



## ЕКОНОМІЧНИЙ ВІСНИК ДОНБАСУ

науковий журнал quarterly scientific journal

# ECONOMIC HERALD OF THE DONBAS

2021

No 4(66)

Kyiv - Starobilsk

### Економічний вісник Донбасу **Economic Herald of the Donbas**

Науковий журнал № 4 (66) 2021

Заснований у 2004 році

Свідоцтво про державну реєстрацію КВ № 14442-3413 ПР видано Міністерством юстиції України 14.08.2008 року, перереєстрований 20.02.2020 року - Свідоцтво КВ №24385-14225 ПР.

Журнал внесений до переліку наукових фахових видань України (економічні науки) Постановою Президії ВАК України від 14 жовтня 2009 р. № 1-05/4. Наказом МОН України від 14 травня 2020 року № 627 (Додаток 2) журнал включено до категорії «Б».

Рекомендований до друку рішеннями Вчених рад Інституту економіки промисловості НАН України (протокол № 14 від 16.12.2021 р.) Луганського національного університету імені Тараса Шевченка (протокол № 5 від 22.12.2021 р.)

Журнал індексується українською загальнодержавною реферативною базою даних "Україніка наукова" (угода про інформаційну співпрацю №30-05 від 30.03.2005 р.).

Видання індексується вільно доступною системою GoogleScholar.

У 2016 році журнал включено до наукометричної бази Research Bible (Токіо, Японія).

Статті видання індексуються в наукометричній базі IndexCopernicus (Польща) з 2015 р.

### Засновники:

Державний заклад "Луганський національний університет імені Тараса Шевченка", Інститут економіки промисловості Національної академії наук України

#### Міжнародна наукова рада

Голова Ради – Амоша О. І., академік НАН України, доктор економічних наук, професор, директор Інституту економіки промисловості НАН України (Україна); Пономаренко В. С., доктор економічних наук, професор, ректор Харківського національного

економічного університету ім. С. Кузнеця (Україна);

Иван Марчевски, PhD (Economics), доцент, професор Господарської академії ім. Д. А. Ценова (Болгарія); Шимов В. М., доктор економічних наук, професор Білоруського державного економічного університету (Білорусь);

Вольчик В. В., доктор економічних наук, професор Південного Федерального університету (Росія);

Павлов К. В., доктор економічних наук, професор Іжевського державного університету (Росія);

Фатеєв В. С., доктор економічних наук, професор Гродненського державного університету (Білорусь);

Краузе Г., DrHab (Technique), президент Міжнародного центру науки і техніки (Німеччина);

Хагеманн H., PhD (Economics), Центр дослідження навколишнього середовища ім. Гельмгольця (Німеччина);

Данило Лучес, PhD (Sociology), професор, Західний Університет Тимішоари (Румунія);

Богдан Надолу, PhD (Sociology), професор, Західний Університет Тимішоари (Румунія);

Кушнірович Н. О., PhD (Economics), доцент, Академічний центр Руппін (Ізраїль);

Столяров В. Ф., доктор економічних наук, професор, ректор Буковинського університету (Україна)

#### Редакційна колегія:

### Головний редактор

Трушкіна Н. В., кандидат економічних наук

### Заступник головного редактора

Чеботарьов В. А., доктор економічних наук, професор

#### Відповідальний секретар

Чеботарьова Н. М., кандидат економічних наук, доцент

### Члени колегії:

Александров І. О., доктор економічних наук, професор

Булєєв І. П., доктор економічних наук, професор

Глінковська-Краузе Б., DrHab (Management), доцент, Лодзький університет (Лодзь, Республіка Польща);

Джвігол X., DrHab (Economics), професор, Сілезький технологічний університет (Глівіце, Республіка Польща);

Драчук Ю. З., доктор економічних наук, професор

Дубницький В. І., доктор економічних наук, професор

Квілінський О., доктор економічних наук, професор, Лондонська академія науки і бізнесу (Лондон, Англія)

Колосов А. М., доктор економічних наук, професор

Ляшенко В. І., доктор економічних наук, професор

Макогон Ю. В., доктор економічних наук, професор

Омельяненко В. А., кандидат економічних наук, доцент

Осадча Н. В., доктор економічних наук, доцент Пушак Я. Я., доктор економічних наук, професор

Хандій О. О., кандидат економічних наук, доцент

Чеботарьов Є. В., кандидат економічних наук

Шевцова Г. З., доктор економічних наук, доцент

E-mail: slaval.aenu@gmail.com http://www.nbuv.gov.ua/portal/Soc Gum/Evd/index.html http://evd.luguniv.edu.ua/index.php/evd http://www.evd-journal.org/

- © Інститут економіки промисловості Національної академії наук України, 2021
- ДЗ "Луганський національний університет імені Тараса
- Шевченка", 2021 Акіндєєв Д. В., Ляшенко В. І., дизайн обкладинки, 2021

### **Economic Herald of the Donbas**

### **Quarterly Scientific Journal №** 4 (66) 2021

Founded in 2004

State Registration Certificate KB No. 14442-3413 IIP issued by the Ministry of Justice of Ukraine on August 14, 2008, re-registered on February 20, 2020 - Certificate of KV №24385-14225 ПР.

The journal is included into the list of the specialized Ukrainian publications (Economics). Addendum to the Decree of the Board of Higher Attestation Commission of Ukraine of October 14, 2009 No. 1-05/4. The journal is included in category "B" by the order of the Ministry of Education and Science of Ukraine dated May 14, 2020 № 627 (Appendix 2).

Recommended to publication by the decisions of the Academic Councils of the Institute of Industrial Economy of the National Academy of Sciences of Ukraine (Minutes No. 14 of December 16, 2021) and of the Luhansk Taras Shevchenko National University (Minutes No. 5 of December 22, 2021)

The journal is included into the title list of the Ukrayinika Naukova abstract database (Information Exchange Agreement No. 30-05 of March 30, 2005). The edition is included into the international databases ResearchBible (Japan, 2016), IndexCopernicus (Poland, 2015). The periodical is indexed by the freely accessible system Google Scholar.

### **Founders:**

State Higher Education Institution "Luhansk Taras Shevchenko National University", Institute of Industrial Economy of the National Academy of Sciences of Ukraine

### **International Scientific Council**

Chairman – Amosha O. I., Academician of the NAS of Ukraine, DrHab (Economics), Prof., Director of Institute of Industrial Economy of the NAS of Ukraine (Ukraine); Ponomarenko V. S., DrHab (Economics), Prof., Rector of Kharkiv National Economic University (Ukraine); Ivan Marchevski, PhD (Economics), Ass. Prof., Rector of the D. A. Tsenov Economic Academy (Bulgaria); Shymov V. M., DrHab (Economics), Prof., Rector of the Byelorussian State Economic University (Belarus); Vol'chik V. V., DrHab (Economics), Prof., Southern Federal University (Russia); Pavlov K. V., DrHab (Economics), Prof., Belgorod State University, (Russia); Fateyev V. S., DrHab (Economics), Prof., Belarus State Economic University (Belarus); Krause G., DrHab (Technique), President of International Center of Science and Oechnique, (Germany); Hagemann N., PhD (Economics), Helmholtz Centre for Environmental Research, (Germany);

Daniel Luches, PhD (Sociology), Prof., West University of Timisoara, (Romania); Bogdan Nadolu, PhD (Sociology), Prof., West University of Timisoara, (Romania); Kushnirovych N. O., PhD (Economics), Ass. Prof., Ruppin Academic Center (Israel); Stolyarov V. F., DrHab (Economics), Prof., Rector of Bukovyna University (Ukraine)

### **Editorial Board:**

#### **Editor-in-chief**

Trushkina N. V., PhD (Economics)

### **Deputy Editor-in-chief**

Chebotarov V. A., DrHab (Economics), Prof.

### **Editorial Secretary**

Chebotarova N. M., PhD (Economics), Ass. Prof.

### **Members of Editorial Board:**

Aleksandrov I. O., DrHab (Economics), Prof. Buleev I. P., DrHab (Economics), Prof.

Chebotarov Ye. V., PhD (Economics)

Drachuk Yu. Z., DrHab (Economics), Prof.

Dubnitskyi V. I., DrHab (Economics), Prof.

Dzwigol H., DrHab (Economics), Prof., Silesian University of Technology (Gliwice, Republic of Poland) Glinkowska-Krause B., DrHab (Management), Ass. Prof., University of Lodz (Republic of Poland)

Khandii O. O., DrHab (Economics), Prof.

Kolosov A. N., DrHab (Economics), Prof.

Kwilinski A., DrHab (Economics), Prof., The London Academy of Science and Business (London, England)

Liashenko V. I., DrHab (Economics). Prof.

Makogon Yu. V., DrHab (Economics), Prof.

Omelianenko V. A., PhD (Economics), Ass. Prof.

Osadcha N. V., DrHab (Economics), Ass. Prof.

Pushak Ya. Ya., DrHab (Economics), Prof.

Shevtsova G. Z., DrHab (Economics), Ass. Prof.

E-mail: slaval.aenu@gmail.com http://www, nbuv. gov ua/portal/Soc Gum/Evd/index.html http://evd.luguniv.edu.ua/index.php/evd http://www.evd-journal.org/

- © Institute of Industrial Economy of National Academy of Sciences of Ukraine, 2021
- State Higher Education Institution "Luhansk Taras
- Shevchenko National University", 2021 © Akindeev D. V., Lyashenko V. I., cover design, 2021

### Contents

### SCIENTIFIC ARTICLES<sup>1</sup>

Macroeconomics, Economic Theory and History	
1. <b>Serdiuk O., Petrova I.</b> Antimonopoly Legislation of Ukraine: Problems and Prospects	5
International and Regional Economics	
2. Liashenko V., Trushkina N. Cluster Component of Sustainable Regional Development: Romanian Practice	
and Ukrainian Realities	11
Bagirzadeh A. Directions for Improving State Policy to Form and Strengthen the Export Potential of Agricultural Products	19
4. Abbasova Sh., Orujova T., Orujova M. Ecological Approach to Assessing the Sustainability of Economic Growth	
5. Alieva N. Economic and Mathematical Modeling of the Innovation Process in the Agro-Industrial Sector	29
<u>Finance</u>	
6. Abbasov S. Improving Cash Flow Management.	33
Marketing and Logistics	
7. Chebotarov Ie. "Lublin Triangle": Prospects for the Formation of a Transport and Logistics Cluster	
(Aspects of Modern Marketing Management)	39
8. Maharramov S. Econometric Assessment of Azerbaijan's Logistics Capabilities in Terms of Relations	
with Turkic-Speaking States	
9. <b>Shkrygun Yu.</b> Management of Logistics Activities of Enterprises in the Context of Industry 4.0	53
<u>Management</u>	
10. Ostrovetskyy V. Some Aspects of Improving the Management System of Enterprises	
of the Baking Industry in Ukraine	62
11. <b>Bolotina Ye., Shubna O., Kvasha A., Melchenko V.</b> Political Aspects of Public Administration in the Public Sector of Ukraine	68
12. Simakov K., Simakova O. Features of Teaching Analytical and Accounting Disciplines in Higher Education Institutions	
Management of Innovations	
13. Fomichenko I., Bashtovyi V., Barkova S., Pakhomova O. Peculiarities of Innovative Risk Management	
at Industrial Enterprises of Ukraine	80
Management of Labour and Safety	
14. Stolyarova V., Shynkaryuk O., Stolyarov V., Antoshkin V., Goryacha O., Frolova G. Monitoring of Human	
Development in Regions of Ukraine (Integrated Approach)	89
15. <b>Abbasov A., Abbasov S.</b> Problems of Development of Social Business	
Digital Economy and Information Technologies	
16. <b>Boretska N., Krapivina G.</b> World Experience in the Digitalization of Public Administration in the Development	
of the Tourist and Recreational Sphere	104
OFFICIAL DEPARTMENT	
17. VII International Scientific and Practical Seminar	
"Ukrainian-Polish Scientific and Educational Integration: a Two-Way Road"	112

<sup>&</sup>lt;sup>1</sup> All articles are published in the author's wording.

### **SCIENTIFIC ARTICLES**

**Macroeconomics, Economic Theory and History** 

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-5-10

UDC 346.546 (477)

O. Serdiuk.

PhD (Economics), ORCID 0000-0003-3049-3144, e-mail: oleksandrserdyk@ukr.net,

I. Petrova,

PhD (Economics), ORCID 0000-0002-0515-5349, e-mail: msirynapetrova@gmail.com,

Institute of Industrial Economics of NAS of Ukraine, Kyiv

### ANTIMONOPOLY LEGISLATION OF UKRAINE: PROBLEMS AND PROSPECTS

Formulation of the problem. Improving the competitiveness of industrial entities is a central problem, the solution of which plays a key role in achieving sustainable economic growth, ensuring the economic security of the country. Of particular importance are the tasks of increasing the competitiveness of industry in connection with globalization. Today, the growth of enterprise competitiveness is associated with the introduction of Industry 4.0 technologies. The transformation of the industry in the conditions of Industry 4.0 requires the solution of at least two complex, difficult and interconnected tasks. First, the creation of conditions for the formation of the innovative potential of the enterprise, and secondly, the conditions for its implementation. And if the solution of the first task depends more on the internal environment of the enterprise, the solution of the second is due to the development of external institutional support.

**Literature review.** The problems of transformation of the economy and its institutional system have been sufficiently studied in scientific circles, types of models describing the behavior of economic agents, methods of decision-making characteristic of different models of their behavior, and types of firms have been developed [1-12]. However, so far no single theory of institutional systems transformation has been formed, and combinations of different theories are used to study it, which does not always take into account the specifics of specific countries against the background of changes in technological systems.

**Aim of research.** The aim of the article is to study the problems and prospects of antimonopoly law in Ukraine.

**Presentation of the basic material.** In Eastern Europe, antimonopoly law is close in nature to Western European law. The legal basis for regulating destructive competition in Ukraine is the legislation on protection of economic competition, which is based on the norms defined by the Constitution of Ukraine and consists of a

system of laws and other normative legal acts. Competition legislation of Ukraine is formed on the functional principle and aims at a comprehensive legislative regulation of relations in the field of economic competition.

The first special law aimed at protecting economic competition was the Law of Ukraine "On Restriction of Monopoly and Prevention of Unfair Competition in Entrepreneurial Activity" of February 18, 1992, which laid the legal foundations for restricting and preventing monopoly, preventing unfair competition in business and exercising state control. in compliance with antimonopoly law [13]. It should be emphasized that the first Competition Law of Ukraine was complex. It defined the basic concepts and categories of competition, the main types of violations in the field of competition, organizational and procedural principles of antimonopoly.

The law also provided that state control over compliance with antimonopoly law, protection of the interests of entrepreneurs from abuse of monopoly position and unfair competition is carried out by the Antimonopoly Committee of Ukraine in accordance with its competence. Most of the articles of the Law were devoted to the establishment and functioning of the Antimonopoly Committee of Ukraine. However, the specificity of the tasks and functions entrusted to the Antimonopoly Committee of Ukraine, necessitated the creation of a special regulation, which became the Law of Ukraine "On the Antimonopoly Committee of Ukraine" [14].

On November 26, 1993, the Verkhovna Rada of Ukraine adopted the Law of Ukraine "On the Antimonopoly Committee of Ukraine", which details the establishment of a state body whose goal is to ensure state protection of competition in business.

According to Art. 3 of the Law of Ukraine "On the Antimonopoly Committee of Ukraine" the main task of the Antimonopoly Committee of Ukraine (AMCU) is:

- implementation of state control over compliance with the legislation on protection of economic competition on the basis of equality of business entities before the law and the priority of consumer rights, prevention, detection and termination of violations of legislation on protection of economic competition;
- control over the concentration, concerted actions of economic entities and regulation of prices (tariffs) for goods produced (sold) by natural monopolies;
  - promoting the development of fair competition;
- methodological support for the application of legislation on the protection of economic competition.

In addition, according to Art. 7 of the Law of Ukraine "On the Antimonopoly Committee of Ukraine", the AMCU, in addition to functions related to the control and prevention of violations of legislation in the field of economic competition, also performs functions inherent in the judiciary. He considers cases of administrative offenses, imposes fines.

The next step in the development of antimonopoly law of Ukraine was the Law of Ukraine "On Protection against Unfair Competition" [15], which entered into force in 1996. This Law defines the legal basis for protection of economic entities and consumers from unfair competition. The law is aimed at establishing, developing and ensuring trade and other fair practices of competition in carrying out economic activities in market relations.

To strengthen state regulation of the activities of natural monopolies in 2000, the Law of Ukraine "On Natural Monopolies" was adopted, which defines the bodies that carry out state regulation of natural monopolies; spheres of activity of subjects of natural monopolies; principles of state regulation of natural monopolies; responsibilities of natural monopolies; types of liability of natural monopolies, their officials and bodies that regulate their activities [16].

To create the necessary legal mechanism for the harmonization of competition and industrial policy, the Verkhovna Rada of Ukraine in 2001 adopted a basic legal act on legislation to protect economic competition - the Law of Ukraine "On Protection of Economic Competition" [17]. This Law regulates the relations of authorities, local self-government bodies, administrative and economic management and control bodies with business entities; business entities with other business entities, consumers, other legal entities individuals in connection with economic competition. It is important that the development of the Law of Ukraine "On Protection of Economic Competition" was preceded by a thorough study of a large number of similar laws of Eastern, Central and Western Europe, the legislation of the CIS member states [18].

With the entry into force of the Law of Ukraine "On Protection of Economic Competition" the Law of Ukraine "On Restriction of Monopoly and Prevention of Unfair Competition in Entrepreneurial Activity" expired.

The Law of Ukraine "On Protection of Economic Competition" in comparison with the Law of Ukraine "On Restriction of Monopoly and Prevention of Unfair Competition in Entrepreneurial Activity" significantly expands the list of actions that can be defined as anticompetitive concerted actions (Article 6) [17].

Exemption from liability is provided if the actions of small or medium-sized enterprises in the joint purchase of goods do not lead to a significant restriction of competition (Article 7).

There are a number of concerted actions that may be allowed by the Antimonopoly Committee of Ukraine and the Cabinet of Ministers of Ukraine (Article 10).

The new Law significantly expands the list of relations between economic entities that may be recognized as a concentration, provides a list of actions that are not considered a concentration (Article 22).

The law is aimed exclusively at those actions of economic entities that may lead to the monopolization of markets. The Law of Ukraine "On Protection of Economic Competition" provides a general and exclusive list of actions that are considered violations of legislation on protection of economic competition, introduces a mechanism according to which businesses, citizens, associations, institutions, organizations can apply directly to the AMCU concerning protection of the rights in connection with infringement of the legislation on protection of economic competition (item 36). In this case, according to the Law, such an entity has the right to apply to the commercial court with a claim for damages in the double amount (Article 55) [17].

Thus, the Law encourages businesses and consumers whose rights have been violated to take active action to protect their rights.

After the adoption of the Law of Ukraine "On Protection against Economic Competition", the rules of competition law were significantly improved. Legislation on protection of economic competition was expanded and formed on the basis of the Law of Ukraine "On Protection of Economic Competition", laws of Ukraine "On Antimonopoly Committee of Ukraine", "On Protection against Unfair Competition", "On Prices and Pricing", "On Business Associations", "On transport", "On telecommunications", "On electricity ","On advertising".

However, despite all the achievements, the legislation on the regulation of destructive competition is relatively young compared to foreign counterparts and requires consideration of specific factors that objectively exist in Ukraine.

Quantitative indicators on destructive competition in terms of basic types are given in the reports of the Antimonopoly Committee of Ukraine.

Based on the analysis of the reports of the Antimonopoly Committee of Ukraine for 2014-2020 [19-25], we can conclude that there is a tendency to reduce the total number of violations of legislation on protection of economic competition. Among the most

common violations of destructive competition are monopoly abuse, anti-competitive actions of public authorities, anti-competitive concerted actions of economic entities and unfair competition.

The analysis of the regulation of destructive competition shows that the antimonopoly legislation of Ukraine needs further development. Despite the positive feedback from leading EU and USA lawyers, antimonopoly law needs to be improved.

In Ukraine, there are active discussions on improving and developing competition law [8-9]. For example, N. Kuznetsova and Y. Semenyuk point to the lack of consistency in the system of concepts of antimonopoly law of Ukraine [9, p. 11]. Yu. Zhuryk points out the cumbersome and difficult definitions in some laws of antimonopoly law [8, p. 84]. The scientist also draws attention to the inexpediency of the AMCU's functions of drawing up protocols on administrative imposing fines for violations antimonopoly law. These functions, the scientist notes, are inherent in the judiciary and their implementation by the AMCU is a violation of Art. 124 of the Constitution of Ukraine, according to which justice in Ukraine is administered exclusively by courts [8, p. 83]. This thesis is supported by another scientist I. Dakhno, who notes that it is unacceptable that the AMCU deals with crime prevention and consideration of cases in two opposite areas of economic activity - in the field of monopolistic activity and in the field of competitive relations [10, p. 94].

S. Kobets already in his work substantiates the areas of improvement of legal and organizational mechanisms of antimonopoly regulation in Ukraine through the improvement of the terminological series of basic laws of antimonopoly law; creation of a separate body that would deal with the prevention and investigation of violations in the field of competition; transfer of authority to draw up reports on administrative violations [26, p. 32].

In addition to the work of scientists, international organizations, in particular the Organization for Economic Cooperation and Development, take an active part in developing key programs and improving competition law in Ukraine in accordance with international standards and best practices [11, p. 13]. In particular, the recommendations include limited AMCU resources and independence, the need to improve the law and impose severe penalties for creating cartels and conspiracies, eliminating inconsistencies with the Commercial Code, and a clear and transparent procedure for setting priorities and processes for the AMCU.

We agree with the statements of scientists on the expediency of delimiting some functions of the Antimonopoly Committee of Ukraine, as the AMCU performs many functions, the number of applications and appeals on violations of economic competition law

is quite large, indicating overload of the AMCU and its structural units.

It should be noted that in 2020, in accordance with the order of the Antimonopoly Committee of Ukraine dated 21.11.2019 No. 23-r "On reorganization of territorial branches of the Antimonopoly Committee of Ukraine" the structure of regional territorial branches was optimized to 6 interregional territorial branches: North, West, South Southwest, Southeast and East. New regional branches of the Committee have started operating in Dnipro, Kyiv, Lviv, Odesa, Kharkiv and Khmelnytsky. At the same time, in other regional centers there are separate departments without the status of a legal entity.

In the report of the Antimonopoly Committee of Ukraine for 2020 [25] the need to reform the AMCU is provided by the recommendations of a number of international organizations, including the Organization for Economic Cooperation and Development (OECD). Also, a similar position was expressed by experts from relevant EU agencies from Germany and Lithuania, who also cooperated with the Committee in the framework of the Twinning project.

