9% of enterprises were engaged in innovation activity.

According to the State Statistics Service, starting from 2010, the volume of sales of innovative products decreased by almost 32%, from mln. UAH 33,697.6 to mln. UAH 23,050.1, and by 21% of the innovative products that were supplied for export. The total volume of innovation costs in industry during this period increased by almost 72% [9].

The basis of the domestic industrial complex form the industries focused on low-tech production and export of raw materials, and factors contributing to the competitiveness of the national economy are traditional factors such as the availability of labor force, natural resources and capital.

The weakest link in the innovation process, which ensures the implementation of the mechanisms of combining science with production, is the subsystem of innovation infrastructure. During the years of Ukraine's independence, this sector of the innovation process has been constantly changing at the stages of growth without having acquired the necessary development. The peculiarity is that its activities require the greatest support and preferences on the part of the state.

Today, the development of the National Innovation System is constrained by a number of negative factors, the main of which are imperfection of legislation in terms of identifying new priority areas for the development of innovation activities in Ukraine; discrepancy of intellectual property legislation with international standards; undeveloped innovation infrastructure (innovative business incubators, technology parks, scientific parks, clusters of high-tech innovative enterprises).

The main problems of the development of the National Innovation System in Ukraine are as follows:

- continuous transformation of public administrative bodies into scientific and technical and innovative activities and, as a result, the absence of well-balanced and long-term policy;
- inconsistency of legislation in the innovation sphere, first of all with corporate, investment, tax, social legislation, lack of support of progressive legal norms by the corresponding by-laws, which would ensure their practical enforcement;
- inconsistency of state actions as to support of the subjects of innovation activity;
- ineffective legal protection of intellectual property;

- absence of proper system of forecasting of scientific and technological and innovative development;

- ineffectiveness of the administrative and organizational structure of management of scientific and technological and innovative activities, insufficient financial support for the implementation of the state scientific and technical and innovation policy;

- inconsistency of the corporate structure that is being formed in Ukraine, the requirements of innovation development, the slow formation of a modern and large-scale market for innovative products and innovation infrastructure.

Today, we should focus on two main blocks of the National Innovation System:

1. Formation of a balanced state innovation policy as a complex of state's measures in order to influence the enterprise and the public in order to initiate and develop innovative processes.

2. Development of a long-term (staged) program of transferring the economy to an innovative type of development. In addition to nation-wide, it should include regional, sectoral, as well as specific programs for state-owned enterprises.

The first step for Ukraine should be the development of a tactical plan for 3 years (until 2020). The basis of which is focusing on:

- increase in research and development costs to 1.5% of GDP;
- stimulation of the development of world-class universities;
- formation of a National Innovation System with a market mechanism and a sectoral innovation system for agriculture;
- creation of high-tech zones.
- The second step consists in developing a medium-term strategy by 2025:
- increase in research and development costs to 2.5% of GDP;
- formation and development of sectoral National Innovation Systems in all sectors of economy and high-tech clusters;
- integration of the National Innovation System into a global one.

The third step is a long-term strategy for innovation development up to 2030, the base of which is the growth of research and development costs to 3.5% of GDP; stimulating the development of world-class clusters [10].

In order to implement an effective National Innovation System, urgent tasks should be solved and the following measures should be taken:

- to form a systematic approach to ensuring the legislative and regulatory framework;

- to improve the system of state administration of innovative processes;

- to create an effective system of resource support for economic stimulation;

- to develop a system of long- and medium-term forecasting of technological development and to determine the directions of scientific and technological development of the country on this basis;

- to increase the level of program-oriented support for the implementation of state scientific and technical innovation priorities;

- to identify science and education as the areas of state priority. The basis of the National Innovation System, as evidenced by the experience of developed countries, should be education, which is the basis for the growth of innovation, understanding of their role and importance for the economy of the country.

References

1. Zadykhaylo D. V. Kodyfikatsiia innovatsiinoho zakonodavstva: okremi kontseptualno-pravovi pidkhody [Codification of innovation legislation: some conceptual and legal approaches]/ D. V. Zadykhaylo//Visnyk Akadamii pravovykh nauk Ukrainy – Bulletin of the Akademy of Legal Sciences of Ukraine. – 2010. – No. 4(63). – P. 177–185.

2. Brykova I. V. Natsionalna innovatsiina systema yak nova mehainstytutsiia hlobalnoho ekonomichnoho seredovyshcha [The National Innovation System as a new mega-institution of the global economic environment] / I. V. Brykova. – Retrieved from: http:// kneu.kiev.ua/.

3. Kontseptsiia rozvytku natsionalnoi innovatsiinoi systemy. Skhvaleno rozporiadzhenniam Kabinetu Ministriv Ukrainy vid 17 chervnia 2009 r. № 680-r. [The concept of development of the National Innovation System. Approved by the Resolution of the Cabinet of Ministers of Ukraine No. 680-r dated June 17, 2009].

4. Tsybuliov P. M. Tryrivneva model natsionalnoi innovatsiinoi systemy Ukrainy [Three-level model of the National Innovation System of Ukraine]/ P. M. Tsybuliov // Nauka innov. – 2018. – Edition 14(3). – P. 5-14. – Retrieved from: http://dspace.nbuv.gov.ua/bitstream/handle/123456789/134024/02-Tsybulov.pdf?sequence=1.

5. Sharko M. V. Model formuvannia natsionalnoi innovatsiinoi systemy Ukrainy [Model of formation of the National Innovation System of Ukraine]/ M. V. Sharko // Ekonomika Ukrainy – Economics of Ukraine. – 2005. – No. 8. – P. 25–30.

6. Karpun I. N. Struktura i seredovyshche natsionalnoi innovatsiinoi systemy Ukrainy [Structure and environment of the National Innovation System of Ukraine]/ I. N. Karpun // Naukovyi visnyk NLTU Ukrainy – Scientific Bulletin of the Ukrainian National Forestry University. – 2010. − Edition 20.14. – P. 193-200.

7. Olefir A. O. Do problemy formuvannia natsionalnoi innovatsiinoi systemy [To the problem of formation of the National Innovation System]./ A. O. Olefir // Forum prava – Law Forum. – 2016. – No. 1 P. 207-217.

8. Natsionalna innovatsiina systema: stan ta zakonodavche zabezpechennia rozvytku: rekomendatsii parlamentskykh slukhan (21.03.2018 r.) [The National Innovation System: State and legislative support of development: Recommendations of Parliamentary Hearings (March 21, 2018)]. – Retrieved from: http://ua-ekonomist.com/archive/2018/3/rekom.pdf.

9. Ofitsiinyi sait Derzhavnoi sluzhby statystyky Ukrainy [Official site of the State Statistics Service of Ukraine]. – Retrieved from: http://www.ukrstat.gov.ua. – Retrieved from: http://www.ukrstat.gov.ua

10. Ukraina u hlobalnykh reitynhakh 2017-2018. Ukrainskyi instytut maibutnoho [Ukraine in global ratings 2017-2018. Ukrainian Institute of the Future]. – Retrieved from: https://www.uifuture.org/post/ukraina-u-globalnih-rejtingah-2017-2018/.

7.2. STRENGTHENING OF THE STATE SUPPORT OF RATIONAL RESOURCE-SAVING OF FARMS IN THE CONTEXT OF FOOD SECURITY OF THE COUNTRY

KATERYNA PYLYPENKO
Ph.D. Associate Professor at the Department of the organization of accounting and audit
Poltava State Agrarian Academy

Food security is one of elements of economic policy of the state which is aimed at providing stable production of food, availability of their obtaining and use by the population according to physiologic regulations of consumption, due to own production and receipts from import. Fight against hunger is acknowledged as a first-priority task of the international economic cooperation of the states therefore the food problem belongs to category global as for its decision there aren't enough efforts of the certain states, and well-adjusted cooperation of the world community, irrespective of social and economic development is necessary.

Today Ukraine couldn't stand apart problems of food security as at the international level, state and regional. In Poltava region the Development program of the region for 2015-2020 is developed and approved. At the level of the state the Sustainability strategy Ukraine-2020 behind a safety vector one of priorities definitely safety of life and health of the person and access to safe foodstuff, the Strategy of development for the agrarian sector of economy for the period in till 2020 and the Concept of the State target development program of the agrarian sector of economy until 2020 is accepted [1].

Forming and accretion of potential production of the region considerably depends on application of such method as privatization and privatization of state-owned property. The state by means of application of different methods of privatization influences forming and accretion of

potential production of the region. In particular, such methods of privatization is [2]:

- the redemption of subjects to small privatization – a method for what owner of an object there is a society of buyers created by his workers; this method doesn't provide the competition of buyers;
- the redemption of a state-owned property of the entities behind the alternative plan of privatization – a method for what owner of an object (or its parts) there is a society of buyers created by his workers according to the plan, developed society of buyers and which is alternative to the plan offered by the commission of privatization;
- the redemption of the state-owned property leased with the redemption – a privatization method for what owner of an object there is a lessee, according to the lease contract;
- the redemption of the state-owned property leased with the redemption – a privatization method for what owner of an object there is a lessee, according to the lease contract;
- sale on non-commercial tender – a method for what owner of an object there is a buyer who offered the best terms to the subsequent operation of an object or under equal conditions the highest price;
- sale on commercial tender – a method for what owner there is a buyer who under the fixed entry conditions offered the highest price;
- sale on tender with a payment deferral – a method for what owner of an object there is a buyer who on the competitive principles acquired the right to pay for the purchased object with a payment deferral for three years on condition of the previous introduction 30,0% of its cost;
- sale of shares of the open joint stock companies (OJSC) – a method for what shareholder on the competitive principles there are buyers who offered the highest price for the greatest number of shares after implementation of shares on favorable terms.

The economy of Ukraine which fell into a difficult situation requires structural adjustment that is restructuring production – economic activity of regions [3]. The state shall stimulate priority development of those industries (productions) which provide fast reconstruction and create potential production, and in particular through enhancement existing, and even creation of essentially new organizational forms of economic activity which would promote attraction of financial resources for investment, updating of production capacities, a construction of the new entities equipped with the latest appliances, carrying out scientific developments and implementation of their results in production.

For preserving, survival and fast return of invested funds, in priority industries of economy the entities (production, industrial, agrarian) the

corresponding industries of economy integrated on the principles of horizontal production cooperation within the complete production cycle directed to production of a certain end product shall become optimum. [4]. They will give the chance to remove economy of regions from crisis, to create internal favorable conditions for enhancement and development of production and by that to promote forming and accretion of potential production of the region.

Creation of special economic zones is one of methods of forming and accretion of potential production. Creation of special economic zones is one of elements of transferring of the center of weight of management of forming and accretion of potential production on the regional level. It is one of forms of the effective organization of regional development of economy which almost completely matches nation-wide approach of its restructuring, expansion of independence of the region, creation of the necessary legal base, for attraction of the equities of national and foreign investors that will promote forming and accretion of its potential production.

The purpose of creation of special economic zones in Ukraine is forming and accretion of potential production by investment attraction and to their effective use, activation of business activity, for building-up of commodity export and services, deliveries, on the domestic market of high-quality products, attraction and implementation of new technologies, market methods of housekeeping, development of infrastructure of the market, improvement of use of resources of the region.

It should be noted that the main prerequisites of creation and effective functioning of SEZ in Ukraine is the profitable geographical arrangement developed foreign economic relations, availability of climatic conditions, considerable labor and natural resources. Availability of these resources will give the chance to turn out products, capable for the competition, which will have demand not only on internal, but also and in the foreign market and it in turn will lead to accretion of potential production of the region and activation of social and economic development of the country in general.

In recent years among the population of the planet increase in consumption of organic products which positively influence both human health and strengthening of food security is observed. Instruments of strengthening of food security are production of organic products from the materials made by organic agricultural industry and with use of modern methods organic agricultural industry according to standards of organic production. The thought-over crop rotations treat natural methods in organic agricultural industry which promote development of the good soil and to cultivation of healthy cultures kindly, encouragement of natural

predators and as result influences development of natural resistance to wreckers and diseases. It should be noted that it is necessary to understand a method of agriculture behind which special attention is paid to the nature with the smallest influence of chemicals on the earth, for example, of fertilizers which can pollute waterways as organic agricultural industry.

Therefore, today the planet population pays special attention to consumption of the organic food which is grown up in organic agricultural industry, and their increase in production by agricultural enterprises ensures food security [5].

During development of programs or packets of documents of creation of special economic zones the main attention should be concentrated on the choice of the priority commodity production directions: on production with the finished production cycle; on implementation of the resource-and power storing technologies, the organization of deep conversion of raw materials. It should be noted that the Law of Ukraine "About general bases of creation and functioning of special (free) economic zones" which is accepted by The Verkhovna Rada of Ukraine in 1992 which determines process of forming and accretion of potential production of the region contains a number of shortcomings [6]:

- first, attempt to create SEZ in the territory, big on the area, which includes the whole administrative areas, the cities and even areas that as a result of different conditions of their functioning doesn't give the chance to determine the priority directions of forming and accretion of potential production of the region;
- secondly, orientation to creation of zones of multipurpose orientation which causes discrepancies in the choice of a rate of forming and accretion of potential production of the region;
- thirdly, groundlessness of calculations of rather financial provision of SEZ: orientation to long-term public credits which sources are absent today that results in lack of financial resources on implementation of the actions directed to forming and accretion of their potential production;
- fourthly, hope for mass inflow of foreign investments.

The reason of such condition is predetermined by lack of the state program of creation of special economic zones as integral component of regional social and economic policy in general. Therefore, the imperfection of the legislation concerning creation of SEZ doesn't give the chance to achieve high economic result.

Therefore creation of free economic zones shall provide accounting of these shortcomings that will give further the chance effectively to adjust and develop in them production and to respectively increase potential production of the region. Creation in it a production infrastructure is one of

the main areas of work of forming of SEZ. Obligatory prerequisite for attraction of direct foreign investments is the susceptible business environment of special economic zones. For its creation first of all it is necessary to enhance the system of communication. If the zone has the developed production infrastructure, then initial expenses of investors considerably decrease, work of industries is developed quicker, and get a capital profit earlier, increasing these most potential production of the region. The compulsory provision of successful functioning of SEZ is also information support, that is a possibility of communication providing investors with the necessary information on opportunities of the region to develop this or that industry of production and also provision of information, about potential investors, especially their financial condition. Level of information support demonstrates the level of development of the region and is crucial in case of the solution of these or those questions.

Submitting to Office of the President of Ukraine, Cabinet, and The Verkhovna Rada of Ukraine, bodies of regional government aim in modern conditions at the independent solution of questions of complex development of the region, effective use of all types of resources. Proceeding from it, necessary creation of such organizational structure of management which would allow using as much as possible specific features of the region in forming and accretion of its potential production. It needs coordinating body of management of potential production of the agrarian entities which shall perform not only planning features, the organizations and so on, but also to provide procedures of responsibility for results of work concerning forming and accretion of its potential production. Thus, regional governing bodies shall direct the efforts to stimulation of development of production business activities in the territory of the region.

When using economic methods the state directly doesn't interfere with decision making process by subjects of economic activity. It only creates conditions for functioning of entrepreneurial structures. At the same time the state, using economic regulators, it is obliged to control constantly their condition and effectiveness of subjects of housekeeping. The taxation belongs to the major levers by means of which the state regulates and influences economic processes of the country [9]. In particular, the tax mechanism is used by the state for an economic impact on social production, its structure and dynamics.

It should be noted that creating the system of the taxation, the state by increase or reducing mass of tax revenues, change of forms of the taxation and the tax rates, rates, release, from the taxation of separate industries of production, can promote growth or recession of economic activity, development of priority industries of economy, carrying out the

balanced regional policy that in final option will determine process of forming and accretion of potential production of the region [12].

It should be noted that the existing system of the taxation doesn't promote a production growth in volumes in the region. Simplification of tax pressure needs to be performed taking into account international experience of the organization of the taxation system, first of all, as for the choice of rates of the taxation. Yes, successful reforms in the late seventies in the USA were performed on the basis of the concept of the Laffer [10]. According to its concept to a certain level taxes promote contribution to the budget, but in case of increase them there comes so-called "danger area". Taxes of this zone lead to fall of budget incomes.

Changing the tax rates and structure of taxes, the state owes an opportunity to constrain undesirable tendencies and to stimulate accretion of potential production. A conclusion from this is that, the inefficient system of the taxation in Ukraine which is performed for this time became one of the most important factors of influence on forming and accretion of potential production and an economic country situation in general.

The following determining method is crediting. It has a number of shortcomings, high interest rates of payment for the credit are basic of which; complexity of an order of decision making about provisions to the credit, short terms of provision to the credit. To the solution of a question of that to provide or not to grant the loan, involvement of six subjects of management is provided, namely: the entity – commercial bank – Department of Economic Affairs – National bank – Cabinet council of Ukraine – the Interdepartmental commission on questions of sanitation of the state to entrepreneurs of Ukraine. At the same time the Ministry of Economics makes the decision on transfer of the entity to the list of the entities which need support. Commercial banks consider materials of reasons for the obtained credit – business plans, plans of structural adjustment, projects of sanitation which are represented by the entities. Commercial banks, in case of own positive project evaluation of the entity, submit the application for participation in target credit auction to National bank. The national bank carries out target credit auctions and allocates to commercial banks the credit for the entities. In case of receipt of the credit the commercial bank signs the agreement with the entity [7].

The government approved programs of support of landowners for 2018 according to which farmers get the corresponding support given in tab.1.

In the conditions of variety of patterns of ownership and transition to the market economic relations it is necessary to create essentially new model of the credit mechanism. It shall be based that near bank shall be

used also for bank forms of the credit. Credit policy of National bank shall be directed to financing of productions and the entities which have effective programs of a way out of crisis state, perform conversion and reorientation of production to release of the competing products; increase in the export potential and reducing import which will give the chance to increase potential production. Credit policy which is pursued today can't promote accretion of potential production in any way. It is enough to tell that it is more than 90% of the credits of banks – short-term which can be used only on overcoming temporary difficulties in work of the entities, but not on production re-equipment at all.

Tab.1.

Support of farms [7]

Farmers today	State support	Farmers tomorrow
34,1k farms	1,5% discount rate of the NBU – reduction in cost of the credits	70k farms
97k busy persons	90 % compensation of consultative services	500k busy persons
6-8 % agrarian GDP	80 % compensation of cost of seeds	12 % agrarian GDP
84 % less than 500 hectares of the earth have farmers	15 % additional compensation (40 %) agricultural machinery costs	+10 % to land banks
		+10 % the areas under organic

In these conditions the entities which perform modernization and upgrade need to reorient credit activities of commercial banks on provision of purpose-oriented soft credits. The system of preferential crediting is widespread in many developed countries: Italy, USA, Japan, France, ect. Preferential crediting is performed by public institutions on the terms of reduced percent. The term of issuance of credits is established such: 15 years for a new construction and 10 years for upgrade and expansion of operating plants. And, interest rates are 5,0 – 10,0% against 20,0-35,0% in Ukraine. On the present a current problem of interstate financially budget system are fixed budget deficit and creation, interrelation and forming of relations, between the central and local budgets for ensuring their state regulation. Yes, the fixed budget deficit has negative effect on forming and accretion of potential production of the region. It is caused by lack of funds to the states for financing of priority industries of economy which development gave the chance to turn out products, capable to the competition, to increase the export potential and to respectively increase potential production.

If to consider foreign experience, then we will tell in the USA financing of budget deficit more than for 90% it is provided due to release of government securities which are implemented among the population. In Ukraine for a long time central government budget deficit directly financed the National Bank of Ukraine [14].

Achievement of efficiency of functioning of the budget system is required by expansion of independence of regional authorities. Local budgets gain a considerable part of income at the expense of two taxes: the property tax and to a tax on income which receipts depend on rises and declines in business activity of subjects of housekeeping. As for expenses that, as a rule, under the authority of the central government remains content of army, payment of a national debt, assistance to development of science and technology, and a number of capital investments of the state value. All other issues are resolved and finance regional authorities because they economies of the region and needs of the citizens, more sensitive to real requirements. Therefore, legislatively arranged differentiation of functions on an imperious vertical in the state and tax revenues between budgets of different levels for their implementation – completely necessary element of modern budget system and creation of a management system in the state. Therefore it is extremely necessary to create and to legislatively fix state mechanism of forming of budgets both at the level of regions, and at the level of the state in general.

The policy of the state concerning development of production business activities shall be directed first of all to forming of the development strategy, to determination of priority industries, to ensuring effective employment and high welfare of the population. It should be noted that in order that the policy of the state concerning support of production business activities was efficient and effective, she shall rely on a real situation which developed in the state, to beat off interests both the states, and entrepreneurs, and it requires a fixed research of developments of production business activities at the local, regional and state levels.

To the aid of agricultural industry it is necessary to involve workers of different fields of activity, however the determining part should be assigned to active participation of peasants which is possible only on condition of recognition at the national level of their right freely to determine the direction of development of the production and all way of rural life. Only peasants, employees of agricultural enterprises who are able to estimate objectively the opportunities, to find aspiration and intentions of fellows' villager, to unite all interested, to nominate initiative heads. The mass initiative of people within decades didn't find manifestation, was practically not encouraged, didn't develop, and in the

years of reforms was neglected most of all. Therefore now it is so difficult to organize the disabused peasants. But it is very necessary. It is important to find on the place of people who will undertake this case. It is necessary to adopt the special law about the rights of employees of agricultural enterprises which will concern all of them types – the state, cooperative, private, economic societies. It is a pity that The Verkhovna Rada couldn't adopt the general law about labor collectives yet [13].

In each agricultural enterprise it is necessary to create democratic internal economic organizationally – the economic mechanism for whom the worker would feel like this owner of production. Immediate change of agrarian policy is dictated also by the following entry of the country into the international structures, in particular in IOT and EES, otherwise there will be serious consequences not of product competitiveness of domestic agricultural industry. And if patriotic statements not very long ago were distributed that Ukraine will feed half of Europe, then now can turn out opposite.

The difficult economic situation of an industry requires that all or at least overwhelming part of income from agricultural activities were used for the benefit of the producer. Meanwhile really main part of income is realized by intermediaries, actively putting between the poor agricultural producer and the same insolvent, poor population. The product demand of food isn't elastic, and in case of their insufficient production there are possible too big price fluctuations. In what side they wouldn't deviate, the intermediary has benefit. In which in years it appeared favorable grain productions, producers forced were to sell it for nothing though retail prices for bakery products were practically not reduced. The situation is opposite when through a crop failure there was an agiotage in the market and the prices on it promptly flew up. The agricultural producer didn't receive any advantage from it, but the intermediary profited again.

All state policy of rather agricultural industry shall consider its backwardness in comparison with agrarian production European and to some other countries. This backwardness is expressed by a big difference in labor productivity levels – a key indicator of cost efficiency. Tough laws of the competition force out those at whom the labor productivity is lower. Meanwhile in domestic tops of this problem "don't notice". Within the ninetieth years the labor productivity in agricultural enterprises reduced more than twice. Besides, a considerable part of production moved from them to personal farms where labor productivity especially low and there are no prospects of its essential increase. If in the advanced economies the agricultural industry becomes the sphere of high technologies, then years

of our reforms were marked by production deindustry, transition to primitive technologies.

For the accelerated overcoming economic lagging it is necessary to increase production volumes first of all. An obligation of the state – to create the capacious market for agricultural products, and first of all internal by increase in solvent demand of the population and also international, in particular with the countries of the close abroad where conditions of production it isn't better than ours.

In the state intervention the question of the work pay level needs agricultural enterprises, it is the lowest among economy industries. By own forces of the entity won't be able to raise earnings according to their growth in other industries. If such unjustified differentiation is stored further, the agricultural industry will lose the best workers and villages will fall into decay. International experience testifies to an opportunity to so regulate salary in different industries of economy that almost equal payment for equal work is reached. Such issues in many countries are resolved jointly by representatives of the government, labor unions and employers, on the basis of mutual understanding.

It is necessary to conduct the state monitoring of changes of system of economic indicators and to quickly take adequate measures. It is possible and to regulate at the local level production, employment and the income of workers, efforts first of all of village councils. It is necessary to consider that further employment in the village only due to agricultural production won't be possible to provide any more. Here in close prospect it can be engaged much less a half of an efficient rural population. Therefore, creation in the village of nonagricultural workplaces shall become a subject of the state concern. Otherwise villages will fall into decay further. Loss sat down, except adverse economic effects, will have pernicious effect on the culture of the Ukrainian people which was historically created on the basis of a rural civilization. The state assistance to development of agricultural industry can be the most various acts, actions, methods. Obviously, the state agricultural enterprises, which model production organization and the economic mechanism, will set an example of effective housekeeping; rational use of all resources shall play the leading role. Economic organizations shall render the specific help to agricultural producers in different fields of activity. It is important that they together with scientists found practical methods of improvement of the weakest entities. There is a need for enhancement, extension of the state reporting, concerning activities of agricultural producers it was possible to analyze competently and quickly a situation for timely and efficient intervention in the course of

affairs. Direct teams of agricultural producers with the cities, their food markets will be mutually advantageous.

The state regional policy, reorganization of system of regional and local authority, is the integral components of state creative process, strengthening of democratic principles of existence of the Ukrainian society.

From certain regions of half a day of Ukraine signals of the raider attacks arrive. Begins with the fact that farms force to do and sell products only to specific processing enterprise. Simple scheme: provide to the farmer seeds, mineral fertilizers, the combine, and sign with it the agreement on supply. However in that case in case of a crop failure the peasant not only doesn't get profit, but also remains at a loss. The plant takes away its debt obligations and works at this earth. At the same time the farm is liquidated. There are also other schemes, negative for farmers, when new entrepreneurs entice owners of shares, offering them the best terms. Reaches that the "old" economy is liquidated, and new doesn't begin to work.

For protection of the rights and representation of interests of farming in Ukraine there was created Association of farmers and private landowners of Ukraine (AFPLU). What as the public organization is organized by the Constituent congress of farmers on February 15 in 1991 with the assistance of representatives of 20 areas of the country. Today AFPLU has the structural divisions in all areas. Approximately the local territorial organizations work in 400 regions of the country, but not all from them are registered in relevant organs. In case of AFZU 11 committees which coordinate work diversely work: on a land reform, protection of the rights of farmers, work, with youth and so on In case of Association two commercial structures – "Expo-centr" and business center "Hospodar" were created, special-purpose committees of Association are also created, namely: potato breeders and vegetable growers. Activities of Association which direct and coordinate work of farms are rather positive moment for development of farmer movement in Ukraine.

By the way, the moratorium on sale of land works against farmers and in other aspect [8, 11]: in particular, the law prohibits building on lands of agricultural purpose the economic yard (current, the pigsty and so on) that in a sense is absurd. Yet not the developed system of the organization of farms where the role and the place of each of them performed by the food programme of the area, and the amount of support from public institutions would be determined when providing them by technical means, seeds, highly productive animals and so forth. Besides, absent scientific developments on conducting agricultural production in the conditions of

small enterprises are economically proved. At the same time it is very important to consider comprehensively specifics of development of agrarian production in this region, to analyse processes of forming of multistructure economy in agricultural industry, to refuse practice of mechanical copying of foreign experience of the organization of farms.

Considering a situation in the market of material resources of agro-industrial complex, it should be noted rather high level of monopolization of this industry intermediary structures which offer acquisition of the productive equipment of foreign producers on future harvest eve, excluding at the same time a possibility of obtaining by producers of the main profit at a stage of sales of products. Such agreements are, as a rule, signed behind the increased level of prices for material resources and cut prices of agricultural products, causing at the same time substantial damages to producers. Regulation of this problem, according to us, it is necessary to perform implementation licensing of activities of such intermediary structures which will help to provide high quality of the services provided by them and to increase receipt in the government budget. On the other hand, the means received thus can be used in support of producers through implementation of system of provision of soft credits and guarantees of the state by it.

In the conditions of variety of patterns of ownership and transition to the market economic relations it is reasonable to create essentially new model of the credit mechanism. It shall be based that near bank shall be used also for bank forms of the credit. Credit policy of National bank shall be directed to financing of productions and the entities which have effective programs of a way out of crisis state, perform conversion and reorientation of production to release of the competing products; increase in the export potential and reducing import which will give the chance to increase potential production. Credit policy which is pursued today can't promote accretion of potential production in any way. It is enough to tell that it is more than 90% of the credits of banks – short-term which can be used only on overcoming temporary difficulties in work of the entities, but not on production re-equipment at all.

Considerably it is impossible to change a situation to the best only by increase in budgetary appropriations though, undoubtedly, and it should try to obtain. It is necessary to ask about redistribution of all income in society – as between industries, sectors of economy, and between segments of the population. The fair solution of this problem would provide the financing of an industry sufficient for gradual development of achievements of scientific and technical progress and the fast solution of a social task, – to satisfy food requests of the population. However or the present power

has a political will to an income redistribution in the country for the benefit of all society what will touch, naturally, the interests of certain circles? The way out requires direct participation of the state in supplying and sales activities, creation on this arena of the competing structures. Would be natural also direct state regulation of the prices of main products of food and products of agricultural producers. The state could also interfere with the relations between agricultural producers and processing enterprises, the last arose based on state-owned property. It is also necessary to create conditions that the producer traded the finished goods.

References

1. Pylypenko K. A. (2018). Mekhanizmy dotrymannia prodovolchoi bezpeky v zdiisnenni diialnosti ahrarnykh pidpryiemstv [Mechanisms of compliance with food security in the implementation of the activities of agrarian enterprises] Ekonomika i derzhava. № 6. pp. 80-87. [in Ukrainian].

2. Blagodatny V. I., Marmul L. O. (2002). Osnovy pidpryyemnytstva ta ahrobiznesu [Fundamentals of entrepreneurship and agribusiness]. Kherson: Aylant, p. 274 [in Ukrainian].