**Conclusions.** Thus, the reorganization of structural subdivisions of the Antimonopoly Committee of Ukraine is taking place gradually as an element of the national strategy of economic reform. However, the issues of functional and structural delimitation of state bodies in the field of destructive competition regulation remain open.

From the above analysis of foreign experience, it turns out that in these countries these powers are distributed among several independent bodies, that is, cross-control is used when the process of implementing competition policy is divided between several bodies: one investigates, the second makes decisions, the third (advisory) gives an independent assessment, what is happening in the field of competition [27, p. 74]. In addition, in many European countries, there are special courts that deal with violations of competition law. For example, in Poland there is a court for competition and consumer protection, in Austria cases in this area are considered at first instance by a cartel court; in Germany, a specialized court of first instance is the cartel chamber (board) of the Supreme Court of the land [12, p. 81], etc.

Given the results of the study, we can conclude that despite the dynamic development of antimonopoly law in Ukraine, which is positively assessed by foreign experts, as well as a significant increase in the effectiveness of the Antimonopoly Committee of Ukraine, a new stage of institutional support to overcome destructive competition its law enforcement in accordance with the best international experience, as well as a significant increase in the effectiveness of antimonopoly authorities due to the functional and structural separation of powers of the AMCU using cross-checking.

#### Literature

- 1. Норт Д. Институты, институциональные изменения и функционирование экономики. Москва: Фонд экономической книги «Начала». 1997. 180 с.
- 2. Фуруботн Э. Институты и экономическая теория / пер. с англ. под ред. В. С. Катъкало и Н. П. Дроздовой. СПб.: Издательский Дом Санкт-Петербургского государственного университета, 2005. 702 с.
- 3. Артьомов І. Транскордонне співробітництво в євроінтеграційній стратегії України: монографія. Ужгород: Ліра, 2009. 520 с.
- Архірєєв С. Теоретичні основи дослідження парної структурно-технологічної конвергенції. Економічна теорія. 2015.
   №2. С. 19-37.
- 5. Борщевський В., Куцаб-Бонк К. Інституційні аспекти конвергенції соціально-економічного простору транскордонного регіону. *Науковий вісник Мукачівського державного університету* [зб. наук. пр.]. Мукачево, 2016. Вип. 1 (5). С. 201-206.
- 6. Куцаб-Бонк К. Соціально-економічна конвергенція у транскордонному просторі між Україною та ЄС: тенденції, виклики завдання: монографія. ДУ «Інститут регіональних досліджень імені М. І. Долішнього НАН України». Львів, 2016. 243 с
- 7. Павліха Н. В. Управління сталим розвитком просторових систем: теорія, методологія, досвід: монографія. Луцьк: Волин. 2006. 380 с.
- 8. Журик Ю. В. Актуальні питання антимонопольно-конкурентного законодавства України. *Вісник господарського судочинства*. 2010. № 6. С. 82–87.
- 9. Кузнєцова Н., Семенюк Ю. Конкурентное законодательство Украины: проблемы и перспективы. *Юридическая практика*. 2003. № 9. С. 11–19.
  - 10. Дахно І. І. Антимонопольне право: курс лекцій. Київ: Четверта хвиля, 1998. 352 с.
- 11. Огляди ОЕСР законодавства і політики у сфері забезпечення конкуренції: Україна. 2016. Звіт щодо виконання попередніх рекомендацій. ОЕСР. 2016. URL: https://amcu.gov.ua/storage/app/sites/1/imported\_content/5d690f5e146d2.pdf.
- 12. Коротун О. Правозастосовна діяльність суб'єктів державної влади у сфері антимонопольного регулювання. *National law Journal: teoriy and practice*. 2017. № 1 (23). С. 71–74.
- 13. Про обмеження монополізму та недопущення недобросовісної конкуренції у підприємницькій діяльності: Закон України від 18.02.1992 р. № 2133-XII. URL: https://zakon.rada.gov.ua/laws/show/2132-12#Text.
- 14. Про Антимонопольний комітет України: Закон України від 26.11.1993 р. № 3660-XII. URL https://zakon.rada.gov.ua/laws/show/3659-12#Text.
- 15. Про захист від недобросовісної конкуренції: Закон України від 07.06.1996 р. № 237/96-ВР. URL: https://zakon.rada.gov.ua/laws/show/236/96-%D0%B2%D1%80#Text.
- 16. Про природні монополії: Закон України від 20.04. 2000 р. №1682-III. URL: https://zakon.rada.gov.ua/laws/show/1682-14#Text.
- 17. Про захист економічної конкуренції: Закон України від 11.01. 2001 р. № 2210-III. URL https://zakon.rada.gov.ua/laws/show/2210-14#Text.
- 18. Бакалінська О. О. Проблеми і перспективи розвитку конкурентного законодавства України. *Часопис Київського університету права*. 2013. № 3. С. 17-21.
- 19. Звіт Антимонопольного комітету України за 2014 рік від 12.03.2015 р. URL: https://amcu.gov.ua/pronas/zvitnist/richni-zviti/zvit-2014.
- 20. Звіт Антимонопольного комітету України за 2015 рік від 14.03.2016 р. URL: https://amcu.gov.ua/pronas/zvitnist/richnizviti/zvit-2015.
- 21. Звіт Антимонопольного комітету України за 2016 рік від 14.03.2017 р URL: https://amcu.gov.ua/pronas/zvitnist/richnizviti/zvit-2016.
- 22. Звіт Антимонопольного комітету України за 2017 рік від 28.02.2018 р. URL: https://amcu.gov.ua/pronas/zvitnist/richni-zviti/zvit-2017.
- 23. Звіт Антимонопольного комітету України за 2018 рік від 12.03.2019 р. URL: https://amcu.gov.ua/pronas/zvitnist/richnizviti/zvit-2018.
- 24.3віт Антимонопольного комітету України за 2019 рік від 12.03.2020 р. URL: https://amcu.gov.ua/pronas/zvitnist/richnizviti/zvit-2019.
- 25. Звіт Антимонопольного комітету України за 2020 рік від 19.03.2021 р. URL: https://amcu.gov.ua/pro-nas/zvitnist/richni-zviti/zvit-2020.
- 26. Кобець С. П. Світовий та вітчизняний досвід антимонопольного законодавства. *Держава та регіони. Сер.: Економіка та підприємництво.* 2013. № 4. С. 27-33.
- 27. Конкурентна політика держави в умовах трансформації національної економіки: монографія / за ред. В. Д. Лагутіна. Київ: Київ. нац. торг. екон. ун-т, 2008. 329 с.

### References

- 1. North, D. (1997). Instituty, institutional'nyye izmeneniya i funktsionirovaniye ekonomiki [Institutions, institutional changes and the functioning of the economy]. Moscow, Fund of the economic book "Nachala". 180 p. [in Russian].
- 2. Furubotn, E. (2005). Instituty i ekonomicheskaya teoriya [Institutions and economic theory]. Transl. from English. St. Petersburg, Publishing House of St. Petersburg State University. 702 p. [in Russian].
- 3. Artomov, I. (2009). Transkordonne spivrobitnytstvo v yevrointehratsiinii stratehii Ukrainy [Cross-border cooperation in the European integration strategy of Ukraine]. Uzhhorod, Lira. 520 p. [in Ukrainian].
- 4. Arkhirieiev, S. (2015). Teoretychni osnovy doslidzhennia parnoi strukturno-tekhnolohichnoi konverhentsii [Theoretical bases of research of pair structural-technological convergence]. *Ekonomichna teoriia Economic theory*, 2, pp. 19-37 [in Ukrainian].

- 5. Borshchevskyi, V., Kutsab-Bonk, K. (2016). Instytutsiini aspekty konverhentsii sotsialno-ekonomichnoho prostoru transkordonnoho rehionu [Institutional aspects of convergence of socio-economic space of the cross-border region]. *Naukovyi visnyk Mukachivskoho derzhavnoho universytetu Scientific Bulletin of Mukachevo State University*, Issue 1 (5), pp. 201-206 [in Ukrainian].
- 6. Kutsab-Bonk, K. (2016). Sotsialno-ekonomichna konverhentsiia u transkordonnomu prostori mizh Ukrainoiu ta YeS: tendentsii, vyklyky zavdannia [Socio-economic convergence in the cross-border space between Ukraine and the EU: trends, challenges]. Lviv, Dolishny Institute of Regional Studies of the NAS of Ukraine. 243 p. [in Ukrainian].
- 7. Pavlikha, N. V. (2006). Upravlinnia stalym rozvytkom prostorovykh system: teoriia, metodolohiia, dosvid [Management of sustainable development of spatial systems: theory, methodology, experience]. Lutsk, Volyn. 380 p. [in Ukrainian].
- 8. Zhuryk, Yu. V. (2010). Aktualni pytannia antymonopolno-konkurentnoho zakonodavstva Ukrainy [Current issues of antimonopoly and competition legislation of Ukraine.]. *Visnyk hospodarskoho sudochynstva Bulletin of commercial litigation*, 6, pp. 82–87 [in Ukrainian].
- 9. Kuznetsova, N., Semenyuk, Yu. (2003). Competition legislation of Ukraine: problems and prospects [Konkurentnoye zakonodatel'stvo Ukrainy: problemy i perspektivy]. *Yuridicheskaya praktika Legal practice*, 9, pp. 11–19 [in Russian].
- 10. Dakhno, I. I. (1998). Antymonopolne pravo: kurs lektsii [Antitrust law: a course of lectures]. Kyiv, Chetverta khvylia. 352 p. [in Ukrainian].
- 11. Ohliady OESR zakonodavstva i polityky u sferi zabezpechennia konkurentsii: Ukraina [OECD reviews of competition law and policy: Ukraine]. (2016). Report on the implementation of previous recommendations. OECD. Retrieved from https://amcu.gov.ua/storage/app/sites/1/imported content/5d690f5e146d2.pdf [in Ukrainian].
- 12. Korotun, O. (2017). Pravozastosovna diialnist subiektiv derzhavnoi vlady u sferi antymonopolnoho rehuliuvannia [Law enforcement activity of public authorities in the field of antitrust regulation]. *National law Journal: teoriy and practice*, 1 (23), pp. 71–74 [in Ukrainian].
- 13. Pro obmezhennia monopolizmu ta nedopushchennia nedobrosovisnoi konkurentsii u pidpryiemnytskii diialnosti: Zakon Ukrainy vid 18.02.1992 r. № 2133-XII [On Restriction of Monopoly and Prevention of Unfair Competition in Entrepreneurial Activity: Law of Ukraine of February 18, 1992 № 2133-XII]. Retrieved from https://zakon.rada.gov.ua/laws/show/2132-12#Text [in Ukrainian].
- 14. Pro Antymonopolnyi komitet Ukrainy: Zakon Ukrainy vid 26.11.1993 r. № 3660-XII [On the Antimonopoly Committee of Ukraine: Law of Ukraine of November 26, 1993 № 3660-XII]. Retrieved from https://zakon.rada.gov.ua/laws/show/3659-12#Text [in Ukrainian].
- 15. Pro zakhyst vid nedobrosovisnoi konkurentsii: Zakon Ukrainy vid 07.06.1996 r. № 237/96-VR [On protection against unfair competition: Law of Ukraine of June 7, 1996 № 237/96-VR]. Retrieved from https://zakon.rada.gov.ua/laws/show/236/96-%D0%B2%D1%80#Text [in Ukrainian].
- 16. Pro pryrodni monopolii: Zakon Ukrainy vid 20.04. 2000 r. № 1682-III [On natural monopolies: Law of Ukraine of 20.04. 2000 №1682-III]. Retrieved from https://zakon.rada.gov.ua/laws/show/1682-14#Text [in Ukrainian].
- 17. Pro zakhyst ekonomichnoi konkurentsii: Zakon Ukrainy vid 11.01. 2001 r. № 2210-III [On protection of economic competition: Law of Ukraine of 11.01. 2001 № 2210-III]. Retrieved from https://zakon.rada.gov.ua/laws/show/2210-14#Text [in Ukrainian]
- 18. Bakalinska, O. O. (2013). Problemy i perspektyvy rozvytku konkurentnoho zakonodavstva Ukrainy [Problems and prospects of development of the competition legislation of Ukraine]. *Chasopys Kyivskoho universytetu prava Journal of Kyiv University of Law*, 3, pp. 17-21 [in Ukrainian].
- 19. Zvit Antymonopolnoho komitetu Ukrainy za 2014 rik vid 12.03.2015 r. [Report of the Antimonopoly Committee of Ukraine for 2014 dated March 12, 2015]. Retrieved from https://amcu.gov.ua/pronas/zvitnist/richni-zviti/zvit-2014 [in Ukrainian].
- 20. Zvit Antymonopolnoho komitetu Ukrainy za 2015 rik vid 14.03.2016 r. [Report of the Antimonopoly Committee of Ukraine for 2015 dated March 14, 2016]. Retrieved from https://amcu.gov.ua/pronas/zvitnist/richni-zviti/zvit-2015 [in Ukrainian].
- 21. Zvit Antymonopolnoho komitetu Ukrainy za 2016 rik vid 14.03.2017 r. [Report of the Antimonopoly Committee of Ukraine for 2016 dated March 14, 2017]. Retrieved from https://amcu.gov.ua/pronas/zvitnist/richni-zviti/zvit-2016 [in Ukrainian].
- 22. Zvit Antymonopolnoho komitetu Ukrainy za 2017 rik vid 28.02.2018 r. [Report of the Antimonopoly Committee of Ukraine for 2017 dated February 28, 2018]. Retrieved from https://amcu.gov.ua/pronas/zvitnist/richni-zviti/zvit-2017 [in Ukrainian].
- 23. Zvit Antymonopolnoho komitetu Ukrainy za 2018 rik vid 12.03.2019 r. [Report of the Antimonopoly Committee of Ukraine for 2018 dated March 12, 2019]. Retrieved from https://amcu.gov.ua/pronas/zvitnist/richni-zviti/zvit-2018 [in Ukrainian].
- 24. Zvit Antymonopolnoho komitetu Ukrainy za 2019 rik vid 12.03.2020 r. [Report of the Antimonopoly Committee of Ukraine for 2019 dated March 12, 2020]. Retrieved from https://amcu.gov.ua/pronas/zvitnist/richni-zviti/zvit-2019 [in Ukrainian].
- 25. Zvit Antymonopolnoho komitetu Ukrainy za 2020 rik vid 19.03.2021 r. [Report of the Antimonopoly Committee of Ukraine for 2020 dated March 19, 2021]. Retrieved from https://amcu.gov.ua/pronas/zvitnist/richni-zviti/zvit-2020 [in Ukrainian].
- 26. Kobets, S. P. (2013). Svitovyi ta vitchyznianyi dosvid antymonopolnoho zakonodavstva [World and domestic experience of antitrust law]. *Derzhava ta rehiony. Ser.: Ekonomika ta pidpryiemnytstvo State and regions. Ser.: Economics and Entrepreneurship*, 4, pp. 27-33 [in Ukrainian].
- 27. Lahutin, V. D. (Ed.). (2008). Konkurentna polityka derzhavy v umovakh transformatsii natsionalnoi ekonomiky [Competitive policy of the state in terms of transformation of the national economy]. Kyiv, Kyiv National University of Trade and Economics. 329 p. [in Ukrainian].

### Сердюк О. С., Петрова І. П. Антимонопольне законодавство України: проблеми та перспективи

У статті здійснено аналіз стану розвитку інститутів, націлених на стримування деструктивної конкуренції в Україні. Проаналізовано кількісні та якісні показники, що характеризують рівень деструктивної конкуренції в Україні.

Виявлено, що простежується тенденція до зниження загального числа порушень законодавства про захист економічної конкуренції за 2014-2020 рр. Серед найбільш поширених порушень деструктивної конкуренції є зловживання монопольним становищем, антиконкурентні дії органів влади, антиконкурентні узгоджені дії суб'єктів господарювання та недобросовісна конкуренція.

Проведений аналіз регулювання деструктивної конкуренції свідчить, що антимонопольне законодавство України потребує подальшого розвитку, незважаючи на позитивні відгуки провідних юристів ЄС та США. Виявлено, що новий етап

розвитку інституціонального забезпечення щодо подолання деструктивної конкуренції потребує вдосконалення антимонопольного законодавства та практики його правозастосування.

Запропоновано напрями вдосконалення інститутів стримування деструктивної конкуренції в Україні відповідно до кращого міжнародного досвіду, а також суттєве підвищення результативності діяльності антимонопольних органів за рахунок функціонально-структурного розмежування повноважень Антимонопольного комітету України із використанням перехресного контроля.

*Ключові слова:* антимонопольне законодавство, конкуренція, деструктивна конкуренція, інститути, перехресний контроль.

### Serdiuk O., Petrova I. Antimonopoly Legislation of Ukraine: Problems and Prospects

The article analyzes the state of development of institutions aimed at curbing destructive competition in Ukraine. Quantitative and qualitative indicators characterizing the level of destructive competition in Ukraine are analyzed.

It was found that there is a tendency to reduce the total number of violations of legislation on protection of economic competition for 2014-2020. Among the most common violations of destructive competition are abuse of monopoly, anti-competitive actions, anti-competitive concerted actions and unfair competition.

The analysis of the regulation of destructive competition shows that Ukraine's antimonopoly law needs further development, despite the positive feedback from leading EU and USA lawyers. It was revealed that the new stage of development of institutional support to overcome destructive competition requires improvement of antitrust legislation and the practice of its law enforcement.

The directions of improvement of institutes of restraint of destructive competition in Ukraine according to the best international experience, and also essential increase of efficiency of activity of antimonopoly bodies at the expense of functional and structural delimitation of powers of Antimonopoly committee of Ukraine with use of cross-control are offered.

Keywords: antimonopoly law, competition, destructive competition, institutions, cross-control.

#### Сердюк А. С., Петрова И. П. Антимонопольное законодательство Украины: проблемы и перспективы

В статье проведен анализ состояния развития институтов, нацеленных на сдерживание деструктивной конкуренции в Украине. Проанализированы количественные и качественные показатели, характеризующие уровень деструктивной конкуренции в Украине.

Выявлено, что наблюдается тенденция к снижению общего числа нарушений законодательства о защите экономической конкуренции за 2014-2020 гг. Среди наиболее распространенных нарушений деструктивной конкуренции являются такие: злоупотребление монопольным положением, антиконкурентные действия органов власти, антиконкурентные согласованные действия субъектов хозяйствования и недобросовестная конкуренция.

Проведенный анализ регулирования деструктивной конкуренции свидетельствует, что антимонопольное законодательство Украины нуждается в дальнейшем развитии, несмотря на положительные отзывы ведущих юристов ЕС и США. Выявлено, что новый этап развития институционального обеспечения преодоления деструктивной конкуренции требует совершенствования антимонопольного законодательства и практики его правоприменения.

Предложены направления усовершенствования институтов сдерживания деструктивной конкуренции в Украине в соответствии с лучшим международным опытом, а также существенное повышение результативности деятельности антимонопольных органов за счет функционально-структурного разграничения полномочий Антимонопольного комитета Украины с использованием перекрестного контроля.

*Ключевые слова:* антимонопольное законодательство, конкуренция, деструктивная конкуренция, институты, перекрестный контроль.

Received by the editors: 04.10.2021 and final form 16.12.2021

### **International and Regional Economics**

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-11-18

UDC 332.1:004:339.9(498+477)

V. Liashenko,

DrHab (Economics), Professor, ORCID 0000-0001-6302-0605, e-mail: slaval.aenu@gmail.com,

N. Trushkina,

*PhD (Economics),* ORCID 0000-0002-6741-7738,

e-mail: nata\_tru@ukr.net,

Institute of Industrial Economics of the NAS of Ukraine, Kyiv

### CLUSTER COMPONENT OF SUSTAINABLE REGIONAL DEVELOPMENT: ROMANIAN PRACTICE AND UKRAINIAN REALITIES

**Problem statement.** In recent decades, economic conditions require the use of networked forms of partnership, clustering mechanism, and cluster landscape formation (development of national and regional cluster policy, creation of a proper innovation ecosystem, cluster infrastructure and system of measures to financially stimulate cluster initiatives). This will increase the level of cluster capacity and achieve balanced sustainable development of national economies around the world: the United States, Japan, the Netherlands, Finland, Germany, the Czech Republic, Lithuania, Poland and more.

At present, there are different types of cluster structures in foreign countries, namely cross-border, transport and logistics, agricultural, energy, IT, tourism, and innovation. There are more than 3 thousand specialized clusters in Europe, such as Imago-Mol. Experts estimate that these innovative business ecosystems provide 54 million jobs in the European Union. According to experts, the network of already established clusters provides more than 50% of the gross national product and increases the level of competitiveness of the economy.

Thus, in most countries of the world, the cluster approach is effectively implemented to ensure the sustainable development of economic systems of different levels in the context of the implementation of smart specialization strategies. This is in line with the main provisions of the EU Clustering Manifesto and the European Cluster Memorandum.

Analysis of recent publications on the problem. The issue of methodological support for the implementation of national and regional policies of economic clustering is being studied by foreign scholars (M. Benner [1], M. Bleackley [2], M. Delgado [3], G. Devlin [2], P. Dussauge [4], M. Enright [5], E. Feser [6], D. Fornahl [7], M. Frankowska [8], B. Garrette [4], N. Grashof [7], R. Hassink [9], A. Kowalski [10], M. Kruczek [11], W. Mitchell [4], S. Morgulis-Yakushev [12], M. Porter [3; 13; 14], M. Preveser [15],

Ö. Sölvell [12], S. Stem [3], G. Swann [15], M. Szuster [16], Z. Zebrucki [11], J. Zrobek [17]).

Leading Ukrainian scientists (M. Buhaieva [18], O. Demedyuk [19], O. Dorovskyi [20], V. Dubnytskyi [21], O. Finagina et al. [22], V. Ilchuk [23], V. Khaustova [20, 35], I. Khomenko [23], V. Kozyk [24], Y. Kudriavets [25], Ye. Kuryliak [26], Yu. Kuts [27], M. Kyzym [20, 28, 35], A. Lebedeva [29], I. Lysenko [23], O. Makarenko [27], V. Mamonova [27], O. Myshchyshyn [24], A. Orlova [18], L. Ryneyskaya [30], M. Shashyna [31], H. Shevtsova [32], N. Shvets [32], S. Sokolenko [33], M. Voynarenko [21, 34], V. Zahorskyi [35]) have been actively engaged in research work on cluster issues In recent decades. They study the best international experience and consider the cluster mainly as an association, qualitatively new institutions of the economic system, which appear under the influence of institutional changes in the economy, the formation of fundamentally new elements of the institutional environment, and global competition and more.

This article is a continuation of the author's research [36-40] to substantiate the conceptual provisions for the creation and development of cluster structures as a priority for the modernization of national and regional economies; strategic institute of balanced sustainable development; network model of partnership in the economic regions of Ukraine, taking into account their specifics.

Coverage of previously unresolved parts of the overall problem. Despite the wide range of research on the chosen topic, multifaceted and controversial issues need to be further developed. And especially the solution to this problem is actualized at the present stage of globalization transformations in the conditions of smart specialization, modernization, digitalization and sustainable development of the regional economy.

In this regard, **the purpose of this article** is to study and summarize the Romanian practice of cluster policy in order to develop proposals for its possible

application in the current conditions of the regional economy of Ukraine.

To achieve this goal, methods of analysis and synthesis, systematic approach, comparisons and observations, classification, structural and logical generalization were used.

Outline of the main results and their justification. To implement the tasks of the National Plan of Regional Development of Romania and the relevant National Agency for Regional Development, eight regions were formed, the aim of which was to create network structures and clusters. For this type of cooperation in Romania, EU financial support was provided, as well as methodological guidance from the OECD through Italian cluster structures. The experience of Italian-Romanian cooperation at the regional level shows the viability and effectiveness of the exchange of experience and knowledge transfer in the field of business activity, overcoming the crisis in depressed regions. The clustering of the Romanian economy began in 1998. Between 1999 and 2001, clustering was externally supported by the Interreg II program and from 2001 to 2004 by the Weid program (FP5). Further development of Romanian clusters was carried out with the help of EU programs – FP6 and FP7 [41]. It is worth noting that most of the industrial clusters in Romania are formed on the example of the Italian model of "industrial districts", which unite small companies or micro-firms.

In accordance with the specifics of the Romanian approach to clustering the economy in the framework of the Innovation Development Program in the country allocated "Public Clusters" ("state" clusters), which include associations of state-established companies such as technology and science parks, business incubators, research centers, etc. In addition, there are "Natural Clusters", i.e. natural clusters (e.g., clusters of automotive, nanotechnology, IT industry), whose operation is focused on creating added value in a particular area.

By industry, cluster structures in Romania are mostly formed in the IT sector, smart specialization, agro-industrial complex, energy, mechanical engineering and engineering, biotechnology and medicine, tourism and recreation, woodworking, creative industry.

There are currently 51 clusters in Romania, 47 of which are most active in the Clustero. The Romanian Ministry of Education and Science has launched a Project Funding Program for the organization and development of innovation clusters and a project to support innovation clusters. Special support is given to the growth of value-added created by the ICT sector and innovation in this area through the development of clusters (900 thousand euros) and POC 2014-2020 (7 million euros), POC/PI2.2/OS2.2/Action 2.2.1 (4 million euros) [42].

An example of Romania's successful cluster development is the modernization of the automotive

industry. In the early 1990s, the country's automobile industry experienced a period of stagnation and even collapse. However, in the early 2000s, thanks to radical restructuring, innovative development, attracting foreign direct investment, and networking, Romania's automotive industry revived as a new global supplier of low-cost automotive components to large manufacturers (Renault, Michelin, Bosch).

Another example of effective implementation of cluster initiatives in Romania is the formation of the IT cluster (Cluj IT Cluster, Cluj-Napoca), which includes organizations in the field of information technology (software and solution providers, universities and research institutes, government agencies, others catalyst organizations, etc.). The main mission of this cluster structure is to become one of the most reliable suppliers from Central and Eastern Europe of innovative IT services and products, as well as organizational support systems. The task of the cluster is to promote innovation in processes, design products to increase competitiveness at the European and international level, create a culture of cooperation based on trust and reliability, promote the Romanian IT services market, and establish long-term public-private partnerships for the mutual benefit of cluster members and society. The IT cluster was able to become a network of more than 80 members without state support, and thanks to an active presence on the European platform for cluster cooperation, membership in the European Alliance of SMEs in the field of ICT and more.

In the woodworking sector of Romania, a regional wood cluster Pro Wood has been established, the priority tasks of which are the development of products and services, participation and/or initiation of innovation and development projects, development of clear cluster policies and legislative projects.

Among the key tasks to support the development of cluster structures in Romania are the following: promoting research and development and the introduction of new technologies; strengthening innovation ecosystems and innovation potential of regions; support for internationalization and best practices of cluster members, cooperation structures between companies or between industries and science; promotion of entrepreneurship, startups and scaling.

If we consider Ukraine, the strategic directions of regional economic development include the transformation of transport and logistics systems on the basis of clustering. This corresponds to the main provisions of the Association Agreement between Ukraine and the EU, the "National Security Strategy of Ukraine", approved by the Decree of the President of Ukraine dated 14.09.2020 no. 392/2020, the State Strategy for Regional Development 2021-2027 and the National Transport Strategy of Ukraine until 2030.

Chapter 7 "Transport" of the EU-Ukraine Association Agreement deals with the development of a multimodal transport network linked to the Trans-European Transport Network (TEN-T) and the

improvement of infrastructure policy in order to better identify and evaluate infrastructure projects for different types of transport.

The State Strategy for Regional Development for 2021-2027, approved by the Resolution of the Cabinet of Ministers of Ukraine dated 05.08.2020 no. 695, contains tasks in the field of "Transport Infrastructure Development" to achieve the operational goal "Infrastructure Development and Digital Transformation of Regions". This strategic document emphasizes the need to promote the creation of world-class regional, interregional and national clusters, as well as the internationalization of cluster initiatives.

In the National Transport Strategy of Ukraine for the period up to 2030, which was approved by the order of the Cabinet of Ministers of Ukraine dated 30.05.2018 no. 430, the main tasks that need to be addressed are the creation of a network of multimodal transport and logistics clusters and basic logistics centers, "Dry ports", terminals, specialized transshipment complexes, etc.

Thus, in modern economic conditions, transport and logistics clusters are an important factor in ensuring competitiveness, given the significant transit and logistics potential of economic regions of Ukraine: Donetsk (Donetsk, Luhansk regions); Carpathian (Zakarpattya, Ivano-Frankivsk, Lviv, Chernivtsi

regions); North-West (Volyn, Rivne regions); Podillya (Vinnytsia, Ternopil, Khmelnitsky regions); Polissya (Zhytomyr, Kyiv, Cherkasy, Chernihiv regions); Prydniprovsky (Dnipropetrovsk, Zaporizhia, Kirovohrad regions); Black Sea (Mykolaiv, Odesa, Kherson regions); Slobozhansky (Poltava, Sumy, Kharkiv regions).

Analytical assessment of the current state of development of regional transport and logistics systems shows that in most economic regions there is a tendency to increase the volume of cargo transportation by regional branches of JSC "Ukrzaliznytsia". Thus, according to the State Statistics Service of Ukraine, the volume of freight traffic by the South-Western Railway increased from 2000 to 2020 by 168.6% (share by 10.8 percentage points or from 5.4 to 16.2% of the all-Ukrainian volume); Odesa - by 145.8% (share of 8.5 percentage points or from 4.8 to 13.3%); South – by 59.7% (share of 5.1 percentage points or from 6.5 to 11.6%); Lviv – by 31.4% (share by 3.4 percentage points or from 7.1 to 10.5%); Prydniprovska – by 3.8% (share of 5.3 percentage points or from 31.5 to 36.8%). However, the volume of cargo transportation by Donetsk Railway decreased during this period by 71.8% due to hostilities in eastern Ukraine, and its share in the all-Ukrainian volume decreased by 30.5 percentage points or from 44.7 to 14.2% (Table 1).

Table 1

Dynamics of cargo volumes by public railway transport

		Dynamics of ca	ingo volumies by	public runway ti	unsport	
Vacera		Regional bi	ranches of JSC "	Ukrzaliznytsia", m	illion tons	
Years	(1)	(2)	(3)	(4)	(5)	(6)
2000	132.4	21.0	14.2	93.3	15.9	19.1
2005	157.8	25.1	24.6	112.0	27.9	31.5
2010	142.4	20.6	27.5	110.4	29.1	28.0
2013	139.0	22.5	30.0	118.3	37.7	29.8
2014	99.4	22.8	27.6	107.9	38.5	29.0
2015	69.2	24.3	29.7	104.9	37.1	29.1
2016	71.7	23.6	31.3	99.4	36.9	29.2
2017	48.7	27.0	32.4	97.6	40.8	30.8
2018	45.4	26.4	31.5	96.7	38.5	29.1
2019	41.2	27.0	33.2	96.7	40.6	29.8
2020	37.3	27.6	34.9	96.8	42.7	30.5

Notes: Donetsk Railway (1); Lviv (2); Odesa (3); Prydniprovska (4); Southwest (5); Southern (6).

Source: compiled by the authors on the basis of information and analytical materials of the State Statistics Service of Ukraine.

During 2000-2020, the freight turnover of the Odessa Railway increased by 71.1%, and the share by 14.1 percentage points. or from 20.7 to 34.8% of the national freight turnover of public rail transport; South-West – by 22.4% (share of 3.7 percentage points or from 17.8 to 21.5%); Southern – by 20.6% (share of 1.4 percentage points or from 7.6 to 9%). At the same time, the freight turnover of Donetsk Railway decreased by 66.8% (share by 13.1 percentage points or from 19.5 to 6.4% of the national freight turnover of public

railway transport); Prydniprovska – by 22.4% (share of 5.4 percentage points or from 23 to 17.6%) (Table 2).

According to the Main Department of Statistics in 24 oblasts, the volumes of goods transported by rail in the Podillya district increased in 2020 by 279.2% compared to 2000; Northwest – by 96.8%; Slobozhansky – by 82.6%; the Black Sea – by 78.2%; Polissya – by 63.5%; Prydniprovsky – by 17.5%; Carpathian – by 4.8%. In the Donetsk economic region, the value of this indicator decreased by 61.8% (Table 3).

Dynamics of freight turnover of public railway transport

Years		Regional branches of JSC "Ukrzaliznytsia", billion tkm								
1 Cais	(1)	(2)	(3)	(4)	(5)	(6)				
2000	33.7	19.7	35.7	39.8	30.8	13.1				
2005	36.9	22.5	51.6	48.1	42.3	22.6				
2010	37.3	18.6	54.1	45.4	42.4	20.3				
2013	34.6	19.2	60.7	44.6	46.7	18.6				
2014	22.8	20.0	62.2	36.7	46.7	21.8				
2015	13.8	21.0	66.1	30.2	42.2	21.8				
2016	17.5	21.1	58.5	31.2	38.4	20.9				
2017	13.2	22.2	61.6	32.0	42.8	20.1				
2018	13.2	21.9	59.5	32.8	41.4	17.5				
2019	11.6	19.3	62.2	31.2	41.7	15.8				
2020	11.2	18.9	61.1	30.9	37.7	15.8				

Notes: Donetsk Railway (1); Lviv (2); Odesa (3); Prydniprovska (4); Southwest (5); Southern (6).

Source: compiled by the authors on the basis of information and analytical materials of the State Statistics Service of Ukraine.

Table 3
Volumes of goods transported by rail in economic regions, thousand tons

		1 7						
Economic region	Years							
Economic region	2000	2005	2010	2015	2020			
Donetsk	99000.0	110100.0	94900.0	69200.0	37800.0			
Carpathian	12674.1	15574.4	8089.8	9816.7	13285.9			
Northwest	5044.9	9060.5	10084.7	8660.6	9928.2			
Podillya	3088.5	5297.1	5653.9	10185.7	11712.9			
Polissya	14726.3	23457.3	25361.8	25486.0	24078.8			
Prydniprovsky	89449.2	110639.8	110775.1	111419.6	105105.9			
Black Sea	20090.3	35716.1	37851.5	40264.8	35806.3			
Slobozhansky	34362.8	57008.5	51513.9	54335.9	62735.4			

*Source*: compiled by the authors on the basis of analytical and information materials of the Main Department of Statistics in 24 regions of Ukraine.

According to statistical analysis, the volume of road freight transport increased in 2000-2020 in the Prydniprovsky economic region by 56.3%; Northwest – by 52.8%; Slobozhansky – by 47.1%; Polissya – by 43.3%; "Podillya" – by 31.8%; in the Black Sea region – by 18.1%.

But in a number of economic regions, on the contrary, the volume of goods transported by road decreased during the study period. Thus, in the Donetsk

region this indicator decreased by 34.3%, and in the Carpathian region – by 7.7% (Table 4).

It should be noted that in economic areas there is a negative trend in the development of water transport. For example, in the Donetsk region the volume of cargo transportation by water decreased in 2020 compared to 2000 by 56.8%; the Black Sea – by 49.5%; Prydniprovsky – by 21.4% (Table 5).

Volumes of goods transported by road in economic region, thousand tons

Volumes of goods transported by road in economic region, thousand tons								
Economic region	Years							
Economic region	2000	2005	2010	2015	2020			
Donetsk	151400.0	202300.0	174100.0	104300.0	99500.0			
Carpathian	59180.6	52267.7	47649.5	48654.2	54641.8			
Northwest	23068.6	28769.4	23850.4	23077.1	35243.7			
Podillya	66632.0	61010.8	61241.6	71386.1	87836.7			
Polissya	112709.6	130240.9	117592.0	128092.2	161472.9			
Prydniprovsky	291308.4	375029.5	452196.2	372689.6	455341.5			
Black Sea	51618.0	65235.8	61792.3	52539.7	60951.9			
Slobozhansky	142473.2	158803.0	181681.3	201331.4	209575.9			

*Source:* compiled by the authors on the basis of analytical and information materials of the Main Department of Statistics in 24 regions of Ukraine.

Table 5

Volumes of cargo transported by water in economic regions, thousand tons

Economic region	Years						
Economic region	2000	2005	2010	2015	2020		
Donetsk	327.1	_	288.1	535.7	141.2		
Carpathian	_	_	_	_	_		
Northwest	_	_	_	_	_		
Podillya	2.7	_	_	_	_		
Polissya	108.9	259.1	90.0	_	_		
Prydniprovsky	859.0	2366.2	1065.7	819.6	675.6		
Black Sea	5446.4	8684.3	4661.0	2841.3	2750.6		
Slobozhansky	_	_	_	_	52.0		

*Source:* compiled by the authors on the basis of analytical and information materials of the Main Department of Statistics in 24 regions of Ukraine.

In this regard, regional and local governments need to pay considerable attention to the development of water transport. And for this, we should look for non-traditional sources of funding — venture capital, factoring, funds of investment funds and international financial organizations, green investment, and more. This is especially true with the transition to a green economy, as water transport is more environmentally friendly than road transport. And this is in line with the key provisions of the Green Pact for Europe or the European Green Course.

In addition, it should be noted that in the surveyed economic areas there are significant problems with the functioning of air transport, which need to be addressed. To this end, it is advisable to develop a set of measures for crisis management of air transport development within the National Transport Strategy of Ukraine until 2030 and the State Targeted Scientific and Technical Program for Aviation Industry Development for 2021-2030.

Currently, the functioning of transport and logistics systems is regulated in the Regional Development Strategies for 2021-2027. These strategic documents are in line with the Sustainable Development Goals until 2030 and the main provisions of the State Strategy for Regional Development until 2027 "Development and unity focused on people", which includes the formation of a cohesive country in social, economic, environmental and spatial dimensions. Achieving this goal should be done through the modernization of infrastructure (including transport) to increase the investment attractiveness of the territories.

Based on the generalization of Regional Development Strategies in 24 regions, it was established that all documents refer to the creation of clusters (sectoral, territorial, innovative, tourism, agroindustrial, energy, etc.). The strategies of 11 regions emphasize the expediency of implementing a clustering mechanism, which provides for the development of a concept for the development of regional clusters, and measures to financially stimulate cluster initiatives and existing clusters in the regions. And only in documents of 7 regions it is a question of application of the cluster approach.

According to the analysis, only 4 regional development strategies indicate the need to create a transport and logistics cluster. The documents mostly use such terms as "Transport and logistics infrastructure" (16 regions); "Logistics centre" (14 regions); "Road transport infrastructure" (8 regions); "Transport and logistics hub" (4 regions); "Transport and logistics system" (4 regions); "Transport complex" (3 regions).

Thus, it was found that at the present stage of development of the regional economy it is advisable to transform the transport and logistics systems in the economic regions of Ukraine on the basis of clustering, taking into account their specifics.

Conclusions and prospects for further research. As a result of the study, it was found that for the further development of clusters in Romania it is necessary to develop a set of measures, namely: stimulating exports through internationalization; formation of fundamentally new value chains integrated into vertical industries; business strategy; assistance in financing innovative projects for technology transfer based on the mechanism of public-private partnership and with the involvement of private investment; use of cluster management tools; developing tools that can support efficient resource allocation processes among cluster members; training; formation of proper organizational culture.

The implementation of these measures should be carried out with the help of the European Cluster Cooperation Platform and the European Cluster Improvement Program, the EU Action "Cluster Go International", and the Eurocluster Program for the period 2021-2027.

It should be noted that it is advisable to adapt and implement the Romanian practice in the context of the regional development of Ukraine. This issue needs considerable attention from representatives of the scientific, educational, governmental, business, and civic environment.

Prospects for further research are the generalization and systematization of existing approaches to the interpretation of the concepts of "clustering of the economy", "regional cluster policy", "cluster infrastructure".

#### References

- 1. Benner, M. (2017). Smart specialization and cluster emergence: Elements of evolutionary regional policies. In D. Fornahl, R. Hassink (Eds.). *The Life Cycle of Clusters: A Policy Perspective* (pp. 151-172). UK: Edward Elgar Publishing.
  - 2. Devlin, G., Bleackley, M. (1988). Strategic Alliances Guidelines for success. Long Range Planning, 21(5), pp. 18-23.
- 3. Delgado, M., Porter, M., Stem, S. (2010). Clusters and Entrepreneurship. *Journal of Economic Geography*, 10(4), pp. 495-518.
- 4. Dussauge, P., Garrette, B., Mitchell, W. (2000). Learning from competing partners: Outcomes and durations of scale and link alliances in Europe, North America and Asia. *Strategic Management Journal*, 21(2), pp. 99-103.
  - 5. Enright, M. J. (1992). Why Clusters are the Way to Win the Game? World link, 5, pp. 24-25.
  - 6. Feser, E.J. (1998). Old and New Theories of Industry Clusters. London: SelectedWorks.
- 7. Fornahl, D., Grashof, N. (2021). *The Globalization of Regional Clusters. Between Localization and Internationalization*. Cheltenham, UK: Edward Elgar Publishing. DOI: http://dx.doi.org.10.4337/9781839102486.
  - 8. Frankowska, M. (2015). Klastry logistyczne jako ogniwa globalnych lancuchow dostaw. Logistyka, 3, pp. 5633-5637.
- 9. Hassink, R. (2021). Strategic cluster coupling. In D. Fornahl, N. Grashof (Eds.). *The Globalization of Regional Clusters. Between Localization and Internationalization* (pp. 15-32). Cheltenham, UK: Edward Elgar Publishing.
- 10. Kowalski, A. M. (2020). Towards an Asian Model of Clusters and Cluster Policy: The Super Cluster Strategy. *Journal of Competitiveness*, 12(4), pp. 74-90. DOI: https://doi.org/10.7441/joc.2020.04.05.
- 11. Kruczek, M., Zebrucki, Z. (2014). Koncepcja klastrow logistycznych. Zeszyty naukowe Politechniki Slaskiej. Seria: Organizacja i zarzadzanie, 70, pp. 229-241.
- 12. Morgulis-Yakushev, S., Sölvell, Ö. (2017). Enhancing dynamism in clusters: A model for evaluating cluster organizations' bridge-building activities across cluster gaps. *Competitiveness Review*, 27(2), pp. 98-112. DOI: https://doi.org/10.1108/CR-02-2016-0015.
  - 13. Porter, M. E. (1985). Competitive advantage. New York: Free press; London: Collier Macmillan.
- 14. Porter, M. E. (1998). Clusters and New Economics of Competition. *Harward Business Review*, November December, pp. 77-90.
- 15. Swann, G.M.P., Preveser, M.A. (1996). Comparison of the Dynamics of Industrial Clustering in Computing and Biotechnology. *Research Policy*, 25(7), pp. 1139-1157.
  - 16. Szuster, M. (2012). Rola klastrow we wspieraniu innowacyjności. Ekonomiczne Problemy Usług, 94, pp. 311-325.
  - 17. Zrobek, J. (2011). Marketing w klastrach logistycznych. Acta Universitatis Lodziennsis. Folia Oeconomica, 251, pp. 5-16.
- 18. Orlova, A. A., Buhaieva, M. V. (2017). The experience of formation and development of clusters in post-socialist countries in the context of national security of Ukraine. *Efektyvna ekonomika*, 11. Retrieved from https://www.economy.nayka.com.ua/?op=1&z=5892 (accessed 27 October 2021) [in Ukrainian].
- 19. Demedyuk, O. P. (2020). Perspektyvy rozvytku transkordonnykh klasteriv v prykordonnykh oblastiakh Zakhidnoi Ukrainy [Perspectives of cross-border clusters development in the border oblasts of the Western Ukraine]. *Regional Economy*, 2, pp. 58-71. DOI: https://doi.org/10.36818/1562-0905-2020-2-4 [in Ukrainian].
- 20. Kyzym, M. O., Khaustova, V. Ye., Dorovskyi, O. V. (2011). Klasterni struktury v ekonomikakh krain svitu [Cluster structures in the economies of the world]. *The Problems of Economy*, 4, pp. 24-32 [in Ukrainian].
- 21. Voynarenko, M. P., Dubnytskyi, V. I. et al. (2019). *Teoriia i praktyka klasteryzatsii ekonomiky* [Theory and practice of clustering of the economy]. Kamianets-Podilskyi: Aksioma [in Ukrainian].
- 22. Finagina, O. V. et al. (2018). *Kontseptualni zasady pidtrymky maloho ta serednoho biznesu v Ukraini: pytannia klasteryzatsii ta biznes-inkubatsii* [Conceptual principles of support for small and medium-sized businesses in Ukraine: issues of clustering and business incubation]: a collective monograph. Cherkasy, Publisher Ponomarenko R.V. [in Ukrainian].
- 23. Ilchuk, V. P., Khomenko, I. O., Lysenko, I. V. (2013). Klasterna stratehiia rozvytku ekonomiky rehionu [Cluster strategy for economic development in the region]. Chernihiv, CSTU [in Ukrainian].
- 24. Myshchyshyn, O., Kozyk, V. (2020). Assessment of the potential of formation and development of cross-border clusters in the ukrainian-polish cross-border region. *Evropský časopis ekonomiky a managementu*, 6(4), pp. 6-13.
- 25. Kudriavets, Y. (2016). Zasady yevropeiskoi polityky stvorennia innovatsiinykh klasteriv ta pohlyblenoi vzaiemodii z Ukrainoiu [Principles of European policy of creating innovation clusters and deepening cooperation with Ukraine]. *Investytsii: praktyka ta dosvid Investments: practice and experience*, 5, pp. 64-72 [in Ukrainian].
- 26. Kuryliak, Ye. (2014). Klasteryzatsiia: yevropeiskyi dosvid i yoho implementatsiia v Ukraini [Clustering: European experience and its implementation in Ukraine]. *Journal of European Economy*, 13(3), pp. 293-316 [in Ukrainian].
- 27. Mamonova, V. V., Kuts, Yu. O., Makarenko, O. M. et al. (2013). Formuvannia terytorialnykh klasteriv yak instrumentu rehionalnoho rozvytku [Formation of territorial clusters as a tool of regional development]. Kyiv, NAPA [in Ukrainian].
- 28. Kyzym, M. (2011). *Promyslova polityka ta klasterizatsiia ekonomiky Ukrainy* [Industrial policy and clustering of the economy of Ukraine]: monograph. Kharkiv, INZHEK [in Ukrainian].
- 29. Lebedeva, A. (2017). Problems and prospects of the establishment and functioning of cross-border clusters in Ukraine. *Derzhavne upravlinnia: udoskonalennia ta rozvytok Public administration: improvement and development*, 11. Retrieved from https://www.dy.nayka.com.ua/?op=1&z=1146 (accessed 27 October 2021) [in Ukrainian].
- 30. Ryneyskaya, L. S. (2016). Klastery u suchasnii hlobalnii ekonomitsi [The clusters in the modern global economy]. *Efektyvna ekonomika*, 5. Retrieved from http://www.economy.nayka.com.ua/?op=1&z=4971 (accessed 27 April 2022) [in Ukrainian].
- 31. Shashyna, M. (2020). Instytutsiine zabezpechennia rozvytku prostorovykh form orhanizatsii biznesu v Ukraini [Institutional support for the development of spatial forms of business organization in Ukraine]. *International Humanitarian University Herald. Economics and Management*, 42, pp. 148-153. DOI: https://doi.org/10.32841/2413-2675/2020-42-26 [in Ukrainian].
- 32. Shevtsova, H. Z., Shvets, N. V. (2017). Klasteryzatsiia khimichnoi promyslovosti: yevropeiskyi dosvid ta uroky dlia Ukrainy [Clustering of the chemical industry: European experience and lessons for Ukraine]. *Visnyk ekonomichnoi nauky Ukrainy Herald of the Economic Sciences of Ukraine*, 2(33), pp. 103-109 [in Ukrainian].
  - 33. Sokolenko, S. I. (2004). Klastery v hlobalnii ekonomitsi [Clusters in the global economy]. Kyiv, Lohos [in Ukrainian].
- 34. Voynarenko, M. P. (2018). *Clusters in the institutional economics*. Schweinfurt, Germany: Time Realities Scientific Group UG (Haftungsbeschränkt).