3. Barabash M. (2001). Problemy stanovlennya ta rozvytku fermerskykh hospodarstv v Ukrayini [Problems of establishment and development of farms in Ukraine]. Ukr. Entrepreneur. №. 1. pp. 21-23.

4. Makarenko, Yu.P. (2011). "The development of cooperation of small agricultural enterprises in market economy", Visnyk Zaporizkoho natsionalnoho universytetu, № 4 (12), pp. 171-176.

5. Pylypenko K. A. (2018). Rozvytok orhanichnoho silskoho hospodarstva v systemi zabezpechennya prodovolchoyi bezpeky v Ukrayini [Development of organic agriculture in the system of food security in Ukraine]. Formuvannya ta perspektyvy rozvytku pidpryyemnytskykh struktur v ramkakh intehratsiyi do yevropeyskoho prostoru: mater. Mizhnarm nauk.-prakt. konf. (zaochna forma). – Poltava: PDAA, 27 bereznya 2018 r. (pp. 228-232). [in Ukrainian].

6. Zakon Ukrayiny "Pro zahalni osnovy stvorennya i funktsionuvannya spetsialnykh (vilnykh) ekonomichnykh zon" [The Law of Ukraine "On the general basis for the creation and functioning of special (free) economic zones"] (n.d.) zakon.rada.gov.ua Retrieved from http://zakon.rada.gov.ua/laws/show/2673-12 [in Ukrainian].

7. Derzhavna pidtrymka silskoho hospodarstva: uryadovi prohramy 2018 r. [Government support for agriculture: government programs in 2018]. dotacii.minagro.gov.ua Retrieved from http://dotacii.minagro.gov.ua/ua. [in Ukrainian].

8. Zemelnyy kodeks Ukrayiny [Land Code of Ukraine]. (n.d.) search.ligazakon.ua Retrieved from http://search.ligazakon.ua/l_doc2.nsf/link1/T012768.html. [in Ukrainian].

9. Instytut silskoho rozvytku [Institute for Rural Development] www.icp.org.ua Retrieved from http://www.icp.org.ua/. [in Ukrainian].

10. Shebanin V. (2002). Stan ta napryamy onovlennya i rozvytku materialno-tekhnichnoyi bazy silskoho hospodarstva v Ukrayini [Status and directions of

renovation and development of material and technical base of agriculture in Ukraine]. Ekonomika APK. – Economy AIC, № 8. pp. 16-23. [in Ukrainian].

11. Holovatyuk M.S. (2002). Novyy Zemelnyy kodeks Ukrayiny: rynok zemli ta yoho rehulyuvannya [New Land Code of Ukraine: Land Market and its Regulation]. Ekonomika APK. – Economy AIC, № 9. pp. 6-10. [in Ukrainian].

12. Zakon Ukrayiny "Pro osnovni zasady derzhavnoyi ahararnoyi polityky na period do 2015 roku" [The Law of Ukraine "On the Basic Principles of the State Agrarian Policy for the Period until 2015"] (n.d.) zakon.rada.gov.ua. Retrieved from http://zakon.rada.gov.ua/laws/show/2982-15. [in Ukrainian].

13. Andriychuk V.H. (2002) Ekonomika ahrarnykh pidpryyemstv [Economics of agrarian enterprises]. Kyiv: KNEU, p. 624 [in Ukrainian].

14. Bolharova N. K. (2004). Osoblyvosti rozvytku hospodarskykh form vykorystannya zemli v silskomu hospodarstvi [Features of development of economic forms of land use in agriculture]. Ekonomika APK. – Economy AIC, № 5. pp. 47 – 52. [in Ukrainian].

7.3. THE STATE SUPPORT – THE KEY TO SUCCESS OF FARMS

KARPENKO NINA
Ph.D. Associate Professor,
Professor at the Department of the Organization of Accounting and Audit

LIPSKIY ROMAN
Ph.D., Associate Professor at the Department of Financial Accounting
Poltava State Agrarian Academy

The agricultural industry has the special nature different from other sectors of economy because its production, considerably, depends both on action of natural factors, and on a human factor. At the same time function of providing and requirements satisfaction of society by food and raw materials for other industries of the national economy is assigned to it. Agricultural activities are performed almost in all territory of the country.

The state support of agricultural industry exists in all countries, irrespective of their social and economic development, general state of the economy in general, including agrarian to the sector.

Among priorities there are Governments and the Ministries of agrarian policy of Ukraine are stimulation of farmer movement and creation of successful model of housekeeping in Ukraine – forming of effective and socially responsible owner in the village.

The analysis of the last researches and publications showed that basic provisions of the theory and practice of the state support of agricultural enterprises, agrarian to the sector stated in works of the famous domestic

and foreign scientists, such as V.G. Andriychuk, I. O. Form, O.M. Borodina, P.I. Gayduk, V.P. Galushko, A.S. Danilenko, S.M. Kvashnya, M.I. Kisil, P.M. Makarenko, M.I. Malik, O.M. Mogilny, L. V. of Moldova, P.T. Sabluk, V.V. Yurchishin, and ect.

The purpose of our work is the research of the mechanism of the state support agrarian to the sector.

The burning issues in the village is the lack of motivation to work, poverty, a labor migration, unemployment, decline of a social infrastructure, deepening of demographic crisis and dying off of villa Dynamically the existing disparity of the prices as the prices of industrial output and rates for the services used in agricultural industry grow more in high gear, than sales prices of agricultural products prevents to develop to the agricultural sector. As a result, improvement of development agrarian isn't provided adequate to industries, to the sector of economy, a salary increase, agricultural producers and the solution of social problems of a rural population.ges.

International experience convinces that a basis of creation of the rational and permanent, economic balanced agricultural production is purposeful state support. Not only amounts of the state support, but also mechanisms of its provision are important. The mechanism of the state support agrarian to the sector is regulated by the Law of Ukraine "About the government budget of Ukraine" [2] and "About the state support of agricultural industry of Ukraine" [3], and the order of expenditure of budgetary funds is annually determined by separate resolutions of Cabinet council of Ukraine. Classification of the mechanism of the state support is represented in fig. 1.

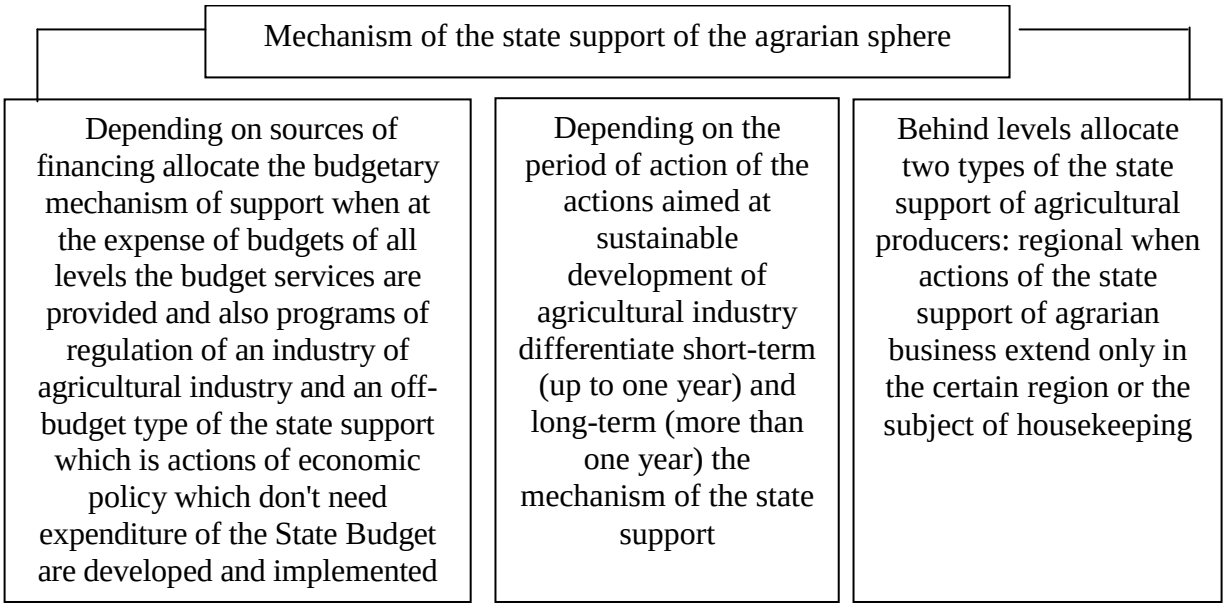


Fig. 1 Differentiation of the mechanism of the state support [5]

In the state support of agricultural producers the state shall not only promote individual approach, but also stimulate them to develop own sales infrastructure that will help to get rid of intermediaries in agricultural industry and to approach world models of development of agro-industrial complex [4].

The state financial support – purposeful state regulation of productive activity of the managing subjects by the direction of budgetary funds behind programs of social and economic development or provision of tax benefits [2].

The purpose of use of budgetary funds is the growth in volumes of production of agricultural products, performance improvement, in agricultural industry, assistance to development of the agrarian market and ensuring food security.

The state financial support of today functions in two types:

- budget financing – assignment from the government budget for financing of the budget programs from support of production of agricultural products;

- tax benefits – refusal of the state of taxes for the benefit of producers by provision of various privileges. In the conditions of a lack of available budgetary funds is the powerful and efficient mechanism of indirect support of agricultural producers.

In Ukraine there are over 34 thousand farms today. It more than 70% of a total quantity of economically active agricultural enterprises. However the potential and social production of farms remains unrealized. Level of the technical equipment, performance indicators (in particular – productivity) mostly are much lower in comparison with the medium and big scale enterprises. Annual loss of the export potential of farms is estimated at least at $350 million according to the Government portal [6].

On condition of receipt of the appropriate material and organizational resources small and average farms are capable to increase considerably the efficiency and to make more considerable contribution and in national economy in general, and in amounts of gross production of agricultural products in particular. However, is main that development of farming will be the driver of development of the rural territories thanks to creation of new workplaces and a production and social infrastructure. They, according to the statistics, provide 73% of supply of milk and totally make 7,6 million tone of dairy raw materials, but such farms are most impressionable through rise in price of forages, growth of cost of keeping and risks of epidemics [6].

For overcoming negative tendencies and creation of conditions for positive dynamics in the agrarian sector the Government approved the

Concept of development of farms and agricultural cooperation for 2018-2020 [1]. It is sent only to support of farms with an area no more than 100 hectares. The document was prepared by the Ministry of agrarian policy of Ukraine in close cooperation with Homestead Association and private land owners – the greatest professional association of farmers in Ukraine.

Main objective of the Concept is creation of necessary organizational, legal and financial prerequisites for development of farms and agricultural cooperation. The state support of small and average agricultural structures will allow lifting the Ukrainian farming to qualitatively new level will promote increase in efficiency and competitiveness of farms, will help to saturate the domestic market with quality products and to expand export geography.

The concept provided creation of new workplaces in the village including through stimulation of agricultural cooperation, creations of prerequisites of crediting of farms, behind available credit rates, provision of support to farms, increase in level of real incomes of a rural population, from transfer to lease of agricultural holdings and so forth.

Programs of support agrarian to the sector the Cabinet council of Ukraine developed behind the key directions within the Government budget for 2018 in the amount 6,3 billion UAH [7]. Support of an industry of livestock production as it is provided, will be performed behind four directions:

- reduction in cost of the credits (livestock production, poultry farming) – a partial compensation of percent.
- compensation of the loans attracted for a construction and reconstruction of livestock farms and complexes, the entities from cultivation of a bird, milking halls, shops, from conversion and storage of agricultural products.
- special grants for content of cows, for young growth (cultivation of young growth of cattle).
- partial cost recovery of purchases for the subsequent reconstruction of breeding animals and a construction cost.

For development directly of farms for 2018 the state support in the amount of 1 billion UAH on the purpose as it is represented in tab. 1 is provided.

Mandatory requirements for farms – receivers of budgetary funds: the registered rights to property and/or use of the parcel of land; availability to the 500th hectare of agricultural holdings in cultivation and to 15 million UAH of an annual turnover; identification and registration of farm animals.

Tab. 1.

Support of farms

Farmers today	State support
34,1k farms	1,5 % discount rate of the NBU – reduction in cost of the credits
97k busy persons	90 % compensation of consultative services
6-8 % agrarian GDP	80 % compensation of cost of seeds
84 % less than 500 hectares of the earth have farmers	15 % additional compensation (40 %) agricultural machinery costs

The state support in 2018 on gardening and wine growing in the amount of 300 million UAH is provided to use in quality is represented in tab. 2. with receipt of future effects.

Tab. 2.

Support of agricultural cooperatives

Agricultural cooperatives today	State support	Future of cooperatives
1125 cooperatives 50% don't work 0,1 % agrarian GDP	Gardening	Forming of consignments
	Berry breeding	Own trademark
	Milk production	Certificate of HACCP
	Construction of storages for fruit and vegetables	Organized markets of sale
	70% of expenses, (max. 3 million UAH on one cooperative) on acquisition of the equipment and conversion of agricultural products the state compensates	Possibility of an entry into the markets of the EU
		Social security

Much attention is paid to provision of the state support to agrarian producers for support of an industry of livestock production in the amount of 4 billion UAH in case of a construction of livestock complexes and other projects (tab. 3).

It is planned to give a financial support on the competitive principles on a rotary basis to farmers through the Ukrainian public foundation of support of farms. Besides, the state support of farmers will consist in reduction in cost of insurance payments. Farmers also shall there will be an opportunity obtain the state guarantees under investment projects and the state support on the terms of financial leasing. The concept provided also assignment for a partial compensation of expenses of agricultural producers for acquisition of domestic agricultural machinery and the equipment.

Tab. 3.

Support of agricultural cooperatives

State support of a livestock BC	The state support of agrarian producers in case of creation of livestock complexes
2500 UAH to citizens who hold BC young growth aged about one year	25% compensation behind the loan attracted on a construction or reconstruction of complexes in industries of pig-breeding, poultry farming and BC
	30% compensation of cost of the livestock complexes put into operation constructed without attraction of borrowing facilities
1500 UAH to the entities which hold cows of the dairy direction	Up to 3% reduction in cost of the credit resources attracted on projects from development of fish breeding, sheep breeding, goat breeding
	50% compensation of cost of a highly productive livestock, biological material, embryo

The concept provides increase within three years of farmlands under organic cultures for 10%. Farms which will choose this activity will have priorities by provision of government assistance – in particular, regarding receipt of cheap loans and a partial compensation of expenses on purchase of agricultural machinery and the equipment. Also the possibility of carrying out special land auctions on sites is provided that behind the characteristics suitable for organic production.

Practice of registration of support showed that the lack of legislatively established list of objects and subjects of production of agricultural products to which special budget support is provided leads to the fact that Cabinet council of Ukraine subjects of charge and a condition of its obtaining annually change, it complicates availability to it agricultural producers. Frequent change of mechanisms of assignment of the government budget in support of production of crop production and livestock production, a complication of the procedure of submission of documents, for consideration of the district commissions, establishments of additional restrictions, including rather available debt to budgets of all levels and obligatory funds, increase in number of checks of use of such means, I led to reduction of number of the entities which submitted documents for receipt of the state support.

For receipt of government assistance it is necessary to perform a number of procedures:

- to open the account in national bank, to take the credit for a covering of the production expenses connected with acquisition of a property, plant and equipment of agricultural production, a construction or reconstruction of agricultural objects and to submit to the State Bank the application and accompanying documents;
- to constitute the contract with consultative services for provision of services, to finish the act of the performed works and to submit the

application and documents to the State Bank and to receive compensation;

- to submit the application and a packet of documents to the State Bank which confirm acquisition of seeds of domestic selection at subjects which are specified in the State register of subjects of seed farming and to receive compensation;

- to identify young growth of BC and cows of dairy herd, to submit passport copies BC, owners and an identification code, the copy of the certificate of opening of the bank account to territorial authorities of society of the village or city and to receive compensation; legal entities submit to MAPU in electronic form the certificate of opening of the account, the copy of the status report of livestock production (a form 24 of sg) a condition for January 1 of the current year, the certificate of lack of a debt on taxes;

- tax to the district commission a packet of documents: a right of possession the earth, the project documentation and the certificate on saplings, bank details and the reference, about lack of a tax debt, the receipt on target use of money, documents on performance of works, costs, and the statement on compensation for expenses on development of gardening and wine growing;

- to choose agricultural machinery of domestic manufacturer on MAPU website, to pay it in one of national banks, to submit the application and documents which confirm purchase of the equipment to bank.

Provision of the state support to the agrarian sector is performed through national banks Oschadbank, Ukreksimbank, Ukrgazbank, Privatbank.

For the purpose of increase in the national status of the Ukrainian farmer, beginning of 2018, will celebrate on June 19 a professional holiday – Day of the farmer.

Powerful agricultural sector – guarantee of own food security, content of leading line items, in world trade, and, above all – a basis of development of the Ukrainian village which gradually is resumed.

Support of farms by development of agricultural cooperation for the purpose of increase in efficiency of their economic activity, forming of batches of agricultural products of proper amount and quality, ensuring engineering procedure of production, promotion of products, on the market, increase in the level of employment by development of labor-intensive industries of agricultural industry shall become a priority of the state agrarian policy.

Therefore, for farmers – a guide to action – who knocks therefore open.

References

1. Kabinetu Ministriv Ukrainy (2015), "Pro skhvalennia Kontseptsii Derzhavnoi tsil'ovoi prohramy rozvytku ahrarnoho sektoru ekonomiky na period do

2020 roku", Retrieved from: https://www.kmu.gov.ua/ua/npas/248907971 (Accessed 30 Grudnia 2015).

2. Zakon Ukrainy (2018), "Pro derzhavnyj biudzhet Ukrainy na 2018", Retrieved from: http://zakon5.rada.gov.ua/laws/show/2246-19 (Accessed 07 Grudnia 2017).

3. Zakon Ukrainy (2004), "Pro derzhavnu pidtrymku sil's'koho hospodarstva Ukrainy", Retrieved from: http://zakon5.rada.gov.ua/laws/show/1877-15 (Accessed 24 chervnia 2004)

4. Cherniienko, O.O. (2012), "Suchasni problemy derzhavnoho rehuliuvannia rynku tsukru", Ekonomika APK, vol. 2, pp. 61-65.

5. Pylypenko K. A. (2018) Mekhanizmy dotrymannia prodovolchoi bezpeky v zdiisnenni diialnosti ahrarnykh pidpryiemstv [Mechanisms of compliance with food security in the implementation of the activities of agrarian enterprises] Ekonomika i derzhava. № 6. pp. 80-87. [in Ukrainian].

6. Uryad shvaliv programi pidtrimki agrariyiv na 2018 rik Retrieved from: https://superagronom.com/news/3254-uryad-shvaliv-programi-pidtrimki-agrariyiv-na-2018-rik

7. Kak agrariyam poluchit gosudarstvennuyu podderzhu Retrieved from: https://uteka.ua/ua/publication/Kak-agrariyam-poluchit-gosudarstvennuyu-podderzhu

8. T. Ostrikova Kabmin style: dotatsii dlia ahrariiv v «ruchnomu rezhymi» Available at: https://www.epravda.com.ua/columns/ 2018/02/16/634168/

9. Derzhavna pidtrymka silskoho hospodarstva: uriadovi prohramy 2018 Retrieved from: http://dotacii.minagro.gov.ua/ua

7.4. TRENDS INNOVATIVE DEVELOPMENT OF RETAIL TRADE ENTERPRISES IN UKRAINE

OLGA PETROVA
Candidate of Economic Sciences, Associate Professor

NATALIYA AVERCHEVA
Candidate of Economic sciences, associate professor
State Higher Educational Institution Kherson State Agrarian University

The trade sphere in Ukraine occupies a significant place in the national economy, as it provides a commodity-money exchange in the form of sales in the amount of more than 1.8 trillion hryvnias per year, forms 14-15% of GDP, provides employment of 25% of Ukraine's labor resources. In the field of commodity circulation, processes are being created for creating new types and store formats. According to the State Tax Service, today one of the most common forms of entrepreneurship in Ukraine is trade activity. In the statutory documents of any enterprise as a type of entrepreneurial activity most often refers to trade [1].

Retail trade is a type of economic activity in the field of commodity circulation, which includes the sale and sale of goods to the final consumer and the provision of trade services [2]. It provides the movement of goods

from the sphere of circulation in the sphere of consumption. In the Dictionary of MacMillan's modern economic theory, retail trade is defined as "the last link in the distribution chain from manufacturer to consumer." Source of goods and services purchased by the consumer [3].

Retail turnover is a generalized indicator, which includes data on retail turnover of enterprises (legal entities and individuals-entrepreneurs), the main type of economic activity of which is retail trade (according to the Classification of Economic Activities (CRED) [4].

Retail turnover includes income from resale directly to the population of new or used consumer goods (for cash, bank payment cards, etc.) through stores, online stores, pharmacies, gas stations, kiosks, trays, tents, postal orders, etc., taking into account the amount of indirect taxes on sold consumer goods (VAT, excise duty, etc.).

In 2017 retail turnover versus 2016 in comparable prices increased by 8.8%. Retail turnover in December 2017. compared to November, it increased by 22.2%, and from December 2016 by 16,1%.

Among the regions, the largest increase in retail trade in 2017. compared to 2016 was observed in Zakarpatska (17.2%), Odessa (by 14.1%), Lviv (by 13.5%), Cherkasy (by 12.3%), Kyiv (by 11.7%) and Vinnytsa (by 11.0%) regions (fig.1).

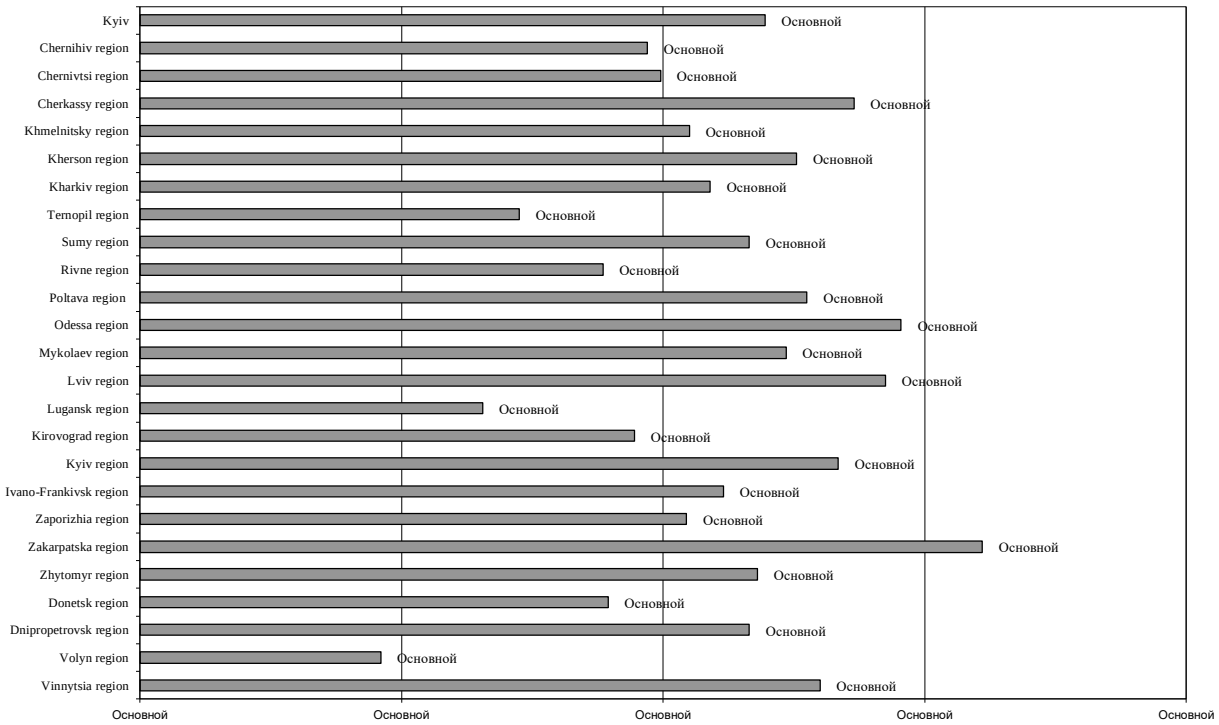


Fig.1 Indices of physical volume of retail trade turnover (in % to the previous year)

Source: According to the State Statistics Service of Ukraine

Table 1 shows the turnover of retail and wholesale enterprises. At present, the concentration of trade in large and medium-sized enterprises has reached 80% of the national turnover. Large commercial facilities have a number of economic, technological and organizational advantages, which predetermines their accelerated development. They acquire the organizational form of networks of large-format retailers. The networks of such enterprises are of a corporate nature and belong to the major commercial and industrial groups: Furshet, Silpo, Maxi, Metro Cash & Carry, Eldorado, Epicenter, Foxtrot, and others.

Tab. 1.

Wholesale and retail trade volume in 2017 *

Indexes	2017p.
Wholesale trade turnover of wholesale trade enterprises (legal entities), mln UAH	1931815,9
Index of physical volume of wholesale trade (in comparable prices) to the corresponding period of the previous year,%	102,8
Turnover of retail trade3, mln.UAH	816553,5
to the corresponding period of the previous year	108,8
to the previous month	x
Retail trade turnover of retail trade enterprises (legal entities), mln UAH	587784,5
Index of physical volume of retail trade turnover (in comparable prices),%	
to the corresponding period of the previous year	108,6
to the previous month	x

Source: According to the State Statistics Service of Ukraine. Excluding the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and part of the area of the anti-terrorist operation.

Trade is one of the sectors with high innovation potential. The Ukrainian trade industry is actively developing advanced trade and marketing technologies, various informational, technical and technological innovation projects that radically change the traditional notion of a trading business [5].

The problems of the development of retail trade of Ukraine are devoted to the scientific works of many domestic authors, in particular V. Apopia, M. Barney, J. Barybina, L. Didkovskaya, K. Belyaeva, A. Berezina, I. Visochin, E. Karpenko, A. Mazaraki I. Mishchuk, V. Rebitsky, N. Rylskaya, S. Rudnitsky, V. Sobolev, T. Futalo, Y. Khomyaka, and others whose works considered both problems of the state state of retail trade of Ukraine and paid attention development of this segment of the economy in different regions of the state.

However, despite significant scientific developments in these issues, the issues of choosing and justifying the directions of development of trading enterprises, in particular the innovation development of retail trade enterprises, are not sufficiently developed, which led to the choice of the topic of research. In developing and substantiating directions of innovative development of retail trade enterprises of Ukraine, we first of all focused on the fact that traditionally innovation is more often associated with production activity, and the innovator is called a person who has the ability to generate new ideas, create a new one, look for opportunities to create new, to use non-traditional ways and methods of work, take on the risk and responsibility during the implementation of these ideas.

Innovation in trade is new or improved goods or services, the introduction of which allows for economic, social and other types of effect. Often, innovations in this area come from other countries that open dealer centers in the domestic space. The urgency of the introduction of innovations by trading enterprises is conditioned by the tendencies that appear in the development of retail trade, including the network.

Characteristic signs of the development of Ukraine's domestic trade are the proliferation of unfair competition, the low level of economic competition and the imbalance of commodity supply, the growing influence of importers on the formation of commodity supply, the absence of a well-balanced pricing policy, and overloaded by intermediary structures. The high inclination of the population to use in Ukraine does not yet play the necessary role in stimulating economic development because of the slow response of the supply to the impulses of the consumer market. At the same time, by the end of 2016, the growth of retail sales amounted to 15.9% (in 2015 growth was 14.8%). But retail trade grew mainly due to imports (for example, clothing imports grew 2.8 times, shoes – by 4.1 times, food products by 16%).

The main trends of retail trade in Ukraine are as follows:

- the retail market for 2015-2017 became more consolidated, resulting in a gradual increase in the share of large retail chains, but it remains rather low both in each segment of the market and in the overall retail turnover;

- the vast majority of trading networks conducted optimization measures related to reorganization of their organizational structure (first of all – elimination of excess levels of management), debt restructuring, business strategy correction, optimization of its own trading network (including, as for due to the closure of the low-profitable store, as well as due to the development of multi-format channels of supply of goods to buyers), focused on the sale of goods of low and middle price segments.

At the same time, domestic trade of Ukraine continues to develop largely by extension, and in order to ensure qualitative transformation, it is necessary to intensify investment processes in this area of activity, especially in terms of expanding the scope and range of innovation products and improving the quality of goods.

Retail development, as well as improvement of work with the end user, are impossible without constant changes. They should concern not only the service, but also the management of the range and product remnants, logistics, as well as business processes in each specific store. Retail trade of Ukraine is undergoing an active technological renovation of retail trade facilities and introduces new innovative approaches to the implementation of economic activity by retail trade enterprises, which can not ignore global trends in changing consumer confidence now [6].

The main focus of activity of retail companies is to ensure the needs of the population in consumer goods, services, which gain consumer experience, advantages in choosing from a large number of offered goods, services, opportunities and convenience in their acquisition, values from the use or consumption of goods and services. Therefore, with all, at first glance, the simplicity of the trade process, which is perceived as the exchange of goods for money at a certain price, in fact, trade must develop and consumer trends be taken into account. Retail trade enterprises, which differ in supply of goods, groups of consumers, sales volumes, forms of payment for goods, after-sales service, etc., need to develop a concept of development tailored to the needs of consumers and their satisfaction through the possibility of introducing innovative technologies in the field of trade [7].

Considering trade as a type of economic activity, it should be noted that it relates to a variety of entrepreneurship, that is, the process of organizing the production and sale of goods and services to meet the ever-increasing demand and profit. In fact, entrepreneurship is a type of innovation activity, which means, by definition, VI Dahl, "shake up, decide to perform any new business, begin to implement something significant" [8]. Since entrepreneurship is characterized by the mandatory presence of an innovative moment, methodologically, the dynamics of innovative processes in trade can be represented by a universal dynamic structure, which includes:

- formulation of the goals of innovation;
- analysis of the existing situation;
- making a decision on the expediency of developing an innovation of a certain type;
- development (designing) of innovations;

- coordination and approval of the project innovation;
- preparation of the object for innovation;
- introduction of innovations;
- assessment of the actual effectiveness of innovation;
- aging of innovation and substantiation of expediency of introduction of new innovation.

Innovation determines the future development of the industry and its organizations, and sometimes involves significant changes in all areas of activity. In most of the trade, they are quite simple and not cardinal, based rather on the accumulation of minor improvements and achievements than on the only major technological breakthrough. Therefore, under the innovative trade technology should be understood all the activities of the business entity of the trading industry, which had not previously been used by the data of organizational or territorial formations and is aimed at increasing the efficiency of trading activities in general or the corresponding part of the technological process. It is more important not just to have some kind of innovative technology, but to choose and formulate the right strategy for development based on innovation. [9].

It is worth noting that each individual enterprise chooses an individual way of innovation development for itself, depending on the stated goals, the chosen strategy and internal possibilities. Here are the main types of innovations that make it possible to see the place of managerial innovation and its distinction from other innovations (Fig. 2).

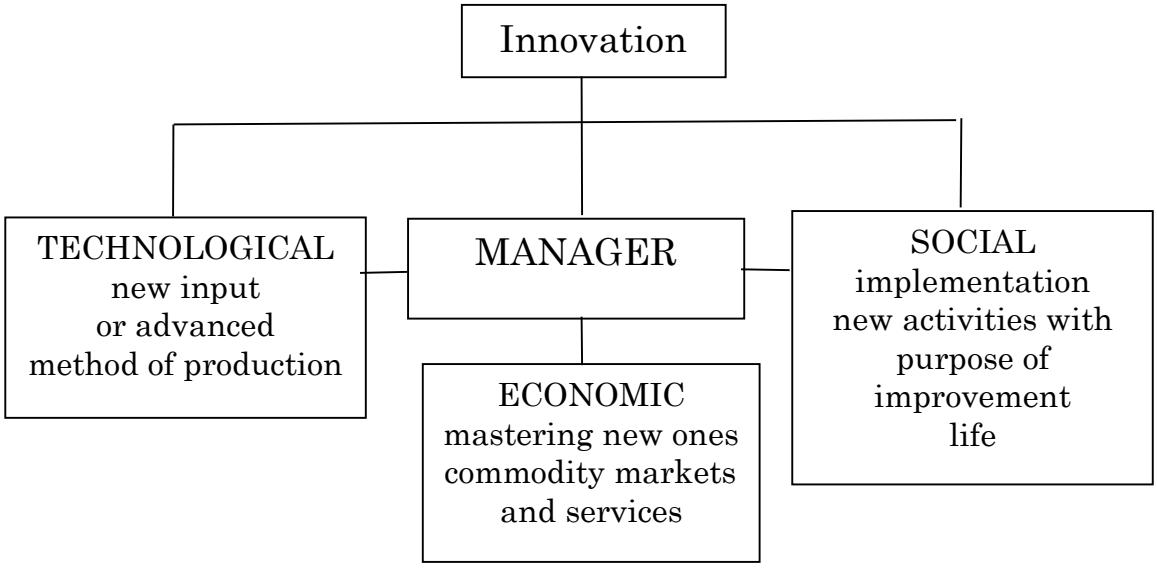


Fig. 2. Types of innovation

At the same time, there is a necessity to take into account the tendencies and programs of the development of the state economy and

certain spheres of economic activity. In view of this, innovative development of trade should be divided into directions depending on the nature of innovation and the factors stimulating their development. Thus, the result of basic innovations is the creation of programs of long-term financial and credit support for innovation activity; development of sectoral institutional scientific and technical infrastructure, communications network; efficiency of tax preferences of tax activity; the availability of financial resources and logistics, advanced technologies.

Economic innovations will promote the development of systems for forecasting, planning, budgeting and financing of new business methods in trade; development of rational depreciation policy, diligence of business planning and staff cohesion in relation to the implementation of innovative projects. Product innovations will provide legal protection of intellectual property objects; the transition to the generally accepted norms of patent law; Limitedness of the revealed commodity form of achievements of science and technology; the efficiency of research on demand for innovative goods (services) and co-operation between companies in the sphere of circulation and marketing firms.

Market and strategic innovations are characterized by the level of development of innovative business in the sphere of internal trade; creating conditions for fair market competition and equal access to resources and markets; availability of strategies and programs for the development of domestic trade and its economic agents, coherence of programs, their integration into the general system of planning of socio-economic development of the state, its regions and types of economic activity. Organizational and technical and economic innovations will be accompanied by an increase in the level of development and integration of the innovation market in the system of modernization of the domestic trade; the level of support of programs of vocational and professional support of innovative activity of enterprises of trade; attraction and activation of personnel motivation to improve the trade and technological process and the quality of trade services; flexibility of the organizational structure of enterprises.

Social innovation implies the availability and effectiveness of the implementation of state programs of socialization of trade; increasing the level of social responsibility in trade, the attitude to the fate of human capital and working conditions, as well as the professional qualification of the sales staff for the quality of customer service [10].

Of course, in different segments of trade, such innovations can be fundamentally different, especially in Ukrainian realities. For example, for some hypermarket networks, innovations will include the introduction of

sectional storage in warehouses, for supermarkets — introduction of consumer experience management systems or general loyalty programs, for garment stores – the launch of virtual office work or mailing services.

The need to develop innovation policy at retail companies is conditioned by the need for strategic management of innovation activities. The Office covers strategic and operational aspects and should aim at creating or attracting innovation and systematic, targeted action to improve existing trade and technology and trade and manufacturing processes.

All trade and technological innovations can be grouped in the table and highlight the main advantages of their application (Table 2) [11].

Tab. 2.

Benefits of trading enterprises using trade and technological innovations

Kind of trade and technological innovation	Benefits
RFID	- the possibility of unique identification of objects; - instant reading of a large number of labels; - accounting for the availability of goods, stocks and other products; - improvement of the supply chain.
NFC	- rate of payment for goods; - security; - convenience.
Templates of self-service	- clear accounting of funds; - ease of use; - reliability; - possibility of round-the-clock work.
Electronic price tags	- improving the image of the store; - reduction of paper costs; - reduction of labor costs.
The box office	- time optimization of the buyer; - reducing waiting time in queue; - election of the buyer and acquaintance with the cost of the check in advance.
Robotic warehouse	- increase the density of storage of goods and the speed of their processing; - lack of classical equipment; - reduction of electricity costs; - reduction of labor costs.
SoLoMo Concept	- offline availability; - increasing loyalty and reducing the likelihood of finding alternative products or services; - speed of work.

Source: [11].

Identifying opportunities for introducing market innovations involves achieving a balance between competitive tendencies and market factors of influence. To succeed, brands need to understand how to connect with new products / services and consumer lives. Under pressure from the market, manufacturers and retailers must constantly develop products and services that maximize sales and profits and force buyers to come back.

Here, success depends on the availability of the most up-to-date data on retail sales and an understanding of what products and services are in demand on the market and which ones are not. With this understanding, companies can create clear business growth strategies and increase return on investment. So, for example, the Swedish company Wheelys tests its mobile grocery store without personnel, which can do all things on their own. To make purchases in this store, you must first download the app to your smartphone. This will allow you to enter the door, which otherwise will remain locked. Then you get into a very small room that can hold up to four people at a time, and put your purchases in a smart trash can. After completing your shopping, you just go outside the door. Money for purchased products is debited from the account automatically [12].

Amazon works above this concept, but Wheelys can outstrip a retail giant. Moreover, Moby's mobile solar battery provides automatic replenishment of product supplies, delivering Moby to the warehouse, while another identical unit takes its place.

While Wheelys tests its first Moby store in the lively city of Shanghai, these stand-alone unmanned shops may also be very useful in small villages where there are no grocery stores, as well as in some urban areas.

Customizing customers in various forms is becoming an increasingly important tool for keeping market share. It is clear that in Ukraine, by reducing the purchasing power of the population, low-cost goods attract the consumer in the first place. But the growing importance of purchasing databases, the analysis of such bases, segmentation from the history of purchases, the formation of individual proposals.

In addition, some commerce networks are already beginning to link their databases with customer profiles in social networks, their telephone numbers, smartphones for identifying the client by IMEI, identifying its maximum digital history for the purpose of creating the most effective individual offer (taking into account the marital status, circle of friends in social networks, kind of activity, birthdays, etc.).

This means that data collection through loyalty programs and other external open sources will take place through the formation of efficient CRM-systems integrated into the network's accounting programs. As a

result, effective ERP systems will be created to manage the preferences of the buyer, inventories, promotions and discounts.

The beginning of this process in Ukraine is already due to the creation of loyalty programs in various retail chains, which are, in essence, the primary tools for data collection. Many retailers build system communications with their customers. If we talk about the global experience of using such technologies in retailing, then brands such as The North Face and 1800-Flowers.com already use artificial intelligence to provide personalized recommendations.

This year, the priority will be to build the image of any retail brand as an expert in its field and an effective advisor for its buyer. What advises the brand to customers, what helps, what offers, which novelties applies – all this should become a content-strategy of promotion, positioning in all information manifestations.

Advertising should be not only and not so much in the offer of good prices on billboards and on the Internet. Being at the edge of a variety of goods and brands, the buyer needs to be taught, helped him. And if to the abstract Internet space due to its "slag" trust in the ordinary consumer falls, then the confidence of the retailer, in which the necessary goods are constantly purchased, on the contrary, increases. Therefore, retail must pay more attention to the innovation of the design of such content, its unobtrusive and informative nature. The video content, in which network representatives explain the possibilities and features of the use of the product, will develop more and more. In essence, brands need to create – with the use of all the latest technology – a kind of "corporate edition", which will provide the buyer with useful information about the product, novelties and the possibility of interaction with the retail network in the most convenient format.

References

1. Hrakovs′kyy YU. Orhanizatsiyno'pravovi pytannya torhovel′noyi diyal′nosti: optova ta rozdribna torhivlya. / YU. Hrakovs′kyy // Visn. podatkovoyi sluzhby Ukrayiny. – 2012. – №9. – Rezhym dostupu: http://www.visnuk.com.ua/ua/pubs/id/749 (data zvernennya 01.07.2018).

2. Natsional′nyy standart Ukrayiny. Rozdribna ta optova torhivlya. Terminy ta vyznachennya ponyat′ DSTU 4303:2004. Rezhym dostupu: http://www.profiwins.com.ua/uk/directories1/dstu4303.html (data zvernennya 05.07.2018).

3. Slovar′ sovremennoy ékonomycheskoy teoryy Makmyllana. — M.: YNFRA'M, 2003. — 608 s.

4. Klasyfikatsiyi vydiv ekonomichnoyi diyal′nosti (KVED). Rezhym dostupu: http://ukrstat.gov.ua/klasf/st_kls/kved.rar) (data zvernennya 02.02.2018).

5. Puhachevs′ka K.Y. Stratehichni napryamy i tendentsiyi innovatsiynoho rozvytku torhivli / K.Y. Puhachevs′ka // Nauk. visn. Mizhnarodnoho humanitarnoho

universytetu. Rezhym dostupu: http://www.vestnik-econom.mgu.od.ua/journal/2015/12-2015/13.pdf (data zvernennya 11.08.2018).

6. All for sale: yaki innovatsiyi chekayut′ rozdribnu torhivlyu. Rezhym dostupu: http://forbes.net.ua/ua/opinions /1426784-all-for-sale-yaki-innovaciyi-chekayut-rozdribnu-torgivlyu (data zvernennya 03.07.2018).

7. Dubovyk T.V. Innovatsiyna spryamovanist′ rozvytku pidpryyemstv rozdribnoyi torhivli / T.V. Dubovyk, I.O. Buchats′ka // Marketynh i menedzhment innovatsiy. – 2017. – № 1. – S. 223-230

8. Dal′ V.I. Tlumachnyy slovnyk zhyvoyi velykorosiys′koyi movy. – Rezhym dostupu: http://slovardalja.net (data zvernennya 11.06.2018).

9. Kolodyazhna I. V. Problemy ta perspektyvy rozvytku innovatsiynoyi diyal′nosti torhovel′nykh pidpryyemstv Ukrayiny / I.V. Kolodyazhna // Nauk. visn. Uzhhorods′koho natsional′noho universytetu. Seriya: Mizhnarodni ekonomichni vidnosyny ta svitove hospodarstvo. – Vyp. 5. – 2015. – S.53-56

10. Zayarna N.M. Osnovni napryamy innovatsiynoho rozvytku torhivli / N.M. Zayarna, A.YU. Marchuk, M.YU. Nechesanov // Problemy formuvannya ta rozvytku innovatsiynoyi infrastruktury. L′vivs′ka komertsiyna akademiya. – Rezhym dostupu: http://ena.lp.edu.ua/bitstream/ntb/32052/1/82-155-156.pdf (data zvernennya 11.06.2018).

11. Yermak S.O. Torhovo-tekhnolohichni innovatsiyi v torhivli na suchasnomu etapi rozvytku Ukrayiny / S.O. Yermak // Efektyvna ekonomika. – № 11. – 2014. – Rezhym dostupu: http://www.economy.nayka.com.ua/?op=1&z=4035 (data zvernennya 03.06.2018).

12. Innovatsiyi u torhivli: U Shankhayi zapratsyuvav mahazyn bez prodavtsiv. – Rezhym dostupu: http://patrioty.org.ua/ blogs/innovatsii-u-torhivli-u-shankhai-zapratsiuvav-mahazyn-bez-prodavtsiv-177566.html (data zvernennya 03.07.2018).

7.5. MODELING AND OPTIMIZING ECONOMIC PROCESSES IN DIFFERENT MARKETING CONDITIONS

OLENA LOBODA
PhD, associate professor

NATALYA KYRYCHENKO
PhD, associate professor
Kherson State Agrarian University

To create automated control systems, based on the implementation of the principle of optimality, the development and use of models of economic processes is required. The main participant in the process of production, distribution and consumption of goods is the manufacturer, conditioned as some object, which produces the costs of factors, means of production [1, p. 20]. The main task that the manufacturer encounters is the competent

management of production on the basis of modern information technologies, as well as in determining the number of products and calculating the costs necessary for its release in accordance with the accepted technology of production and prices for the used resources and for their own products. Obviously, the decisions on the issue and the costs can not be taken independently of each other, because certain technological dependencies limit the choices.

Researchers for a long time received new information about the properties of agricultural production functions. Historically, however, these studies were planned and carried out in isolation from the formalized regression equations of production functions [2, p. 75]. Also, the research was planned based on the phenomenon of discreteness, that is, two or more technological methods of production were used to determine the point estimates of the output of agricultural crops and livestock products, depending on the level of costs of factors of production. In some cases, although this was a by-product, the data obtained was sufficient to conclude simple regression equations or curves showing the dependence of output on costs. More often, experiments and statistical methods allowed only to obtain indications as to whether there was a mathematically significant difference between the levels of yields or yields corresponding to two or three technologies or levels of expenditure. If you follow the traditionally accepted point of view – the manufacturer seeks to maximize his profit, then the built theory of production gives a fairly realistic description of the economic activity of the manufacturer [3, p. 25].

The production of goods is done through the use of certain factors of production in accordance with the given technology. We are not interested in the physical or chemical characteristics of this technology, but the quantitative dependencies that exist between resource expenditures and output and are due to this technology. The goods produced by the manufacturer in the future will, as it is customary in the economy, be called production. The manufacturer can consume (use for production) several factors (resources) and produce several types of products. Let's denote through $x_j (j=\overline{1,n})$ number of j factor of production used by the manufacturer. Then the volumes of costs of all factors of production used by the manufacturer can be represented as a vector $x = (x_1,x_2,...,x_n)$, which is called the vector of costs of factors of production or production resources. Under the cost of space E_+^n we will understand the set of all sorts of cost vectors of the manufacturer, which is an integral orange of the n-dimensional vector space E^m, that is $E_+^n=\{x=(x_1,x_2,...,x_n): x_j\geq 0, j=\overline{1,n}\}$. Cost space may also be a kind of closed or open set of costs $G\in E_+^n$. Тут x_1^{min} і x_2^{min} – Minimum resources needed

to support the production process in working order, x_1^{max} i x_2^{max} – maximum volumes of resources available in the market of resources [4, p. 80].

For each vector, the costs of the factors of production correspond to certain volumes of production at the given technology. Let's denote through y_i ($i=\overline{1,m}$) the output of the i-th type of product, then the vector $y=(y_1,y_2,\ldots,y_m)$ represents the volumes of production of all types produced by the manufacturer using the costs of factors of production, given by the vector x. We call the vector vectors of production output. Thus, the vector of expenditure x determines the vector in output. A pair of vectors (x,y) is called a process. The set of all kinds of technological processes (x,y) is called the technological set of the manufacturer, or by a plurality of production possibilities. The structure of the technological set reflects the features of the technology, so that studying the technology of the manufacturer is reduced to the study of his technological set. The manufacturer, apparently, should be interested in the most economical transformation of production resources into products. The technological process (x*, y*) is said to be effective or optimal in Pareto [5, p. 216], if there is no other process of the manufacturer, more effective than (x*, y*). Naturally, the manufacturer should only be interested in effective technological processes. Thus, there is a certain relationship between the factors used in the production volumes used and the maximum level of production that they can achieve.

With continuous change in the amount of labor employed, efficient processes will be depicted by the curve, and the set of all technological processes (technological set) – an area enclosed between this curve and the axis 0x. The pair of vectors (x,y), which specify the technological process, can be considered as a vector of space E^{n+m}, which is called the cost vector – the manufacturer's release. Then the technological set is the set of all kinds of cost-release vectors in space E^{n+m}. Usually an additional hypothesis is accepted that the technological set is convex. Consider such technological processes, in which only one product is produced. Such processes will be called single-product. Let the production of one unit of output j-type resource is used in quantity a_j. Then the vector of cost per unit of output $a=(a_1,a_2,\ldots,a_n)$. If output is in units, then the vector of resource spending $x=ya$. Let now the same product is produced by several *(r)* technological processes, with each process, with a certain combination of resources, provides release of one unit of production. These processes are given by cost vectors $a_1=\begin{pmatrix} a_{11} \\ a_{21} \\ \vdots \\ a_{n1} \end{pmatrix}$, $a_2=\begin{pmatrix} a_{12} \\ a_{22} \\ \vdots \\ a_{n2} \end{pmatrix},\ldots,a_r=\begin{pmatrix} a_{1r} \\ a_{2r} \\ \vdots \\ a_{nr} \end{pmatrix}$ space E_+^n If $y_1,y_2,\ldots,y_r$ – quantity of products, issued accordingly 1,2,...r processes, then the total

output of products $y=y_1+y_2+\ldots+y_r$, and a vector of resource spending $x=a_1y_1+a_2y_2+\ldots+a_ny_n$.

Then a couple $(x,y)=\begin{pmatrix} a_1y_1 \\ y_1 \end{pmatrix}+\begin{pmatrix} a_2y_2 \\ y_2 \end{pmatrix}+\ldots+\begin{pmatrix} a_ry_r \\ y_к \end{pmatrix}=\begin{pmatrix} a_1y_1+a_2y_2+\ldots..+a_ry_r \\ y_1+y_2+\ldots\ldots\ldots\ldots+y_r \end{pmatrix}$ at $y_1\geq 0$, $y_2\geq 0,\ldots,y_r\geq 0$ ask a technological set. The solution to this problem and detect the processes that should be used in the production of this product in this situation, that is – those processes vectors costs which will be included in an optimal basis.

Manufacturer, as mentioned, is trying to ensure that the processes used are effective, so interest does not represent all the technological set, and its border. So, it's enough to consider only the function that sets the boundary of the technological set. This function is called production. In general, this function can be written in the following way $\Phi(x,y)=\Phi(x_1,x_2,\ldots,x_m)=0$. It binds the costs of x and production in efficient technologies, but it is difficult to find it for agricultural purposes, as was shown earlier [6, p. 130; 7, p. 97].

In a mixed economy, different producers can operate in different market structures. These types of markets differ, first of all, by the number of participants acting both in the role of sellers and in the role of consumers. Consider each of these concepts:

1. The manufacturer operates in the market of goods and services and in the market of factors of production in conditions of perfect competition, if: the prices of each factor of production are predetermined; the price of manufactured goods is fixed; prices for factors of production and manufactured products do not depend on decisions taken by the manufacturer; the manufacturer can purchase any necessary number of factors of production; the manufacturer can sell all his manufactured products. This means that the manufacturer consumes a small number of factors of production and produces relatively few products in comparison with the total volumes of factors of production and market products, so that its actions do not affect market prices.

2. The manufacturer has a monopoly on the market of goods (goods and services) when selling his product when: only he alone supplies the market with this product; demand for this product is formed by a large number of consumers operating independently from one another. In these circumstances, the producer is dealing with demand, the size of which varies depending on the price of the product, but the nature of this change does not depend directly on its decisions, that is, the price of the product depends only on the quantity of products that the manufacturer will offer for sale on the market. Thus, a monopolist can influence the price of products, varying the volume of production of their products.

3. The manufacturer operates in the market of resources in the conditions of monopsony, when: the manufacturer is the only buyer of factors of production in the market of resources; prices for factors of production may vary depending on their demand. In this case, being the sole buyer of a resource, the manufacturer can affect its price by increasing or decreasing demand for it, that is, the manufacturer can buy more of this resource by offering a larger fee (price) for it.

4. The manufacturer operates in conditions of oligopoly if: a small number of manufacturers of the same product operates in the market of goods and services; each of the manufacturers has a significant contribution to the market capacity, so that each of them has the ability to act on the price of the product. In this case, taking the actual decision on the release of products, the manufacturer must take into account decisions taken by other manufacturers operating in the market of goods and services.

5. The manufacturer operates under conditions of oligopsony, when: a small number of producers, who acquire the same factors of production, operate in the resource market; Each of the manufacturers will acquire a relatively large amount of resources, so each of them can affect the price of resources. In such a situation, the producer also can not have full influence on the resource market, because the magnitude of the prices and volumes of the resulting resources depends on the actions of each of the producers who buy resources in this market.

In the mixed economy one can distinguish: small producers; middle producers; big business Small producers, as a rule, form the largest number of sectors of the economy. This sector plays an important role in supporting competitive relations in the economy, and others react more quickly to changing economic conditions adapting to it. These manufacturers, as a rule, operate in conditions of perfect competition.

Medium-sized manufacturers often specialize in output, which uses a constant but limited demand. They have to compete with both small and big business. They act more often in the role of the monopolies.

Big business makes massive, standard products, designed for widespread needs. It acts as a major monopoly, because it is the monopoly that has the best opportunities for mass production.

Suppose that the main purpose of the manufacturer is to maximize profits by choosing a set of x costs of resources for a given production function $y=f(x)$, the price of p products and price vectors $q=(q_1,q_2,...,q_n)$ resources, that is, it is assumed that the manufacturer operates in conditions of perfect competition. Profit Π equal to income other than production costs, i.e. $\Pi=py-(q_1x_1+q_2x_2+\ldots+q_nx_n)=py-\sum_{j=1}^{n} q_j x_j$.

Let's distinguish between the long-term task of the manufacturer and the short-term. In the long run, the manufacturer can choose any vector of cost over space $E.^{n}_{+}$ Therefore, the problem is formulated as follows: find $\max \Pi = py - \sum_{j=1}^{n} q_j x_j$ under conditions $y=f(x_1,x_2,...,x_n)$, $x_j \geq 0$, $j=\overline{1,n}$.

In the short-term task, there are limitations on the choice of costs through accounting, for example, different delivery limits for resources under contractual obligations. In this task, the manufacturer must choose such a vector of costs $x=(x_1,x_2,...,x_n)$, which maximizes profits $\Pi = py - \sum_{j=1}^{n} q_j x_j$, де $y=f(x_1,x_2,...,x_n)$, under additional conditions $g_i(x_1,x_2,...,x_n) \leq b_i$, $i=\overline{1,m}$, $x_j \geq 0$, $j=\overline{1,n}$. [8, p. 131-135]. Long-term and short-term tasks of the manufacturer relate to the tasks of mathematical programming. Limit here to research only the long-term task of the manufacturer. Necessary conditions for maximizing profits (Kuhn – Tucker conditions), at $j=\overline{1,n}, x_j \geq 0$ є: $\frac{\partial \Pi}{\partial x_j} = p\frac{\partial y}{\partial x_j} - q_j \leq 0, \frac{\partial \Pi}{\partial x_j} x_j = \left(p\frac{\partial y}{\partial x_j} - q_j \right) x_j = 0$.

From these conditions it turns out that if $x_j>0$, то $p\frac{\partial y}{\partial x_j} - q_j = 0$ or $p\frac{\partial y}{\partial x_j} = q_j$. If so $p\frac{\partial y}{\partial x_j} - q_j < 0$, то $x_j=0$. Let's notice that $p\frac{\partial y}{\partial x_j}$ is the value of the boundary product at the optimum point for j-th resource. From this we can conclude: if the resource is used to achieve maximum profit, then the cost of the marginal product for resource j is equal to the cost unit of the used resource. If the cost of the marginal product for the resource j is less than the cost of the unit of the resource used, then this resource is inappropriate to be used in the production. Assume that at the optimum point all resources are used, that is, x*> 0. If $j=\overline{1,n}$, then at the optimum point we have: $p\frac{\partial y}{\partial x_i} = q_j$. These conditions can be written in the form $p=q_j / \frac{\partial y}{\partial x_j}$, which means: the price of the product coincides with the cost per unit of the marginal product. Thus, for all resources spent in production, we obtain the maximum profit conditions for $j=\overline{1,n}$: $p\frac{\partial f}{\partial x_j} = q_j$, which means that in the case when the manufacturer works optimally (with maximum profit), the cost of an additional product for an additional unit of the used resource of the j-th type is equal to the price of this resource. If this condition was not fulfilled, either $p\frac{\partial f}{\partial x_j} > q_j$ or $p\frac{\partial f}{\partial x_j} < q_j$. In the first case it makes sense to increase the

use of *j*-th resource until the condition is fulfilled $p\frac{\partial f}{\partial x_j} = q_j$, because the unit of its additional use gives the manufacturer additional profit $\Pi_j = \frac{\partial f}{\partial x_j} - q_j$.

In the second case, an increase in *j*-th resource results in damage, due to the fact that $p\frac{\partial f}{\partial x_j} - q_j < 0$, therefore, the desire to increase profits leads to a reduction in the loss, that is, to reduce the use of *j*-th resource, until the condition is fulfilled $p\frac{\partial f}{\partial x_j} = q_j$, or until the *j* resource is excluded from production (x_j=0). Thus, at fixed prices, we have *n* equations, and moreover $j=\overline{1,n}, p\frac{\partial f}{\partial x_j} = q_j$ of which quantities can be determined $x_1^*, x_2^*, ..., x_n^*$ resources at which the profit of the manufacturer is maximal. Expenditures are a function of *C(y)* from the release of *y*, and if the function *C(y)* is explicitly given, then the maximization of profit reduces to finding the maximum of the function of one variable*y-Π(y)=py-C(y).*

A prerequisite for optimality is $\frac{d\Pi}{dy} = p - \frac{dC}{dy} = 0$, i.e. $\frac{dC}{dy} = p$, which means equality of marginal costs and product prices. A sufficient condition for a maximum is the positivity of the second derivative $\frac{d^2C}{dy^2}$. This means that the marginal costs should increase. The optimum level of output at a price *p* and given prices for resources is from the condition $\frac{dC}{dy} = p$.

The manufacturer in the short period of time, determining the volume of production, faces a number of restrictions on production: lack of machine-hours of various types of equipment, limited volumes of raw materials, materials, lack of skilled labor, etc. All these factors, taken together, lead to the appearance of bottlenecks in production. Overcoming these complications is combined with higher costs, and often impossible at all for a short period of time (month, quarter, year). In this regard, when deciding on the volume of output, in these difficult conditions in order to obtain maximum profit, the manufacturer must take into account the restrictions on the use of resources [9, p. 72-79].

Consider how the production output of the producer changes and its demand for factors of production when prices change for products and prices $q_1, q_2, \ldots, q_n$ on production factors. These changes are characterized by the shares of derivative functions $y^*, x_1^* x_2^*, \ldots, x_n^*$ at a price *p* and prices

$q_1,q_2,\ldots,q_n$ factors. You can show that always $\frac{\partial y^*}{\partial p}>0$, that is, the growth of the price of the product always leads to an increase in the optimal output, that is, the output curve (supply) is increasing.

In addition, there are such resources for which $\frac{\partial x_j^*}{\partial p}>0$ that is, the increase in the price of products should lead to an increase in demand for some resources, as output will increase. Such resources are called valuable. If $\frac{\partial x_j^*}{\partial p}<0$, then resource j is called invaluable, that is, the price increase leads to a decrease in demand for this resource.

Resources are divided into two categories: interchangeable and complementary. Resources j and k are called interchangeable if $\frac{\partial x_j^*}{\partial p_k}>0$ that is, if the increase in the price of the k-th resource causes an increased demand for the j resource. Resources j and k are called complementary, if $\frac{\partial x_j^*}{\partial p_k}<0$, that is, raising the price for k-th resource leads to a decrease in demand not only for the k-th resource, but also for j-th resource. Illustrate the example presented. As it was established, for the production function $y= x_1^{1/2}x_2^{1/3}$ functions of demand for production factors are $x_1^*=\frac{p^6}{144q_1^4q_2^2}$, $x_2^*=\frac{p^6}{216q_1^3q_2^3}$, a function of product offerings $y^*=\frac{p^5}{72q_1^3q_2^2}$.