- 35. Zahorskyi, V. S., Kyzym, M. O., Khaustova, V. Ye. (2010). Klasteryzatsiia ekonomik krain svitu y Ukrainy: dosvid i problemy [Clustering of economies of the world and Ukraine: experience and problems]. *Problems of the economy*, 1, pp. 3-7 [in Ukrainian].
- 36. Ivanov, S. V., Liashenko, V. I., Trushkina, N. V. (2020). Pravovi aspekty stvorennia transportno-lohistychnykh klasteriv v rehionakh Ukrainy [Legal aspects of creation of transport and logistics clusters in the regions of Ukraine]. *Gesellschaftsrechtliche Transformationen von wirtschaftlichen Systemen in den Zeiten der Neo-Industrialisierung*: Collective monograph (s. 661-668). Nüremberg, Verlag SWG imex GmbH [in Ukrainian].
- 37. Trushkina, N., Dzwigol, H., Kwilinski, A. (2021). Cluster Model of Organizing Logistics in the Region (on the Example of the Economic District "Podillya"). *Journal of European Economy*, 20(1), pp. 127-145. DOI: https://doi.org/10.35774/jee2021.01.127.
- 38. Liashenko, V., Ivanov, S., Trushkina, N. (2021). A Conceptual Approach to Forming a Transport and Logistics Cluster as a Component of the Region's Innovative Infrastructure (on the Example of Prydniprovsky Economic Region of Ukraine). *Virtual Economics*, *4*(1), pp. 19-53. DOI: https://doi.org/10.34021/ve.2021.04.01(2).
- 39. Pushak, H. I., Trushkina, N. V. (2021). Obgruntuvannia dotsilnosti stvorennia transportno-lohistychnoho klasteru v Karpatskomu ekonomichnomu raioni [Substantiation of expediency of creation of transport and logistics cluster in Carpathian economic region]. *Economic Herald of the Donbas*, 1(63), pp. 61-77. DOI: https://doi.org/10.12958/1817-3772-2021-1(63)-61-77 [in Ukrainian].
- 40. Liashenko, V. I., Osadcha, N. V., Trushkina, N. V. (2021). Mozhlyvi orhanizatsiino-pravovi formy transportno-lohistychnoho klasteru v Prychornomorskomu ekonomichnomu raioni [Possible organizational and legal forms of transport and logistics cluster in the Black Sea economic region]. *Black Sea Economic Studies*, 67, pp. 60-70. DOI: https://doi.org/10.32843/bses.67-10 [in Ukrainian].
- 41. European Union (2019). Cluster programmes in Europe and beyond. European Observatory for Clusters and Industrial Change. Luxembourg: Publications Office of the European Union.
- 42. Yurchak, O. et al. (2020). *Natsionalna prohrama klasternoho rozvytku do 2027 roku. Kontseptsiia. Oriientyry rozvytku. Rekomendatsii* [National program of cluster development until 2027. Concept. Landmarks of development. Recommendations]. Kyiv, AIAU, Platforma Industry4Ukraine [in Ukrainian].

### Ляшенко В. І., Трушкіна Н. В. Кластерна складова сталого розвитку регіонів: румунська практика та українські реалії

На даний час особливої актуальності набувають проблеми вдосконалення управління розвитком кластерних структур в економічних районах України з урахуванням передового румунського досвіду відповідно до сучасних викликів, пов'язаних із смарт-спеціалізацією, модернізацією виробництва та цифровізацією організаційних й управлінських процесів.

Для подальшого розвитку кластерних утворень у Румунії необхідно розробити комплекс заходів, а саме: стимулювання експорту шляхом інтернаціоналізації; формування принципово нових ланцюгів доданої вартості, інтегрованих у вертикальні галузі; стратегування діяльності; сприяння фінансуванню інноваційних проєктів для передачі технологій на основі механізму публічно-приватного партнерства та із залученням приватних інвестицій; використання інструментів кластерного менеджменту; розроблення інструментарію, який може підтримувати ефективні процеси розподілу ресурсів між учасниками кластеру; підготовка кадрів; формування належної організаційної культури. Реалізація перелічених заходів має здійснюватися за допомогою Європейської платформи кластерного співробітництва та у рамках Європейської програми удосконалення кластерів, Акції ЄС «Cluster Go International», Програми єврокластерів на період 2021-2027 роки.

На підставі узагальнення передового румунського досвіду встановлено, що для підвищення конкурентоспроможності національної й регіональної економік необхідно створювати кластерні структури як ефективні форми партнерства. Але у результаті дослідження виявлено, що в чинному законодавстві України не приділяється належної уваги формуванню й функціонуванню кластерів. Для цього необхідно внести зміни і доповнення до Концепції створення кластерів в Україні, Стратегій регіонального розвитку до 2027 року і Планів заходів з їх реалізації на 2021-2023 роки щодо створення кластерних структур як суб'єкта господарювання. Доцільним є розроблення та схвалення Концепцій кластерної політики та Цільової програми «Формування та розвиток кластерних утворень у регіонах України на 2021-2023 роки», у яких необхідно передбачити створення кластерів як особливого виду об'єднань підприємств у різних сферах діяльності та з урахуванням регіональної специфіки.

*Ключові слова:* регіональна економіка, економічний район, кластеризація, кластерна ініціатива, кластерна політика, кластерний підхід, кластерна структура, транспортно-логістичний кластер, європейська практика, трансформація, модернізація, смарт-спеціалізація, цифровізація, глобалізація.

### Liashenko V., Trushkina N. Cluster Component of Sustainable Regional Development: Romanian Practice and Ukrainian Realities

At present, the problems of improving the management of cluster structures in the economic regions of Ukraine, taking into account the best Romanian experience in accordance with modern challenges related to smart specialization, modernization of production and digitalization of organizational and managerial processes, are especially relevant.

For the further development of clusters in Romania it is necessary to develop a set of measures, namely: stimulating exports through internationalization; formation of fundamentally new value chains integrated into vertical industries; business strategy; assistance in financing innovative projects for technology transfer based on the mechanism of public-private partnership and with the involvement of private investment; use of cluster management tools; developing tools that can support efficient resource allocation processes among cluster members; training; formation of proper organizational culture. The implementation of these measures should be carried out with the help of the European Cluster Cooperation Platform and the European Cluster Improvement Program, the EU Action "Cluster Go International", and the Eurocluster Program for the period 2021-2027.

Based on the generalization of the best Romanian experience, it is established that in order to increase the competitiveness of national and regional economies, it is necessary to create cluster structures as effective forms of partnership. However, the study revealed that the current legislation of Ukraine does not pay due attention to the formation and functioning of clusters. To do this, it is necessary to make changes and additions to the Concept of creating clusters in Ukraine, Regional Development Strategies until 2027, and Action Plans for their implementation for 2021-2023 to create cluster structures as a business entity. It is expedient to develop and approve the Concepts of cluster policy and the Target Program "Formation and development of clusters in the regions of Ukraine for

2021-2023", which should provide for the creation of clusters as a special type of enterprise association in various fields and taking into account regional specifics.

Keywords: regional economy, economic region, clustering, cluster initiative, cluster policy, cluster approach, cluster structure, transport and logistics cluster, European practice, transformation, modernization, smart specialization, digitalization, globalization.

### Ляшенко В. И., Трушкина Н. В. Кластерная составляющая устойчивого развития регионов: румынская практика и украинские реалии

В настоящее время особую актуальность приобретают проблемы совершенствования управления развитием кластерных структур в экономических районах Украины с учётом передового румынского опыта в соответствии с современными вызовами, связанными со смарт-специализацией, модернизацией производства и цифровизацией организационных и управленческих процессов.

Для дальнейшего развития кластерных образований в Румынии необходимо разработать комплекс мероприятий, а именно: стимулирование экспорта путём интернационализации; формирование принципиально новых цепей добавленной стоимости, интегрированных в вертикальные отрасли; стратегирование деятельности; содействие финансированию инновационных проектов для передачи технологий на основе механизма публично-частного партнёрства и с привлечением частных инвестиций; использование инструментов кластерного менеджмента; разработка инструментария, который может поддерживать эффективные процессы распределения ресурсов между участниками кластера; подготовка кадров; формирование организационной культуры. Реализация перечисленных мероприятий должна осуществляться с помощью Европейской платформы кластерного сотрудничества и в рамках Европейской программы совершенствования кластеров, Акции ЕС «Cluster Go International», Программы еврокластеров на период 2021-2027 годы.

На основании обобщения передового румынского опыта установлено, что для повышения конкурентоспособности национальной и региональной экономики необходимо создавать кластерные структуры как эффективные формы партнёрства. Но в результате исследования обнаружено, что в действующем законодательстве Украины не уделяется должного внимания формированию и функционированию кластеров. Для этого необходимо внести изменения и дополнения в Концепцию создания кластеров в Украине, Стратегии регионального развития до 2027 года и Планы мероприятий по их реализации на 2021-2023 годы по созданию кластерных структур как субъекта хозяйствования. Целесообразно разработать Концепцию кластерной политики и Целевую программу «Формирование и развитие кластерных образований в регионах Украины на 2021-2023 годы», в которых необходимо предусмотреть создание кластеров как особого вида объединений предприятий в различных сферах деятельности и с учётом региональной специфики.

*Ключевые слова:* региональная экономика, экономический район, кластеризация, кластерная инициатива, кластерная политика, кластерный подход, кластерная структура, транспортно-логистический кластер, европейская практика, трансформация, модернизация, смарт-специализация, цифровизация, глобализация.

Received by the editors: 12.11.2021 and final form 16.12.2021

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-19-24

UDC 338.24:338.43

A. Bagirzadeh,
doctoral student,
ORCID 0000-0002-6370-5783,
e-mail: bagirzade\_ali@mail.ru,
Azerbaijan Cooperation University,
Baku, Azerbaijan

### DIRECTIONS FOR IMPROVING STATE POLICY TO FORM AND STRENGTHEN THE EXPORT POTENTIAL OF AGRICULTURAL PRODUCTS

### Introduction

The current level of agricultural development in the country in a market economy requires the formation of a complex technical-technological-economic system. This suggests a change in the ratio between agricultural and processing enterprises. It should be noted that the current poor development of the processing industry does not allow for the complete processing of agricultural raw materials into finished products and their export. This, on the one hand, leads to the loss of many agricultural products in the form of raw materials, on the other hand, as a result of the untimely processing of perishable products, many products become unusable. This situation harms the quality of these products and meets the demand of the population for these products. For these and other reasons, agricultural producers deal with huge losses. Elimination of this shortcoming and the establishment of proper relations between enterprises processing agricultural raw materials will lay the foundation for the development of the agricultural sector in the country. At the same time, it creates an economic basis for strengthening economic relations in the processing industry. The development of processing enterprises creates conditions for application of selection and agro-technical methods, improvement of production and processing based on new principles, increase of technological level, deepening of territorial and field specialization, renewal improvement of production structure. Research shows that the delay in solving this problem, which is very important in the development of the country's economy, harms the development of the agricultural sector and improves the welfare of the population.

### Formation and strengthening of export potential of agricultural products

One of the important issues in the integration of the national economy into the world economy and in the conditions of market relations is the country's foreign economic relations and its export potential in increasing the competitiveness of industrial products. The foreign economic strategy of the Republic of Azerbaijan, which is at the current stage of formation of relations with the world market, aims to increase export opportunities, not only to improve the structure of export and import operations but also to enter the world market with competitive products. For this reason, an important element in the implementation of foreign economic strategy in Azerbaijan is state support and state assistance to enterprises and industries operating in the framework of the system of

measures taken to expand exports. In turn, this policy, which supports the export sector, was implemented to ensure the inflow of foreign currency into the country in the newly industrialized countries. This experience is very important in modern times. Thus, there is no other alternative way to provide foreign exchange inflows into the country.

Export potential, being a part of the economic potential of the country, is the ability to produce and export various types of goods and services in quantities and quality appropriate to the needs of foreign market consumers as a result of the full use of the means of production of the national economy and its private sectors.

It should be noted that to export, they must first be in demand. Given that the amount of products a country can produce is quite small compared to the number of products on the world market, the country's demand for oil products may always be there. Other factors to consider when analyzing export potential are quality, compliance with world-class standards and prices. In our opinion, if the price of a product in the domestic market is lower than the price of this product in the international market, then there is an export potential. In other words, when assessing the export potential of their products, prices should be compared and it should be determined whether the product in question can be sold at a profit at international prices.

One of the main factors determining the formation and development of export potential is the availability and level of use of natural resources in the country. The availability of natural resources and the level of their development determine the development of the country's productive forces, in particular, the means of material production and, on this basis, the export potential. Therefore, the export potential of a country directly depends on the number of natural resources owned and discovered and mastered by that country and the natural conditions. Thus, it can be said that the existing export potential for a certain period is based on both used and untapped aggregate natural resources.

One of the components of export potential is labour resources, which is conditioned by a system of quantitative and qualitative indicators. This includes scientific personnel, employees working in various industries, persons engaged in organizational and managerial work related to the export and sale of products in foreign markets. Recently, trade and economic relations of the Republic of Azerbaijan with the number of countries around the world have expanded. This has led to an increase in import-export relations. It should be noted that

currently, the main area in the structure of the country's export potential is oil production and oil products. The production of agricultural products is also of special importance in Azerbaijan's export potential.

At present, many processing plants are physically and morally obsolete, and the production technology does not allow the production of competitive and high-quality products. These enterprises are highly material and labour intensive and require large additional costs. In this regard, the "State Program of socio-economic development of the regions of the Republic of Azerbaijan in 2019-2023" provides for the restructuring of agricultural processing enterprises, the construction or rehabilitation of new processing plants in the regions [4].

The efficient operation of the processing industry will be possible only if the infrastructure units are reorganized following the requirements of a market economy. Currently, the poor development of infrastructure in this area harms the long-term storage, processing and sale of products, and ultimately has a negative impact on the deterioration of large quantities of products, the decline in product quality and delivery to consumers. In our opinion, in a market economy, radical changes must be made in the structure of infrastructure units and these intersectoral relations must be re-formed. One of the main challenges is to prevent losses associated with processing, production, sales and storage of products.

Taking into account the financial capacity of the state, the country's economic policy to stimulate exports should include:

- Barriers to production investment should be removed by creating favourable conditions for raising capital and allocating resources efficiently;
- Establishment of an optimal competitive regime with the help of customs policy tools for individual industries.

In this regard, there is a need to develop regional and sectoral programs for the rational use of the export potential of the national economy. It is important to develop not only government agencies but also local entrepreneurs, foreign investors, experts in the field of technical assistance, international organizations. The existence of precise programs and projects is one of the main conditions for the Azerbaijani market to be attractive for foreign investors.

Therefore, state assistance should be provided to areas that can enter foreign markets with competitive products. This assistance is provided directly through subsidies, soft loans, etc. through the issuance or indirectly, i.e., tax breaks, export insurance, export premiums, etc. can be implemented through the application. For example, the state can undertake the training of personnel for exportoriented enterprises and can determine the necessary political and economic conditions for the operation of these enterprises abroad. But there is another problem. Thus, there is still no law in the country that can protect the interests of national producers, both abroad and within the country. This is explained by the lack of a fully formed policy in the field of foreign economic activity in the country, the lack of definition of the country's interests in foreign markets and, accordingly, the formation of a foreign economic strategy.

In this regard, investment should be distributed among the sectors in such a way as to achieve comprehensive and equal development of the required areas. First of all, the demand for technological machines and equipment, material and technical means must be adjusted to the general demand following the needs of each sector separately. The economic relations between the unit producing the means of production and the production of agricultural products must be organized in such a way as to create a base following the requirements of agriculture (tractors, agricultural machinery, vehicles) and to link the dynamic development of production. Studies show that material costs account for 80-85% of total costs in the fruit and vegetable canning industry. Therefore, changes should be made in the structure of industries producing means of production for the processing industry and agriculture, small and medium-sized processing enterprises should be established and meeting the needs of these enterprises in material and technical means and equipment should be given priority. In other words, there is a need to create new enterprises that are small and agile, processing enterprises that produce quality and export-oriented products with innovative technology that meet the level of scientific and technological progress. On the other hand, the change in the structure of agricultural production requires a change in the structure of the processing industry. It is known that 70% of fermented tobacco and 65% of cotton fibre produced in the Republic of Azerbaijan are exported to other countries as raw materials. In our opinion, the income from the sale of agricultural products as a finished product after processing or export can increase by 4-5 times. Although the production of agricultural products is increased, the export of these products to consumers or foreign markets without processing leads to a decrease in income and employment.

Research shows that if the produced cotton fibre is processed in the country and delivered to the finished product, it can play an important role in increasing the economic power of the republic and attracting the everincreasing labour force to production, creating a large amount of additional income.

It should be noted that due to the small processing capacity of processing enterprises in the Republic of Azerbaijan, most of the raw materials are sent to other countries and regions for processing. Cotton, tobacco, wool, fruits, vegetables, wine and cognac have a special place in the formation of agricultural exports. Cotton fibre is the main agricultural product exported in raw form. Russia currently accounts for 72% of cotton exports and Turkey for 15%. The reason for this is the lack of processing capacity. The processing of exported raw materials within the country and their delivery to the finished product and then exported to foreign countries can provide additional income to the country's economy [3].

This export trend is also reflected in fruit production and silkworm breeding.

One of the main reasons for the existing shortcomings in agriculture is the poor application of the latest achievements of scientific and technological progress, poor use of modern technologies, lack of staff in the organization and management of these problems do not allow a positive solution.

It should be noted that the relationship between agricultural production and the processing industry is still not established at the required level. Thus, at present, economic instruments (finance, credit, prices, supplies, etc.) are not used at any level. At present, there are sharp differences between the retail and wholesale prices for cotton, tobacco, grapes, wine, tea and other products in agricultural enterprises. In many cases, these differences lead to the weakening of production and economic relations between enterprises and entrepreneurs and a decrease in the level of efficient production, which does not create incentives for production.

The role of many medium and small farms in providing the population with food products, food and light industry raw materials is high in the Republic of Azerbaijan. This requires the application of the achievements of scientific and technological progress in production, the intensification of production, the improvement of economic relations, the development of various sectors of the economy and their stimulation.

Comprehensive and efficient use of machinery and technology in agricultural enterprises requires deepening and stimulating economic ties between large and small producers. This creates conditions for the efficient use of natural losses and wastes during the processing of raw materials. It should also be taken into account that economic and technological relations between large and small economic entities provide an incentive for the regulation of intersectoral price equality through economic mechanisms.

It should be noted that one of the most important issues in the formation of various forms of agriculture is the expansion of agricultural processing enterprises, the establishment of warehouses and refrigeration facilities, the construction or repair of inter-farm road structures, the development of industrial production of construction materials. It is very important to establish new cooperative relations for the establishment of related infrastructure activities

### Directions for improving public policy to form and strengthen export potential

Although a large part of Azerbaijan's exports is oil, oil products and gas, the share of the non-oil sector in foreign trade is growing. To further accelerate the development of this field, the Republic of Azerbaijan successfully continues the process of production of quality and international standards products that can compete in world markets, the establishment of enterprises based on modern technology and measures to stimulate exports. One of the most important steps taken in this direction was the approval of the "Action Plan to stimulate the export of nonoil products for 2011-2013" by the decision of the Cabinet of Ministers dated February 8, 2011. The plan includes important issues such as improving the legal framework, strengthening coordination in export policy, stimulating the production of export goods, improving the infrastructure of exports, strengthening the quality control system, export promotion and awareness. In addition, the establishment of an Industrial Park in Sumgayit and the ongoing work in Ganja are aimed at ensuring competitive and scientific production, in other words, the development of the non-oil sector, as well as increasing non-oil exports.

Since agricultural products are of vital importance to people, the formed price levels of these products should satisfy the producer and play a stimulating role in the production of export-oriented products by increasing large-scale reproduction. In our opinion, for this, it is necessary to intervene in the formation of prices based on market relations in the agricultural sector within the necessary limits. Market prices for agricultural products should be regulated by state subsidies and different incentive prices should be set for each economic region.

Research shows that in developed countries there is a different level of government intervention in prices, and the necessary amount of funding is allocated to improve this price mechanism at a certain level. Most of the funding is formed from the budget. The target price policy should be applied to the products produced and processed by economic entities located in unfavourable socio-economic regions to allow the establishment of guaranteed prices for the sustainability of large-scale reproduction.

One of the important issues in the development of the agricultural sector is the determination of supply prices for products purchased for state reserves. These prices are determined based on target prices. The improvement of prices should be considered, including the final stage of processing of agricultural and food products, starting from the acquisition of material and technical resources.