The reaction of the manufacturer to the change of prices can be measured and using the coefficient of elasticity [10, p. 76-79]. We compute the elasticity coefficient for the functions of our example:

$$E_1^p=\frac{\partial x_1^*}{\partial p}\div\frac{x_1^*}{p}=\frac{p^5}{24q_1^4q_2^2}\div\frac{p^5}{144q_1^4q_2^2}=6>0;$$

$$E_1^{q_1}=\frac{\partial x_1^*}{\partial q_1}\div\frac{x_1^*}{q_1}=-\frac{p^6}{36q_1^5q_2^2}\div\frac{p^6}{144q_1^5q_2^2}=-4<0;$$

$$E_1^{q_2}=\frac{\partial x_1^*}{\partial q_2}\div\frac{x_1^*}{q_2}=-\frac{p^6}{72q_1^4q_2^3}\div\frac{p^6}{144q_1^4q_2^3}=-2<0;$$

Because these functions are homogeneous of zero degree, then the sum of all coefficients of elasticity for each of them is zero, that is, $E_1^p+E_1^{q_1}+E_1^{q_2}=6-4-2=0$, $E_2^p+E_2^{q_1}+E_2^{q_2}=6-3-3=0$, $E_y^p+E_y^{q_1}+E_y^{q_2}=5-3-2=0.$

Consequently, if the functions of demand for production factors and the function of supply of products are found explicitly, then we can determine how the producer reacts when the prices of products and the

factors of production change, that is, what is the sensitivity of the optimal cost of factors and volume of output when prices in the markets. To do this, it's enough to calculate the corresponding particles of the derivative or the coefficients of elasticity. If these functions can not be obtained in an explicit form then then, considering y and $x_1,x_2,\ldots$, from the price of p products and the price vector $q=(q_1,q_2,\ldots q_n)$ factors of production, we can use the following *(n+1)* – equations: $y^*(p,q) = f(x_1^*(p,q), x_2^*(p,q),..., x_n^*(p,q))$ and $p\frac{\partial f}{\partial x_j}(x_1^*(p,q), x_2^*(p,q),..., x_n^*(p,q)) = q_j.$

Differentiating these equations sequentially by variables $p,q_1,q_2,\ldots,q_n$, we can find from the systems of equations the degree of change in the optimal cost of factors, that is derivatives $\frac{\partial x_j^*}{\partial q_1}, \frac{\partial x_j^*}{\partial q_2}, \ldots, \frac{\partial x_j^*}{\partial q_n}, j=\overline{1,n.}$ and the degree of change in the optimal output, ie derivatives $\frac{\partial y_j^*}{\partial p}, \frac{\partial y_j^*}{\partial q_1}, \frac{\partial y_j^*}{\partial q_2}, \ldots, \frac{\partial y_j^*}{\partial q_n}$

For example, by differentiating these identities with respect to p, we obtain a system of equations: $\begin{cases} \frac{\partial y^*}{\partial p} = \sum_{k=1}^{n} \frac{\partial f}{\partial x_k}\frac{\partial x_k^*}{\partial p}; \\ \frac{\partial f}{\partial x_j} + p\sum_{k=1}^{n} \frac{\partial^2 f}{\partial x_j \partial x_k}\frac{\partial x_k^*}{\partial p} = 0, \; j=\overline{1,n} \end{cases}$, де $\frac{\partial y^*}{\partial p}$ characterizes the change in the optimal volume of output when changing its price; $\frac{\partial x_k^*}{\partial p}$ – the influence of the change in the price of products on the optimal volume of costs of factors of production, and $\frac{\partial f}{\partial x_j}$ the marginal productivity of the j factor of production.

Solving the received system with (n +1) linear equations (n +1) variables $\frac{\partial y^*}{\partial p}, \frac{\partial x_1^*}{\partial p}, \frac{\partial x_2^*}{\partial p}, \ldots, \frac{\partial x_n^*}{\partial p}$ We express these variables because of the marginal productivity of the factors of production $\frac{\partial f}{\partial x_j}$, and $j=\overline{1,n.}$, the price of p and the second partial derivatives $\frac{\partial^2 f}{\partial x_j \partial x_k}$ ($j=\overline{1,n.}$; $k=\overline{1,n.}$) production function $y=f(x_1,x_2,\ldots,x_n)$.

The method of modeling of economic processes with the help of manufacturer's problems in different market structures is offered. This information is used when considering issues of distribution and consumption of goods by the producer, on the basis of which the decision-making process is proposed for the head of the agrarian enterprise. The

model of determination of quantity of output and calculation of expenses necessary for its release is developed. In the proposed model, according to the accepted technology, the prices for the resources used and for their own products are taken into account. The information model of optimum behavior of the manufacturer in the conditions of competition and monopoly is developed. The method of determining the maximum profit, based on the demand and supply functions of the product, is proposed.

References

1. Semenenko, V.M. Kovalenko, D.I. Buhas, V.V. and Semenenko, O.V. (2010), Ekonomichna teoriia. Politekonomiia, – Tsentr uchbovoi literatury, Kyiv, Ukraine.

2. Azarova, A.O. Sachaniuk-Kavets'ka, N.V. Roik, O.M. and Mironova, Yu.V. (2011), Ekonometriia, 2nd ed, VNTU, Vinnytsia,. Ukraine.

3. Nabava, M.I. Adler, O.O. and Les'ko, O.J. (2011), Ekonomika ta orhanizatsiia vyrobnychoi diial'nosti pidpryiemstva [Ekonomika pidpryiemstva],.VNTU, Vinnytsia, Ukraine.

4. Vitlins'kyj, V.V. (2003), Modeliuvannia ekonomiky, KNEU, Kyiv, Ukraine.

5. Kosik, A.F. and Hrontkovs'ka, H.E. (2008), Mikroekonomika, 2nd ed, Tsentr uchbovoi literatury, Kyiv, Ukraine.

6. Loboda, O.M. and Kyrychenko, N. V. (2015), «Aktual'ni problemy identyfikatsii ta modeliuvannia struktury upravlinnia pidpryiemstvom», Naukovo-tekhnichnyj zhurnal Khmel'nyts'koho ekonomichnoho universytetu, Vol.3(39)., pp. 130-134.

7. Marasanov, V.V. and Pliashkevych, O.M. (2002), Osnovy teorii proektuvannia i optymizatsii makroekonomichnykh system, TOV «Ajlant», Kherson, Ukraine.

8. Loboda, O.M. Kyrychenko, N.V. and Larchenko, O.V. (2017), «Modeliuvannia ta optymizatsiia tekhnolohij vyrobnytstva ahrarnykh pidpryiemstv v riznykh rynkovykh umovakh», Visnyk Odes'koho natsional'noho universytetu. Ekonomika, vol. 22, № 7(60), pp. 131-135

9. Loboda, O.M. (2018), «Modeliuvannia ahrarnoho sektoru ekonomiky Ukrainy u vyhliadi mahystrali zrostu», Rehional'na ekonomika ta upravlinnia, vol. 2(20). S. 77-82

10. Loboda, O.M. Kyrychenko, N.V. and Larchenko, O.V. (2017), «Aktual'ni problemy identyfikatsii struktury upravlinnia ahrarnoho pidpryiemstva», Implementatsiia standartiv ievropejs'koho soiuzu v ahrarnij sferi ekonomiky Ukrainy, Mizhnarodna naukovo-praktichna internet–konferentsiya, KhDAU, Kherson, Ukrain, pp. 76-79.

Розділ 8.

FINANCIAL AND ACCOUNTING SUPPORT FOR THE FUNCTIONING OF AGRICULTURE

8.1. METHODS AND SOURCES OF FINANCING ACTIVITIES OF AGRICULTURAL ENTERPRISES: SPECIAL PECULIARITIES

OLHA SUPRUN
Candidate of Economic Sciences, entrepreneur, Ukraine

The development of agricultural production in the conditions of Euro-economic integration of Ukraine and the intensification of globalization processes is impossible without improving its financing. The agricultural sector continues to be one of the priority areas for the development of the Ukrainian economy. Agriculture itself is the only industry that forms food security of the country, attracts significant investments, creates preconditions for the employment of a large part of the population of Ukraine. Only under these conditions is it possible to overcome a number of problems that remain in force today: the physical and moral depreciation of agricultural machinery, the lack of funds for the efficient and progressive development of the industry, uncontrolled soil depletion and their inefficient use, etc.

The dynamic development of the national economy once again confirmed the impossibility of its functioning without effective funding. In the process of their activities, enterprises generate and use various financial resources, ensuring their circulation. It is from the financing that the whole production process of any economic entity depends on its viability and safety. Therefore, the question of proper financing of the activities of agrarian enterprises remains the focus of many domestic and foreign scientists.

The current state of financial provision of agricultural producers requires solving a number of problems that do not allow to meet the financial needs of agro-industrial production. The pace of development of agro-industrial production does not ensure adequate access of agrarian enterprises to the market of financial resources, the formation of a favorable institutional environment and equalization of economic conditions.

The financing of the activities of different economic entities differs depending on many factors, including the size, ownership, life cycle of the enterprise, the purpose of financing, and most importantly – its sectoral orientation. In the national economy, the agrarian sector is the most

significant and at the same time the most complex and problematic. Despite the advantages of the geographical location of Ukraine, the many years of agricultural production and existing national traditions, domestic agrarian enterprises suffer from a lack of funding.

At present, a number of tasks have been set up before the financing of the activities of agrarian enterprises, the fulfillment of which creates conditions for the effective functioning of both the economic entity and the national economy, thus ensuring the food security of the nation. The primary purpose of financing is to provide the financial resources of agrarian enterprises, which, according to Blank I.O., Sitnik G.V. [1, p.14] Party G.O., Selyuchenko N.E. [2, p.12], VI Pasinicha and Shelushenko AV [3, p.17] is realized by performing such tasks as:

- ensuring the continuity and saturation of monetary turnover with the necessary financial resources in a timely and appropriate manner;
- reduction of production cost and financial risks by optimizing the rational structure of financial resources;
- creation of optimal conditions for timely fulfillment of financial obligations of agrarian enterprises;
- optimization of monetary turnover of agrarian enterprises in accordance with its purpose;
- ensuring the optimal level of profitability of activities;
- creation of conditions for financial equilibrium (ratio of incomes and expenditures) of agrarian enterprises;
- ensuring the adaptability of financial resources to internal and external conditions of operation of the enterprise through operational reinvestment;
- ensuring balance between borrowed (financial) resources and the amount of profit;
- creation of reserve stocks of financial resources of agrarian enterprises, etc.

The most common methods of financing activities of agrarian enterprises in the scientific literature are self-financing, lending, budget financing, leasing and selenga, venture financing, project financing, equity financing, financing through free and charitable contributions, mixed financing, and others. The researchers found that the basis for funding activities of agrarian enterprises are self-financing, budget allocations and lending. In addition, Lanova MI Among the methods of financing the agrarian sector of the economy is self-financing, state financing, investment, lending and progressive (non-traditional) financing [4].

According to Dobrovolskaya O.V. [5, p.176-177] and Kushnir IV [6, p.5] financial support of the agrarian enterprise should consist of state

financing, own financial resources of enterprises, credit resources and investments (Table 1).

Note that the choice of the method of financing agrarian enterprises depends on the purpose of financing, the size of the enterprise, the life cycle and the annual monetary circulation, and may combine several options. Thus, self-financing is most desirable in comparison with other methods and is used predominantly for realization of small real projects for which the payback period and the term of realization is difficult to determine. Lending is used for small short- and medium-term projects with a high rate of return on investment. The importance of budget financing for the activities of agrarian enterprises is due to the need to reduce the price parity caused by the increase in production costs, which caused other negative trends in agriculture.

Financing activities of agrarian enterprises as well as any business entity as a whole depends on the timely, qualitative and efficient filling of monetary turnover with financial resources. It is on the structure of the sources of financial support that is most influenced by the sectoral features of the participants in agricultural production, including Maslovska L. Ts. notes that the total financial resources of agrarian enterprises consist of current financial resources, non-current assets and other assets of enterprises. The author draws attention to the fact that the most liquid are current financial resources, because they ensure the ability of the enterprise temporarily and to the extent necessary to meet their financial obligations. While non-negotiable and other assets of an enterprise should be considered financial resources, if possible, their transformation into any form of current financial resources [7, p. 65-66]. Given the time division of the production process and the financing of development from its implementation, it is the liquidity of financial resources that serves as the main destabilizing factor. After all, existing assets in the company's turnover are not always able to realize the function of highly liquid goods, because they are directly related to the production process. So finished products, the terms of implementation of which are reduced, loses its liquidity, and sometimes monetary value, turning from an element of financial resources to the object of financing, if necessary, utilization.

As noted earlier, financing of activities is carried out at the expense of financial resources that are in the money circulation of enterprises. In turn, Oparin VM it is appropriate to note that the stability of the operation of the enterprise depends on the sufficiency of financial resources and the stability of their circulation [8], and therefore the optimal choice of their sources is extremely important. It should be emphasized that the concentration of excessive amount of financial resources is not rational,

since financial resources should take an active part in the cash flow of enterprises rather than serve a certain amount of their storage, which will increase their liquidity, solvency and maximize the present value. The most controversial issue is the systematization of sources of financing, which includes financial resources, which are in the money circulation of enterprises (tabl.1).

Tab. 1.

The most controversial issue is the systematization of source of financing

Financing methods	Sources of funding	Advantages of the financing method	Disadvantages of the financing method	Features of the method of financing
Self-financing	- profit	- Free access to financial resources.	- Limited by volume.	Demands clear and effective financial management at the enterprise
Crediting	- depreciation deductions	- Free use of financial resources.	- The difficulty of forecasting the exact amount of available resource	The most accessible for agrarian enterprises. A wide range of targeted financial resources
Budget financing	- share capital;	- Free choice of target use, quantity and term of engagement	- high cost;	It solves important state-level problems of financing agrarian enterprises, which require a high concentration of financial resources.
Investment	- Reserve capital;	- an extensive network of banking institutions;	- complicated terms of receipt;	Thanks to tax incentives, it encou-rages the develop-ment of agricultural production. At a successful use of financial resources increases the positive image of the enterprise, especially with foreign investment. Because of the negative investment climate in the country, most often use domestic investment.

For example, Matviychuk O.D. [9], Tkachenko AM, Avdey O.K. [10], Vasilik O.D. [11] distinguish their own, borrowed and borrowed financial resources of enterprises, namely:

- Own funds are enterprises that are constantly in circulation and the deadline for their use is not established, because they belong to the enterprise on the property;
- attracted funds are constantly in circulation of the enterprise, but it does not belong (arrears on advances of the customer, on payment of labor, on contributions to the budget of different levels, other free cash reserves);
- borrowed funds are used by the business entity for a fee, on the terms of return and for a certain period.

Different forms of financing are distinguished, which should be classified according to the purpose of financing (financing in the establishment of an enterprise, expansion of activities, refinancing, sanitary financing), sources of income (external, internal, borrowed, borrowed and others), according to the legal status of owners of capital (own capital, borrowed capital, domestic investment, public investment, foreign investment, etc.) and others. Oparin VM is a supporter of the division of financial resources for the cycle, use and ownership. [8]. However, Klymash N.I. notes that all sources of financial resources take part not only in the implementation of production and economic activities of the enterprise in order to profit, but also in the formation of assets of the enterprise [12, p. 149]. Instead, O.R. Romanenko defines key such classification features as dependence on the sources of formation and ownership [13].

In addition, Poddorogin AM argues reasonably that the systematization of financial resources should be based on the following main features: resources that are generated when enterprises are founded; are formed at the expense of their own and equated to them funds; mobilized in the financial market; resources received in the order of distribution of cash receipts [14].

Considering financial resources as a capital, some scholars express an opinion on their division by object of investment, purpose of use and belonging to the enterprise. Unlike them, Tereshchenko O.O. draws attention to the possibility of systematizing financial resources by sources of mobilization (external and internal financing) or by the legal status of investors (equity and loan capital) [15].

Among the scholars, the view is that the sources of funding are distributed to their own and involved. For example, Salo I.A. notes that the own resources of agrarian enterprises are formed at the expense of profits

and amortization deductions, while the involved are created with the help of foreign investments, state subsidies, subsidies, etc. [16], which in our opinion is not correct.

Oparin V.M. [8] emphasizes the need to include profits, depreciation, working capital, budget allocations (budget investments, loans, subsidies, subsidies), loans, revenues from target or centralized funds into the composition of financial resources. Thus, the author expresses the opinion on the limited use of cumulative earnings as sources of financing activities, which, according to Degtyarenko AV is false [17] with what we agree with.

To systematize the sources of financing of the enterprises Bliznyuk O.P. and Horpinchenko AP use a classification that groups financial resources into four blocks, namely: financial resources that are formed when an enterprise is founded; financial resources, which are formed at the expense of own and equivalent funds; financial resources mobilized in the financial market; financial resources that come in the order of distribution of money receipts [18]. In our opinion, the main disadvantage of this classification is the failure to take into account all possible sources of funding. For example, the budgetary refinancing that is practiced in the financing of agricultural enterprises can not be attributed to any of the features suggested by the authors.

At the same time, Filimonenko O.S. among sources of financing of enterprises distinguishes own, borrowed, attracted financial resources, budgetary investment allocations, funds of extrabudgetary funds, funds of foreign investors and other own sources of financial resources [19]. But Berdar MM distinguishes its own (internal and external) and attracted financial resources, noting that their assortment depends on the ownership of the economic entity [20]. There is also another point of view, supported by Kharkiv D.F., Medvedyuk I.M., Konoplyov O.I. [21], Nepochatenko O.O. [22] which, while classifying financial resources, apart from the above categories, distinguish budget allocations, noting that this type of financing may not belong to any of the above, since it includes irretrievably and free of charge funds allocated from the budget. At the same time, the authors emphasize the need to determine the optimal need for financial resources.

The source of financing Malia O.G. allocate proceeds from the sale of marketable products and assets that are not used in economic turnover, budget allocations, commercial bank loans, payables, share payments, dividends and interest on securities, insurance indemnities [23].

At the same time, there are other approaches to determining sources of financing for enterprises. Thus, Polyakov M. Y., among sources of financing, calls state and private financing, which in turn consists of own, borrowed and borrowed funding [24]. For example, Lyubenko N.M.

distributes financial resources to borrowed capital (internal and external), own (internal and external) and asset restructuring, which includes depreciation and disinvestment (sale of non-current assets) [25]. It is worth noting that some scholars classify sources of funding for elements of the liability balance, which in our opinion is relevant in the first place in financial reporting and accounting.

By categorizing sources of funding for sources of income, scientists point out significant differences, but note that this division is the most optimal in terms of financial resources management. Thus, borrowed and attracted financial resources belong to the same group, but various authors call them borrowed (borrowed) or borrowed (borrowed). While Steciuk P.A. [26], L.D. Beetroot, E.V.Vakulenko, AP Kulish and others [27] according to this classification feature sources such as: own, borrowed and involved, and O. M. Kravchuk, V. P. Leschuk also include centralized financial resources [28]. Thus, given the peculiarities of agricultural production, the structure of sources and methods of financing agricultural enterprises' activity is to combine methods of self-financing, lending, budget allocations and investments (Table 1.1).

Taking into account the analysis of the scientific achievement of domestic scientists, one should agree with the opinion of Stetsyuk P.A., who emphasizes that the problem of financial provision of agricultural production at the expense of external sources is not in the absence of financial resources in general, but in the access to them of a particular enterprise, as well as forms and methods of their distribution between branches of economy and economic entities. [26].

The transition from the command-administrative to the market economy in Ukraine, which began with the adoption of independence, has brought significant changes in the financing of the activities of agrarian enterprises, and especially in the methods of their financing. For effective functioning and ensuring sustainable development, economic entities use different forms, methods and sources of attracting financial resources. And if the emergence of an independent economy was accompanied by state support of the agrarian sector, then over time its share decreased significantly, while the share of self-financing and lending to agrarian enterprises increased. But for today, agricultural development is not possible without budget support, as the competitiveness of enterprises in this sector does not stand the existing market conditions of the economy. Particularly acutely this issue arose on the path of European integration of the national economy, which is ambiguous for the agro-industrial complex.

Among the major problems of agrarian enterprises in this situation, it is possible to distinguish between low level of logistics, moral

depreciation of fixed assets, non-compliance with European standards of quality of production, unsatisfactory state of logistics in agro-industrial complex, and others. Please note that the given situation in Ukraine was due to inefficient financing of the enterprises of the industry, and first of all budget financing. After all, the question of bringing the quality of production to European norms and standards is solely within the scope of state regulation; therefore, medium and small agrarian enterprises, which make up the majority of producers of agro-industrial complex, do not raise such costs, and the existing regulatory framework does not stimulate the improvement of the situation.

Consequently, specific features of the financing of the activities of agrarian enterprises, which consist in preferential state lending, the practice of forward contracts, special conditions of interaction with credit institutions and dependence on budget financing, have created conditions for reforming the methods of financing agricultural enterprises, singling out self-financing, lending, budget financing, leasing and selengh, venture financing, project financing, equity financing, financing at the expense of free charitable contributions, mixed funding and so on. At the same time, the choice of the optimal financing structure is the main task of the agrarian enterprise, the solution of which ensures its functioning and development.

References

1. Blank I.O. Upravlyannya finansamy pidpryyemstva / I.O. Blank, H.V. Sytnyk. – K.: Kyyiv. nats. torh.-ekon. un-t, 2006. – 780 s.

2. Partyn H.O. Finansovyy menedzhment: navch. posib. / H.O. Partyn, N.YE. Selyuchenko. – L′viv: vyd-vo Natsional′noho universytetu "L′vivs′ka politekhnika", 2010. – 332 s.

3. Pazynych V.I. Finansovyy menedzhment: navch. posib. / V.I. Pazynych, A.V. Shelushenko. – K.: TSUL, 2011. – 408 s.

4. Lanova M.I. Metody ta dzherela finansuvannya pererobnykh pidpryyemstv APK [Elektronnyy resurs] / M.I. Lanova // VI Mezhdunarodnaya nauchno-praktycheskaya konferentsyya "Nauka v ynformatsyonnom prostranstve" – Rezhym dostupu: http://www.confcontact.com/

5. Dobrovol′s′ka O. V. Finansuvannya sil′s′kohospodars′kykh pidpryyemstv / O. V. Dobrovol′s′ka // Visnyk Dnipropetrovs′koho derzhavnoho ahrarnoho universytetu. – 2012. – № 2. – S. 176-178.

6. Kushnir, Ivan Vasyl′ovych. Finansovo-kredytne zabezpechennya rozvytku ahrarnoho sektoru ekonomiky Ukrayiny [Tekst] : monohrafiya / Kushnir Ivan Vasyl′ovych. – Mykolayiv : [Mykolayiv. obl. drukarnya], 2011. – 122 s.

7. Maslovs′ka L.TS. Optymizatsiya struktury finansovykh resursiv sil′s′kohospodars′kykh pidpryyemstv / L.TS. Maslovs′ka // Ekonomika APK. – 2009. – №10. – s. 65-69.

8. Oparin V. Finansovi resursy: problemy vyznachennya ta rozmishchennya / V. Oparin // Visnyk NBU. – 2001. – №7. – S. 26-28.

9. Matviychuk D. O. Teoretychni osnovy formuvannya finansovykh resursiv pidpryyemstva v suchasnykh umovakh hospodaryuvannya / D. O. Matviychuk // Visnyk Khmel′nyts′koho natsional′noho universytetu. – 2008. – № 5. / T. 2. – S. 80 – 82.

10. Tkachenko A.M., Avdyey O.K. Henezys teoretychnykh pidkhodiv do kursovoyi polityky ta formuvannya finansovykh resursiv pidpryyemstva / Tkachenko A.M., Avdyey O.K. // Stratehiya i mekhanizmy rehulyuvannya promyslovoho rozvytku: Zb. nauk. pr. — Donets′k: IEP NANU, 2010. — S. 48-58.

11. Teoriya finansiv: [Navchal′nyy posibnyk] / za zah. red. O.D. Vasylyka. – K.: Tsentr navchal′noyi literatury, 2005. – S.164-168.

12. Klymash N.I. Upravlinnya finansovymy resursamy pidpryyemstva / N.I. Klymash // Kharchova promyslovist′ – №7. – 2008. – s. 148-151

13. Romanenko O.R. Finansy [Tekst]: pidruchnyk / O.R. Romanenko. – K.: TSNL, 2006. – 312 s.

14. Podder′ohin A. M. Finansy pidpryyemstv / Za red. prof. A. M. Podder′ohina. – 6-e vyd., pererob. ta dopov. – K.: KNEU, 2006. – 552 s.

15. Tereshchenko O. O. Finansova diyal′nist′ sub″yektiv hospodaryuvannya : navch. posibn. / O. O. Tereshchenko. – K. : KNEU, 2003. – 554

16. Salo I.A. Finansove zabezpechennya haluzi sadivnytstva / I. A. Salo // Ekonomika APK. – 2013. – № 8. – S. 28-32.

17. Dehtyarenko A.V. Stan i problemy finansuvannya ahrarnykh pidpryyemstv Sums′koyi oblasti / A.V. Dehtyarenko // Naukovi pratsi NDFI. – 2008. – №4(45). – s.85-91

18. Blyznyuk O. P. Klasyfikatsiya dzherel formuvannya finansovykh resursiv pidpryyemstva / O. P. Blyznyuk, A.P. Horpynchenko // Visnyk Mizhnarodnoho slov'yans′koho universytetu. Ser. : Ekonomichni nauky. – 2012. – T. 15, № 2. – S. 52-58.

19. Filimonenkov O.S. Finansy pidpryyemstv [navch. posibnyk] / O.S. Filimonenkov – 2-he vyd.,pererob. i dopov. – K.:. MAUP, 2004. – 328 s.

20. Berdar M.M. Finansy pidpryyemstv. Navch. posib. / Berdar M.M. – K.: Tsentr uchbovoyi literatury, 2010. – 352 s.

21. Finansy pidpryyemstv: Navch. posib. /D. F. Khar′kovs′kyy, I. M. Medvedyuk, O. I. Konopl′ova; Za red. D. F. Khar′kovs′koho; Odes′k. derzh. ahrar. un-t./ – Odesa: Druk, 2003. – 168 s.

22. Nepochatenko O.O. Finansy pidpryyemstv. Navch. posib./ O.O.Nepochatenko – K.: Tsentr uchbovoyi literatury, 2011. – 328 s.

23. Maliy O.H. Finansovi resursy pidpryyemstv: dzherela formuvannya ta efektyvnist′ vykorystannya / O.H. Maliy // Visnyk Kharkivs′koho natsional′noho tekhnichnoho universytetu sil′s′koho hospodarstva. Ekonomichni nauky. – 2013. – Vyp. 137

24. Polyakov M.Y. Dzherela finansuvannya rozvytku haluzi zv″yazku ta potentsial yikh naroshchuvannya / M.Y. Polyakov // Naukovyy visnyk Natsional′noho universytetu DPS Ukrayiny (ekonomika, pravo). – 2011. – №3(54). – s.65-75

25. Lyubenko N. M. Finansy pidpryyemstv. Navchal′nyy posibnyk / N.M. Lyubenko. – K.: Tsentr uchbovoyi literatury, 2009. – 264 s.

26. Stetsyuk P. Stratehichni dominanty finansuvannya rozvytku ahrobiznesu [Elektronnyy resurs] / P. Stetsyuk – Rezhym dostupu: http:// agrofin. com.ua.

27. Buryak L.D. Finansy pidpryyemstv: Navch.-metod. posibnyk dlya samost. vyvch. dysts. / L.D. Buryak, YE.V. Vakulenko, A.P. Kulish ta in. – K.: KNEU, 2003. – 165s.

28. Kravchenko, Svetlana Anatol′evna. Obespechennost′ fynansovymy resursamy ahrarnykh predpryyatyy v protsesse adaptatsyy v rynochnoy srede [Tekst] : uchebnyk / S.A. Kravchenko ; Nats. nauch. tsentr "Yn-t ahr. ékonomyky". Ukr. akad. ahr. nauk. – K. : [b. y.], 2005. – 225 c.

8.2. INSURANCE MECHANISM OF AGRICULTURAL ENTERPRISES FUNCTIONING

VIKTORIYA HRANOVSKA
Candidate of Economic Sciences, Associate Professor

VITALINA YARMOLENKO
PhD student,

OLEKSANDR SYNENKO
PhD student
Kherson State Agrarian University

In the conditions of protracted political and economic crisis, devaluation of the national currency, groundless state policy and a number of other factors, caused the violation of effective work of the economic system of Ukraine. Under these conditions, stabilization of the situation can be achieved through the development and quality functioning of agriculture, which will provide solutions to the issues of improving its food and financial security [1]. Today, agriculture is a promising branch of the country's economic development. But at the same time it is one of the most risky, because the success of the industry depends largely on weather conditions. Prices for agrarian products are constantly increasing, so the loss or lack of harvest leads to significant material losses for producers and leads to loss of benefits. Ukraine's accession to the WTO in 2008, the launch of the free trade zone with the European Union in 2016 sets new requirements for agricultural products, requires the creation of a more competitive environment in the country. Reliable protection of producers of agricultural products from risks provides insurance.

Planning of various types of entrepreneurial activity, including agricultural production, is associated with risk. Risks arise at each stage of the enterprise's activity: during the preparation and execution of production plans, supply, sales, in assessing the market situation, in

violation of terms of supply of raw materials and sales of products, etc. Risk is a phenomenon that can not be avoided, therefore, each enterprise should develop a risk management system that arises or may arise and plan possible ways to minimize the negative impact of risk on their activities.