By the way, the production of competitive products in the Republic of Azerbaijan has increased significantly in recent years. Interest in these products is growing in world markets. It is no coincidence that President Ilham Aliyev touched upon this important point and said at a meeting of the Cabinet of Ministers on the results of socio-economic development in 2013 and the tasks ahead in 2014: "Ensuring food security" program is being implemented. In recent years, great strides have been made in this direction, and our dependence on imports has been greatly reduced. Today, Azerbaijan produces all major food products, the production of some products fully meets our needs, and in some areas, we still depend on imports. But, as you know, I have repeatedly expressed my views on this issue. Today, I want to say that all basic food products in Azerbaijan must fully meet our needs. That is, the food products produced in our country must fully meet our needs. We are approaching this and we must work to ensure that all issues related to food security are resolved within the next 5 years, and perhaps even sooner when the implementation of the 3rd Regional Development Program is completed.

To ensure sustainable development and develop the country's export potential, to ensure the development of import-substituting industries, it is expedient to focus on the implementation of the following priorities at the current stage of economic development:

- elimination of inequality in regional development;
- formation of an effective sectoral structure of the country's economy;
  - acceleration of technological development;
- effective realization of the country's export potential;
  - development of the non-oil sector;
  - ensuring the optimal level of employment;

- accelerate the process of formation of the middle layer.

Based on the principles set out in these priorities, it would be expedient to implement the following policy measures:

- to improve the normative-legal base of entrepreneurship development based on regular analysis, this policy will be aimed at limiting the economic functions of the state and increasing the efficiency of regulation;
- to strengthen the financial provision of entrepreneurship, especially regional entrepreneurship, to create the necessary environment for further activation of alternative sources of finance, along with targeted public funding in this direction, this activity will be stimulated, to expand opportunities for start-up capital formation;
- to expand the scope of organizational measures aimed at the development of entrepreneurship in priority areas, to create institutions that provide sustainable and systematic services in various areas.
- to ensure the effective operation of the Export and Investment Promotion Fund, which will support the production of products in export-oriented areas, their delivery to world markets and measures to increase competitiveness to effectively realize the country's export potential;
- to create organizational models (industrial camps, business incubators, etc.) successfully applied in the world practice to support production entrepreneurship;
- to strengthen the measures taken to create a competitive environment that will allow businesses to benefit equally from the created business environment, to implement effective antitrust regulation;
- to implement a balanced tax, customs, tariff policy in the field of application of economic regulation methods, ensuring that the interests of the state (formation of budget revenues, economic security, etc.), entrepreneurs (an increase of profits) are brought to a single level in terms of public interests;
- to expand the state-entrepreneur dialogue, to complete the establishment of effective relations in this direction, to support the establishment of public unions of entrepreneurs;
- to strengthen guarantees of inviolability of property, including private property, to improve mechanisms for the protection of the rights of entrepreneurs;
- to carry out systematic measures for the realization of innovation potential, the scientific and personnel potential of the country will be involved in the realization of this direction;
- to support the realization of existing opportunities for the expansion of mutually beneficial cooperation between small, medium and large enterprises;
- to take measures aimed at attracting the wider social strata of the population, including youth, women and the disabled to entrepreneurial activities, etc.

Today, Azerbaijan imports goods from more than 100 countries. Most of these goods are similar to or close to the goods produced in Azerbaijan in terms of consumer demand and quality. It is even possible to produce these goods in Azerbaijan. In many cases, imported goods compete with domestically produced goods. Import duties

on such goods should be determined taking into account the ratio of the world and national costs, prices. This allows you to differentiate duty rates by product groups and types. Customs and tariff policy cannot be imagined outside the ongoing socio-political processes and economic policy in the country. This policy is an integral part of economic policy, and the customs authorities are directly involved in its development and implement it. Proper customs tariff policy creates new production potential in the country. Experience shows that such a policy bears fruit in Azerbaijan as well. Thus, in recent years, a significant part of the demand for food is already met by domestic production. So, the main production assets in domestic production have been renewed, new equipment and new technology have been brought to the country. It can be considered that this successful policy, which began with the measures of state regulation of foreign economic activity, should be continued, and important areas of the economy should be at the centre of attention.

Some necessary measures taken at the state level in Azerbaijan, work done to ensure equal rights and prevent monopolies in the import and export of strategic products, proper marketing of the domestic market, simplification of customs relations, liberalization of foreign trade, as well as a favourable investment climate creation and so on. These issues will undoubtedly lead to a significant expansion of the scope and geography of foreign economic relations.

Since the Development Concept "Azerbaijan 2020: Vision for the Future" and the "Strategic Roadmap for Agricultural Production and Processing in the Republic of Azerbaijan" approved by the relevant Decree of the President of the Republic of Azerbaijan are based on an export-oriented economic model, to further simplify, the priorities of the country's foreign trade policy in the medium term will be as follows:

- further liberalization of foreign trade and ensuring the maximum use of the country's export potential and continuing the process of accession to the World Trade Organization while ensuring the national economic interests of the country;
- to take appropriate measures to study and increase the access of agricultural and processed products to the target markets, which play an important role in the development of the regions;
- continuation of work to improve the relevant legislation for the unimpeded export of products of Azerbaijani origin to foreign markets;
- take appropriate measures to ensure the maximum use of benefits obtained under the Generalized System of Preferences;
- trade facilitation, as well as the continuation of work to reduce the time of paperwork and reduce costs;
- taking appropriate measures to further improve and enhance the provision of infrastructure for the development of foreign trade;
- optimization of tariff rates, reduction of non-tariff restrictions, application of import policy that will support the growth of domestic production and ensure the economic security of the country;
- stimulation of participation of exporting enterprises in international exhibitions and fairs to increase the access

of Azerbaijani products with comparative advantage to world markets;

- continuation of relevant work to join bilateral and multilateral agreements in the field of trade following the national interests of Azerbaijan;
- carrying out relevant work to study and develop opportunities for widespread use of e-commerce services in exports;
- to study the mechanisms of state support for exporters to expand exports, to carry out relevant work by banks to develop export credits to provide financial support to exporters, etc.

The limited domestic market for each country, lack of a single economic complex, specialization of industrial production and exports of raw materials, imperfect transport and communication infrastructure, as well as monopolization of industrial production at the initial stage of national development. is necessary. One of the main conditions for increasing the long-term efficiency of exports is the liberalization of foreign trade policy. This is primarily aimed at eliminating non-tariff barriers and quantitative restrictions on international exchange. At present, the government of the republic has chosen an export expansion strategy that combines certain elements of import substitution policy. In this regard, the ultimate goal of the foreign trade strategy of the Republic of Azerbaijan should be to reduce the dependence of the domestic market on imports, eliminate the export orientation of raw materials, and give impetus to the scientific and technological development of the country. Stimulation of exports and harmonization of import substitution policies are associated with some objective needs.

In general, the problem of forming an effective foreign economic policy is very important. Thus, it is not only one area of the problem of foreign trade development, but also closely related to domestic production, economic revival, its social orientation and, consequently, the political stability of the country. At the same time, it should be noted that the development of not only export-oriented sectors of the economy but also those aimed at the domestic

consumer market depends on the choice of the right direction of foreign economic policy and its effectiveness.

### Conclusion

In general, it is important to implement the following measures to expand and strengthen exports in the country, as well as to increase export potential:

- stimulation of participation of exporters in international exhibitions and fairs to increase the access of Azerbaijani products to world markets;
- reduction of non-tariff restrictions, optimization of tariff rates, application of import policy that will support the growth of domestic production and ensure the economic security of the country;
- continuation of work to reduce the time of registration during trade and reduce related costs;
- raising the quality standards of exported and export potential products and stimulating enterprises producing products following international standards in this direction and supporting the creation of national brands;
- application of modern trade policy methods based on scientific and practical methods following the national interests of the Republic of Azerbaijan to study international experience in the field of foreign trade and further improve foreign trade policy;
- investigation of discriminatory measures applied to agricultural products of Azerbaijani origin in foreign markets and implementation of appropriate measures if necessary, etc.

Thus, the development of competitive export potential in the Republic of Azerbaijan and the diversification of the structure of imports and the improvement of state policy in this area, on the one hand, create favourable conditions for local products to enter the world market, on the other hand, provide conscious protection of local producers from foreign competition. It allows to achieve exports with maximum efficiency and optimal structure, expand the range of products exported from the country and gradually increase the share of high-tech products in the export structure.

#### References

- 1. Azərbaycan Respublikası regionlarının 2019–2023-cü illərdə sosial-iqtisadi inki afi Dövlət Proqramı [State Program of socioeconomic development of the regions of the Republic of Azerbaijan in 2019-2023]. (2019). Baku. 184 p. [in Azerbaijdzhan].
- 2. "Azərbaycan 2020, Gələcəyə Baxı" Inki af konsepsiyası [On approval of the Development Concept "Azərbaijan 2020: vision for the future"]. (2012). Baku. 39 p. [in Azərbaijdzhan].
- 3. Azərbaycan Respublikasında kənd təsərrüfatı məhsullarının istehsalına və emalına dair Strateji Yol Xəritəsi [Strategic Road Map for the production and processing of agricultural products in the Republic of Azerbaijan]. (2016). Baku. 177 p. [in Azerbaijdzhan].
- 4. Azərbaycanın Statistik Göstəriciləri 2021: Statistik məcmuə [Statistical Indicators of Azerbaijan 2021: Statistical Bulletin]. (2021). Baku. 752 p. [in Azerbaijdzhan].
- 5. Aliyev, I., Soltanlının, I. (2017). Aqrar sahənin modernlə Thə və rəqabət qabiliyyətliliyinin təmin olunması problemləri [Problems of modernization and ensuring the competitiveness of the agricultural sector]. Baku, Avropa publishing house. 428 p. [in Azerbaijdzhan].
  - 6. Ibrahimov, I. H. (2016). Aqrar sahənin iqtisadiyyatı [Agrarian economics]. Baku. 655 p. [in Azerbaijdzhan].
- 7. Qurbanzadə, A. A. (2013). Dayanıqlı ərzaq təminatının iqtisadi əsasları [Economic bases of sustainable food supply]. Baku. 232 p. [in Azerbaijdzhan].

### Багірзаде А. Г. Напрями вдосконалення державної політики щодо формування та зміцнення експортного потенціалу сільськогосподарської продукції

Основною метою дослідження  $\hat{\epsilon}$  аналіз поточного стану сільськогосподарського виробництва, вивчення можливостей переробки та визначення напрямів удосконалення державної політики для підвищення експортного потенціалу. У роботі використовувалися статистичний, системний підхід, методи аналізу та узагальнення. У статті проводиться аналіз ролі

держави у збільшенні виробництва експортоорієнтованої сільськогосподарської продукції, підвищенні конкурентоспроможності та якості, покращенні технологічних можливостей виробництва молока та молочних продуктів, бавовни, м'яса та м'ясопродуктів, тютюну, винограду.

У дослідженні проаналізовано напрями вдосконалення державної політики у галузі збільшення виробництва наукомісткої продукції за рахунок забезпечення імпортозамінною сільськогосподарською продукцією та застосування науково-технічного прогресу. У статті розглядаються можливості збільшення виробництва сільськогосподарської продукції, дається оцінка діяльності переробних підприємств, аналізується переробний потенціал у цій сфері та визначаються напрями державної підтримки у цій сфері. У дослідженні аналізується взаємодія цих напрямів, перспективи розвитку та експортні можливості, а також вносяться відповідні пропозиції щодо ефективності та розвитку заходів.

*Ключові слова:* державна політика, сільське господарство, аграрний сектор, переробна промисловість, виробництво, експорт, інновації, реструктуризація.

### Bagirzadeh A. Directions for Improving State Policy to Form and Strengthen the Export Potential of Agricultural Products

The main purpose of the study is to analyze the current state of agricultural production, explore processing opportunities and identify areas for improving public policy to increase export potential. A statistical, systematic approach, analysis and generalization methods were used in the research work. The article provides an analysis of the role of the state in increasing the production of export-oriented agricultural products, improving competitiveness and quality, improving the technological capabilities of milk and dairy products, cotton, meat and meat products, tobacco, grapes.

The research analyzes the directions of improving the state policy in increasing the production of science-intensive products by providing import-substituting agricultural products and applying scientific and technical progress. The article examines the opportunities to increase the production of agricultural products, evaluates the activities of processing enterprises, analyzes the processing potential in this area and identifies areas of state support in this area. The study analyzes the interaction of these areas, development prospects and export opportunities, and makes relevant proposals on the effectiveness and development of measures.

Keywords: public policy, agriculture, agrarian sector, processing industry, production, export, innovation, restructuring.

### Багирзаде А. Г. Направления совершенствования государственной политики по формированию и укреплению экспортного потенциала сельскохозяйственной продукции

Основной целью исследования является анализ текущего состояния сельскохозяйственного производства, изучение возможностей переработки и определение направлений совершенствования государственной политики для повышения экспортного потенциала. В работе использовались статистический, системный подход, методы анализа и обобщения. В статье проводится анализ роли государства в увеличении производства экспортоориентированной сельскохозяйственной продукции, повышении конкурентоспособности и качества, улучшении технологических возможностей производства молока и молочных продуктов, хлопка, мяса и мясопродуктов, табака, винограда.

В исследовании проанализированы направления совершенствования государственной политики в области увеличения производства наукоемкой продукции за счет обеспечения импортозамещающей сельскохозяйственной продукцией и применения научно-технического прогресса. В статье рассматриваются возможности увеличения производства сельскохозяйственной продукции, дается оценка деятельности перерабатывающих предприятий, анализируется перерабатывающий потенциал в данной сфере и определяются направления государственной поддержки в данной сфере. В исследовании анализируется взаимодействие этих направлений, перспективы развития и экспортные возможности, а также вносятся соответствующие предложения по эффективности и развитию мероприятий.

*Ключевые слова:* государственная политика, сельское хозяйство, аграрный сектор, перерабатывающая промышленность, производство, экспорт, инновации, реструктуризация.

Received by the editors: 01.11.2021 and final form 16.12.2021

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-25-28

UDC 504:330.552:330.36

Sh. Abbasova, PhD (Economics), ORCID 0000-0003-3402-6041, e-mail: sh.abbas@mail.ru,

T. Orujova, PhD (Economics), Baku State University, Baku, Azerbaijan,

> **M. Orujova,** PhD (Economics), UNEC, Baku, Azerbaijan

### ECOLOGICAL APPROACH TO ASSESSING THE SUSTAINABILITY OF ECONOMIC GROWTH

At present, the world community, realizing the real threat of a global environmental catastrophe, has come to a common opinion on the issue of developing a concept for its further development both on a global and national scale. This concept has become the concept of sustainable development. Sustainable development is the achievement of such economic growth that will preserve the environment for the current and future generations. The most difficult problem of the transition to sustainable development is finding the optimal ways and means of combining the tasks of economic development and ensuring the environmental security of human life. As many experts in this field have emphasized, the main obstacle to sustainable development lies in the contradiction between the market nature of economic processes and the nonmarket nature of actions to protect the environment.

In connection with the transition of most countries of the world to a sustainable type of development, the question arose about how to assess Azerbaijan's progress in this direction and what macroeconomic indicators to use to analyze the sustainability of the country's economic growth. The existence of various formulations to characterize sustainable growth has led to the need to use various methods for assessing sustainability. Conditionally, these methods can be divided into several groups. One group evaluates sustainability based on the Lyapunov theory, which represents the development in the form of a trajectory of a dynamic system described as a system of differential equations [1]. The sustainability of a dynamic system means the stability of the equilibrium position. To assess the stability, statistical methods were used, such as the law of large numbers, the essence of which is that with an increase in the number of tests, the average values tend to some constants, as well as comparative statistical analysis in which the main macroeconomic indicators are compared with boundary data. It is necessary to note the role of optimal control methods for assessing stability [2]. What these models have in common is the choice of the quality criterion and the reliability of the

model. The next group of assessment of the sustainability of economic growth is associated with the wide use of various indices and indicators of sustainability, and also integral criteria [3].

According to the methodology developed by the UN Commission on Sustainable Development and the World Bank research, it is proposed to divide sustainability indicators, into economic, social and environmental ones [4]. If we consider these indicators separately, it will be difficult to make a correct conclusion about the level sustainability of the economy as a whole. In each group, a stability check is performed, then the results are combined using an integral criterion, the value of which must meet certain requirements.

Along with indicators, indexes are being developed and applied in practice [5]. An index is an aggregated or weighted indicator based on several other indicators or data.

The problems of aggregating diverse indicators into a single index were considered in the Commission's report UN on Sustainable Development. construction of an aggregated indicator would allow us to determine the degree of sustainability of economic development. This aggregated criteria can represented as a kind of analog of the main macroeconomic indicator which are now often used to measure the success of economic development. economic welfare. For example, macroeconomic indicators such as gross domestic product (GDP) or national income (NI) do not reflect the contribution of natural and human capital to the national wealth of a country. Therefore, these indicators cannot objectively assess the quality of development and do not at all indicate the high welfare of the country. Much depends on how the country achieves these high results. Leading international organizations and many countries have come to the conclusion that the gross domestic product does not reflect the true economic realities. Economic growth can mask environmental and social degradation and come at the expense of exploitation and depletion of natural resources. The disadvantage of this measure of economic development is that it does not take into account the goods and services associated with natural and human capital. And thus the real level of economic development is distorted.

One of the ways to bridge the gap between economic growth and improved welfare is to improve the quality of the national accounts system by incorporating human and natural capital. Countries that derive much of their income from natural resources cannot sustain economic growth by replacing the accumulation of physical capital with a deterioration in the quality of natural capital, for example, most of Azerbaijan's economic growth depends on the oil sector. In order to give an adequate picture of the development of the economy, some authors proposed to adjust macroeconomic indicators by the amount of depletion of natural capital, i.e. by the amount of reduction of natural resources reserves.

In 1993, the statistics division of the UN Secretariat proposed a system of environmental and economic accounting (SEEA), the purpose of which is to take into account the environmental factor in national statistics [6].

The system of ecological and economic accounting consists of several large blocks. In the first block, flows related to nature exploitation and environmental activities are highlighted. The second block describes the interactions between the natural environment and the economy in natural units. The third block discusses different approaches to the estimation of estimated costs using natural assets. The fourth block concerns the extended interpretation of the sphere of production in macroeconomic analysis. As a starting point in the development of the system of environmental and economic accounting, the method of inter-industry balance sheet and non-financial assets account is used. Environmental and economic accounting addresses the inclusion of natural capital in the national wealth, along with capital produced by human labor, and also provides an opportunity to assess environmental costs (depletion and impact on the quality of natural resources).

The system of environmental and economic accounting provides sample opportunities for macroeconomic analysis, in particular:

- wide statistical characterization of the state and changes of the environment;
- estimating of environmental processes and factors influencing them;
- obtaining one generalizing indicator, namely, the so-called environmentally "clean" national product or "eco-logical national product".

In the green accounts included environmental costs, the evaluation of the use and pollution of subsoil, soil, water, air, forests, etc. At the moment the difficulty of constructing a system of environmental accounts is that not all positions being statistics, as well as in translation of natural form into money. The disadvantage of this approach is that it is difficult to make comparisons between accounts in different units

of measurement, which is necessary when analyzing priorities or choices. One of the approaches to assess the sustainability of socio-economic development is the calculation of the indicator "Adjusted net savings" (Genuine saving) developed by English scientists D. Pearce and J. Atkinson. In the future, the practical implementation of this indicator was carried out by World Bank specialists K. Hamilton, D. Dixon, and others [7]. This indicator determines the level of welfare of the country. "Adjusted net savings" is the rate of accumulation of national savings after due consideration of the depletion of natural resources and damage from environmental pollution [8].

The concept of "Adjusted net savings" is closely related to the attempt of a new approach to measuring the national wealth of countries. The World Bank has calculated the values of natural, produced (physical or artificial) and social capital, as well as their share in the total national wealth of the country [9; 10]. Thus, the share of natural capital in the national wealth on average for more than 100 countries of the world is 2-40%, the share of human capital - 40-80%. In addition, in developed countries, the share of natural capital in national wealth on average does not exceed 10%, while the share of human capital is more than 70%. For many countries with low per capita incomes, the share of the agricultural component in natural capital is 80%, while in high-income countries this figure does not exceed 40%. Since 2000, the World Bank calculates annually for the whole world the indicator of "Adjusted net savings" as % of GNI (gross national income).

Indicator of "Adjusted net savings (GS – genuine savings)" is calculated according to the following formula:

GS = (GDS - CFC) + EDE - DPNR - DMGE, where GDS is gross domestic savings;

CFC – the indicator characterizing the depreciation of produced assets;

EDE – education costs;

DPNR – the indicator of the depletion of natural resources:

DMGE – the indicator characterizing the amount of damage caused by environmental pollution.

Gross domestic savings GDS is a statistical indicator that is calculated as the difference between gross domestic product and total private and public consumption.

Depletion is estimated as the difference between world prices and the cost of production of a resource, multiplied by its physical quantity produced. Energy depletion includes crude oil, natural gas, and coal.

Damage from greenhouse gas emissions is calculated as the actual amount of emissions multiplied by the social cost of the emission unit.

The cost of education is considered as an additional contribution to the sustainability of development, this indicator takes into account investment in human capital. This indicator is very important because it shows the need to compensate for the depletion of

natural capital by increasing investment in human and physical capital. In general, the UN experts consider the costs per person as an investment that ultimately ensures the growth of national wealth.

The significance of measuring GS for sustainable development policies is quite clear: consistently negative rates of this indicator show the formation of an anti-sustainable type of development and should inevitably lead to a deterioration in welfare. Calculations based on these methodologies for individual countries showed a huge discrepancy between traditional economic indicators and environmentally adjusted ones. Thus, for many countries of the world, the situation is relevant when the formal economic growth is environmental degradation, and environmental correction can lead to a significant reduction in traditional economic indicators up to negative values of their growth, which indicates their unstable growth. In other words, if the country's economy has high growth of GDP, then "Adjusted net savings" can reflect the opposite trend and indicate the main component of degradation. All these are typical signs of "anti-stable" trends in the development of national economies. For Azerbaijan, the indicator of "Adjusted net savings" is important because it shows the need to compensate for the depletion of natural capital by increasing investment in human and physical capital, as well as transferring part of the benefits from the sale of non-renewable natural resources to increase renewable natural capital. According to the 2008 World Bank report, which reflected the situation in 2006 in some post-Soviet republics, such as Azerbaijan, Kazakhstan, Kyrgyzstan, Russia and Estonia, and in several other African and Latin American countries, this indicator was negative [4]. Thus, the highest negative value of the studied indicator after African countries was achieved in Azerbaijan (39.7%) and Kazakhstan (-33.2%). In Russia, it is (- 13.8%), Estonia - (-20.9), and in Kyrgyzstan, although also negative, it is close to zero (-2.3%) of the GNI. This indicates show that economic growth in these countries is driven by natural resources. Against this background, the situation of the growth of environmental intensity, resource intensity, specific pollution, environmental degradation of the structure of

the economy is extremely dangerous for the future of these countries. This type of development cannot be considered sustainable; sooner or later, depletion of the nonrenewable part of natural capital and exhaustion of the assimilation potential of the environment will come.

Indeed, the oil sector plays a leading role in the economy of Azerbaijan. During the transition period, it was oil resources that attracted large foreign investments into the economy. The revenues received from oil helped to improve the material and technical base of the entire economy, solve important social problems, reduce poverty and, in General, improve the standard of living of the population. But the global economic crisis that began in 2008 showed the vulnerability and dependence of our economy on world oil prices. The fall in world oil prices has led to a sharp decline in economic growth and reduced income. In these conditions, there is a danger of the so-called "Dutch disease", one of the main symptoms of which is the concentration of investment in the oil sector, unequal development of regions. All this has forced the government to take a course on economic diversification, the main goal of which is to achieve independence of the country's economy from oil resources and sustainable development of the non-oil sector of the economy. Therefore, a new development strategy was adopted, the essence of which is to direct oil revenues to the development of the non-oil sector. Beginning from 2011, the shares of the oil and non-oil sectors in the total gross domestic product (GDP) have been equal. Since this period, there has been a stability growth trend in the non-oil sector. The main directions of development of this sector in Azerbaijan are agriculture, tourism, information and communication technologies, construction, transport, services, tourism, and energy. The government is successfully pursuing a strategy to transform "black gold" into human capital and use oil revenues to develop a competitive economy that is independent of these revenues in the future. The direction of oil revenues to the non- oil sector has led to serious success in the development of this industry. All this is reflected in the indicator of "Adjusted net savings", table shows the values of this indicator from the World Bank report for 2018 for some countries [5].

Table

Indicators of "Adjusted net savings"

Country	Adjusted net savings, % of GNI	Country	Adjusted net savings, % of GNI
Angola	-23.2	Singapore	35.7
Congo Rep.	-40	USA	5.9
Azerbaijan	9.5	United Kingdom	4.1
Kazakhstan	7.9	Germany	14.3
Russia	8.4	Бельгия	14.1
Estonia	14.8	Latvia	4.0
Kyrgyzstan	6.9	China	19.9

The table shows that in developed countries, the indicator of "Adjusted net savings" is positive. In the former Soviet republics, including Azerbaijan, the value

of this indicator went from negative to positive. And only in some African countries (Angola ,Congo ) is still negative.

All these changes indicate a well-chosen strategy that determines the direction of oil profits to diversify the economy. As a result of this strategy has been a steady growth in construction, tourism, agriculture, transport and information spheres, as well as in the field of communication technologies. Today, the non-oil

sector products produced in Azerbaijan are competitive and exported to various regions.

Thus, the use of oil and gas revenues has allowed our country to create a strong competitive economy independent of these revenues, thereby achieving sustainable economic growth.

#### References

- 1. Botasheva, L. S. (2009). Evaluation of sustainable development sectors of the economy of the region.. *Audit and financial analysis*, 1, pp. 1-5 [in Russian].
- 2. Daniel, N. (2000). Sustainable development: the methodology of mathematical research. *Bulletin KemSU «Mathematics»*, Issue 4, pp. 5-15.
- 3. Gurman, V. I. (2003). Simulation of sustainable development in view of innovation processes. *Economics and Mathematical Methods*, 1, pp. 3-11.
- 4. Indicators of Sustainable Development. UN Department for Policy Coordination and Sustainable Development. December, 1994.
- 5. David R. Anderson, Dennis J. Sweeney& Thomas A. Williams. Statistics for Business and Economics. Revised 13th ed. South-Western (Thomson Learning).
- 6. Bobylev, S. N., Kiryushin, P. A. and Kudryavtseva, O. V. (Eds.). (2019). Green economy and sustainable development goals for Russia. Moscow, Lomonosov Moscow State University, 284 p. [in Russian].
- 7. Dixon, J., Backes, J., Hamilton, K. et al. (2000). A new view of the richness of peoples. Indicators of environmentally sustainable development. Moscow, Dialogmsu [in Russian].
  - 8. Atkinson, G., Pearce, D. W. (1993). Measuring Sustainable Development. The Globe, 13.
- 9. World Development Indicators 2008. *The World Bank*. Retrieved from https://openknowledge.worldbank.org/handle/10986/11855?locale-attribute=en.
- 10. World Development Indicators 2018. *The World Bank*. Retrieved from https://databank.worldbank.org/source/world-development-indicators.

### Аббасова Ш. А., Оруджева Т. В., Оруджева М. Ш. Екологічний підхід щодо оцінки стійкості економічного зростання

У статті розглядаються різні підходи щодо оцінки національного багатства з урахуванням екологічного фактору, а саме існування природних ресурсів і нанесення збитків навколишнього середовища. Описується індикатор істинних збережень, розроблений Всесвітнім банком і щороку розраховується для всіх країн світу. Проведено загальний аналіз даних індикаторів для різних країн, у тому числі для Азербайджану. Відмітний знак цього індикатора до 2008 року показує, що економічний розвиток був пов'язаний з використанням природних ресурсів у нашій країні. Але правильно вибрана стратегія держави, спрямована на досягнення незалежності економіки цих країн від природних ресурсів, привела в подальшої зміни знака істинних збережень у зазначених країнах на позитивний, що свідчить про їх стійкий розвиток, що супроводжується зростанням добробуту.

*Ключові слова:* економічне зростання, стійкість, коректовані чисті збереження, валовий внутрішній продукт, валові внутрішні збереження.

#### Abbasova Sh., Orujova T., Orujova M. Ecological Approach to Assessing the Sustainability of Economic Growth

The article considers various approaches to the assessment of national wealth taking into account the environmental factor, namely, the depletion of natural resources and damage to the environment. It describes the "Adjusted net savings" indicator developed by the world Bank and calculated annually for all countries of the world. A comparative analysis of this indicator was conducted for various countries, including Azerbaijan. The negative sign of this indicator before 2008 shows that economic growth was associated with the depletion of natural resources in our country. But the well-chosen strategy of the governments aimed at achieving independence of the economies of these countries from natural resources, led to a further change in the sign of genuine savings in these countries to a positive one, which indicates their sustainable development, accompanied by an increase in welfare.

Keywords: economic growth, sustainability, adjusted net savings, gross domestic product, gross domestic savings.

### Аббасова III. А., Оруджева Т. В., Оруджева М. III. Экологический подход к оценке устойчивости экономического роста

В статье рассматриваются различные подходы к оценке национального богатства с учетом экологического фактора, а именно истощения природных ресурсов и нанесения ущерба окружающей среде. Описывается показатель истинных сбережений, разработанный Всемирным банком и рассчитываемый ежегодно для всех стран мира. Проведен сравнительный анализ данного показателя для различных стран, в том числе для Азербайджана. Отрицательный знак этого показателя до 2008 года показывает, что экономический рост был связан с исчерпанием природных ресурсов в нашей стране. Но правильно выбранная стратегия государств, направленная на достижение независимости экономик этих стран от природных ресурсов, привела к дальнейшему изменению знака истинных сбережений в указанных странах на положительный, что свидетельствует об их устойчивом развитии, сопровождаемому ростом благосостояния.

*Ключевые слова:* экономический рост, устойчивость, скорректированные чистые сбережения, валовой внутренний продукт, валовые внутренние сбережения.

Received by the editors: 14.09.2021 and final form 16.12.2021

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-29-32

UDC 330.4:330.342.24:338.436.3

N. Alieva,

PhD (Economics), Associate Professor, e-mail: aliyevanaila@rambler.ru, Azerbaijan State University of Economics, Baku, Azerbaijan

### ECONOMIC AND MATHEMATICAL MODELING OF THE INNOVATION PROCESS IN THE AGRO-INDUSTRIAL SECTOR

It is known that econometric modeling is a powerful method of economic analysis and forecasting [1, 2, 3]. Therefore, the author considers it appropriate to use the above method in the dissertation work. To analyze and predict some indicators of the agroindustrial sector, trend models were built for such indicators as the volume of AIS production, the volume of AIS fixed assets, the volume of investment in AIS, the volume of value added created in AIS. In addition, an econometric model was constructed that describes

the dependence of the volume of AIS production on the indicators of the volume of AIS fixed assets and the volume of investment in AIS. Note that the statistics of the indicator of the volume of innovative products are available only for 2011-2019, and at the same time they were subject to significant fluctuations, which did not allow for this indicator to build a statistically significant trend model with common economic sense.

The main information base of the dissertation work is presented below (Table 1).

Table 1

Information base of a number of AIS indicators, million mans (in current prices)

Years	Volume of agro-	Investments	Volume of fixed	Volume of	Volume of added
	industrial products	in AIS	production assets	innovative products	value
2000	736,6	41,0	6943,3	-	-
2001	811,2	15,6	7884,3	-	-
2002	839,3	7,2	9110,2	-	-
2003	1 063.4	13,5	11380,7	-	-
2004	1 098.6	8U	14198,9	-	-
2005	1265.8	42,8	1022,9	-	254,8
2006	1374,9	63,4	985,7	-	224
2007	1509.8	833	1071,1	-	282
2008	1669,6	82	1448,4	-	302,9
2009	1794,1	73,7	1615,8	-	540,8
2010	2225,7	96,4	2084,7	-	582,7
2011	2452,5	220,6	2186,7	3,9	644,4
2012	2923,1	203,1	2169,2	18,2	724,6
2013	2742	214,9	2139,8	8,9	719,2
2014	2879,1	190,9	2274,7	7	757,3
2015	2742,4	162,7	2344,8	0,7	719,7
2016	3543,4	96.8	2617,8	18,5	830,9
2017	3738	200.5	2651,3	0,5	959,6
2018	3914,2	400.1	2711,4	0,8	993,6
2019	4874,9	322,9	2919,5	0,3	12243

Source: official data of the State Statistics Committee of the Republic of Azerbaijan.

4 trend models were constructed, which were specified as follows:

LOG (Indicator) = C(1) + C(2)\*@TREND, (1) where LOG stands for the logarithm, the indicator takes one of the following values {Volume of agricultural products, Investment in AIS, Volume of fixed assets, Volume of value added}. The @TREND variable means time. The regression equation of the dependence of the volume of agricultural products on the volume of fixed

assets and investments is presented below by equation (2):

LOG (Volume of agricultural products) = 
$$= C(1) + C(2)*Fixed assets +$$

$$+ C(3) * LOG (Investment (-1))$$
. (2)

In equation (2), the Investment indicator (-1) means that the impact of the investment on the volume of agricultural products occurs 1 year late.

The main results of the econometric models are presented in Table 2.

### Main econometric results

Equation	Dependent variable	C	Time	Volume of fixed assets	Log (Volume of investment (-1))	Number of observations	Refined coefficient of determination
1	Log (Volume of	6.641052	0.095999			20	0.980597
	AIS products)						
	t- statistics	(192.9965)*	(31.00355)*				
2	Log (Volume of	2.975260	0.155793			20	0.718242
	investment						
	in AIS)						
	t- statistics	(12.08247)*	(7.030915)*				
3	Log (Volume of	6.617063	0.075833			15	0.926205
	fixed assets in						
	AIS)	(25.21012)*	(3.259648)*				
	t- statistics						
4	Log (Volume of	4.960888	0.116807			15	0.963888
	value added						
	created						
	in the AIS)	(58.34440)*	(16.23087)*				
	t- statistics						
5	Log (Volume of	6.240468		0.000536	0.101194	14	0.959278
	AIS products)						
	t- statistics	(32.54395)*		(9.225890)*	(1.805247)**		

Note. \* and \* \* means that the corresponding coefficient is statistically significant at 99.9% and 90%, respectively.

According to the constructed trend models, it can be argued that

- the volume of AIS products for 2000-2019 grew by an average of 9.59% per year (at current prices);
- the volume of fixed assets of the AIS for 2005-2019 grew by an average of 7.58% per year (at current prices);
- the volume of investment in AIS for 2000-2019 grew by an average of 15.58% per year (at current prices);
- the volume of value added created in the AIS for 2005-2019 grew by an average of 11.68% per year (at current prices).

Based on the constructed trend models, forecast values for 2020-2025 were constructed for a number of AIS indicators, which are presented in Table 3.

Table 3 Forecast values of a number of AIS indicators, (million mans) at current prices

2 of toust (whose of a manifest of first management) and the prices						
Index	2020	2021	2022	2023	2024	2025
Volume of AIS products	5750.44	6329.84	6967.62	7669.66	8442.44	9293.09
Volume of fixed assets in AIS	3675.90	3965.51	4277.92	4614.94	4978.52	5370.74
Volume of investment in AIS	516.42	603.48	705.21	824.10	963.03	1125.38
Volume of value added created	1475.91	1658.78	1864.30	2095.29	2354.91	2646.68

The table is constructed by the author on the basis of trend models for a number of AIS indicators.

The regression equation describing the dependence of the volume of AIS production on the volume of fixed assets and investments can be interpreted as follows:

- an increase in the volume of AIS fixed assets by 1 million manats will lead to an increase in AIS production by 0.054%;
- a 1% increase in the volume of investment in AIS will lead to an increase in AIS production by 0.10% with a delay of 1 year;
- changes in the volume of fixed assets and the volume of investment cause changes in the volume of AIS products by 95.93%.

All the constructed models are implemented using the econometric Eviews application software package.

Modern problems of managing economic entities often require the development of extraordinary solutions that are based on accurate mathematical calculations. Practice shows that those entities that widely use mathematical modeling tools in the areas of production and labor organization, marketing, financial and economic assessment and regulation, production and technological planning, crisis management and strategic forecasting, achieve great success and occupy leading positions in a particular business environment. These trends have recently gained particular popularity and

prospects in the field of agriculture. Based on econometric modeling, trend models are constructed for the following indicators:

- products of the agro-industrial sector (AIS);
- the volume of fixed assets of the AIS;
- the volume of investment in the AIS;
- the amount of value added created in the AIS.

With the help of trend models, it was possible to predict the volumes of the above indicators for 2020-2025.

According to the constructed trend models, it can be argued that:

- the volume of AIS products for 2000-2019 grew by an average of 9.59% per year (at current prices);
- the volume of fixed assets of the AIS for 2005-2019 grew by an average of 7.58% per year (at current prices);
- the volume of investment in AIS for 2000-2019 grew by an average of 15.58% per year (at current prices);
- the volume of value added created in the AIS for 2005-2019 grew by an average of 11.68% per year (at current prices);
- the volume of AIS's innovative products decreased by an average of 48.23% annually from 2011 to 2019.

Thus, we note that data on the volume of innovative products are available for 2011-2019, while they were subject to significant fluctuations, which in turn did not allow us to build a statistically significant trend model for this indicator.

In addition, an econometric model of the volume of AIS production is constructed as an explicable variable from such explanatory factors as the volume of AIS fixed assets and the volume of investment in AIS.

All the constructed models are implemented using the econometric Eviews application software package.

The corresponding trend models are presented below:

$$LOG(AIS\_PRODUCTION) = 6.64105210858 + + 0.0959987070137*@TREND,$$
 (3)

LOG(ASSETS) = 6.61706344629 + +0.0758331786325\*@TREND + + [AR(1)=0.719073449491, UNCOND, ESTSMPL="2005 2019"], (4)

LOG(ADDED\_VALUE) = 4.9608882587 + + 0.116807196167\*@TREND + + 0.222861539561\*DUMMY\_2009\_2010 + + [AR(5)=-0.800010823335, UNCOND,ESTSMPL="2005 2019"], (6)

where APO\_PRODUCTION denotes the volume of APO production in value terms, ASSETS – the value of fixed assets in AIS, INVESTMENTS – the volume of investment in APO, ADDED\_VALUE – the added value created in AIS. @TREND means the time variable, AR(1) – the variable entered in the trend model means the first – order autocorrelation, AR(5) – the variable entered in the trend model means the fifth-order autocorrelation, the variable DUMMY\_2009\_2010-is a qualitative variable, and takes the values 1 in 2009 and 2010, and in the remaining years the value 0 (zero).

The econometric model of the volume of AIS output from the volume of AIS fixed assets and the volume of investment in AIS is presented below:

 $LOG (AIS_PRODUCTION) = 6.24046752916 +$ 

- + 0.00053647684835\*ASSETS +
- + 0.101193578547\*LOG(INVESTMENTS(-1)). (7)

### APO production

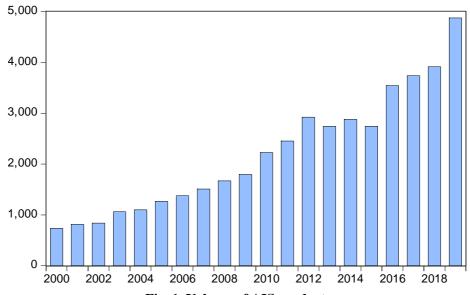
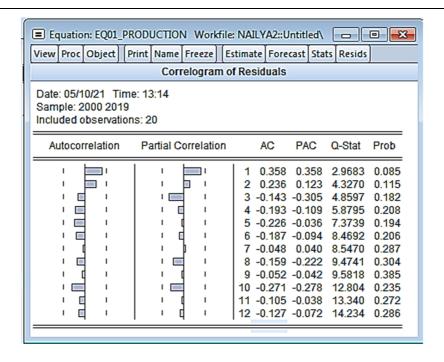


Fig. 1. Volume of AIS products



#### Literature

- 1. Damodar N. Gujarati, Dawn C. Porter, Sangeetha Gunasekar. Basic Econometrics (Fifth Edition). Published by Tata McGraw-Hill Education Pvt. Ltd, 2013.
  - 2. Wooldridge J. Introductory Econonometrics, Fourth edition, South-Western. 2012.
  - 3. Damodar N. Gujarati. Econometrics by Examples. Published by Palgrave. 2014. 2-nd edition.
  - 4. The State Statistical Committee of the Republic of Azerbaijan. URL: www.stat.gov.az.

#### References

- 1. Damodar N. Gujarati, Dawn C. Porter, Sangeetha Gunasekar. (2013). Basic Econometrics (Fifth Edition). Published by Tata McGraw-Hill Education Pvt. Ltd.
  - 2. Wooldridge, J. (2012). Introductory Econonometrics, Fourth edition, South-Western.
  - 3. Damodar N. Gujarati. (2014). Econometrics by Examples. Published by Palgrave. 2-nd edition.
  - 4. The State Statistical Committee of the Republic of Azerbaijan. Retrieved from www.stat.gov.az [in Azerbaijdzhan].

### Алієва Н. Р. Економіко-математичне моделювання інноваційного процесу в агропромисловій галузі

Сучасні наукові дослідження в агропромисловій сфері все частіше базуються на різних математичних розрахунках. На практиці особливого значення набувають саме економіко-математичні моделі. Особливу цінність і поширення дані методи і підходи отримали саме у виробничому середовищі, але в сучасних умовах виробничо-економічної діяльності все більше галузевих господарюючих суб'єктів стикається з питаннями застосування математичних моделей з метою підвищення ефективності управління інвестиційними ресурсами.

*Ключові слова:* економетрична модель, обсяг основних фондів, обсяг інвестиції, обсяг доданої вартості, обсяг інноваційної продукції.

### Alieva N. Economic and Mathematical Modeling of the Innovation Process in the Agro-Industrial Sector

Modern scientific research in the field of agriculture is increasingly based on various mathematical calculations. In practice, it is the economic and mathematical models that are of particular importance. These methods and approaches are particularly valuable and widespread in the production environment, but in the modern conditions of production and economic activity, more and more industrial economic entities are faced with the application of mathematical models in order to improve the efficiency of investment resource management.

*Keywords:* econometric model, volume of investment in AIS, volume of fixed assets of AIS, volume of investment in AIS, volume of value added, volume of innovative products of AIS, volume of fixed assets of AIS.

### Алиева Н. Р. Экономико-математическое моделирование инновационного процесса в агропромышленной отрасли

Современные научные исследования в агропромышленной сфере все чаще базируются на различных математических расчетах. На практике особую значимость приобретают именно экономико-математические модели. Особую ценность и распространение данные методы и подходы получили именно в производственной среде, но в современных условиях производственно-экономической деятельности все больше отраслевых хозяйствующих субъектов сталкивается с вопросами применения математических моделей с целью повышения эффективности управления инвестиционными ресурсами.

*Ключевые слова:* эконометрическая модель, объем основных фондов, объем инвестиции, объем добавленной стоимости, объем инновационной продукции.

Received by the editors 20.09.2021 and final form 16.12.2021

#### Finance

**UDC 336.74** 

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-33-38

S. Abbasov,

DrHab (Economics), Associate Professor, e-mail: server.abbasov@gmail.com, Baku State University, Baku, Azerbaijan

### IMPROVING CASH FLOW MANAGEMENT

### 1. Introduction

In a modern market economy, cash is one of the most scarce resources, and the success of enterprises and organizations depends on their more efficient use. With the help of indicators that characterize cash flows, a company can reveal additional income-generating opportunities and self-financing opportunities.

Effective cash flow management is a specific function of financial management and is an important factor in reducing the company's solvency risk, asset management and economic growth.

Cash flow is a key indicator of a company's development, as it shows the amount of cash available to the company to produce competitive products, apply innovative technologies and enter new markets. Thus, cash flow reflects the company's ability to invest freely, create reserve funds and use profit as an investment.

The implementation of continuous cash flow is an important prerequisite for strengthening the company's position in the market. In this regard, the company needs to improve cash flow management methods and improve its organizational and functional mechanisms. In this regard, the problems of improving the organizational and functional mechanism of cash flow management are of particular relevance and there is an urgent need for their study.

### 1.1. Cash flow as an object of financial management

To determine the nature, purpose and objectives of cash flow management, you need to look at the different views of famous economists on financial management.

American scientist James van Horn in the book "Fundamentals of financial management" outlined the theoretical and methodological foundations of financial management and called the term "financial management" capital management. Due to the effectiveness of attracting and distributing capital, the financial director contributes to the development and competitiveness of the company, as well as to the development of the economy as a whole [17, p. 10-11].

Russian scientists V. Bocharova and V. Leontiev consider financial management as the art of managing the company's finances in terms of the formation and use of capital, income and cash flows [6, p. 21].

In his research, V. Ostapenko considers financial management as the process of managing the finances of

an enterprise, developing management goals and making an impact on finance (monetary relations). [14, p. 252].

In V. Kovalev's works, financial management is considered as a system of relationships between various entities, despite the attraction and use of financial resources. [11, p. 7]. In this context, financial management consists of four main divisions: analysis and planning of general finances, management of financial resources, investment management and ongoing financial management. In this definition, financial resources are specifically designated as an object of financial management.

The correct view of cash flow as an object of financial management is explained in the work of I. Balabanov. The author believes that financial management is focused on managing financial relations and the movement of financial resources between business entities during the movement of financial resources [5, p. 18].