Insurance is one of the most effective methods of reducing the risk of impact on the results of the operation of the enterprise. Today, the insurance segment of the market in Ukraine is relatively young and is in the stage of formation. However, we can already state that insurance is one of the most important segments of market economic relations. It is insurance that is able to ensure not only security, stability, social guarantees in society through the mechanism of insurance protection, but in the long term can become an important mechanism for redistribution of investment resources and a mechanism for resolving the issue of employment for the population [2].

At the present stage of economic development of the country, insurance is one of the few branches of the economy of Ukraine, which in recent years has a significant stable annual increase in the volume of services rendered.

In Ukrainian, the term "insurance" comes from the word "fear", in some ways echoing with European languages, in which the term comes from the words "confidence", "security", "prudence", etc. [3]. In today's insurance literature, in dictionaries and encyclopedias there are more than 20 different definitions of the concept of "insurance". However, most scholars tend to make such a determination that insurance is a means of reimbursing damages to a natural or legal person, through the distribution of payments between many individuals. Losses are compensated from the insurance fund that is at the disposal of the insurance company.

The content of insurance is a system of closed redistributive relations between its participants, the object of which is the formation at the expense of monetary contributions of the target insurance fund to recover from it the possible extraordinary and other losses of the insured or to pay cash to citizens in case of loss of their ability to work [4]. Yes, Bazilevich V.D. believes that the economic content of insurance is that this type of human activity is aimed at protecting the property interests of legal and natural persons who have suffered in connection with the occurrence of insurance cases defined by the contract or insurance law at the expense of insurance funds formed by the participants insurance [5]. All these definitions confirm the diversity of the manifestation of insurance and the complexity of its unambiguous definition.

The notion of "classification" comes from the Latin classis – rank, class. The Latin root defines the "quintessence" of this concept, its most

significant, the most significant meaning: the division of objects of a certain set of common features with the formation of a system of classes in this set. Consequently, the classification is understood as the system of the subsystems of certain terms (classes) in a particular field of knowledge or human activity, used as a means for establishing interrelationships between these concepts (classes) [6]. Classification of insurance is carried out on various grounds. Often, insurance is classified according to historical, legal and economic characteristics. Classification of insurance on a historical basis is associated with the allocation of stages of development of certain types of insurance.

Insurance creates for all participants the level of rights, the opportunity to profit, the desire to take risks, gives confidence in the development of entrepreneurial activity, creates new incentives for increasing productivity and ensuring economic development. The importance of insurance continues to grow, as with the development of socio-economic relations both within and outside the country, scientific and technological progress is facing increasing risks, which can not be resisted without compensation guarantees. Due to a wide range of insurance, after the occurrence of an insured event, insurance payments are a reliable guarantee of economic security of legal entities and individuals.

The necessity of insurance of activity of enterprises is conditioned by the fact that losses occur more often from the actions of destructive phenomena which can not be controlled by a person. Given the risk nature of the functioning of any enterprise and the less risky people, there is a need to prevent the elimination and compensation of losses as a result of adverse events or risks.

Famous Ukrainian scientists V.D. Bazilevich and KS Bazilevich explains the need for insurance protection from the standpoint of the following aspects [6]:

1) natural – explains the need for insurance as a means of preserving material goods in the event of accidental, unpredictable, as well as predictable, but undesirable and unforeseen cases, for the purpose of distributing damages caused to individual citizens among many other members of society in order to to reduce losses of victims;

2) economic – the creation of such a kind of human activity that would be based on the accumulation of financial means for the reimbursement of losses caused by the occurrence of harmful to health and (or) material well-being of events, both physical and legal persons, which creates favorable conditions for the uninterrupted process of social reproduction;

3) social – insurance is a form (mode) of the participation of the state, employers and citizens in protecting the personal interests of citizens and thus creating conditions for ensuring social and political stability in society;

4) legal – insurance is a kind of civil-law relations for the protection of property interests of citizens and legal entities in the event of certain events (insurance cases) defined by the insurance contract or current legislation at the expense of money funds, which are formed by payment of insurance payments by citizens and legal entities ;

5) international – the elimination of national differences in the laws of different countries and the unification of ways to protect the interests of economic entities, on the one hand, and the development of such legal rules that would provide insurers with sufficient financial guarantees – on the other hand.

The agribusiness market in Ukraine began to develop actively in the early 2000s. During these 17 years, Ukraine has twice attempted to introduce a system of state support, which directly affected the increase of agricultural insurance market indicators. Having analyzed the trends of the agrarian risk insurance market development in the period from 2005 to 2017, we can conclude that 2016 was the first year of recovery after prolonged stagnation. In 2017, the growth dynamics spread to more indicators.

Thus, compared to 2016, the number of contracts increased by 164 contracts, which is 21%. In 2017, 427 agreements were concluded – for the winter and 530 for the spring-summer period. The volume of collected insurance premiums in the hryvnia has increased for the third year in a row, in particular, in 2017, it grew by 30% and amounted to UAH 204.4 million. Also, in 2017, the volume of insurance premiums increased in dollar terms. In 2017 it amounted to 7.7 million dollars, which is 28% more than in 2016. The total insured amount in 2016 was higher by UAH 327 billion than in 2017 [7].

According to the index of the insured area, the championship belongs to Poltava (75.6 thousand hectares, or 11.5%) and Khmelnytsky (75.3 thousand hectares, or 11.5%), regions. According to them, there are Dnipropetrovsk (67.3 thousand hectares, or 10.2%), Kharkiv (57.5 thousand hectares, or 8.7%), Chernihiv (48.0 thousand hectares, or 7.3%), Sumy (46.9 thousand hectares, or 7.1%) and Ternopil (39.4 thousand hectares, or 6.0%). The volume of collected awards in the oblast of Ukraine was in the following order: Poltava (UAH 33.7 million, or 16.5%), Dnipropetrovsk (UAH 18.1 million, or 8.8%), Sumy (UAH 17.8 million, or 8.7%), Kherson (15.9 million Hryvnia, UAH 7.8%), Khmelnytsky (UAH 15.6 mln or 7.6%), Rivne (UAH 14.8 mln or 7.2%), Mykolayivska (UAH 12.5 mln or 6.1%) and Cherkassy (UAH 11.5 mln or 5.6%) [7].

Experts give forecasts of the growth of the insurance market for agriculture in 2018. This is due to an increase in the risks associated with weather conditions. Previously, they were mostly insured by winter frost damage, and today there is a threat from spring frosts. Meteorologists predict more stringent farming conditions for farmers, so the need for protection in insurance is growing. However, there are problems that hamper agricultural insurance. One of the main reasons is the mutual distrust of agrarian commodity producers and financial companies involved in agricultural risk insurance.

Agrarians do not believe that they will receive compensation in the event of an insured event, and insurance companies, in turn, do not know how to work with the agrarian sector, they are not sure that they can assess all possible risks. The use of transparent, affordable insurance products can simplify communication between the parties.

In 2016, the International Finance Corporation (IFC) project, together with its partner companies – Syngenta, Credit Agricole Bank, AXA Insurance, introduced a comprehensive program for agribusiness "Your harvest is our concern". This program is designed for three years. As part of this program, an innovative insurance product was introduced for crop insurance and future winter wheat harvest. It is designed primarily for small and medium-sized agricultural producers, which are limited in funding. This product is tied to financing by Credit Agricole Bank and obtaining trade credits from Syngenta. Thus, the product is oriented on the current and potential customers of these companies.

Winter wheat insurance for the entire period of cultivation is included from the moment when the insurance company's representatives left the fields, fixed the quality of the stairs and the farmer paid his part of the insurance payment. The insurance product provides an insurance cover consisting of two phases with an appropriate repayment after each phase. The first phase is winter risks, and the second one is spring-summer risks. The main advantage of the first phase is that the coverage level of the area under the culture is 95%. This is the highest figure available on the market today. Insurance companies typically offer insurance coverage at 70% of the sum insured. The second advantage is the settlement of insured events and the payment for each perished hectare of cultivated area. The second phase (after the restoration of the vegetation) involves the insurance of the future harvest. The level of insurance cover in this case is equal to 70% of the average yield of winter wheat in the household for the last three years. The innovation of this product lies in the fact that insurance covers not only the costs incurred for sowing, but also part of the planned costs of growing and harvesting.

Nowadays, not only in Ukraine, but also in the whole world, index insurance is gaining in popularity. It does not require the departure of an inspector to establish an insured event. The benefits of this approach are evident: simplicity, cheapness and fast payout. This is a transparent and understandable method of insurance. There are many varieties of index insurance products. In particular, weather and "crop" can be distinguished [8]. Index insurance provides the right of the policyholder for compensation in the event that the yield of the insured crop will fall below the guaranteed level. Index insurance is performed on those weather risks that are measured by certain parameters. Therefore, they are limited by temperature, precipitation, wind force, snow cover thickness, and so on. But hail to this list does not fall. The index can insure autumn drought, the inability to start sowing due to the absence of precipitation or their redundancy. Unlike traditional insurance, the index does not require mandatory pre-insurance survey of crops and the assessment of losses incurred by the economy.

Consequently, insurance is a special type of economic activity, in the process of which an insurance fund is created, from which, in the event of an insured event provided for by law or contract, payments to policyholders are made. In a market economy, insurance is, on the one hand, a means of protecting business and the well-being of people, and on the other – a kind of entrepreneurial activity that generates profit. At the same time, agriculture is highly risky, the issue of using crop insurance as a method of reducing future loss of benefits is relevant and timely. The main tendencies of the development of insurance of agricultural crops in recent years are an increase of 21% of the concluded contracts and 30% increase of insurance premiums in UAH million. Insured area and insured amount in UAH million. decreased by 6% and 5% respectively. After the crisis in 2014, the average rate of premiums began to increase by an average of 42% per year and in 2017 it is 3.5%. One of the most productive years on the level of insurance payments was 2016 (44.2%). In addition, the activity of international companies regarding the introduction of insurance programs for agrarians is followed. Thus, today the agricultural insurance market is actively developing and requires the improvement of the insurance mechanism for the functioning of agrarian enterprises. Insurance companies offer new beneficial insurance programs for farmers, taking into account all the wider range of risks.

Prospects for future research are the need to make forecasts for further insurance of crops, as well as identify the most effective insurance products for agribusinesses.

References

1. Tanklevs′ka N.S. Osnovy formuvannya finansovoyi bezpeky funktsionuvannya sil′s′koho hospodarstva yak bazysu ekonomichnoho rozvytku krayiny / Naukovyy visnyk NUBIP Ukrayiny. Seriya: ekonomika, ahrarnyy menedzhment, biznes. – m. Kyyiv – 2015 r. – Vyp.222 – S. 15-20
2. Strakhova sprava: Pidruchnyk. – K.: Tovarystvo «Znannya», KOO, 1998. – 321 s.
3. Navrots′kyy S.A. Strakhuvannya yak samostiyna ekonomichna katehoriya vidtvorennya / Navrots′kyy S.A. // Ekonomika APK. – 2006. – №9. – S.37-44
4. Vovchak O.D. Strakhova sprava: pidruchnyk / O.D. Vovchak. – K.: Znannya, 2011. – 391 s.
5. Bazylevych V.D., Bazylevych K.S. Strakhova sprava. 3-tye vydannya – K.: Tovarystvo "Znannya", KOO. – 1998. – 374 s.
6. Strakhuvannya: Pidruchnyk / Za red. V.D. Bazylevycha. – K.: Znannya, 2008. – 1019 s.
7. Proekt «Rozvytok finansuvannya ahrarnoho sektoru v Yevropi ta Tsentral′niy Aziyi», Mizhnarodna finansova korporatsiya (IFC, Hrupa Svitovoho banku), u spivpratsi z Ministerstvom ahrarnoyi polityky ta prodovol′stva Ukrayiny [Elektronnyy resurs]. – Rezhym dostupu: https://forinsurer.com/files/file00624.pdf
8. Tanklevs′ka N.S. Zarubizhnyy dosvid finansovo-kredytnoho zabezpechennya rozvytku aharnykh pidpryyemstv / Visnyk Aharnoyi nauky Prychornomor″ya. – Vyp. 1 (44) – 2008 r. – S. 81-87.

8.3. THE IMPACT OF INTERNATIONAL ECONOMIC INTEGRATION ON FINANCING INNOVATIVE ACTIVITY OF AGRICULTURAL ENTERPRISES

ALLA KARNUSHENKO
Ph.D, Assistant of the Department of Economics and Finance
Kherson State Agrarian University

VIKTORIYA PETRENKO
Ph.D, Associate Professor of the Department
of Accounting, Finance and Entrepreneurship
Kherson State University

The rapid development of the world economy requires the economic system of our country to take an active part in the process of international economic integration, whose purpose is to expand existing market relations and change their nature. Ukraine is a country with an open market economy, which implies its active foreign economic policy. The future of Ukraine lies in an innovative, European-oriented economic policy. It is important for domestic enterprises to increase their potential, to develop

capacities for realization of opportunities, to establish high-tech production, to introduce principles of free international trade. The main strategy of Ukraine's innovation development should be the strategy of "building up", which is based on the principle of steady growth of its own scientific and technological and innovative potential in order to maintain the leading position in the world market.

At present, the overwhelming majority of enterprises in Ukraine rely on a conservative business model in which business is seen as an activity focused on the performance of individual business functions (personnel management, marketing, etc.) and resource management, which results in the production and sale of goods or services in exchange for cash equivalent or other goods and services dominate the strategies of "transfer" and "borrowing", which are reduced to the use of world scientific and technical capacity and the transfer of created abroad of innovation in its economy or initiating production in the country, which already was produced in developed countries.

As one of the main sectors of the national economy is agriculture, international integration also affects its state of the agrarian sector, stimulating the modernization of production, strengthening the competitiveness of domestic products, expanding the product range, improving the adaptability of economic actors to dynamic international trading conditions that include innovative the nature of the transformations. Therefore, the issue of financing the innovation activity of agricultural enterprises should be considered through a spectral analysis of Ukraine's international economic integration that will identify threats and prospects, opportunities and losses, methods of stimulation and suppression of the domestic agricultural market, and also define a protection mechanism for protection not only of food security of the country, but also the innovative activity of business entities in the industry.

International economic integration is a process of economic and political union of countries based on deep stable relationships and division of labor between national economies of different countries, as well as the interaction of their reproductive structures at different levels and in different forms, therefore, requires the harmonization of national policies and the formation of economic unions of states. It is the effective national innovation policy in agriculture that is a key factor in successful international integration, which, in the conditions of expanding the standards of foreign economic activity of Ukraine, ensures the preservation of national interests, a high level of well-being of citizens, as well as a strong position of the state in the international arena.

It should be emphasized that international integration is a very rigid and uncompromising process, and therefore requires from the national

economy of the country to strengthen its strategic priorities with the aim of positioning itself as an equal partner, because otherwise it will turn into a raw material appendage, a cheap labor market in the international market etc. Today, the most vulnerable and unprepared is domestic agriculture, due to the low level of commercialization of innovative ideas, the lack of an effective mechanism for funding innovative activity, the unbalanced state policy regarding the agrarian sector, a significant share of households in the gross production structure, which in some sectors account for 97% of production and hamper large-scale innovation in the industry.

An important task of the state during the conclusion of any international integration agreements should be, first of all, protectionism of domestic agricultural innovation production. Unfortunately, the practice of many interstate talks demonstrates the tendency to put pressure on a stronger partner to the weaker one, which most clearly reflects the real conditions of market relations. This assertion is axiomatic, since any business entity (whether a country, enterprise or individual) is primarily concerned about its own wealth and the protection of its own interests. For example, in the field of research, foreign contractors often impose unfair terms of cooperation for Ukrainian scholars, which include, with the financing of foreign venture funds, the transfer of intellectual property rights to them not only created in the process of joint activity, but all previous developments 1; 2]. Today, the eastern and western key vectors of international integration, which influence the financing of innovation activity of agricultural enterprises, are distinguished. The western vector is the most innovative, as it involves the development of a new European Union market for Ukraine. Instead, the eastern vector reflects the preservation of the established ties within the CIS and does not involve radical changes in its structure. The development of international integration processes involves the consistent legal consolidation or institutionalization of the following five stages: a free trade area; customs market; common market; economic integration; complete integration [3, p.372]. Therefore, the current international economic integration of Ukraine is represented by organizations such as the World Trade Organization (WTO), the Free Trade Area of the CIS, the European Union (EU) and the Customs Union (MC). Ukraine's accession to the WTO was an important strategic goal of the country's foreign economic policy, and thanks to the signing of membership in the organization on May 18, 2008, opened new boundaries of the world market. The question of Ukraine's associate membership in the EU caused great controversy, mainly related to political speculation, but due to the introduction of a huge number of reforms, the association agreement was signed in 2014. The agreement on the establishment of a free trade area was ratified by Ukraine on October

6, 1999, and envisaged a special status of foreign economic activity between the post-Soviet countries of the CIS. But in practice, due to inconsistencies and lack of political will of the CIS countries, it was not possible to develop and agree on multilateral FTAs of the CIS, so today mostly bilateral conditions continue to operate, which significantly influences the development of foreign economic relations of the CIS countries and, accordingly, the development of financing of innovation activity of agricultural enterprises of the FTA CIS does not have. The agreement on associate membership of Ukraine in the EU is a modern vector of development of the country's economy, aimed at modernizing and reloading the entire country's production. Subject to compliance with the treaty for agriculture, trade relations are expanding, which include high standards of production, quality and certification of products, opportunities and incentives for innovation development. But it should be noted that the Association Agreement has advantages and threats that should be oriented to domestic agricultural enterprises in the industry (Table 1).

Tab. 1.

Advantages and disadvantages of Associate Membership in the European Union to finance innovation activities of agricultural enterprises of Ukraine

№ п/п	Можливість	Загроза
1	2	3
1.	Reduction in weighted average customs duty from 23.8% to 0.3%	Growth of competition in the domestic market at the expense of the reduction of the average weighted import duty on agricultural land. products from 4.2% on average to 0.9% over 10 years
2.	Introducing tariff quotas at a zero rate within the quota for exports to the EU of livestock products, cereals, certain types of food products	
3.	Canceling export subsidies on agricultural products destined for sale in Ukraine	Sunflower oil production: rising raw material prices due to cancellation of export duties
4.	Cancellation of export duty	Changes in names due to commitments to comply with geographical indications
5.	Establishment of a mechanism for the recognition of the equivalence of sanitary and phytosanitary measures	The gradual disappearance of the product market that is not in line with EU standards in sectors where technical regulation is harmonized with EU norms
6.	Wider opportunities for sharing experiences and technologies	
7.	Opportunity to compensate for the growth of raw material prices due to cancellation of export duties due to the application of additional fee	

Continuation of the tab. 1

1	2	3
8.	Exchange of information and best practices on typical situations, development perspectives, sustainable development issues, etc.	Manufacturers may have less freedom to sell products, in particular to fix prices for end users
9.	Harmonization of the technical regulation system and standards with the relevant EU rules and regulations	
10.	Improving the reliability of the financial system through the establishment of a more effective system of public prudential supervision on the basis of international standards and a more transparent permitting system	Growth of the cost of purchasing products containing the intellectual component
11.	Opportunities for the development of new types of financial services	
12.	Opportunities for attracting investment for the development of the financial services market	
13.	Guarantees of free access to payment and clearing systems and to the channels of financing and refinancing	Increased competition due to the increased presence of enterprises in the country. EU or their affiliates in Ukraine
14.	Simplification of customs procedures, greater automation of customs procedures, hence the creation of a customs environment similar to that existing in the EU	
15.	Creating a mechanism for ongoing consultations between customs authorities and businesses	
16.	Prohibition of minimum customs value	Sectoral Impact: Provision of product brand change in connection with the implementation of obligations related to the observance of intellectual property rights (geographical indications)
17.	Reduce the costs associated with customs clearance	
18.	Simplification of access to the EU market by introducing the principle of symmetric regulation in matters of business opening	
19.	Strengthen investment protection regime	The reform of the state aid system can lead to a reduction / cancellation of assistance to those sectors that are currently receiving it
20.	Increasing the attractiveness of investment in Ukraine	
21.	The possibility of mutual recognition of qualifications will facilitate the movement of individuals-service providers	
22.	Implementation of Small and Medium Enterprises Development Strategy, based on the principles of the European Charter for Small Enterprises	
23.	Improving the business environment by simplifying and rationalizing regulatory rules and practices	
24.	Increasing the transparency and effectiveness of the Antimonopoly Committee of Ukraine, which will positively affect the business environment in the country.	Increasing the responsibility of business for the correctness of customs documents

Continuation of the tab. 1

1	2	3
25.	Strengthening competition that will create the potential for lower prices	
26.	Redirection of state aid to small business, regional development, etc.	
27.	Stimulating innovation and modernizing the economy	Costs for transition to EU standards and compliance
28.	Increasing the investment attractiveness of the economy	
29.	Sectoral Impact: Obtaining EU support for product brand change in relation to compliance with intellectual property rights (geographic indications) obligations	Systemic risks inherent in modern financial systems

Ukraine has all the prerequisites for inclusion in the pan-European innovation space under the condition of developing an effective national innovation system, which is influenced by two levels of innovation environment: the macro-environment – covers socio-political, institutional and legal, socio-economic systems for obtaining and using new knowledge in national scale (productive forces, social institutions, cultural traditions, research potential, educational sector); micro-environment – includes socio-political and economic conditions of the individual's life, a set of motives for the development and use of new knowledge.

One of the most important policies of the European Union is the Common Agricultural Policy (CAP), which means the joint actions of the member states of the Union to ensure the supply of agricultural products at stable prices, increase agricultural production, maintain a suitable standard of living for farmers and ensure optimal prices for food consumers.. Agrarian policy guarantees producers of agricultural products its sale at a pre-set price.

Some agricultural products introduced direct subsidies to the producer. For the centralized functioning of agriculture in the EU countries, an Orienteering and Guarantee Fund funded from the EU budget has been created. The main components of a unified agrarian policy are: single prices for agricultural products within the EU and the only mechanism for its support; the freedom to trade in agricultural products within the EU, the absence of tariff and quantitative restrictions; the only financing of agriculture. According to P.I. Gaidutsky [4, p. 3-7], the epicenter of the common agricultural policy of the EU is a special system of support and joint regulation of agriculture that determines the development of this area. The introduction of such a system in Ukraine will ensure the competitiveness of the domestic agrarian sector.

The EU Council of Ministers sets limits on imported food prices, that is, the minimum prices at which certain products can be imported into the European Union member states. Prices that are, by and large, higher than world import duties, are designed to protect EU agriculture from competition from cheaper products from countries outside the European Union. Farmers receive subsidies from the EU budget in the event of unfavorable weather conditions, construction of new premises, modernization of production and the purchase of new equipment. Agricultural exports are also subsidized. Exporters receive compensation, which should offset the difference between the world price and the higher price in the EU.

The path of Ukraine towards closer EU integration lies in further progress in building political trust and democracy, creating a genuine market economy. Progress in this direction improves integration into the European Community, which will facilitate Ukraine's free trade with the EU member states and our country's accession to the European Union [5].

When establishing a free trade zone, participants in international integration sign an agreement on the mutual abolition of customs tariffs and quotas. Typically, specific agreements on the creation of a free trade area for industrial goods provide for a certain term (several years), during which the duty and other non-tariff restrictions are gradually reduced and canceled. In the case of agricultural goods, liberalization is limited.

The common market is the third stage of international economic integration. It provides, in addition to the characteristics inherent in the customs union, the removal of obstacles to the free movement of all the factors of production between the countries. Today, this stage of economic integration is realized in the EU. It includes the coordination of the following issues between the integrated countries:

- development of a common policy for the development of individual spheres and sectors of the economy. In the EU, such sectors of the economy were agriculture and transport;
- the formation of joint funds for the promotion of social and regional development, oriented to meeting local needs, which would make it possible to really feel the benefits of integration;
- implementation of measures to prevent violations of the norms governing competition. This necessitates the formation of special management and control bodies. In the EU, such bodies are the European Parliament, the Council of Ministers, the European Commission, the Court and the Council of Europe.

Establishing an economic union as the fourth stage of international integration implies, in addition to the features inherent in the common

market, the implementation by the member countries of a coherent economic policy. The European Union is the only example of an integration group of countries in Europe in the form of an economic union that is not yet fully formed. In order to achieve new economic integration, it is necessary not only to harmonize, but to actually implement a unified economic policy, which requires unification of the legislative framework in many areas. which includes: 1) a tax that provides for identical levels of taxation in all countries belonging to the integrated group; 2) standardization (for example, for food preservatives, exhaust gas toxicity requirements, size and quality of equipment, etc.); 3) common safety rules in the production process; 4) labor (the rules for recruiting and dismissal, the only retirement age); 5) antitrust; 6) the relation to different forms of mergers and acquisitions firms; 7) rules for the creation and registration of new firms; 8) monetary (the existence of a single Central Bank, a single currency system with a single currency); 9) the refusal in decisions taken by the relevant government agencies from protectionism and any form of preferences with regard to national economic entities.

In turn, Ukraine should pursue a state policy in the field of developing programs for the attraction and use of investments in the innovation sphere, taking part in the process of managing processes and risks in innovation activities, supporting the innovative potential of leading research and development centers, and ensuring the implementation of scientific and technical policy, which corresponds to the world level. This means that Ukraine should choose the following directions for the development of "high" technologies, for realization of which the real conditions have already been created in the state and there is a corresponding scientific and technical potential for entering the leading positions of science and technology.

State support for innovation processes in Ukraine should include:

- financial aspects: financing of the formation of new industries, knowledge intensive industries at the expense of the state budget; initiation of creation and financing of research programs, scientific centers; provision of interest-free or preferential loans and grants; government order for innovative products; subsidies from the state budget for certain industries, industries or technologies; compensation of the bank interest, in whole or in part, in the case of a loan to finance investment in technological innovation; government payments to leading research centers and scholars;

- Fiscal incentives for innovators: reduction of corporate profit tax rates; tax credit for innovative enterprises; exemption from some deductions to the budget; Reduced depreciation for firms identified as innovative.

- other legal, infrastructural, economic and political instruments of innovation support: improvement of the legislation on copyright, patent

relations; the introduction of a certification system and standards that encourages the consumption of innovative goods; development and support of the education system in the country; creation of state information infrastructure; providing state orders to enterprises to guarantee compensation for the costs of financing innovations (Fig. 1).

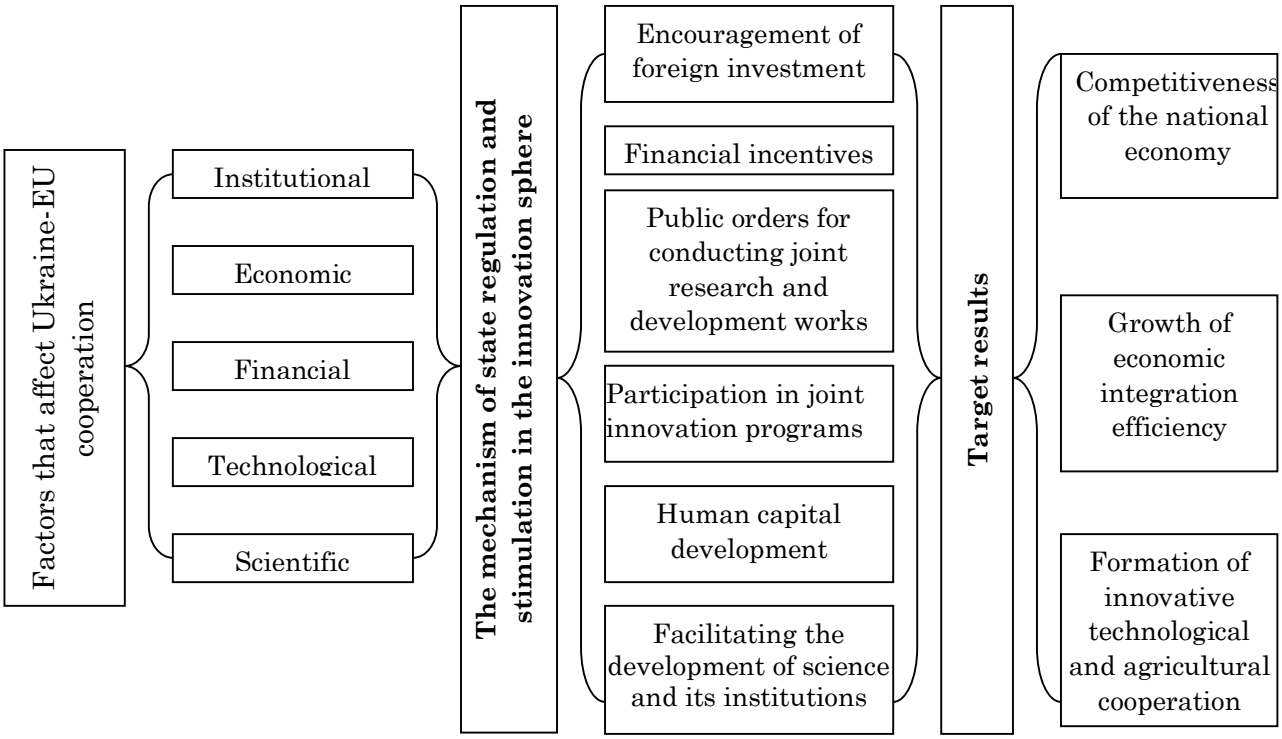


Fig. 1 Scheme of cooperation between Ukraine and the EU

Thus, international economic integration is important for the development of financing innovative activity of agricultural enterprises in Ukraine, which is the influence of world organizations, including the WTO, the EU, the FTA of the CIS, through the technical, technological, organizational and economic factors on the financial and economic system, which forms the conditions for the functioning of the country's agrarian sector, aimed at the development of financing their innovation activities. In fig. 2 consider in more detail the mechanism of the impact of international economic integration on the financing of innovation activity of agricultural enterprises in Ukraine.