In the textbook on financial management, L. Pavlova, financial management is defined as follows: Financial management is the process of managing funds by using the influence mechanism [8]. The logical conclusion from this definition is that the process of financial management of an enterprise is an integral part of the management of the enterprise as a whole and expresses a set of means and methods of influencing the object of management to achieve a certain goal. Financial management of the enterprise directs financial resources to the development of business activities at the most appropriate time.

In his work, M. Romanovsky describes financial management as a special area of asset management, capital formation and the targeted organization of cash flows necessary to achieve the strategic goals of an enterprise [7, p. 56].

Thus, there is no consensus in many of these opinions that cash flow management is perceived as an object of financial management.

In our opinion, the definition of an object of financial management requires special discussion, since the solution of many theoretical and methodological issues depends on it. The object of financial management may vary, and its choice depends on the financial policy of the business entity and the goals of

the proposed management. In most cases, the object of financial management is turnover of cash flow and fund flow arising in the process of financial and economic activity of the enterprise. Nevertheless, financial resources dominate as an object of financial management and this is absolutely true: an enterprise can work only if there are sufficient financial resources, and expanded reproduction also implies the continuation of the process of formation, distribution, redistribution and use of financial resources.

1.1.1. Economic content and classification of cash flows

In a modern market economy, each business entity freely chooses its development strategy and tactics, presenting self-financing as a priority. Cash flow in the enterprise is constantly happening. Technological improvements caused by significant investments, changes in inflation and interest rates, tax reforms, affect the cash flow in the enterprise.

A cash flow statement is important as a source of information. This information is used by both financial managers and investors, and entrepreneurs use it to solve additional issues, such as creating additional assets, paying off debts and new investments.

The concept of "cash flows" first became the subject of research by scientists in the United States in the first, in connection with the activities of the securities market. American scientists have developed a method for calculating, analyzing and forecasting cash flows of the firm, and the term "cash Flow" has begun to be recognized internationally.

In the Oxford Dictionary, cash flow is defined as the movement of money into and out of business when goods are bought and sold.

M. Romanovsky describes the cash flow as a result of the cash flow of the company over time, that is, the total difference between the cash flow of the company and their repayment for the period [7]. B. Colass gives a more specific definition of cash flows as the excess of cash that arises in the enterprise as a result of all operations that are directly related and unrelated to economic activities [9, p. 135].

V. Bocharov characterizes cash flow as the distribution of cash flows by time and place created in the production process. From the point of view of J. Pearls, cash flows correspond to the resources generated by the activities of the company for a certain period of time. This is an expression of the company's development potential in the context of full self-financing" [6].

A more detailed presentation of cash flows was provided by J. Van Horne. He compares cash flows with the human circulatory system, representing the enterprise as a living organism. According to him, if the cash flow management system works continuously and efficiently, then the financial condition of the enterprise as a living organism will be healthy and constantly developing.

Given the importance of the cash flow category for financial management, it should be clarified both broadly and narrowly.

Cash flow in a broad sense means the timely distribution of cash flows, which is manifested as a result of the company's activities. The scale of cash flows in practice can be very different, and the financial Manager must explain in a narrow sense the category of cash flows, which refers to the management of a specific object, the timely distribution of incoming and outgoing funds at a certain scale.

There is no unanimous view of the existence of cash flow cycles. French economist B. Colass argues that the concept of a cycle, understood as a sequence of operations that are reproduced with a certain frequency, is suitable for describing production operations (except for enterprises with a long production cycle). But this understanding of the cycle is not suitable for describing investment and financial transactions, and certainly does not correspond to the description of operations with cash. Cash transactions, even if they fully meet their function, cannot be represented in a cycle [9, p. 52].

Summarizing the opinions of various scientists about cash flows in the economic literature, we can conclude that the cash flow cycle of an enterprise is a certain period of time during which assets are returned as a result of using these assets.

The cash flow at the enterprise can be presented as a schematic illustration of the cash flow from the sale of goods to the final distribution of profits and the formation of financial resources.

Various cash flows that occur in an organization are classified according to the purposes of analyzing, planning, and controlling cash flows.

V. Kovalev proposes to analyze cash flows in four directions; current, investment, financial and other activities. In our opinion, each of the industrial enterprises always has some economic operations that cannot be seriously attributed to any of these areas. Therefore, other activities may include targeted funding or values purchased for free. The cash flows generated by the current activities of the enterprise are often transferred to the area of investment activity and used to develop production, and can also be converted into financial activity to pay dividends to shareholders. In fact, current activities are often supported by financial and investment activities, which puts pressure on a number of enterprises in unstable economic conditions.

The second most important feature of the classification of cash flows is the scale of servicing financial and economic processes, as a generalized indicator of which is the cash flow of the enterprise. It characterizes the receipt and expenditure of funds at the level of the enterprise as a whole.

The most valuable classification used in financial management is the cash flow differentiation used in valuing a company. The most important of them are:

1. Free cash flows of a company are actual cash flows arising from its core business, that is, total cash

flows that remain after tax and are distributed between creditors and property owners. This can be considered as cash flow after taxes, which falls into the ownership of the owner of the company in the conditions if he has no debt obligations.

- 2. Total cash flow the cash flow generated by the company is the amount available for investment in support and development of the business. The category "investment cash flow", which is differentiated to measure a company, is inherently consistent with the cash flows of investing activities.
- 1.1.2. Methodological foundations of cash flow management

Management of financial resources, including cash flows, in a market economy is a complex and responsible activity. In real economic terms, financial flows can be in cash or in monetary documents. An enterprise's financial resources are a set of cash flows in the form of cash flows in bank accounts and cash registers.

The concept of cash flows arose in the United States in the mid-twentieth century, and its main provisions were developed by foreign economists.

Cash flow management includes the following key blocks:

- identification of cash flows for certain types;
- determination of the total amount of cash flows of different types;
- distribution of the total amount of various types of cash flows at individual intervals;
- analysis and assessment of internal and external factors affecting the formation of cash flow.

The implementation of these measures is carried out within the framework of its financial policy, creating an effective financial management system that ensures the achievement of strategic and tactical goals of the company.

The cash flow management methodology provides an overview of the general principles and management methods that are reflected in the respective methodologies. The main and permanent principles of management are considered to be the provisions that underlie cash flow management and are characteristic of all financial management systems. Cash management is based on the following key principles:

- information accuracy the management process must be provided with the necessary database;
- balancing balancing is achieved by synchronizing the positive and negative cash flows of the company by type of activity, volume, time interval and other significant characteristics;
- ensuring the effectiveness of cash flows through financial investments of the company;
- liquidity provision- Liquidity is achieved by optimizing cash balances in accordance with the volume of term liabilities.

These principles can be the basis of the cash flow management process of any business entity.

The goal of cash flow management is to ensure the financial balance of the company in the development process by balancing and timely synchronization of cash inflows and expenditures.

To achieve this goal, it is necessary to solve the following tasks in the cash flow management process:

- ensuring the balance of cash flows
- ensuring timely synchronization of the formation of cash flows:
- providing an increase in the company's net cash flow.

However, restricting cash flow management functions only through balancing and synchronization undermines management effectiveness.

The main objects of cash flow management are:

- positive cash flow (cash inflow);
- negative cash flow (cash flow expense);
- net cash flow;
- cash balance.

The subjects of cash flow management are the company's financial services, which depend on the composition and number of employees, and depend on the size, structure, types of activities and other factors of the company's activity.

1.1.3. Organizational and functional mechanism for managing cash flows

Various aspects of the organizational and economic mechanism were studied in the works of domestic and foreign economists. I. Balabanov interprets the organizational and economic mechanism of an enterprise as a financial mechanism, a systematic action of financial levers, which is expressed in planning, organizing and stimulating the use of finance [5, p. 25].

- T. Makushkin identifies five main elements in the organizational and economic management mechanism, each of which in turn expresses the mechanism of a certain type of enterprise activity: the mechanism of financial activity; the mechanism of working with consumers; the mechanism of functioning of internal processes of the enterprise; the mechanism of the enterprise as a developing system; the information mechanism of the enterprise [12, p. 15].
- A. Sheremet and P. Sayfulin's financial mechanism elements include the following [16, p. 13-14]:
- financial relations arising from lending, investment, taxation, insurance, current financing, payroll deductions and payments;
- -a set of financial indicators: profit, income, financial sanctions, price, dividends, interest, salaries, taxes, etc.
- financial methods are understood as financial accounting, financial analysis, financial planning,
- legislative, regulatory, informational and methodological support of management.

The traditional organizational and functional mechanism is defined as a complex set of elements, structure and functional tasks that are interconnected organizationally, economically and technologically

Such interaction has a clear organizational and functional subordination. Thus, the organizational-functional mechanism of cash flow management refers to a set of elements that interact with each other and act as a whole.

The organizational and functional mechanism for managing cash flows represents two interrelated areas: organizational and legal (enterprise management structure) and functional (determination and consolidation of professional rights and obligations of each of the responsible persons).

The composition of elements of an organizational and functional cash flow management mechanism, its ultimate goal and the choice of tasks to achieve it depend on the following factors:

- differences in sectoral and territorial characteristics of financial and economic activities
- improving the legal regulation and structure of debt obligations of state and regional authorities and the conditions for their implementation
- optimal organizational structure that ensures the efficiency of all departments of the enterprise;
- excellence in information technology provided to experts for data analysis in order to make appropriate decisions on cash flow management;
- differences in operating, investing and financing activities.
- 1.1.4. Identification of shadow cash flows in financial management

The target management system, which involves the use of production, marketing, innovative and financial methods, is widely used in the process of forming and implementing a corporate financial management strategy. The financial method used to manage the value of the company is complex, integrated and affects other management methods.

The specifics of the financial management method is determined by its ability to participate in the following tasks:

- impact on costs and profitability;
- minimizing the cost of raising funds;
- capital structure optimization;
- qualitatively structure cash flow;
- determine the allowable amount of receivables and payables;
  - financial risk management;
- ensure the implementation of effective investment projects;
  - company budgeting;
  - implementation of an effective dividend policy;
  - to ensure the profitability of assets;
- determine the dynamics of indicators reflecting the final results of the company.

Within the framework of the above tasks, the company can operate in various schemes related to shadow cash flows. This is due to the fact that it has a one-sided and simple effect on key economic indicators, that is, on the manipulation of financial results. Holding companies usually carry out commercial, investment

and financial operations in the national and foreign markets, as well as in the markets of countries where they have branches. This means that large companies can distribute cash flows between several countries. The financial method used to manage the value of the company is divided into three areas: operations, investment activities, the formation of the structure of private and debt capital. This approach is used in preparing a cash flow statement and is generally accepted.

The ability to identify shadow cash flows in financial management is associated with determining the impact of factors on the growth of the economic potential of the enterprise. The realization of this task is convincing if the increase in the value of the company occurs in the phase of recession of the economic cycle, and also if the increase in value occurs in the context of the upward cycle, it is possible, although it is very difficult.

This traditional approach does not take into account the cyclical deviation of the global economy and the company's ability to form a growth point. This is explained by the fact that for subsidiaries, the cost is estimated separately, and then added to the cost of the parent company to determine the integrated indicator. At the same time, this does not take into account the possibility of creating a synergistic effect within the overall financial strategy. It is believed that it manifests itself as a result of a simple pooling of resources and activities, rather than through the use of shadow cash flows due to the purposeful efforts of the manager.

A value-based approach to identifying the potential of shadow cash flows in financial management to increase the value of a company should be based on the cyclical nature of the global economy. Although this is somewhat contrary to the probability of market efficiency, the market value of which is based on all the information coming to the market, and therefore corresponds to an objective real price.

### 2. Conclusions

- 1. A more accurate definition of cash flow corresponds more to the term "cash flow", which refers to the difference between the inflow and outflow of funds and the various types of assets that serve the financial and business activities of the company.
- 2. It is impossible to identify the concepts of financial flow and cash flow, since financial flow is a structural element of cash flow. The types of cash flows directly depend on the cash flow accounting system, as indicated in International Financial Reporting Standards.
- 3. Qualitative characteristics of cash flows can be estimated by the cyclical sequence of economic processes in the company and presented in the form of a cash flow diagram of the company.
- 4. Management of cash flows mainly occurs in the course of the financial and economic activities of the company and ensures its financial stability.

5. Cash flow management is a complex process that uses a combination of methods, tools, and special techniques that constantly affect cash flows to achieve the company's strategic goal.

6. To improve cash flow management, it is important to develop the perfect organizational and functional mechanism with more precise consideration of the specifics of the company's activities and the characteristics of industries.

#### References

- 1. Abbasov, A. B., Abbasov, S. A. (2017). Fundamentals of business. Baku, Science and education publishing house.
- 2. Abbasov, A. B., Abbasov, S. A. (2015). Business Finance. Baku, "University of Economics" publishing house.
- 3. Abbasov, A. B., Abbasov, S. A. (2016). The Role of small business in the socio-economic development of Azerbaijan. *Tax Journal of Azerbaijan*. No. 1.
- 4. Abbasov, S. A. (2015). Effective cash flow management as an important lever of financial management. *Russian entrepreneurship*, No. 14.
  - 5. Balabanov, I. T. (2000). Financial analysis and planning of an economic entity. Moscow, Finance and statistics. 208 p.
  - 6. Bocharov, V. V., Leontiev, V. E. (2004). Corporate Finance. SPb., Peter. 544 p.
  - 7. Romanovsky, M. V. (Ed.). (2000). Business Finance. St. Petersburg, "Publishing House Business Press". 528 p.
- 8. Cheglakova, S. G. (2017). Information support of cash flow management in the assessment of financial risks. *Economics and entrepreneurship*, No. 2.
- 9. Colass, B. (1997). Management of the financial activities of the enterprise. Problems, concepts, methods. Moscow, Finance and statistics.
- 10. Surikova, K. Y. (2015). Institutional trust in money as a factor in the development of the monetary sphere. *Candidate's thesis*. Samara. 169 p.
  - 11. Kovalev, V. V. (1999). Introduction to financial management. Moscow, Finance and statistics. 768 p.
- 12. Makushkin, T. V. (2006). Formation of the organizational and economic mechanism of industrial enterprise management. *Candidate's thesis*. Saratov. 195 p.
- 13. Modern monetary policy: justified criticism or typical misconceptions of the expert community? *Scientific and practical peer-reviewed journal "Voprosy Ekonomiki"*, 2015, No.6.
  - 14. Ostapenko, V. V. (2004). Business finance. Moscow, Omega-L. 304 p.
  - 15. Sheremet, A. D., Sayfullin, R. S., Negashieva, E. V. (2015). Methodology of financial analysis. Moscow, INFRA-M. 128 p.
  - 16. Sheremet, A. D., Sayfullin, R. S. (1999). Business finance. Moscow, INFRA-M. 343 p.
  - 17. Van horn D. (2001). Fundamentals of financial management. Moscow, Williams. 1988 p.
- 18. Volkov, I. I. (2015). The interaction of monetary policy as a way to overcome the crisis in Russia. *Bulletin of the Russian Economic University named after G. V. Plekhanova*, No 3.
- 19. Zavalishin, A. A., Gurieva, L. K. (2015). Application of the net asset value method for evaluating enterprises. Moscow, INFRA-M. 200 p.

### Аббасов С. А. Удосконалення управління грошовими потоками

У статті розглядаються різні науково-теоретичні погляди відомих економістів на сутність, призначення та завдання грошового потоку як об'єкта фінансового менеджменту та зроблено відповідні висновки. Грошовий потік має унікальну властивість фінансової ліквідності і повною мірою реалізує економічні функції.

Управління грошовими потоками є фінансовим інструментом, що дозволяє досягти високих кінцевих результатів фінансово-господарської діяльності підприємства, тобто максимізувати прибуток. Розглянуто принципи, методи та комплексний аналіз управління грошовими потоками. Детально описано етапи процесу управління грошовими потоками та їх інформаційне забезпечення. Розглянуто принципи та етапи створення організаційно-функціонального механізму управління грошовими потоками та підкреслено, що формування відповідного механізму управління грошовими потоками дозволить підприємству залучити додаткові інвестиції для здійснення поточної діяльності та виходу на зовнішні ринки, у тому числі на фондові ринки. Детально досліджено питання розкриття тіньових грошових потоків у фінансовому менеджменті та визначення його ролі у підвищенні вартості компанії та ризиків, які пов'язані з макроекономічним регулюванням.

Є обгрунтовані пропозиції та рекомендації щодо вдосконалення механізму управління грошовими потоками.

*Ключові слова:* грошовий потік, фінансовий менеджмент, фінансові методи, фінансові інструменти, організаційнофункціональний механізм, тіньові грошові потоки.

#### Abbasov S. Improving Cash Flow Management

The article discusses various scientific and theoretical views of famous economists on the essence, purpose and objectives of cash flow as an object of financial management and makes appropriate conclusions. Cash flow has a unique property of financial liquidity and fully implements the economic functions that relate to it.

Cash flow management is a financial tool that allows you to achieve high final results of the financial and economic activities of the company, that is, maximize profits. The principles, methods and a comprehensive analysis of cash flow management are considered. The stages of the cash flow management process and their information support are described in detail. The principles and stages of creating an organizational and functional cash flow management mechanism were considered and emphasized that the formation of an excellent cash flow management mechanism will allow the company to attract additional investments to carry out its current activities and enter foreign markets, including the stock market. Issues of disclosing shadow cash flows in financial management and determining its role in increasing the value of the company and the risks associated with macroeconomic regulation have been studied in detail.

There are reasonable suggestions and recommendations for improving the cash flow management mechanism.

Keywords: cash flow, financial management, financial methods, financial instruments, organizational and functional mechanism, shadow cash flows.

#### Аббасов С. А. Совершенствование управления денежными потоками

В статье рассматриваются разные научно-теоретические взгляды известных экономистов на суть, назначение и задачи денежного потока как объекта финансового менеджмента и сделаны соответствующие выводы. Денежный поток обладает уникальным свойством финансовой ликвидности и в полной мере реализует экономические функции.

Управление денежными потоками является финансовым инструментом, позволяющим достичь высоких конечных результатов финансово-хозяйственной деятельности предприятия, то есть максимизировать прибыль. Рассмотрены принципы, методы и комплексный анализ управления денежными потоками. Подробно описаны этапы процесса управления денежными потоками и их информационное обеспечение. Рассмотрены принципы и этапы создания организационнофункционального механизма управления денежными потоками и подчеркнуто, что формирование соответствующего механизма управления денежными потоками позволит привлечь предприятию дополнительные инвестиции для осуществления текущей деятельности и выхода на внешние рынки, в том числе на фондовые рынки. Подробно исследованы вопросы раскрытия теневых денежных потоков в финансовом менеджменте и определения его роли в повышении стоимости компании и рисков, связанных с макроэкономическим регулированием.

Обоснованы предложения и рекомендации по совершенствованию механизма управления денежными потоками.

*Ключевые слова:* денежный поток, финансовый менеджмент, финансовые методы, финансовые инструменты, организационно функциональный механизм, теневые денежные потоки.

Received by the editors: 12.10.2021 and final form 16.12.2021

### **Marketing and Logistics**

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-39-44

UDC 658.7:338.47:339.138

Ie. Chebotarov,
PhD (Economics),
ORCID 0000-0001-5963-7637,
e-mail: iegor.chebotarov@gmail.com,
Luhansk Taras Shevchenko National University, Starobilsk

### "LUBLIN TRIANGLE": PROSPECTS FOR THE FORMATION OF A TRANSPORT AND LOGISTICS CLUSTER (ASPECTS OF MODERN MARKETING MANAGEMENT)

**Formulation of the problem.** An analysis of the dynamics of pan-European disintegration trends, manifested, in particular, in the inability of the world community to develop an effective policy to counter Brexit and the COVID-19 pandemic, confirms the need to search for new determinants of reliable international cooperation and the creation of sustainable international organizations. A similar kind of determinant can be such a phenomenon of economic comparative studies and international entrepreneurship as national business cultures.

The comprehensive development of the theoretical and practical aspects of this problem gives reason to assume that national business cultures can indeed become a reliable basis for creating new stable integration associations of states and their business structures. At the same time, objective studies show that there cannot be many long-term international organizations; it is expedient to create them, first of all, within the framework of unique alliances of relatively few participating countries. One of these international organizations could be the cooperation platform "Lublin Triangle" consisting of Poland, Lithuania and Ukraine, the creation of which was announced in late July 2020 [1]. It is significant that the expediency of forming a new integration association of Poland, Lithuania and Ukraine based on the complementarity of their national business cultures was iustified even before the announcement by the foreign ministers of these states of the establishment of the Lublin Triangle in late July 2020 [2].

In the context of understanding the role of national business cultures as a factor in the creation of the "Lublin Triangle", an assumption was made about the cooperation of these countries in the field of transport as the most priority area with a high economic effect and concomitant institutional benefits [3].

The basis for such cooperation can be the creation on the basis of the "Lublin Triangle" using modern marketing management of an innovative transport and logistics cluster (TLC) as a system of transport and logistics hubs (TLH).

Analysis of recent research and publications. In general, the problem of clustering, as well as the problem of creating clusters in the transport and logistics sector, is not new to the world and Ukrainian economic science. M. Porter is considered to be its founder, who understood a cluster as a geographic concentration of interaction between related companies [4]. At the same time, attempts to improve the territorial and sectoral distribution of productive forces in the former USSR should not be ignored, to some extent similar in content, within the framework of the creation of economic councils.

The general economic nature of clusters as a phenomenon of the economy was studied in details by D. Rutko [5], S. Hrudnytska [6], M. Voynarenko [7] and others. In modern Ukrainian science, transport and logistics aspects of clustering at the regional level are fruitfully developed by V. Liashenko [8], H. Pushak [9], N. Trushkina [10].

Approaches to the creation of the "Lublin Triangle" and the prospects for the development of this new platform have already received some attention [2; 3; 11]. However, attempts to substantiate the expediency of forming a TLC within the framework of the "Lublin Triangle" (or on its basis), especially as a system of hubs, in Ukrainian science, as well as in Polish and Lithuanian, remain unknown.

The purpose of the article is to substantiate, on the basis of modern marketing management, an innovative proposal in terms of its institutional, economic and functional-technological content, on the advisability of forming TLC as a system of TLC on the basis of the international organization-platform "Lublin Triangle" with the identification of the essential parameters and functions of the cluster, as well as the definition networks of corresponding hubs.

**Presentation of the main material.** TLC in the modern understanding of transport as a sub-complex of the production-technological, economic and social system of the national and supranational (when it comes to the European Union) levels, should be considered as ordered on the sub-division of hubs, the collection of spaciously designated subjects of the government of all

types of transport, the infrastructure of their roads and engineering industries, as well as disputed business with them, establishing management bodies, as functioning on contractual planes and ensuring horizontal and vertical cooperation.