Note that the organizational factors are the level of administrative, communication, functional structure and information technology. For economic factors it is expedient to include the state of financial resources, financial stability, production capacity, working capital. Among the technical and technological factors of international integration are the technical and technological level of production, the level of innovation production, the size of the subject of integration, the structure of production and the organizational level of production.

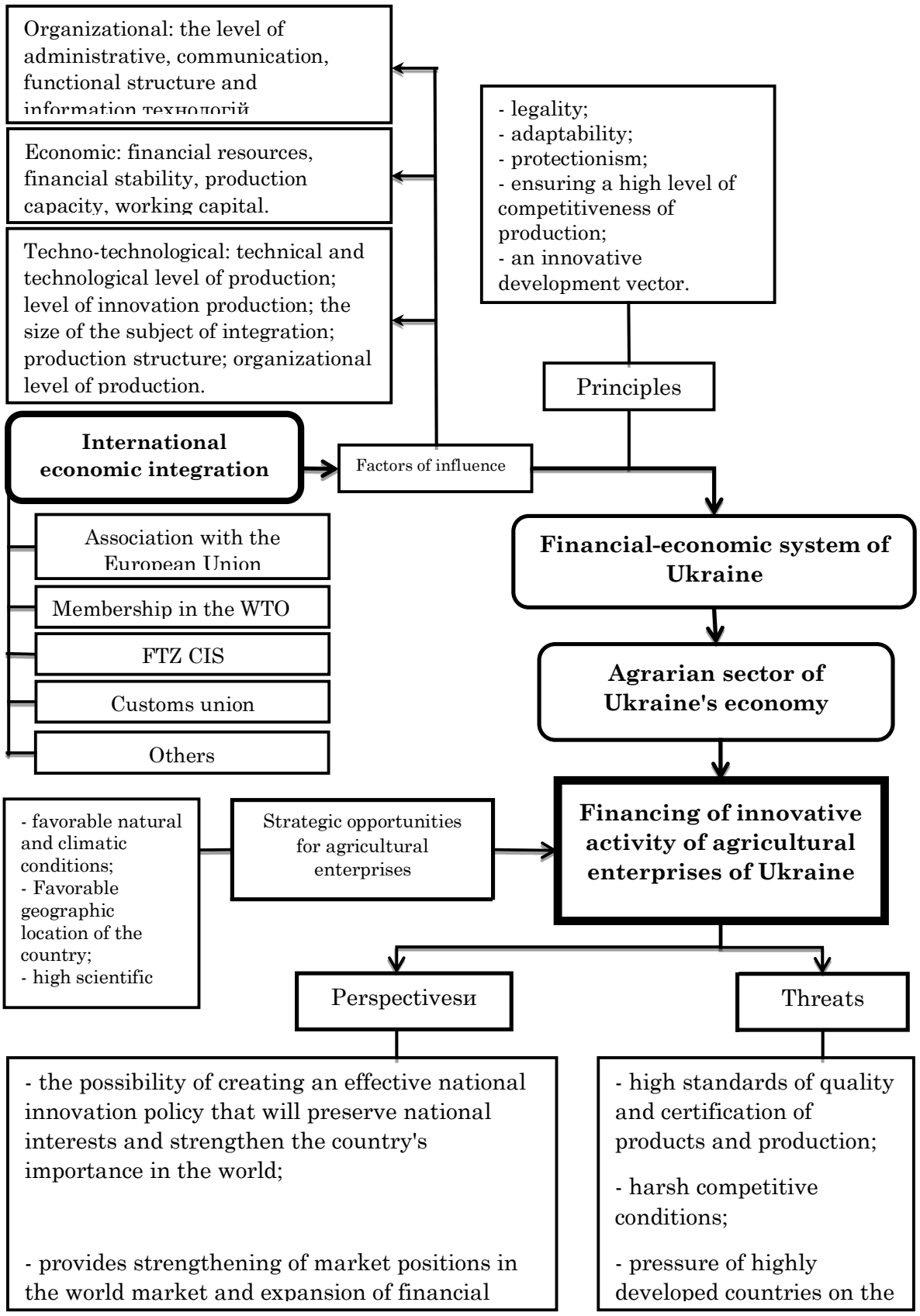


Fig. 2 Mechanism of influence of international economic integration on financing of innovative activity of agricultural enterprises of Ukraine

We note that in order to develop financing of innovations in the country, the process of international integration should be carried out in compliance with key principles, namely, legality, adaptability, protectionism, ensuring a high level of competitiveness of production, an innovative vector of development that allows the strategic opportunities of agricultural enterprises to be realized: favorable natural and climatic conditions, favorable geographic location of the country, high scientific and production potential.

The introduction of the mechanism of international economic integration impact on the financing of innovation activities of agricultural enterprises in Ukraine will minimize and neutralize the threats, as well as realize the prospects of international integration. We believe that the key threats to financing innovation activities of agricultural enterprises in the process of international integration are: high standards of quality and certification of products and production; tough competitive conditions; the pressure of highly developed countries on the domestic market, etc. Instead, the important prospects are: the possibility of creating an effective national innovation policy that will preserve national interests and strengthen the country's importance in the world; possibility to strengthen market positions in the world market; expansion of financial opportunities; Under competitive conditions, innovation is a tool for survival and development.

In addition, despite the threats and advantages of international integration for the domestic economy and the development of financing innovative activities of agricultural enterprises, the bearer of which is international cooperation, it is worth noting that it is the state which must determine the conditions for the formation of an innovative vector for the development of enterprises in the agrarian sector of the economy [6, p. 16-17]. These include:

1. harmonization of state, private and public interests on the basis of recognition of the priority of social needs in modernizing the Ukrainian economy by translating it into an innovative model of development;
2. a combination of economic efficiency and social justice; strengthening the role of the state in the formation of an innovative economy;
3. creation and support of state guarantees of the social orientation of the economy; development of mechanisms of public-private partnership in the innovation sphere;
4. support of the domestic commodity producer;
5. rational use of natural resources;
6. provision of social and socio-economic rights of citizens;
7. elimination of disparities in regional and sectoral development;

8. multi-layered economy, ensuring economic diversification;

9. decision-making on the basis of public involvement, transparency of public administration in the innovation sphere;

10. a combination of national, regional and sectoral needs and interests [2, p. 264; 7, p. 30-33; 8, p. 10-11; 9, p.82-83], etc.

An analysis of environmental factors in relation to agricultural enterprises (PEST analysis) has been conducted to determine the approaches to the development of the potential of Ukrainian enterprises in the context of European integration (Table 2). On the basis of this analysis it is possible to carry out the following analysis of the factors affecting the main Policy, Economy, Society and Technology enterprises of agrarian production.

Tab. 2.

PEST analysis of the activity of agricultural enterprises of Ukraine

Policy	Economy
1. Politicization of a society that has been manifested in a military conflict in the east of the country. 2. Difference of centers of influence with distribution of budget funds. 3. Lack of legislative and tax support of innovative active enterprises. 4. More than 90% of agricultural enterprises are privatized, which practically excludes state regulation. 5. Mistrust of business to power and its bodies	1. Systemic crisis of the global financial system. 2. Inflation risks and the absence of ways to overcome them. 3. The inability of the government and the NBU to stabilize the hryvnia exchange rate. 4. High NBU discount rate, excessive business lending rates. 5. High dependence of the country's economy on loans from international financial organizations and funds. 6. Uncontrolled growth of prices for goods and services of monopolies (raw materials, energy resources). 7. Low profitability of production.
Society	**Technology**
1. Reduction of the number of able-bodied population. 2. Reduction of the number of specialists of schools and workers in villages. 3. Underestimation of the role of agricultural enterprises as the basis of economic and social security of the country. 4. Reducing the attractiveness of labor in rural areas. 5. There is no clearly expressed orientation to quality as the basis of competitiveness. 6. Significant gap between the level of wages and the level of employees' needs.	1. Lack of innovative activity of agricultural enterprises. 2. Lack of proper technological base: significant deterioration of the active part of fixed assets. 3. Insignificant level of introduction of new technologies and diversification of production. 4. The absence of a three-way link "science – technology – production".

Effective political factors hindering the development of the potential of Ukrainian agricultural enterprises are:

- restriction of budgeting of innovative development of enterprises;
- limiting the possibilities of state regulation of enterprises in the area of development and implementation of support measures.

After analyzing economic factors one can say that for the development of the domestic market, the intensification of the processing of agricultural raw materials and the introduction of innovations into production, it is necessary to introduce effective measures for the formation and reduction of bank interest rates on loans.

The analysis of existing social factors makes it possible to conclude that it is necessary to form a cult of a highly paid and highly skilled agricultural worker.

Taking into account the weight of technological factors in the development of agricultural enterprises, it is necessary:

- To maximize modernization of Ukrainian enterprises through the creation of favorable conditions for lending and investment;
- Assess the existing scientific and production potential of advanced industrial enterprises, establish links between research institutes and manufacturing enterprises through the creation of scientific and production clusters that will promote the innovative type of development of agricultural enterprises;
- develop legislative, regulatory and tax measures to increase the innovation activity of enterprises;
- to develop and implement action programs at the national and regional levels on the restoration and modernization of fixed assets;
- to popularize and stimulate the introduction of modern methods of management, marketing and logistics into the activities of enterprises [10].

An innovative business model should apply to all areas of the entity's functions, from production to customer relations. Innovations should also address the attitude of teamwork, systems of organization and motivation of employees at all levels – from top management to key and auxiliary workers at work.

In modern conditions of European integration, enterprises are often confronted with uncertainty and risks, unpredictable situations, when evolutionary approaches, the construction of extrapolation forecasts and plans for "incremental" methods, can not provide the correct orientation of development in the future, and hence the possibility of ensuring the effectiveness of activities. It is necessary to solve these problems by applying methods of strategic management of the potential of enterprises as a multidimensional, managerial process that promotes the formulation

and implementation of effective capacity development strategies aimed at efficiently balancing relationships within the enterprise, including its separate units, as well as achieving the set goals, creating new opportunities. and benefits [10].

In order to successfully integrate Ukraine into the European economy, it is necessary to determine in each of the regions of the country those sectors in which there are favorable conditions for long-term development.

Euro integration will affect the economic processes in Ukraine not only on the macro, but also on micro-level business, which involves changing the model of doing business at enterprises, especially those that are oriented towards the development of international economic processes and export-import relations. However, for many business entities, such changes will be forced and will not be adequately prepared for change. The prospect of such enterprises is negative: they can become bankrupt and disappear from the market. To avoid this, the business must be flexible and aimed at continuous improvement regardless of the foreign policy of the state. Only by developing the investment and innovation potential of domestic enterprises of the leading industries of the economy, Ukraine can achieve recognition in the European economic space, as it is the enterprises that are the basis of the state's competitiveness.

Consequently, international economic integration with the help of technical and technological, economic and organizational factors, subject to the principles of protectionism, adaptability, legality, innovation development vector, forms the financial and economic system of the country, which determines the conditions of functioning of the agricultural sector, and therefore affects the development of financing Innovative activity of agricultural enterprises of Ukraine, defining its priority directions and structure of sources of financing.

References

1. Udovyk S. Nashu innovatsiynu polityku krashche nazvaty denovatsiynoyu // Dzerkalo tyzhnya. — 2002. — 12 zhovt.

2. Radchenko V. V. Svitovyy dosvid pidvyshchennya efektyvnosti derzhavnoho rehulyuvannya innovatsiynoho protsesu // Sots.-ekonomich. doslidzhennya v perekhidnyy period. — L., 2000. — Vyp. 16. — S. 259–265.

3. Martynyuk I. I. Mizhnarodna ahropromyslova intehratsiya [Elektronnyy resurs] / I. I. Martynyuk, S. B. Romanyshyn // Visnyk Natsional′noho universytetu "L′vivs′ka politekhnika". Menedzhment ta pidpryyemnytstvo v Ukrayini: etapy stanovlennya i problemy rozvytku. – 2013. – № 776. – S. 369-373. – Rezhym dostupu: http://nbuv.gov.ua/j-pdf/VNULPM_2013_776_57.pdf

4. Hayduts′kyy P.I. Ukrayini potribna nova ahrarna polityka / P.I. Hayduts′kyy// Ekonomika APK. – №103. – S.3-7.

5. Lubtsi Khoffman Filitsitas M′ollers. Ukrayina na shlyakhu do Yevropy / KH.F.M. Luttsi. – K.: Feniks, 2001. – 338 s.

6. Fonotov A. H. Teoretyko-metodolohycheskye podkhody k razrabotke ynnovatsyonnoy polytyky. — M.: RÉNS, 1992.

7. Bzhylyanskaya L. Ynnovatsyonnaya deyatel′nost′: tendentsyy razvytyya y mery hosudarstvennoho rehulyrovanyya // Ékonomyst. — 1996. — № 3. — S. 22–33.

8. Amosha O. I. Rehional′ni problemy innovatsiynoyi polityky ta yiyi aktyvizatsiyi: naukova dopovid′ / O. I. Amosha, S. M. Kapura, M. H. Chumachenko ta in. — Donets′k: IEP NAN Ukrayiny, 1999.

9. Musayev A. H. Rozvytok derzhavnoho upravlinnya innovatsiyamy v konteksti mizhnarodnoyi intehratsiyi [Elektronnyy resurs] / A. H. Musayev // Naukovi pratsi MAUP. – 2013. – Vyp. 1. – S. 81-84. – Rezhym dostupu: http://nbuv.gov.ua/j-pdf/Npmaup_2013_1_16.pdf

10. Koval′chuk S.V. Aktualizatsiya marketynhovykh stratehiy v konteksti innovatsiynoho rozvytku pidpryyemstv: [monohrafiya] / S.V. Koval′chuk. – Khmel′nyts′kyy: Polihrafist-2, 2012. – 280 s.

8.4. PERFECTION OF THE MECHANISM OF MANAGEMENT OF INVESTMENT RESOURCE FLOWS IN THE AGRARIAN SECTOR OF THE ECONOMY

LUBOV BOROVIK
Ph.D., Associate Professor of the Department of Accounting and Finance, Kherson State Agrarian University

The lack of transparency in the formation and use of investment resources makes the industry unattractive, which hinders its social and economic development. Solving this problem will contribute to the development of agriculture. These circumstances also influenced the choice of the topic of scientific research. Analysis of recent research and publications. Problems of improving the management methods of investment resources were engaged by such scientists as KL. Atoyev, L. Borsch, V.V. Valetenko, Z.V. Gerasimchuk, P.I. Gaiduk, N. Kovtun, L.A. Marmul, A.P. Makarenko, A.V. Mityay, M. Chumachenko, N.A. Shevchenko, etc. But the solution of this problem requires further research. The aim of the scientific work is to improve the mechanisms of managing investment flows in agriculture.Statement of the main material. The investment activity of the subjects of agrarian production is viewed as a consistent unity of the processes of investing capital and generating income [1,2]. Investment management should ensure the continuity of this

process through economic and administrative levers of influence on the promotion of investment capital from the investor to the investee. At the same time, great importance in the management process is not only the search for sources of investment by business entities, but also a constant, systematic influence on the mechanisms ensuring the growth of the attractiveness of the investment object [3, 4]. Reducing the attractiveness of the investment object is a signal for the investor, which means that the effectiveness of investments is low and the risks of their non-return grow. Managers should predict the course of events and take measures in advance to improve the investment climate, while analyzing the elements of the investment process. In some cases, the decrease in the activity of filling the investment flow is promoted by the misuse of a part of investment funds by the business entity (the user of the invested resources) or by deviations from the established and agreed timeframes for the receipt of investments, which leads to an increase in the deficit of working capital in the farms [5]. All this indicates that for the successful management of the investment flow and the transparent use of investment resources in each region, Investment Resource Management Departments should be established, which together with specialized banks, investors, recipients of investments and district departments of agro-industrial development, controlling the use of land and water resources, will create an information field that will be used in the interests of all participants of the investment process (executors of projects, programs), (Figure 1). At the same time, information interaction between investors and recipients of investments can be decisive for success in implementing joint investment projects. It should be characterized by transparency, truthfulness and satisfying all participants of the investment process.

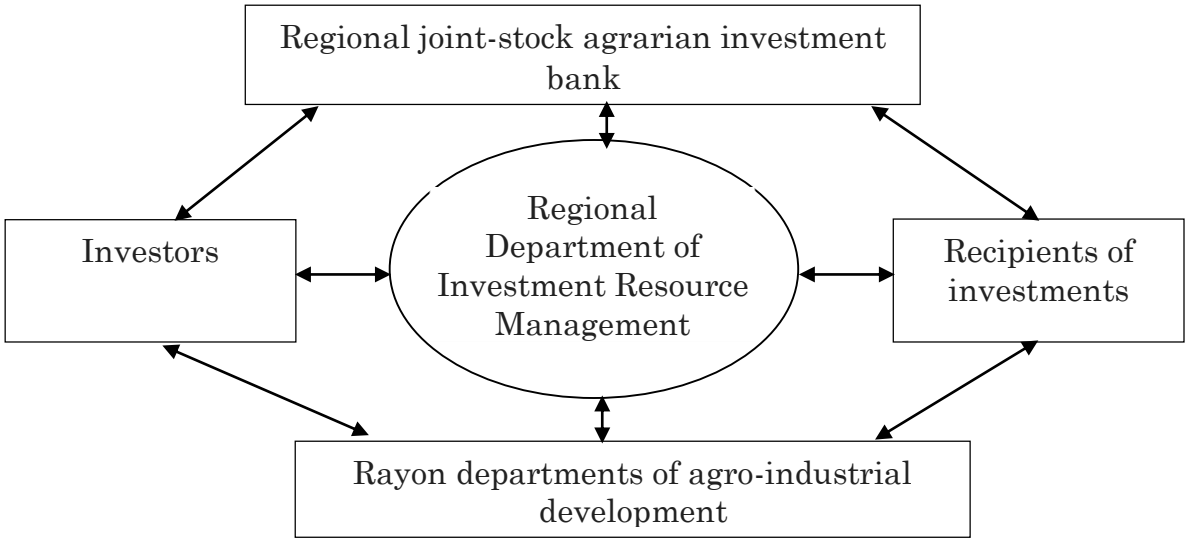


Fig. 1 Formation of an information field between the main participants of the investment process

Source: Developed by the author

First, the investor, in the competitive core, must prove that he is a financially stable partner who is able to meet the investment needs of the recipient of investments and fulfill the contractual obligations assumed. On the other hand, the subject of economic activity, as a user, must be investment attractive, financially stable and competitive. In carrying out investment activities, the investor seeks to cooperate with such a recipient of investments, which would ensure to him the maximum profit. Therefore, at the initial stage of their relationship, the investor assesses the financial condition, production and technological, labor, human resources and prospects for the development of the applicant enterprise. The internal information infrastructure should consist of in-house reporting and provide information on changes in the external environment. At a preliminary acquaintance with an economy such sources of the information as statistical editions, reports, directories, catalogs, prospectuses, etc. can be used. Preliminary analysis involves the use of statutory documents, annual and quarterly reports and other sources of information that give a general idea of the economic activities of the applicant for obtaining investment resources, financial condition, production and sales base, competitors [6]. Determining the degree of financial risks, the potential investor carefully examines the financial statements of the company over the past few years and analyzes the results of all its economic activities. Solvency assessment is carried out on the basis of the liquidity characteristics of the current assets. Studying the object of their future investments, the investor seeks to obtain reliable information about the state and prospects of development of the entire agrarian sector of the region. The main element of the external information infrastructure is the database, which is formed by industry unions of enterprises, the State Statistics Committee, the Antimonopoly Committee of Ukraine, the State Information and Analytical Center for Market Monitoring, consulting firms and information agencies. These sources contain information on the market of investment services in agriculture in Ukraine and certain regions, as well as information on the level of competition in the markets for the production of raw materials and the sale of finished products. Unfortunately, such a database is not freely accessible both for investors and for commodity producers [7].

The regional departments of agro-industrial development is an important mechanism for the formation of the information flow and its direction is higher, hierarchically, to the state administration bodies. In accordance with the needs, management systems of investment resources of the industry in the region, they should be partially reformed and also perform intermediary functions between investors and users of investments, carrying out information and control functions on the use of

investment resources. Controlling the flow of investment resources coming to farms in the form of such material values as fertilizers, seeds, construction materials, technical aids, fuels and lubricants, etc., and carrying out a permanent control over the effectiveness of their use, specialists of the regional departments of agro-industrial development should provide practical assistance in the introduction of innovative technologies in production. Performing such a function as such activity, they will provide information to agricultural producers how to more effectively use land, water, energy resources, help with the introduction of innovative technologies, which will help increase the level of investment attractiveness of agriculture. Having operational information on the flow of investment resources flows, it is possible to take timely measures to manage them in accordance with the goals set. At the same time, it is necessary to take into account that the structure of investment flows is not homogeneous. Each of the streams has its own formation conditions, and their owners have the ability to influence their volumes. Therefore, the main condition for the successful implementation of the process of managing investment flows is the achievement of an optimal balance of financial interests between investors and recipients of investments fixed in agreements that should be controlled by the Regional Office of Investment Resources, as well as a specialized bank and district departments of agro-industrial development of agriculture [8].

Proceeding from the foregoing, we propose a real model of a system for managing investment resource flows in the agrarian sector of the regional economy, which consists of three blocks: the information flow generation unit; block of management of investment resources and the control unit.

In addition, using information, it is possible to familiarize with the economic and financial state of the recipient of investments and its ability to comply with the terms of the contract. Thanks to this and other information, the legal provision of the investment process is carried out. Obtaining information provided by the Regional Joint Stock Agricultural Investment Bank and the regional departments of agro-industrial development under the RGA allows the regional Department of Investment Resource Management to make appropriate management decisions on-line.

Block-1 (Figure 2) forms an information base that gives a complete picture of the financial possibilities of investors and the future movement of investment flows. We get a full answer to the question of who is the owner of the investment, in what form (monetary or otherwise) will the investment be provided and in what time period will they receive the investor (the user). A continuous process of managing investment resources

must be answered by a continuous process of monitoring the state of the investment environment, which is constantly changing. Without receiving reliable and complete information, it is impossible to assess the situation qualitatively and to make correct management decisions that would reliably ensure the flow of investment flows in the direction of "investor – recipient of investments". Thus, thanks to the information received, not only the orderly formation of the flow of investment resources, but also the real management of investment resources can be carried out [9].

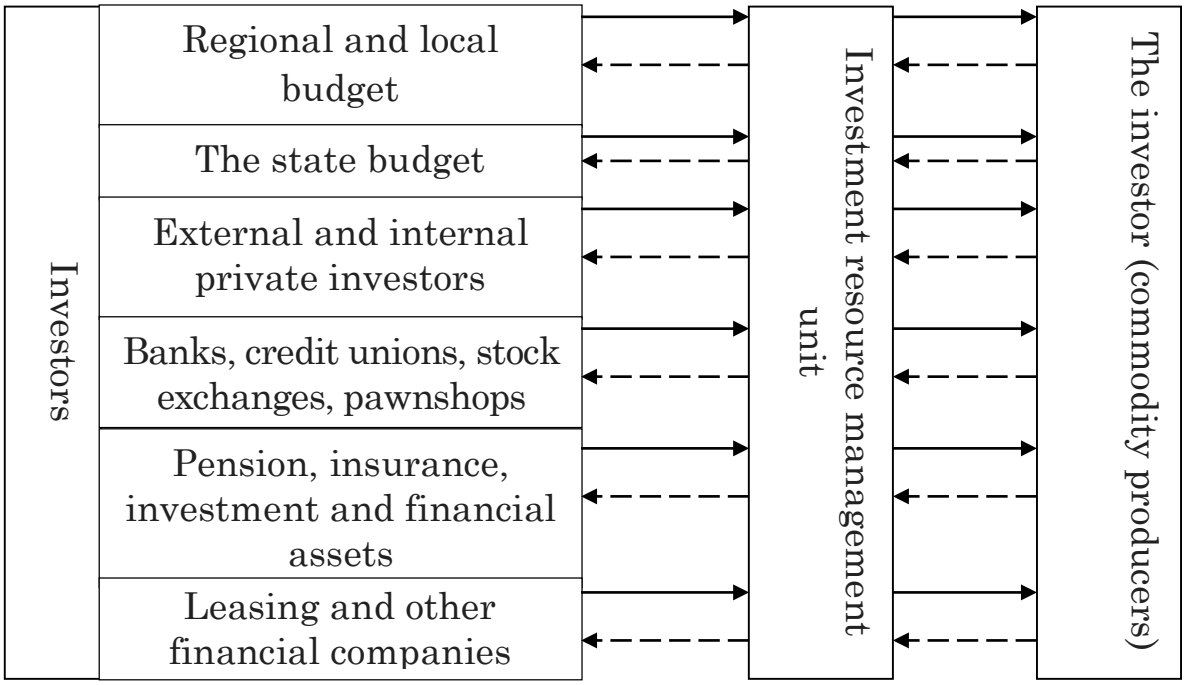


Fig. 2 Block – 1. Formation of information flows in the management system of investment resources in the agricultural sector of the region

Source: Developed by the author

Block-2 (Figure 3) is a block for managing the flow of investment resources. It is basic in the management system and operates exclusively in the interests of both the investor and the recipient of investments. Using the information of the Regional Joint-Stock Agricultural Investment Bank, based on the compilation of daily balances of the balances of assets and liabilities and operational data of the regional departments of agro-industrial development at the WGA on the movement of investment property, the Regional Department for Management of Investment Resources to exercise its managerial functions, actively influencing investment processes.

***Fig. 3* The real model of the system of management of investment resources flows in the agrarian sector of the economy of the region**

Source: Developed by the author

The flow control block of investment resources consists of two sectors:

1. Sector A (formation of investment flows and scoring them in the direction of "investor – recipient of investments.") In this sector, investment flows are formed through: regional and local budgets, domestic and foreign private investors, commercial banks, credit unions, exchanges; pawnshops, pension, insurance, investment and other funds, leasing and other financial companies.

The use of data from the accounting of financial transactions of a specialized bank (as an additional service) and information from the regional departments of agro-industrial development on receiving investments in tangible form by agricultural enterprises allows to promptly resolve issues of unhindered passage from investors to recipients. In case of violation of contractual obligations between investors and recipients of investments, managers will make a decision to immediately eliminate the identified shortcomings [10].

2. Sector B (analysis of the quality of the formation, promotion and use of investment resources). As can be seen from Fig. 3, the central part of the model reflects the scheme of input and output flows of investment resources, that is, those that flow to their recipient, as well as those that return again to investors (invested in cash, plus dividends). Carrying out the analysis of the received results of activity of participants of investment process, experts give an estimation of quality of formation, promotion and use of investment resources, make different versions of models for their redistribution, correct the actions of participants in the investment process and eliminate differences in their actions that may arise in the management of investment resources.

Emerging problems that are the result of uncoordinated actions between participants in the investment process, or mistakes made by managers, should be eliminated according to the following scheme (Figure 4):

Block-3 is a control unit, ensures the unity of management decisions for their implementation. Its main task is:

- observation and supervision of actual performance, undertaken by participants in the investment process;
- Identification of factors that adversely affect the management of investment resources, the implementation of decisions taken by managers, which makes it impossible to timely achieve the goals;
- blocking deviations from the specified parameters. If there are significant discrepancies, using mechanisms and levers to regulate the system's alignment with legally effective legislative, legal and regulatory acts;
- protection and preservation of property of subjects of the investment process.

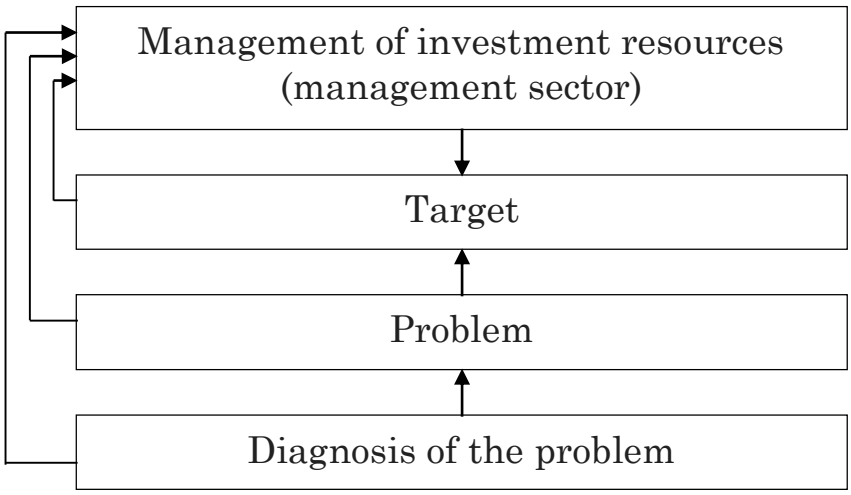


Fig. 4. The scheme of the mechanism of elimination of problems

Source: Developed by the author

Coherence of actions between all participants of the investment process and individual blocks of management of investment resources flows should be regulated by legislative, legal and regulatory acts and agreements.

The application of the proposed model of the management system of investment resources in the agricultural sector and recommendations for its use can be of great practical importance in the process of implementing regional investment projects and programs, and significantly improve the quality of the overall management system of the agricultural sector of the economy.

Inefficiency of modern levers of influence on the formation and management of investment potential is one of the factors of inefficient use of investment resources of the industry. The absence of a permanent interaction between the investor and the recipient of investments leads to a loss of investor control of the targeted use of invested capital. Changing the mechanism of interaction between partners and strengthening state control over the actions of participants in the investment process, can give the desired result. Regional departments for the management of investment resources, having operational information on the flows of investment resources and taking measures for the timely elimination of deficiencies, could not only monitor the use of investment in the interests of all participants in the investment process, but also ensure the continuity of the formation and use of investment resources, directing their flow to fulfill the set goals.

References

1. Makarenko A.P. Teoriya i praktyka derzhavnoho rehulyuvannya v ahrarniy sferi: [Monohrafiya]/A.P.Makarenko. – K.: NNTS "Instytut ahrarnoyi ekonomiky" UAAN, 2009. – 636s.
2. Stratehycheskoe planyrovanye ynvestytsyonnoy deyatel′nosty: ucheb.posobye// M.Y. Knysh, B.A. Perekatov, YU.P. Potykov. – Yzd.Dom "Byznes – Presa", 1998. – 315s.
3. Teylor S. Rehyonal′noe ékonomycheskoe razvytye na baze prohramno-tselevoho podkhoda: opyt Zapadnoy Evropy/S.Teylor//Rehyon: Ékonomyka y sotsyolohyya. – 2000. №1. – S. 3-36.
4. Makarenko P.M. Modeli ahrarnoyi ekonomiky: [monohrafiya]/ P.M. Makarenko K.: NNU IAE. – 2005. – 682s.
5. Onyshchenko O.M. Osobysti selyans′ki hospodarstva u poreformenomu rozvytku ahrarnoho sektoru/O.M.Onyshchenko//Ekonomika Ukrayiny. – №6. – 2003. – S.57-59.
6. Osobysti pidsobni hospodarstvi Ukrayiny – analiz vytrat ta efektyvnosti vyrobnytstva vydiv sil′s′kohospodars′koyi produktsiyi/ kol.monohrafiya za red. O.M.Shpychak. – K.: IAE. – 2001. – 236s.
7. Burkat V.P. Rozvytok form vidtvorennya poholiv″ya koriv v osobystykh hospodarstvakh naselennya/V.P. Burkat// Ekonomika APK. – №1. – 1998. – S. 57-61.
8. Volyns′kyy S.V. Mali orhanizatsiyni struktury ahrarnykh formuvan′ ta efektyvnist′ yikh diyal′nosti./S.V. Volyns′kyy// Ekonomika APK. – №8. – 2003. – S.38-43.
9. Dubinina M.V. Osobysti selyans′ki hospodarstva yak forma realizatsiyi ekonomichnykh interesiv selyan./M.V. Dubinina// Kol.monohrafiya. T.1 za redaktsiyeyu P.T. Sabluka, V.YA. Ambrosova, H.YE. Maznyeva. – K.: IAE. – 2001. – 831s.
10. Kulish M.YU. Osobysti selyans′ki hospodarstva – yedyna stabil′na forma hospodaryuvannya v sil′s′komu hospodarstvi Ukrayiny/M.YU.Kulish, M.V.Dubinina// Visnyk ahrarnoyi nauky Prychonomor″ya. – Vyp.2. – 2000. – S.3-8.

8.5. ACCOUNTING AND ANALYTICAL FILLING OF MONITORING OF THE PROCESS OF MANUFACTURING AGRICULTURAL ENTERPRISES

SVETLANA SKRYPNYK
Candidate of Economic Sciences, Associate Professor
Kherson State Agrarian University

In the current conditions of farming, agricultural enterprises are not able to properly carry out the reproduction process, based on the level of financial and economic indicators, the lack of payment facilities, the lack of an optimal use of external sources in the presence of an extremely high risk of their involvement. In addition, the effectiveness of managing the

processes of reproduction in the practice of agribusiness enterprises is largely dependent on the quality, timeliness and adequacy of information provision on property, financial condition, results of work, actual volume of production costs, sales volumes, works, services. Moreover, accounting information remains an important resource that has the ability to accumulate, renew, and allows you to make informed management decisions about the process of reproduction to achieve the strategic goal. Therefore, the issue of monitoring the accounting and analytical system and managing its relevant information flows in the overall process control system of production reproduction should be given priority.

As a rule, monitoring is considered as one of the tools for the assessment and diagnosis of the state of objects or processes, as well as the formation of an appropriate information and analytical framework that provides management personnel with complete, objective and relevant information for the preparation, adoption and analysis of decisions at different levels of management.

Concerning a certain object V.K. Galitsin, O.P. Suslov, NK Samchenko proposes to consider monitoring in two aspects:

- monitoring of the situation, which is intended to determine the presence of changes in relation to the static state of the object;
- monitoring of the process, which involves monitoring the changes that occur during the operation of the object [1].

At the same time monitoring of a certain process is characterized by consistency, orientation, function of information gathering, its systematization and processing, assessment of the object for the adoption of quality management decisions, as well as diagnostics of the state of the object at a predetermined time point that is necessary to control the process of production reproduction. In particular, monitoring of the production reproduction process involves conducting repetitive observations and additional surveys for a specific purpose, diagnosing the condition and trends in the development of this process. Its information base is: use of its own analytical base in the form of expert assessments, relative estimators, indicators, survey procedures, questionnaires, etc.

The scientific literature identifies many systems and types of monitoring that have a certain set of common features. In the economy, monitoring is used to study various objects and distinguish its types: economic, social, socio-economic, sociological, statistical, financial, banking, monitoring of the production system, technical, monitoring in construction, monitoring of the project, monitoring of scientific and technical potential, monitoring of the competitive environment, monitoring of economic safety of the enterprise, monitoring of national security, monitoring of

emergencies, monitoring of education, monitoring of foreign economic activity Monitoring of information society, legal monitoring, monitoring of quality of life, media monitoring, monitoring of risk monitoring and information technology [2; 3; 4]. That is, scientists associate a certain kind or system of monitoring with a separate field of activity and use it as a way to provide management personnel with timely and qualitative information. Thus, the main area of application of monitoring is the information service of management of various industries and activities, and the development of informatization leads to the emergence of new types of monitoring.

Economic monitoring is organized to assess the dynamics of economic objects and to monitor and prevent the factors of negative impact on the object or obtain information for the adoption of managerial decisions. In the economy and business, the objects of monitoring are products, prices, business, equipment, income, expenses, labor market, employment, net profit, food market, consumption, construction products, and others.

In the system of economic monitoring an important place should belong to its accounting and analytical component in order to improve the methods and tools of operational management of decision-making on the basis of creation of accounting and information support. The current accounting and analytical system of agrarian enterprises has specificity in the representation of biological factors of production and reporting system, the formation of operational information for management needs, so when determining the parameters of the information received, the production component and the need for the implementation of segmentation into management accounting are taken into account.

When constructing an accounting and analytical monitoring of the production reproduction process, it is necessary to form an information space to determine the level of influence of the business environment on the reproduction process. To do this, indicators should be defined that characterize the processes of functioning and development of the production reproduction process.

Academician I. Lukinov noted that reproduction, covering all the sequential stages of production, circulation and consumption, is a complex set of organically interconnected forms of economic circle. In an inextricable relationship, material-oriented, cost and money forms of social product are considered, which, interweaving, pass from one to the other. The pace of the growth of social production, the improvement of its structure, as well as the overall speed of reproductive revolutions are determined by the formed objective conditions, economic strategy under the influence of a set of factors that regulate them [5].

The reproduction is also understood as the constant repetition of the production process, since society has a constant process of consumption of material goods, which requires continuity of the production process. The reproduction process is a constant renewal of manpower and means of production, as well as natural resources. In agriculture, the peculiarities of the reproduction process are related to the reproduction of land, biological assets of plant growing and livestock, which are a natural biological system, which combines technology, biology, economics and ecology.

In the scientific economic literature, several types of reproduction are distinguished quantitatively (Fig. 1).

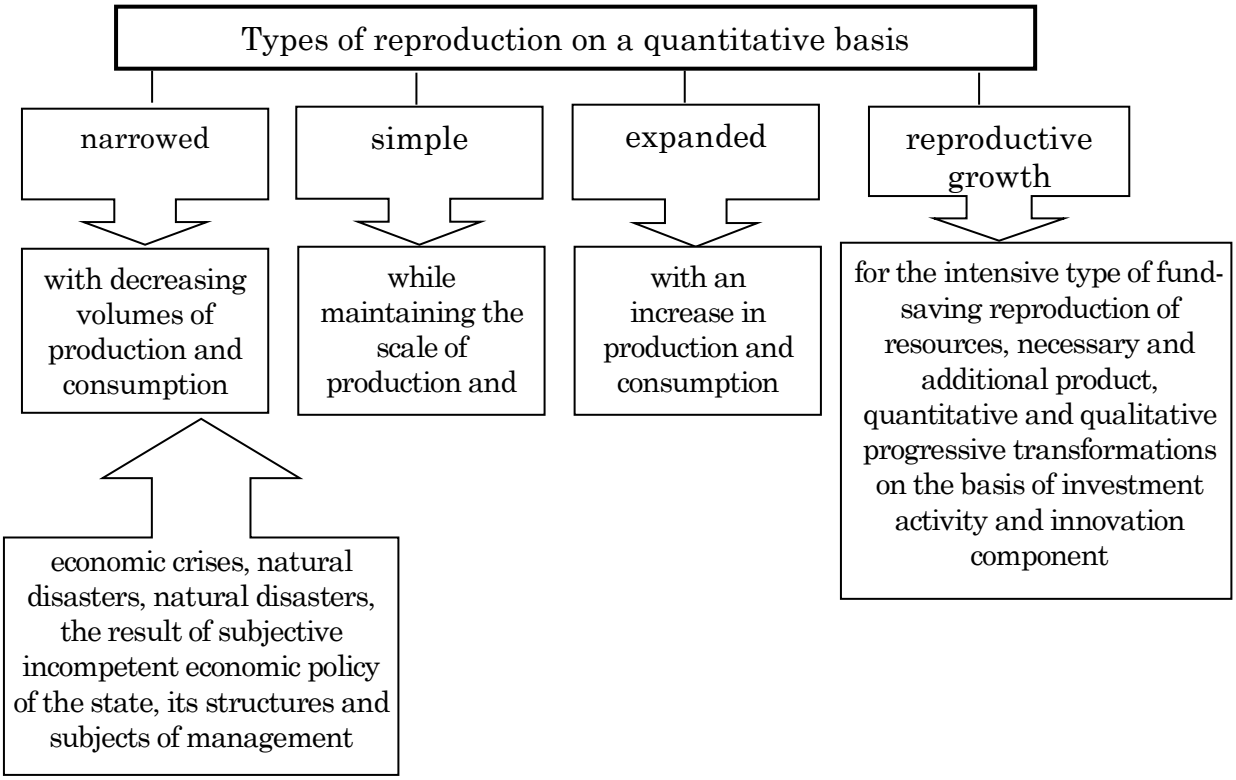


Fig. 1. Types of reproduction in quantitative terms

The main types are simple and expanded reproductions, which are viewed from the standpoint of social and individual reproduction. Thus, the continuous production process implies either reproduction on a simple basis, if the cost of labor-intensive production is restored unchanged, or extended reproduction – if in larger volumes. It is well known that the reproduction process has two directions: reproduction by cost parameters and physical updating of production facilities or the creation of productive assets. At the same time, the process of reproduction of the main productive assets by value is always accompanied by a reproduction process in a natural-material form, which has a phase of formation (or recovery) and a wear phase, without passing the stage of depreciation [6].

Scientific literature also deals with extensive and intensive types of reproduction. Extensive reproduction is carried out through the involvement in the production process of additional workers, natural resources, fixed and circulating funds for a permanent technical basis. Intense type of reproduction occurs with advanced technologies, improving the quality of labor, introducing advanced forms and methods of production organization, etc. This reduces the stock, material and energy intensity of products [7].

The current state of agricultural enterprises requires not so much an increase in the volume of attraction of means and labor resources in the industry (extensive type of reproduction). But the modernization and renewal of basic productive assets based on the latest achievements of science and technology (intensive type of reproduction), while taking into account the aging of most as a means of production, and the backwardness of technologies.

The main sources of their own financial resources for a simple and expanded reproduction of agricultural enterprises are profit and depreciation. It is the depreciation from the point of view of its influence on the process of reproduction in agricultural enterprises given insufficient attention.

One of the functions of depreciation is the preservation of fixed assets at a constant level, but depreciation deductions in a large part are not used for purpose. The funds that would be used for the reproduction of fixed assets are not distinguished at all, but are used for current needs. Therefore, there is an urgent need to restore the investment role of depreciation as the main financial resource for reproduction of fixed assets in the agricultural sector of the economy.

One of the reasons for this approach is mixed accounting in the account 13 "Depreciation (depreciation) of non-current assets" of two different categories of economic content, since the notion of "depreciation" is defined as the loss of labor costs of its value in the production process, and "wear" – as a loss of their consumer value [8]. That is, the depreciation of fixed assets is not identical to their depreciation, because the loss of objects of its primary qualities occurs regardless of the accrual of depreciation, because depreciation of fixed assets is accrued only if they are used.

It seems that in agricultural production, the economic process of reproduction, regardless of its social nature, is always interwoven with natural. The close relationship of economic processes with natural causes the significant influence of the latter on the results of economic activity, which affects the pace of reproduction.

The organization of the monitoring of the production reproduction process involves monitoring the sources of the necessary information; preparation of initial data for analysis and evaluation; preparation of analytical information for making managerial decisions; identification of factors that determine the status of research objects; observing the state of objects, research and evaluation of their predictive state. The main thing in monitoring is the assessment of the dynamics of the main indicators, for which they analyze the economic indicators in time (for a month, a quarter, a half year, a year, and several years). Accounting mainly monitors internal changes in business and management, takes into account changes within the monitoring system and only to a certain extent beyond its borders. In the monitoring results, employees of the management staff and individuals from shareholders, suppliers, buyers, financial and tax authorities are interested in using the information obtained as a result of the analysis of the financial condition of the enterprise for their own needs. The results of the analysis in the system of internal monitoring are of a confidential nature.

Input information for the production process reproduction monitoring system is the operational data of accounting registers in relation to the formation of costs for the modernization and updating of production fixed assets, current payments and payments by the enterprise with buyers and suppliers, as well as information on financial statements (p.1, p.2). The information product of the monitoring system is the reports that contain the estimated values of the indicators of financial, commercial and industrial stability and can be supplemented by reference information (normative values, data of previous periods, etc.). Reports are compiled automatically according to pre-created layouts, with the periodicity schedule [9].

The current state of agrarian enterprises requires not so much an increase in the volume of attraction of means and objects of labor in the industry (extensive type of reproduction), how much modernization and renewal of basic productive assets based on the latest achievements of science and technology (intensive type of reproduction), while taking into account the obsolete in most as a means of production, and the backwardness of technologies. At the same time, profits and depreciation are the main sources of their own financial resources for simple and expanded reproduction of agricultural enterprises.

The key concept in determining the purpose of monitoring is the trends and patterns of the economy of the enterprise, its economic and financial state. Speaking about the economy, it should be borne in mind that this is primarily about the use of its assets and liabilities, and the

information shows trends and patterns of development. The diagnosis of the economic and financial condition is possible provided that the actual accounting and other types of information about the objects are provided and compared with the planned indicators.

In the process of study and evaluation distinguish two groups of factors of influence on the activities of the enterprise:

1) internal, depending on the activity of the enterprise (factors of production activity, factors related to investment activity, indicators characterizing the effects and risks of financial activity, factors of the current financial situation, a list of comparative criteria and rules of regulation;

2) external, independent of the enterprise (socio-economic factors of the overall development of the country, market factors, containing data on commodity and financial markets, other external factors, determined by the specifics of the enterprise.

The subject of monitoring is the microeconomic processes and phenomena in the enterprise, which are characterized by certain indicators – indicators – in their dynamics and macroeconomic processes in the country, which directly affect the economy of the enterprise.

We grouped the main stages of work and monitoring techniques (Fig. 2).

In the process of monitoring the process of production reproduction, which is accompanied by accounting and analytical information, distinguish three stages:

- preparatory (definition of programs and procedures);
- collecting information on methods, principles and procedures of accounting;
- systematization, generalization and interpretation of the information received.

The accounting and analytical system of the enterprise during the monitoring of the process of production reproduction provides:

- analysis of the company's activity in certain areas;
- accounting of business operations according to the target directions on the basis of accounting with the addition of non-financial indicators;
- control over the use of tangible and intangible resources, with the correct reflection of all business operations at the planning, accounting and veracity of analytical data;
- planning of the enterprise activity, in particular business operations; types of activity: operational, investment, financial, tax; responsibility centers and enterprises in general;
- formation of analytical budgets as sources of accumulation of planned, accounting and analytical information.

Purpose of the monitoring of the state of the enterprise	Collection and analysis of internal and external information about the state of the enterprise Detection of "bottlenecks" at the enterprise. Analysis and evaluation of financial and investment operations. An analysis of the environment and the assessment of new opportunities. Risk control activities. Detection of reserves for reducing the cost, increasing the profit of the enterprise. Detection of crisis phenomena in financial and economic activity.
Stages of the monitoring system	Definition of observation spheres: external and internal entities and data monitoring objects. Determining the nature of the information to be collected, controlled and processed. Organization of the system of information collection and processing. Determination of data coordination models for making managerial decisions
Methods of monitoring	Compilation of comparative tables for a number of years, while revealing deviations in absolute amounts and in relative indicators (in%) of the main objects of economic and financial activity. Determination of relative deviations of indicators (in% relative to the base period). Determination of indicators for a number of years (quarters) in% to any sum (to the amount of balance sheet, own assets, etc.). Determination of special coefficients that characterize the relationship between individual reporting items.

Fig. 2. Characteristics and purpose of monitoring and methods of its implementation [10; 11]

In the system of internal monitoring, the main place is allocated to the interrelations between its subjects: users of information (managers of different levels of management), accountant-analyst and center of responsibility (structural unit). In particular, the creation of a system of continuous circulation of recurrent information flows in the direct and reverse direction from the manager to the accountant-analyst, from the accountant-analyst to the accountant of the center of responsibility about the necessary data on the organization of the production process, the process of production reproduction, grouping and processing of indicators for the specified characteristics, control its reliability, carrying out of analytical work, drawing up on the basis of the report in a visual form with the proposal of possible decisions and their consequences, presentation of the beer the manager to make decisions and others.

In the process of collection and initial processing of the collected information, all structural subdivisions of the enterprise should be involved, which will allow employees to be involved in the decision-making process, improve communication and cooperation between specialists, managers and units, including between production units and management apparatus, that is, the monitoring system should to provide for the use of a wide range of information resources, to ensure the integrity of the accumulated data. The main analytical work in this process is assigned to the accountant-analyst, which supplements the forms of reporting with the data of management accounting, provided by the centers of responsibility (structural units). The head of the highest level of management should receive a comprehensive report on the main areas of activity with the diagnosis of the dynamics of production and economic indicators for the future, because only due to reliable information can make an informed decision on further activities.

Modern information technologies allow for monitoring to create and combine the bases of accounting and analytical data with visual visualization capabilities in the form of various charts, diagrams, supplementing tabular and textual information, provide the results of monitoring in the most informative and user-friendly form.

Consequently, for the analysis of the efficiency of the process of production reproduction, monitoring information is not required in the primary form (statement of facts), but in the processed (systematization, generalization). The information obtained through monitoring is used to obtain information on the implications of innovation policy; Detection of deficiencies of depreciation policy in order to be able to change the methods of depreciation; determination of current needs. Consequently, it is a system of methods and tools aimed at the functional support of enterprise managers in the field of their information support in terms of the effectiveness of investment activity, which is aimed at restoring the production potential of the enterprise.

The current state of the development of the monitoring system is characterized by the complication of the market orientation of the enterprise, which leads to an increase in the value of management, the quality of changes in structures and management methods. The process of transforming and integrating traditional methods of accounting, analysis, valuation, planning and control into a unified system of receiving, processing information and adopting management decisions based on it, in the system that manages the enterprise, is dynamically taking place, being oriented not only to achieve current, but also strategic goals.

Monitoring of the process of production reproduction in modern conditions is an important subsystem of the management system at the enterprise. Further research in this area is associated with the formation of an information, technical, organizational and methodological support system that will provide an opportunity for a comprehensive study of the effectiveness of accounting and analytical support for the process of production reproduction of agrarian enterprises and the improvement of its control and analytical tools.

References

1. Halitsyn V. K. Kontseptual′ni zasady monitorynhu / V. K. Halitsyn, O. P. Suslov, N. K. Samchenko // Biznes Inform. – 2013. – № 9. – S. 330-335. – Rezhym dostupu: http://nbuv.gov.ua/UJRN/binf_2013_9_55.

2. Zhukovych I.A. Informatsiyne zabezpechennya monitorynhu naukovoyi ta innovatsiynoyi diyal′nosti / I.A. Zhukovych, YU.O. Ryzhkova // Problemy nauky. – 2008. – № 7. – S. 2-6.

3. Polyakov S.H. Monytorynh ynnovatsyonnykh protsessov v nauchno-tekhnycheskoy sfere / S.H. Polyakov // Ynnovatsyy. – 2003. – № 5. – S. 62-64.

4. Halitsyn, V. K. Systemy monitorynhu [Tekst]: navch. posib. / V.K. Halitsyn, O.P. Suslov, N.K. Samchenko. – K.: KNEU, 2015. – 409 s. – Rezhym dostupu: https://pidruchniki.com/75791/ekonomika/sistemi_monitoringu

5. Lukynov Y. Y. Vosproyzvodstvo y tseny / Y. Y. Lukynov. – M.: Ékonomyka, 1987. – 362 s.

6. Pryadko V.V. Problemy vidtvorennya vyrobnychykh potsesiv u molochniy promyslovosti Ukrayiny na suchasnomu etapi: avtoref. dys. na zdobuttya nauk. stupenya kand. ek. nauk: spets. 08.07.01 «Ekonomika promyslovosti (kharchova promyslovist′)» / V.V. Pryadko. – Kyyiv, 1999. – 20 s.

7. Brukhans′kyy R. F. Finansovo-oblikova problematyka vidtvorennya potentsialu sil′s′kohospodars′kykh pidpryyemstv: monohr. / R. F. Brukhans′kyy, N. V. Zheleznyak, I. P. Khomyn; za nauk. red. R. F. Brukhans′koho. – Ternopil′: TNEU, 2014. – 452 s.

8. Vyhovs′ka N. H. Hospodars′kyy kontrol′ v Ukrayini: teoriya, metodolohiya, orhanizatsiya: monohr. / N. H. Vyhovs′ka. – Zhytomyr: ZHDTU, 2008. – 532 s.

9. Volovik I.A. Monitorynh ekonomichnoho rozvytku sil′s′kohospodars′kykh pidpryyemstv v umovakh rynkovykh peretvoren′ [Tekst]: avtoref. dys. na zdobuttya nauk. stupenya kand. ekon. nauk: spets. 08.06.01 «Ekonomika, orhanizatsiya i upravlinnya pidpryyemstvamy» / I.A.Volovik. – Kharkiv, 2005. – 20s.

10. Moyseyenko I.P. Investuvannya: navchal′nyy posibnyk /I.P. Moyseyenko. – Kyyiv: Znannya, 2006. – 490 s.

11. Fedorenko V. H. Investoznavstvo/ V. H.Fedorenko: Pidruchnyk. – 3-tye vyd., dop. – K.: MAUP, 2004. – 480 s.

12. Sadovs′ka I.B. Oblikovo-informatsiyne zabezpechennya upravlins′koho analizu // Visnyk Natsional′noho universytetu «L′vivs′ka politekhnika»: zb. nauk.-prykl. pr. «Menedzhment ta pidpryyemnytstvo v Ukrayini: etapy stanovlennya i problemy rozvytku». – № 647. – L′viv: Vydavnytstvo Natsional′noho universytetu «L′vivs′ka politekhnika», 2009. – S. 498–503.

8.6. DEBT SECRETION: SATISFACTION, CAUSES AND ALTERNATIVE FORMS AND METHODS OF PAYMENT

INESSA SHEPEL
PhD, Associate Professor
Kherson State Agrarian University

Ukraine's transition to a market economy and the creation of a new type of economic mechanism are closely linked to the search for remedies for the improvement of industrial production and the economy of the state as a whole. The solution to this problem is due to the improvement of the accounting system, one of the central elements of which is the accounting of mutual settlements of industrial enterprises. The various aspects of this process are devoted to the numerous works of economists. In particular, the issue of indebtedness is considered in the works A.M. Androsova, V.A. Bykova, V.V. Sopka, F.F. Butintsya, S.F. Golova, V.I. Efimenko, V.V. Kovaleva, O.M. Petruk, S.S. Rodionova, M.V. Svobodina, Zh.O. Semenchenko, A. Tverdomeda. The calculations complete the turnover of the value of the assets of the enterprise embodied in the finished products and create conditions for the beginning of a new economic turnover [1, p. 158]. The cash received as a result of this treatment allows to timely, on a new information, technical and technological basis, to formulate and use factors of production in the new production cycle, to settle on obligations with the state, suppliers, banks, employees of the enterprise, shareholders. The components of the mechanism of calculation are also organizational and technical factors and relevant communication and other structures, whose activities are related to the provision of calculations and regulated by certain legal rules.

Investigating the nature of calculations, prof. Bezrukykh P.S. noted that the calculations are based on the movement of economic means between different actors [2, p. 414]. In general, the concept of calculations in various literary sources is quite rare (Table 1).

Forms and procedures for settlements between enterprises are defined in economic contracts. This is the most widespread and important basis for the emergence of obligations, the main form of sales of commodity-money relations in a market economy. All settlements made on the basis of concluded contracts, refer to the calculations of commercial transactions (transactions), in which the partners expect to receive a profit. In addition to these calculations, non-commercial operations are carried out without

the conclusion of contracts, which are not subject to the expiry of the limitation period [6, p. 43].

Tab. 1.

Definition of the term "calculations" in the accounting and economic literature

No	Author	Definition
1	Bezrukykh P.S. [2, p. 414].	Settlements are the monetary relationships that arise between organizations in commodity and non-commodity operations.
2	Chatskis Ye.D., Lysyuk AN, Mikhailova T.P. [3, p. 117]	Settlements – a system of relations between enterprises and individuals, based on the monetary return of the value of inventory, works, services
3	pcs. authors for ed. A. I. Sukharev [4, p. 316]	Settlements – making payments on monetary obligations
4	Parushutin NV, Kozlova E.P. [5, p. 22]	Under the settlement relationship is understood as the obligation of the buyer to pay in due time the value of the property, services and other debt, after the fulfillment of the supplier's contractual obligations, or the right of the supplier to demand payment from the buyer for the goods or services rendered to him

In the context of the non-payment crisis in Ukraine, the growth of accounts receivable and payable is becoming widespread. The emergence of receivables is an objective process of financial and economic activity of enterprises, since it is:

- obligations of the debtor on the transfer of property, performance of works, provision of services, payment of funds for a certain date [7];
- a consequence of policies aimed at increasing the turnover of goods [8];
- a certain amount of funds that an individual or legal entity owes to another economic entity for previously supplied products, goods, work performed or services rendered to them [9].

The state of payments at domestic enterprises is tense, which is manifested in significant amounts of debt and long periods of its repayment. Providing economic entities with complete economic independence in the choice of markets for products, the choice of suppliers and contractors and forms of payment, in search of sources of funding, actualizes the need to efficiently manage the calculations with different counterparties. Accounts receivable is one of the most complex and controversial issues due to the problem of non-payment. Market conditions

of the economy provide for improvement of the organization and methods of accounting of the state of payments of the enterprise and, above all, the ordering of contract work.

According to P. Petruk, accounts receivable is a component of working capital, which is a requirement for individuals or legal entities to pay for goods, products and services. Increase in receivables means withdrawal of funds from circulation, which, in turn, requires additional financing. The traditional classification of accounts receivable involves its division by legal criterion into a fixed or overdue. The size of the receivables is determined by many factors, which are divided into external and internal (Fig. 1). [10, p. 210-212].

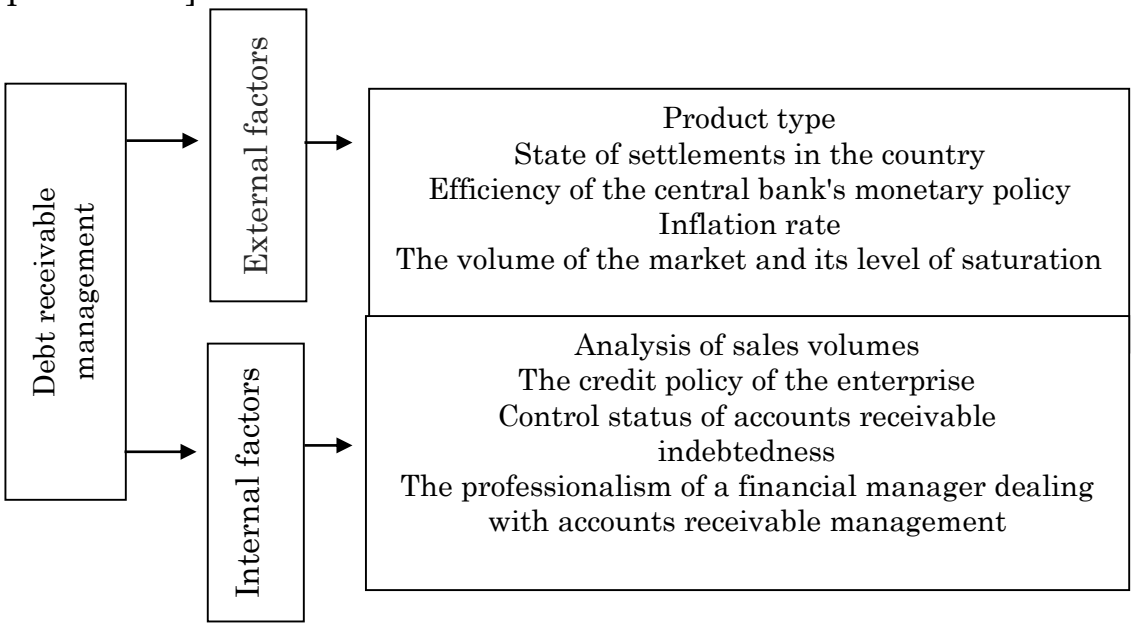


Fig. 1. Composition of factors determining the size of receivables

External factors are practically independent of the activities of enterprises and limit their influence is difficult enough. Internal – depends on how much the financial manager has the skills of managing receivables.

Features of the functioning of receivables:

1) in the broad sense, covers all calculations of supplier enterprises with enterprises-buyers and is a prerequisite for accounts payable

2) this is a relatively independent phenomenon, since the monetary claim for the collection of accounts receivable can be transferred to a third party through a factoring transaction

3) does not coincide with the duration of existence with the creditor

4) in most cases reflects the transition of working capital from the sphere of production to the sphere of circulation

Today, accounts receivable remains the bottleneck in the financial work of many enterprises. It is formed largely because accountants do not

always carry out the necessary control over the timely collection of amounts from debtors, do not take sufficient measures in this direction. In many cases, the enterprises do not establish the responsibility of specific individuals for compliance with the discipline. Accounts receivable under conditions of inflation represents for buyers (customers) a source of crediting their activities on a very favorable basis, since it is a non-interest loan. The presence of receivables indicates the withdrawal of funds from the company. This condition not only causes the mismanagement of funds, but, of course, leads to financial difficulties for enterprises. Business accountants should be vigorously struggling for the maximum reduction and complete elimination of receivables.

The emergence of receivables due to the current system of payments for products, goods and services. Since products (goods, works, services) are usually paid for cashless payments, in practice there is often a temporary gap between the shipment of goods to the buyer and their payment, as well as in the relationship between the company and its employees, the budget, and other enterprises.

Accounts receivable arises at a certain stage of the operating cycle of the enterprise, that is, during the period of full turnover of invested in working assets of cash. The process of this turnover is shown in Fig. 2.

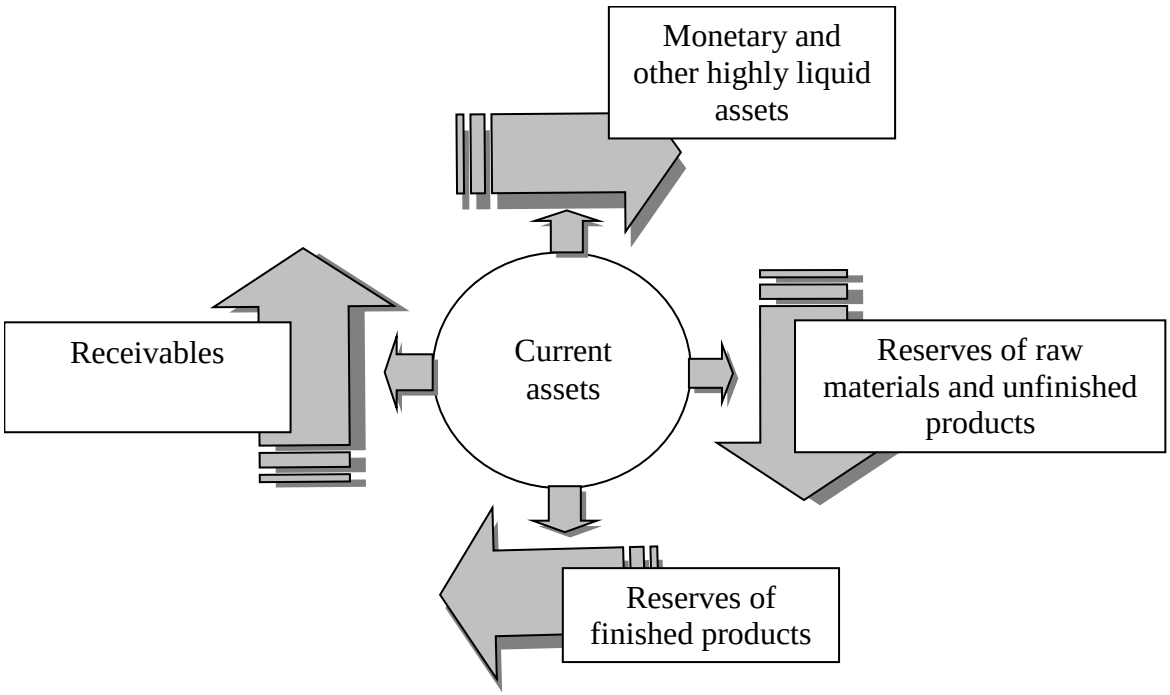


Fig. 2. The movement of current assets in the operating cycle

An important characteristic of the operational (production-commercial) cycle, which significantly influences the volume, structure and

efficiency of the use of current assets, is its duration. It includes the period of time from the moment the company expends its cash to purchase inventories of tangible assets until the receipt of funds from the debtors for the product sold.

In today's conditions of market competition, business entities are forced to sell products with a delay in payments, making a significant withdrawal of the turnover of their working capital. One part of the receivable is a regular current receivable, as it is provided in the order of settlements, the other part is overdue and bad accounts receivable that arises as a result of violation of payment discipline. We analyzed the state of the receivables in Ukraine for 2015-2017 by types of economic activity (Table 2).

Tab. 2.

Dynamics of volumes and structure of accounts receivable of Ukrainian enterprises in terms of types of economic activity

Type of economic activity	2015 year		2016 year		2017 year	
	million UAH	%	million UAH	%	million UAH	%
Agriculture, forestry and fisheries	151461	7,72	342782	13,62	1092111	27,68
Industry	595111	30,32	767422	30,49	990702	25,11
Construction	92132	4,69	122948	4,88	115496	2,93
Wholesale and retail trade; repair of motor transport	575446	29,32	702987	27,93	997461	25,28
vehicles and motorcycles	78458	4,00	101217	4,02	196187	4,97
Transport, warehouse	4634	0,24	5041	0,20	6444	0,16
post office and	23101	1,18	29594	1,18	48272	1,22
courier activities	124934	6,37	135550	5,38	114168	2,89
Temporary placement and organization of food	110802	5,65	145577	5,78	175302	4,44
Information and telecommunications	175591	8,95	123809	4,92	147930	3,75
Financial and insurance activities	24551	1,25	32977	1,31	52129	1,32
real estate transactions	313	0,02	365	0,01	391	0,01
Professional, scientific and technical activities	1347	0,07	1451	0,06	2054	0,05
Activity in the field of administrative and auxiliary services	3419	0,17	3499	0,14	5395	0,14
Education	1472	0,07	1985	0,08	1589	0,04
Health care and social assistance	1962772	100,00	2517204	100,00	3945631	100,00

The highest growth rate of accounts receivable was observed in the field of agriculture, forestry and fisheries with more than 7.2 times from UAH 151461 million. as of December 31, 2015 to UAH 1092111 million. as of December 31, 2017, but in industry the increase was 1.7 times from UAH 595111 million. up to 990702 million UAH in accordance.

By certain types of economic activity (construction, financial and insurance activities, real estate operations, education) there is a decrease in the rate of change in accounts receivable due to the slowdown in the intensity of economic entities in these activities in recent years. It is worth taking into account a significant decrease in the number of enterprises of the above-mentioned types of economic activity from 2015 to 2017: construction – from 29785 units. to 24333 units (by 5452 units), financial and insurance activities – out of 4410 units. to 3786 units (by 624 units), education – from 2081 units. to 1855 units (for 226 units), operations with real estate – from 31201 units. to 30913 units (288 units) [11]. Low solvency of enterprises causes the creation of large amounts of receivables on the balance sheet of producers. In our opinion, not only economic preconditions, but also improper organization of accounting in the enterprise lead to the occurrence of receivables. These reasons we highlighted in Fig. 3.

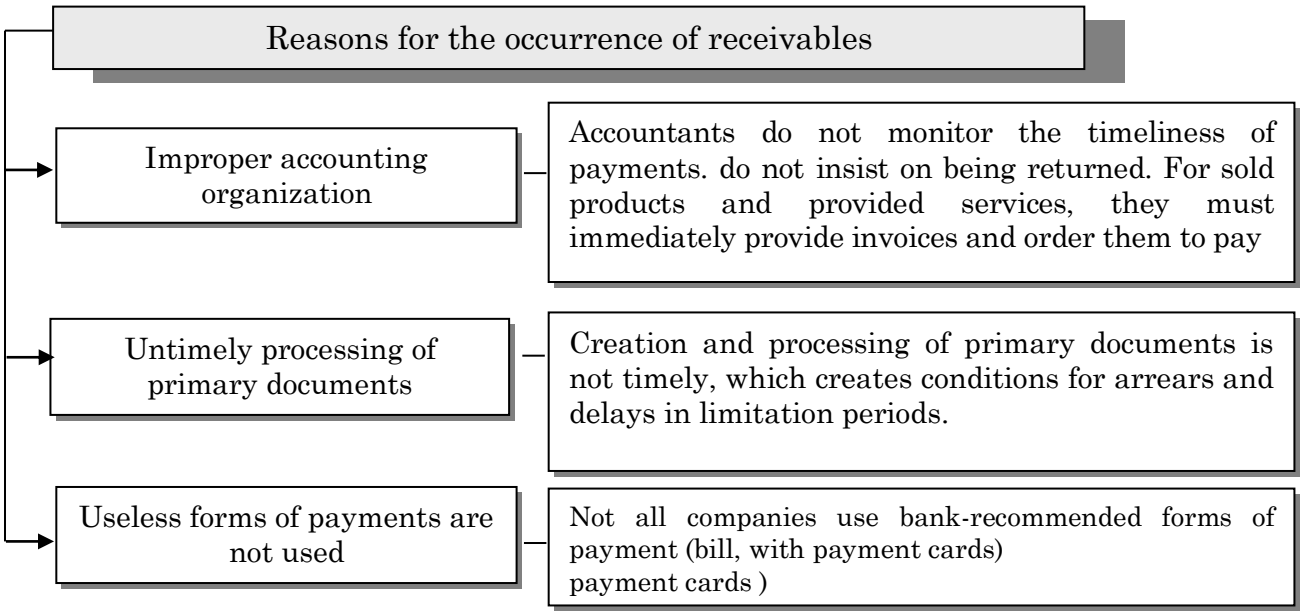


Fig. 3. Reasons for the occurrence of receivables

One of the necessary conditions for meeting obligations under contracts and one of the objects of mutual control of enterprises is the timeliness of settlements. The contractual relations between the two companies provide not only the timeliness of calculations, but, above all, the corresponding obligations regarding the nomenclature and the quality of the supplied products, prices, delivery terms, etc. Users of financial

statements need the necessary information on receivables to evaluate and make management decisions on financial matters. The task of interpreting financial statements is complicated by the adoption of a variety of policies in many sections of accounting. There is no single list of commonly accepted policy components that users can verify; the variety of accounting policy components that can be applied now can lead to significant differences in financial statements based on the same events and conditions. In times of economic crisis and non-payment, cases of non-timely payment of the enterprise for the received goods (works, services) are more often encountered. This debt refers to the receivable and if it was not repaid in due time, it becomes hopeless. In this case, at the end of the reporting period, the creditors write off this type of debt. Let's consider in more detail the order of reflection in the accounting and tax accounting of the write-off of bad money debts for the goods shipped (work, services).

Regardless of whether this arrears arose due to non-payment of the delivered goods (works, services) (money receivables) or in connection with non-delivery of advance acquisitions (trade receivables) [12]. The definition of bad accounts receivable is disclosed in P (C) BO 10 "Accounts Receivable" and in the Tax Code of Ukraine (CGU). However, they are somewhat different.

According to item 4 P (C) BO 10 [13], current accounts receivable are classified as bad accounts receivable, about which there is confidence in its non-return by the debtor or on which the limitation period has expired. According to this definition, the management of the company decides whether to enroll or not to be classified as a bad current receivable on own discretion. The debt with expired expiration date is in any case hopeless.

The problem of paying receivables, determining the admissible level of funds withdrawn for accounts receivable, developing an optimal management policy is serious enough and needs to be studied in depth.

In our opinion, customers' receivables are, in fact, interest-free loans to customers, although direct sellers of goods lose interest on bank loans for new loans, until their capital is involved in accounts receivable. Before deciding to mitigate settlement conditions, it is necessary to compare the cost of keeping on the balance of additional receivables clients with the benefit of growth in sales. If the result of such a comparison gives a profit, then the enterprise may weaken its customers' settlement conditions. However, the relaxation of settlement requirements does not always produce such a result. The result may be accumulation on the balance sheet, in addition to the old accounts of debtors, new ones. In this case, it is not correct to change the terms of calculations, that is, not weaken them. However, before recognizing the hopeless one or that current debt, for

which the limitation period has not expired, it is necessary to examine the debtor and make sure that he does not pay off. In order to be sure that the debtor does not pay off the receivables, the company needs to do some work with obtaining full information about the debtor (fig. 4).

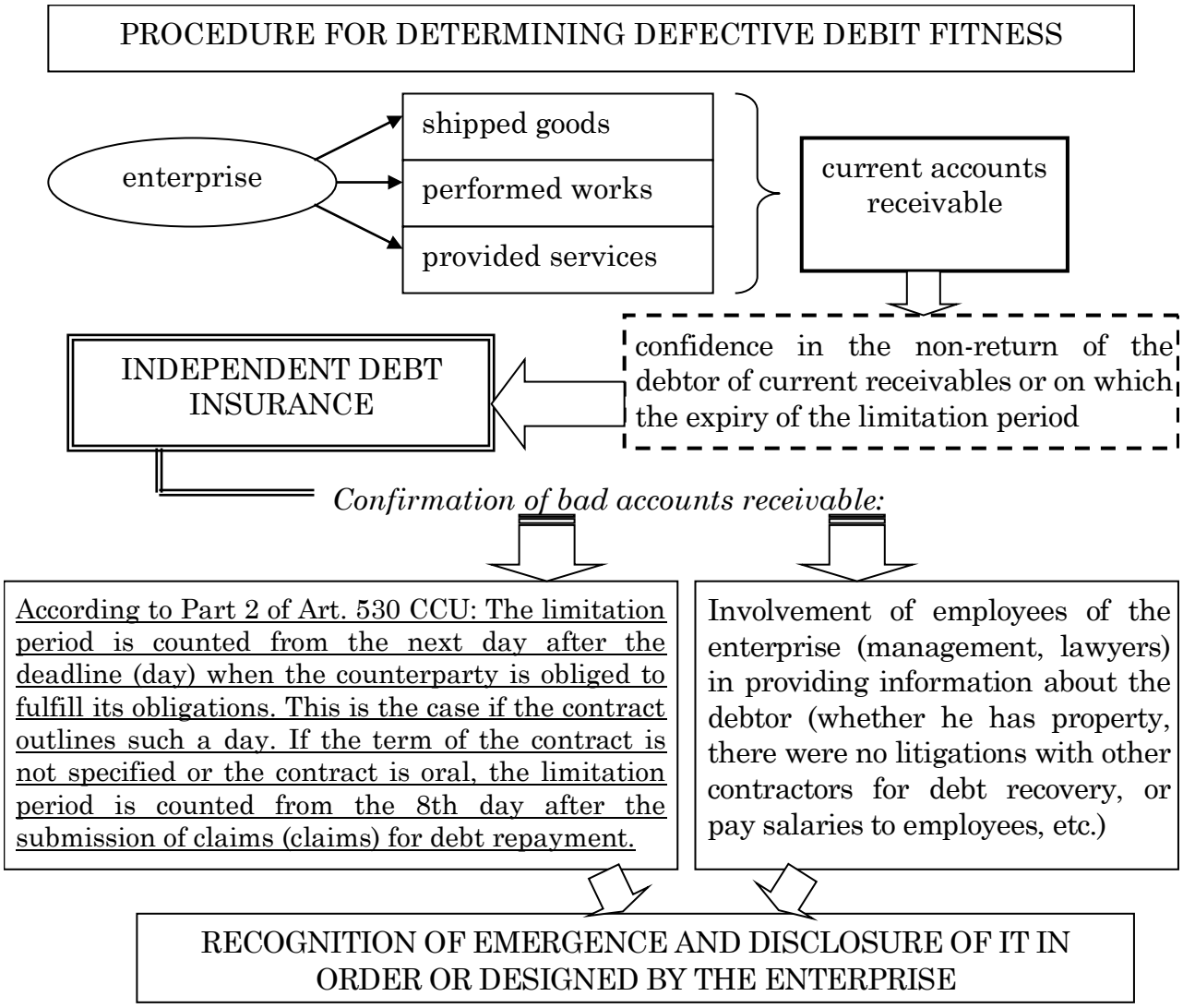


Fig. 4. Procedure for determining bad debts

Indebtedness that corresponds to one of the features listed in this subclause is classified as hopeless [14]. In particular, this is an indebtedness: with a limitation period, expired or bankrupt or liquidated enterprises, a physical or legal person that is past due and not repaid due to insufficient property of such persons; the collection of which is impossible due to force majeure circumstances, confirmed by law.

When the debt is recognized as hopeless, it is written off as it does not correspond to the characteristics of the asset, that is, there is confidence in retaining future economic benefits (clause 5 P (C) BO 10).

Depreciable receivables are written down with the simultaneous decrease in the reserve of doubtful debts by posting: Debit 38 Credit 34, 36, 37. And if the provision is not enough or the debt that is written off, it was not created (if using the method of individual reservation), the debt is credited to other operating expenses : Debit 944 Credit 34.36, 37 (Item 11 P (C) BO 10). In addition, the debt reflects the off balance on sub-account 071 "Write-off receivables". At the same time, such amount takes into account the balance sheet not less than three years from the date of writing off to monitor the possibility of its collection in cases of change in the property status of the debtor.

Debt management is one of the key tasks in solving problems that arise during the current management of enterprises from the point of view of the optimal balance between liquidity and profitability, but there should be no distorted information in the financial statements, which was formed at the enterprises.

The financial statements are submitted to the authorities, whose sphere of management belongs to the enterprises, to the labor collectives on their request, to the owners (founders) in accordance with the constituent documents, as well as in accordance with the legislation, to other bodies and users, in particular, the state statistics bodies and the use of budget allocations received from local budgets, respectively, to the financial departments of rayon state administrations, city executive committees and financial management of regional state administrations. Commercial banks submit financial statements to the National Bank.

It is necessary to carry out a random check of correctness of conducting settlement operations (at least in 3-4 months) with the use of all necessary registers and primary documents. This will also make certain conclusions about the correctness of accounting in the enterprise and determine the range of operations (and accounts), which need to be checked for particular attention.

Today, the development of the market in our country allows us to apply new forms and methods of payment of receivables – its refinancing, that is, the transfer of receivables into other forms of current assets of the enterprise (cash assets, securities, etc.). Refinancing receivables is a system of financial transactions that provide accelerated conversion of receivables into cash assets. The main forms of today's refinancing of accounts receivable are: a) factoring; b) accounting of bills; c) Forfaiting.

Forfeiting is a bilateral agreement, in which participants are the seller and buyer of financial (payment) obligations. The seller of forfeiting payment obligations is the exporter who accepts bills for payment of the delivered goods. A buyer (forfeeper), in whose role the bank acts, buying a

payment obligation, waives its right to make inverse claims to any of the previous owners of the obligations that are the subject of the transaction, and therefore assumes all the risks, related to their payment.

The subject of forfeiting is the receivables from buyers of goods (importers), which are issued in the form of commercial paper (bills of exchange) or promissory notes. The use of forfaiting payment obligations of a simple or a bill of exchange is due to their long and wide application in lending to trading operations, as well as the ease of their execution.

The purpose of factoring servicing of creditors is the timely repayment of accounts receivable, reduction of losses that arose due to delays in payments, prevent the emergence of doubtful debts and increase the liquidity of enterprises [15, p. 48]. Factoring is:

1) sale of receivables to a financial company; for an appropriate fee, the company transfers the right to receive funds for accounts receivable;

2) one type of loan. The basis of modern factoring in the western countries is the provision of commercial credit in the form of a delay in payment for goods delivered, sometimes – in the form of an open account. This means that the supplier ships the goods to the buyer, and the amount of the debt makes the debit account opened by him in the name of the buyer. The buyer repays the arrears in terms specified by the parties in the contract. The risk of non-payment or untimely payment of goods is assumed by a factoring company. She pays the amount of her payment claims;

3) financing mechanism, which provides for the provision of a set of financial services;

4) a wide range of services provided by the firm-factor: accounting service, information and consulting services, etc. Specialized enterprise is engaged in collection of accounts receivable. It can either secure collection, insurance and financing of accounts receivable, or provide assistance in recovering overdue receivables and insuring doubtful debts, providing information on solvency of client counterparties, and advising on financial issues.

The use of factoring operations has its advantages, which are reduced to the following (Figure 5).

Factoring allows you to reduce costs, namely: to avoid loss due to bad debt, taken by a factoring company; Do not spend money on loan agent services; eliminate financial risks; reduce the loan period and the number of bad debts by increasing the efficiency of the work of specialized staff; save time on settlement operations in order to focus on production and trade.

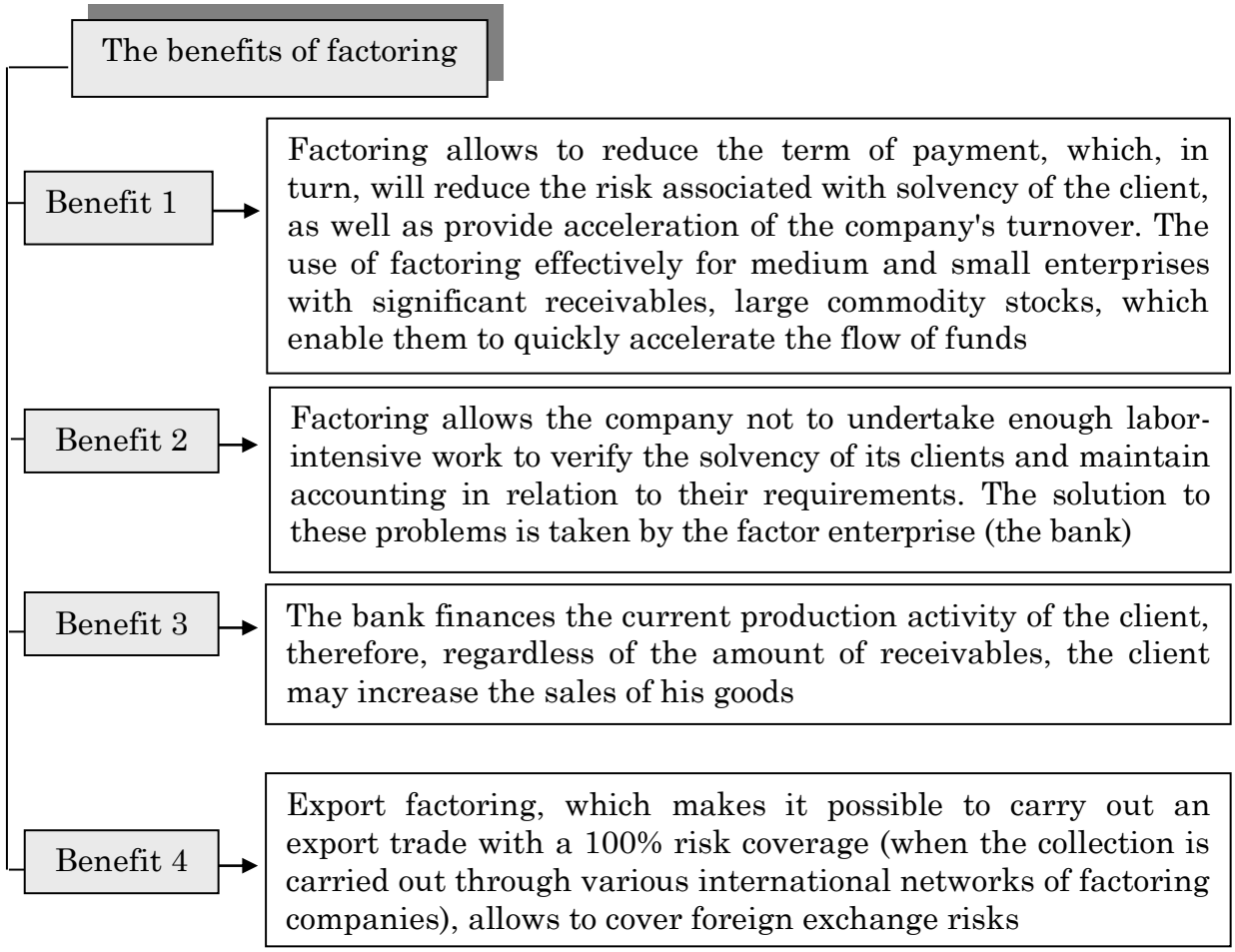


Fig. 5. The benefits of factoring

Factoring operations can be as a normal element of the policy of the enterprise in obtaining funds (accounts receivable) on accounts, as well as the urgent exit when selling the relevant part of accounts receivable, including hopeless. In modern conditions, factoring helps to eliminate mutual non-payments, accelerate the turnover of enterprises capital. In addition, he often has an advantage over a bank and commercial loan. In the first case, factoring is more likely to attract bank loans. In the other – it ensures the rapid collection of debts in a situation where the billing form of settlement does not guarantee timely repayment by the debtor of his obligations. Strengthening of operational documentary control will provide an opportunity to assess the possibility of timely settlement operations with all economic agents.

References

1. Sopko V.V. Organízatsíya bukhgalters'kogo oblíku, yekonomíchnogo kontrolyu ta analízu/ Sopko V.V. Zavgorodníy V.: pídruchnik. – K.: KNEU, 2000. – 260 s.

2. Bukhgalterskiy uchet: Uchebnik / Bezrukikh P.S., Ivashkevich V.B., Kondrakov N.P. i dr. Pod red. Bezrukikh P.S. – 3-izd., pererab. i dop. – M.: Bukh. uchet, 1999. – 624 s.

3. Chatskis Ye.D. Bukhgalterskiy uchet aktivov, sobstvennogo kapitala, obyazatel'stv khozyaystvennykh operatsiy/ Chatskis Ye.D., Lysyuk A.N., Mikhaylova T.P. : Ucheb. posobiye. – Donetsk, 2001. – 301 s.

4. Yuridicheskiy entsiklopedicheskiy slovar'. Red. kol.: Sukharev A.YA. (gl. red.) i dr. – M.: Sov. Entsiklopediya, 1984. – 415 s.

5. Parashutin N.V. Kurs bukhgalterskogo ucheta/ Parashutin N.V., Kozlova Ye.P.. M: Finansy, 1977. – 424 s.

6. Bukhgalters'kiy fínansoviy oblík.: Pídruch./ Za red. Butintsya F.F. – Zhitomir: ZHÍTÍ, 2000. – 608 s.

7. Bardadim M.V. Yefektivne upravlínnya debítors'koyu zaborgovanístyu pídpriêmstv/ M. V. Bardadim// Yekonomíchní nauki. Ceríya: Oblík í fínansi. – 2012. – Vip. 9(1). – S. 42-50. – Rezhim dostupu: http://nbuv.gov.ua/UJRN/ ecnof_2012_9%281%29__8

8. Potrivaêva N.V. Teoretichní aspekti shchodo viznachennya debítors'koï zaborgovaností na pídpriêmství / N.V. Potrivaêva, M.Í. Zhornyak// Ínnovatsíyna yekonomíka. – 2014. – No 6(55). – S. 289-292.

9. Chornobrivets' M. M. Debítors'ka zaborgovaníst': sutníst' ta prichini viniknennya/ M.M. Chornobrivets'// Êvropeys'kí perspektivi. – 2013. – N10. – S. 181-185.

10. Petruk O.M. Oblík ta analíz dogovírnikh vídnosin: problemi teoríï ta praktiki/ O.M.Pertruk. – Zhitomir: ZHÍTÍ, 1999. – 332 s.

11. Dombrovs'ka L.V. Debítors'ka zaborgovaníst' pídpriêmstv Ukraïni:stan ta yefektivníst' upravlínnya/ L.V. Dombrovs'ka// Yefektivna yekonomíka № 7, 2018 Rezhim dostupu: http://www.economy.nayka. com.ua/pdf/7_2018/44.pdf6.

12. Alpatova N. Oblík spisannya beznadíynoï debítori / N. Alpatova // Vse pro bukhgalters'kiy oblík. – 2016. – № 44 (2401). – S. 6-12.

13. Polozhennya (standart) bukhgalters'kogo oblíku 10 «Debítors'ka zaborgovaníst'», zatverdzhene nakazom Mínísterstva fínansív Ukraïni № 237 víd 08.10.1999, zí zmínami í dopovnennyami [Yelektronniy resurs]. – Rezhim dostupu: http:// zakon2.rada.gov.ua.

14. Podatkoviy kodeks Ukraïni № 2755-VI víd 02.12.2010 zí zmínami ta dopovnennyami [Yelektronniy resurs]. – Rezhim dostupu: http://zakon2.rada.gov.ua.

15. Kuz'míns'kiy YU., Navolots'kiy K. Zdíysnennya ukraïns'kimi yeksporterami faktoringovikh operatsíy za ínkasovoyu formoyu rozrakhunkív// Bukhgalters'kiy oblík í audit, – 1995. – № 9. – s. 48.

SCIENTIFIC PUBLICATION

ADAPTATION OF SCIENCE, EDUCATION AND BUSINESS TO WORLD INNOVATIVE MEGATRENDS

International collective monograph

Edited by M.M. Iermoshenko – Doctor of Science in Economics, Professor, President of the International Academy of Information Science, Real Member of New York Academy of Sciences USA
Project Manager: O.I. Zaitseva – Ph.D. (Economics), Associate Professor, Kherson National Technical University
Printed by: Publishing House Science and Innovation Center, Ltd. St. Louis, Missouri, USA

Mind. printing. the arch
First published 2018
Edition: 300 copies

ISBN