Based on the technical and functional features of the logistics nature for the Baltic countries and the corresponding associated institutional components, cooperation between Poland, Lithuania and Ukraine in this area should be spoken of precisely as a basis for more extensive cooperation on a country-by-country basis. That is, Latvia and Estonia can also be participants in the proposed TLC in full and without any exceptions (for this reason, the cluster itself, in this case, can be called, for example, as the Baltic-East European TLC).

It should be noted a number of favorable factors for the creation of the proposed TLC, both of an institutional nature and from the point of view of the extreme advantage of the geographical location of its member countries. In addition to the very fact of the formation of the "Lublin Triangle", additional favorable institutional components, in particular, are: the EU-Ukraine Association Agreement, the modern Trans-European Transport Network (TEN-T) policy and the National transport strategy of Ukraine for the period up to 2030.

Favorable factors for the creation of such a TLC in the "geographical dimension" is its location at the intersection of all types of economic and universal relations in the coordinate systems "Northern Europe – Southern Europe", "Western Europe – Eastern Europe", "Europe – Asia" (with subsequent "branches-rays", covering almost the entire hemisphere).

The strategic goal of creating a TLC as a system of hubs based on the "Lublin Triangle" can be defined as follows - the formation and implementation of the competitive advantages of the participating countries (and their private and public business entities and authorities at the state, regional and local levels) in the system of the international division of labor and implementation of the common European transport policy TEN-T.

In other words, the TLC "Lublin Triangle" as a structured system of hubs – large transport interchange and transshipment hubs, should be built into the pan-European TEN-T policy. In an even more specific definition – in the system of ten pan-European transport corridors. At the same time, the justification for the creation of the TLC "Lublin Triangle" should proceed from the full implementation of all the provisions and norms of TEN-T; first of all – from the association within the framework of transport corridors of at least two modes of transport and the connection of at least three countries.

Thus, the core of the TLC is objectively the logistics operators of all types of transport (railway, road, air, sea and inland waterways), carrying out passenger and freight transportation. From the point of

view of ensuring the technical and technological functioning of logistics operators (and TLC as a whole), it is necessary to single out the system of means of communication, as well as engineering enterprises of all types of transport, as its important components. The same integral element of the TLC is its so-called service sub-complex: business entities in the areas of service, financial, information and warehouse services, institutions of scientific and technical support and training, as well as management bodies of its various levels (up to local).

At the same time, the very fact of substantiating the idea of creating a TLC as a system of hubs plays a significant role. This significantly enhances the role of management as a means of implementing the idea of creating a cluster. Modern marketing: the concept of ethical marketing acts as a target orientation of the TLC (there is reason to believe that the ethical concept itself should be "enriched" based on the theory and practice of national business cultures).

The innovative nature of the put forward proposal for TLC "Lublin Triangle" lies in the fact that, in contrast to the approaches existing in domestic and foreign science, according to which TLC are considered within several administrative-territorial regions of a particular country, in this case:

- the understanding of the TLC is brought to the interstate level within the framework of a well-defined organization "Lublin Triangle" in the context of the implementation of the norms, regulations and procedures of TEN-T;

- a structured approach is proposed to justify the activities of TLC based on the network of TLC.

In the context of the implementation of modern approaches to the theory of knowledge, the question arises of identifying the essential parameters of the TLC "Lublin Triangle" – Table 1.

According to the content of Table 1, such important aspects should be noted, the clarification of which plays a particularly important role at the stage of substantiating the proposal for the creation of the Lublin Triangle TLC.

The goals, mechanisms and logic of the creation of the "Lublin Triangle" TLC (the sequence of implementation of the relevant measures) should proceed from the spirit and letter of TEN-T, which is precisely the policy and specific practices of the organization and functioning of the transport sector of the European Union considered in the complex. At the same time, it should be noted: TEN-T cannot be reduced to European transport corridors as such: they are, of course, important, but only the technical and technological basis of the common transport space of the European Union (the development of such policies the European Union began in the agrarian sector – Common Agricultural Policy).

These EU policies are closely interrelated. In the context of developing a strategy and tactics for the creation of the proposed TLC, the interdependence of

TEN-T and the European Regional Policy (Cohesion Policy) plays a special role. One of the important aspects of the European Cohesion Policy is the transition from industrial (sectoral) development to spatial development, which ensures a balanced development of territories and the implementation of administrative-

territorial reforms in the countries of the European Union (for this reason, TLC as such cannot be considered as a purely industrial geographical concentration activity, which is contrary to modern common European practice).

Table 1

Parameters of the "Lublin Triangle" transport and logistics cluster (Baltic-East European Transport and Logistics Cluster)

Parameters of TLC	Contents of parameters				
Participating countries	Poland, Lithuania, Ukraine, Latvia, Estonia				
Institutional framework	International Cooperation Platform "Lublin Triangle"				
Legal and regulatory framework	Common transport policy of the European Union TEN-T; EU-Ukraine Association				
	Agreement; National transport strategy of Ukraine for the period up to 2030				
The goals of the TLC	Implementation of the statutory provisions of the TLC (TEN-T goals; implementation				
	of the commercial interests of economic entities; obtaining social effects by all				
	participating countries and administrative-territorial units)				
Creation of a legal entity	Yes				
Governing Body	Coordinating Council				
The nature of the association	Contractual				
Place of registration	One of the EU member states				
Organizational and legal bases	Public-Private-Communal Partnership				
Mechanisms for financial	National budgets of participating countries; investments of economic entities; budgets				
provision of TLC activities	of EU Structural Funds Programs; budgets of local authorities of the participating				
	countries; investments of international organizations				

Source: own elaboration.

For the same reasons, the essence of the organizational and legal foundations for the activities of "Lublin Triangle" TLC (parameter 9 of Table 1) is identified as "public-private-communal partnership". The latter is important in the context of the implementation of the administrative-territorial reform in Ukraine and is aimed at taking into account the interests of the united territorial communities and the formed enlarged districts.

In the context of developing effective mechanisms for the financial support of the cluster, one should take into account the content of the financial policy of the European Union, which evolves with each seven-year EU budget period and the directions (as well as features) of the activities of its Structural Funds.

In order to concretize the proposed proposal for the creation of the Lublin Triangle TLC, we identify its functions, which is necessary both from a theoretical and practical point of view. As such, we can single out the following.

- 1. Coordination of the activities of the TLC in the context of the evolution of TEN-T, the specifics of a certain budgetary period of the European Union and the activities of its Structural Funds.
- 2. Coordinating the activities of the TLH cluster in order to optimize their structure in the system of pan-European transport corridors, as well as the regulation of the corresponding passenger and freight traffic.
- 3. Justification of the initial technical, technological, organizational and economic parameters of the activities of logistics operators within each mode of transport.

- 4. Substantiation of the initial technical, technological, organizational and economic parameters of the activities of the defining players of the cluster in the areas of operation of communication lines and mechanical engineering for each type of transport.
- 5. Optimization of mechanisms for ensuring multimodal transportation of passengers and goods within the cluster and trans-European transport corridors.
- 6. Lobbying (based on civilized pan-European norms and practices) the interests of the cluster (as well as its hubs and defining cluster players) in the institutions of the European Union.
- 7. Organizational, economic, marketing and media support for the activities of the TLC in the authorities of the participating countries.

The experience of developing regulatory economic policy problems shows that it is important not only to classify the functions of the proposed TLC, but also to determine the starting points for the implementation of these functions (itself a matter of mechanisms for implementing the functions of economic entities, as well as adopted regulatory legal acts in a more general context, has always been a big problem since the days of Soviet-type economic practices).

There is reason to believe that the main thing in this regard is the adoption of legal acts already developed by Ukrainian scientists on the creation and regulation of the activities of clusters (at the same time, it is advisable to supplement them with provisions on the creation and regulation of the functioning of this type of structures in the system of the international economy and aimed at

increasing harmonization of Ukrainian acts, norms and regulations with the Trans-European Transport Network policy TEN-T).

At the initial stage of the creation of the Lublin Triangle TLC, it is necessary (at least in principle) to resolve the issues of determining the network of its hubs. Here, it is important to observe not only the principle of combining flows of different types of transport in hubs, but also to optimize the placement of hubs within the

cluster member countries: based on the interests of the TLC as a whole. Unlike, for example, the sphere of gas transportation, in the transport and logistics sphere, hubs, according to global practice, are "tied" to large metropolitan cities at the intersection of transport flows.

In principle, the initial option for placing hubs within the framework of the TLC "Lublin Triangle" can be the following – Table 2.

Table 2

### Schematic diagram of the geographical location of the hubs of the transport and logistics cluster "Lublin Triangle" (Baltic-East European Transport and Logistics Cluster)

TLC member countries	Geographic location of TLH
The member countries	Geographic location of TEII
Poland	Warsaw, Gdansk, Szczecin, Poznan, Wrocław, Krakow, Lublin
Lithuania	Vilnius, Kaunas, Klaipeda, Siauliai
Ukraine	Kyiv, Lviv, Kharkiv, Mariupol, Odesa, Mykolayiv
Latvia	Riga, Ventspils, Liepaja, Daugavpils, Jurmala
Estonia	Tallinn, Pärnu, Tartu

Source: own elaboration.

Conclusions and prospects for further development of the problem under study. The relevance of the creation of the TLC "Lublin Triangle" (Baltic-East European TLC) goes far beyond the purely transport and logistics sphere. It is necessary to take into account a number of economic, institutional and other factors that actualize the significance of the formation of such a structure. In this, objectively, Ukraine is most interested.

The priority tasks for further development of the raised problem may be: harmonization of sectoral regulations and provisions with the standards of the Trans-European Transport Network policy, lobbying the proposed proposal in front of the political establishment of the European Union and developing specific measures for the activities of the TLC in the system of trans-European transport corridors.

#### Literature

- 1. Ministry of Foreign Affairs of Ukraine. Joint Declaration of Foreign Ministers of the Republic of Poland, the Republic of Lithuania and Ukraine on establishing Lublin Triangle. 2020. URL: https://mfa.gov.ua/en/news/joint-declaration-foreign-ministers-republic-poland-republic-lithuania-and-ukraine-establishing-lublin-triangle.
- 2. Чеботарьов Є., Чеботарьов В. Польща, Литва, Україна: національні ділові культури як детермінанта інтеграції на європейських і світових ринках. *Галицький економічний вісник*. 2020. Т. 63. № 2. С. 279–288. DOI: https://doi.org/10.33108/galicianvisnyk\_tntu2020.02.279.
- 3. Чеботарьов Є. «Люблінський трикутник»: інституціональні передумови та економічний потенціал створення. *Економічний вісник Донбасу.* 2020. № 3(61). С. 41-48. DOI: https://doi.org/10.12958/1817-3772-2020-3(61)-41-48.
- 4. Porter M. E. Clusters and the New Economics of Competition. *Harvard Business Review*. 1998. Vol. 76. No. 6. November–December, pp. 77-90.
  - 5. Рутко Д. Зарубежный опыт развития инновационных кластеров. Наука и инновации. 2016. № 1(155). С. 18-22.
- 6. Грудницька С. М., Нестиренко Л. А. Правові основи кластерної самоорганізації і саморегулювання енергопростору. Форум Права. 2018. № 53(5). С. 13-27. DOI: https://doi.org/10.5281/zenodo.2527932.
- 7. Войнаренко М. П. Кластери в інституційній економіці: монографія. Хмельницький: ХНУ, ТОВ «Тріада-М», 2011. 502 с
- 8. Liashenko V., Pidorycheva I., Mytsenko I., Chebotarova N. The modern concept of special economic zones in Ukraine. *Bulletin of Geography. Socio-economic Series.* 2021. № 52(52). P. 85-94. DOI: https://doi.org/http://doi.org/10.2478/bog-2021-0015.
- 9. Пушак Г. І., Трушкіна Н. В. Обгрунтування доцільності створення транспортно-логістичного кластеру в Карпатському економічному районі. *Економічний вісник Донбасу*. 2021. № 1(63). С. 61-77. DOI: https://doi.org/10.12958/1817-3772-2021-1(63)-61-77.
- 10. Трушкіна Н. В. Формування інтегрованої транспортно-логістичної системи в Україні: фінансово-правовий аспект. *Emergence of public development: financial and legal aspects*: monograph. Agenda Publishing House, Coventry, United Kingdom, 2019. P. 619-629.
- 11. Чеботарьов Є. «Обгрунтування кластеризації національних ділових культур як передумова ефективної міжнародної економічної політики». Вісник Східноукраїнського національного університету імені Володимира Даля. 2021. Вип. 3 (267). С. 48-52, DOI: https://doi.org/10.33216/1998-7927-2021-267-3-48-52.

#### References

1. Ministry of Foreign Affairs of Ukraine. (2020). Joint Declaration of Foreign Ministers of the Republic of Poland, the Republic of Lithuania and Ukraine on establishing Lublin Triangle. Retrieved from https://mfa.gov.ua/en/news/joint-declaration-foreign-ministers-republic-poland-republic-lithuania-and-ukraine-establishing-lublin-triangle.

- 2. Chebotarov I., Chebotarov V. (2020). Polshcha, Lytva, Ukraina: natsionalni dilovi kultury yak determinanta intehratsii na yevropeiskykh i svitovykh rynkakh [Poland, Lithuania, Ukraine: national business cultures as integration determinant in European and world markets]. *Halytskyi ekonomichnyi visnyk Galician economic journal* (Tern.), Vol. 63, No 2, pp. 279-288. DOI: https://doi.org/10.33108/galicianvisnyk\_tntu2020.02.279 [in Ukrainian].
- 3. Chebotarov, I. (2020). «Liublinskyi trykutnyk»: instytutsionalni peredumovy ta ekonomichnyi potentsial stvorennia ["Lublin Triangle": institutional preconditions and economic potential of creation]. *Ekonomichnyi visnyk Donbasu Economic Herald of the Donbas*, 3(61), pp. 41-48. DOI: https://doi.org/10.12958/1817-3772-2020-3(61)-41-48 [in Ukrainian].
- 4. Porter, M. E. (1998). Clusters and the New Economics of Competition. *Harvard Business Review*, Vol. 76, No. 6, November–December, pp. 77-90.
- 5. Rutko, D. (2016). Zarubezhnyy opyt razvitiya innovatsionnykh klasterov [Foreign experience in the development of innovative clusters. *Nauka i innovatsii Science and innovation*, 1(155), pp. 18-22 [in Russian].
- 6. Hrudnytska, S. M., Nestyrenko, L. A. (2018). Pravovi osnovy klasternoi samoorhanizatsii i samorehuliuvannia enerhoprostoru [Legal bases of cluster selforganization and self-regulation of energy space]. *Forum Prava Law Forum*, 53(5), pp. 13-27. DOI: https://doi.org/10.5281/zenodo.2527932 [in Ukrainian].
- 7. Voynarenko, M. P. (2011). Klastery v instytutsiinii ekonomitsi [Clusters in the institutional economy]. Khmelnytskyi, KhNU, Triada-M [in Ukrainian].
- 8. Liashenko, V., Pidorycheva, I., Mytsenko, I. Chebotarova, N. (2021). The modern concept of special economic zones in Ukraine. *Bulletin of Geography. Socio-economic Series*, 52(52), pp. 85-94. DOI: https://doi.org/10.2478/bog-2021-0015.
- 9. Pushak, H., Trushkina, N. (2021). Obgruntuvannia dotsilnosti stvorennia transportno-lohistychnoho klasteru v Karpatskomu ekonomichnomu raioni [Substantiation of Expediency of Creation of Transport and Logistics Cluster in the Carpathian Economic Region]. *Ekonomichnyi visnyk Donbasu Economic Herald of the Donbas*, 1(63), pp. 61-77. DOI: https://doi.org/10.12958/1817-3772-2021-1(63)-61-77 [in Ukrainian].
- 10. Trushkina, N. V. (2019). Formuvannia intehrovanoi transportno-lohistychnoi systemy v Ukraini: finansovo-pravovyi aspekt [Formation of an integrated transport and logistics system in Ukraine: financial and legal aspect]. *Emergence of public development: financial and legal aspects*: monograph. Agenda Publishing House, Coventry, United Kingdom, pp. 619-629 [in Ukrainian].
- 11. Chebotarov, I. (2021). Obhruntuvannia klasteryzatsii natsionalnykh dilovykh kultur yak peredumova efektyvnoi mizhnarodnoi ekonomichnoi polityky [Justification of clustering of national business cultures as a prerequisite for effective international economic policy], *Visnik of the Volodymyr Dahl East Ukrainian National University*, 3 (267), pp. 48-52. DOI: https://doi.org/10.33216/1998-7927-2021-267-3-48-52 [in Ukrainian].

### Чеботарьов €. В. «Люблинський трикутник»: перспективи формування транспортно-логістичного кластеру (аспекти сучасного маркетинг-менеджменту)

Узагальнюючий аналіз сучасних загальноєвропейських дезінтеграційних тенденцій, тим більше – на тлі прогнозованих такого роду нових тенденцій, зумовлює необхідність пошуку інших детермінант надійної міжнародної співпраці та формування стійких міжнародних організацій. Однією з таких небагатьох міжнародних організацій може стати нова платформа «Люблінський трикутник» у складі Польщі, Литви та України, яку було засновано у 2020 році. Найбільший економічний ефект і низку супутніх інституційних переваг співпраця цих країн може дати у транспортно-логістичній сфері з формуванням транспортно-логістичного кластеру «Люблінський трикутник». З урахуванням низки інституціональних і техніко-функціональних чинників учасниками пропонованого кластеру у повному обсязі можуть бути також Латвія та Естонія; у такому разі пропонований кластер може отримати назву, наприклад Балтийсько-Східно-Європейський транспортно-логістичний кластер. Обгрунтовано категоріальне визначення дефініції «транспортно-логістичний кластер». Це упорядкована на підгрунті мережі хабів сукупність просторово визначених суб'єктів господарювання всіх видів транспорту, інфраструктури їх шляхів сполучення та галузей машинобудування, а також споріднених з ними підприємств, установ й органів управління, яка функціонує на договірних відносинах і забезпечує їхню горизонтальну та вертикальну взаємодію. Інноваційний характер висунутої пропозиції полягає у тому, що на відміну від наявних у вітчизняній і зарубіжній науці підходів, згідно з якими транспортно-логістичні кластери розглядаються лише в межах певних регіонів окремої країни, у даному випадку: розуміння кластера виноситься на міждержавний рівень у контексті реалізації норм, положень і процедур Trans-European Transport Network (TEN-T) політики на засадах сучасного маркетинг-менеджменту; сам кластер пропонується у вигляді відповідних транспортно-логістичних хабів. У статті, окрім ідентифікації дефініції «транспортно-логістичний кластер», виокремлено параметри пропонованого кластеру з розкриттям їх змісту; класифіковано функції кластеру; надано структуру мережі географічного розміщення хабів.

*Ключові слова:* транспортно-логістичних кластер, Спільна європейська транспортна політика, «Люблінський трикутник», Балтийсько-Східно-Європейський транспортно-логістичний кластер, хаб, маркетинг-менеджмент.

## Chebotarov Ie. "Lublin Triangle": Prospects for the Formation of a Transport and Logistics Cluster (Aspects of Modern Marketing Management)

The generalizing analysis of modern pan-European disintegration tendencies, especially against the background of forecasted such new tendencies, necessitates the search for other determinants of reliable international cooperation and the formation of stable international organizations. The new Lublin Triangle platform, consisting of Poland, Lithuania and Ukraine, which was founded in 2020, could be one of the few international organizations. The greatest economic effect and a number of concomitant institutional advantages of cooperation between these countries can give in the transport and logistics sphere with the formation of the transport and logistics cluster "Lublin Triangle". Taking into account a number of institutional and technical-functional factors, Latvia and Estonia can also be full participants in the proposed cluster; in this case, the proposed cluster may be called, for example, the Baltic-Eastern European Transport and Logistics Cluster. The categorical definition of the definition of "transport and logistics cluster" is substantiated. It is a set of spatially defined entities of all types of transport, infrastructure of their modes of transport and engineering industries, as well as related enterprises, institutions and governing bodies, which operates on the basis of a network of hubs. The innovative nature of the proposal is that in contrast to the existing approaches in domestic and foreign science, according to which transport and logistics clusters are considered only within certain regions of a country, in this case: the understanding of the cluster,

provisions and procedures of the Trans-European Transport Network (TEN-T) policy on the basis of modern marketing management; the cluster itself is offered in the form of appropriate transport and logistics hubs. The article, in addition to identifying the definition of "transport and logistics cluster" highlights the parameters of the proposed cluster with the disclosure of their content; cluster functions are classified; the structure of the network of geographical location of hubs is given.

Keywords: transport and logistics cluster, European Common Transport Policy, "Lublin Triangle", Baltic-Eastern European Transport and Logistics Cluster, hub, marketing management.

## Чеботарьов Е. В. "Люблинский треугольник": перспективы формирования транспортно-логистического кластера (аспекты современного маркетинг-менеджмента)

Обобщающий анализ современных общеевропейских дезинтеграционных тенденций, тем более на фоне прогнозируемых такого рода новых тенденций, обусловливает необходимость поиска других детерминант надежного международного сотрудничества и формирования устойчивых международных организаций. Одной из немногих международных организаций может стать новая платформа «Люблинский треугольник» в составе Польши, Литвы и Украины, основанная в 2020 году. Наибольший экономический эффект и ряд сопутствующих институциональных преимуществ сотрудничество этих стран может оказать в транспортно-логистической сфере с формированием транспортно-логистического кластера «Люблинский треугольник». С учетом ряда институциональных и технико-функциональных факторов участниками предлагаемого кластера в полном объеме могут быть также Латвия и Эстония; в таком случае предлагаемый кластер может получить название, например, Балтийско-Восточно-Европейский транспортно-логистический кластер. Обосновано категориальное определение определения «транспортно-логистический кластер». Это упорядоченная на основе сети хабов совокупность пространственно определенных субъектов хозяйствования всех видов транспорта, инфраструктуры их путей сообщения и отраслей машиностроения, а также родственных им предприятий, учреждений и органов управления, которая функционирует на договорных отношениях и обеспечивает их горизонтальное и вертикальное взаимодействие. Инновационный характер выдвинутого предложения заключается в том, что в отличие от имеющихся в отечественной и зарубежной науке подходов, согласно которым транспортно-логистические кластеры рассматриваются только в пределах определенных регионов отдельной страны, в данном случае понимание кластера выносится на межгосударственный уровень в контексте реализации норм, положений и процедур Trans-European Transport Network (TEN-T) политики на основе современного маркетинг-менеджмента; сам кластер предлагается посредством соответствующих транспортно-логистических хабов. В статье, кроме идентификации определения «транспортно-логистический кластер», выделены параметры предлагаемого кластера с раскрытием их содержания; классифицированы функции кластера; предоставлена структура сети географического размещения хабов.

*Ключевые слова:* транспортно-логистический кластер, Общая европейская транспортная политика, «Люблинский треугольник», Балтийско-Восточно-Европейский транспортно-логистический кластер, хаб, маркетинг-менеджмент.

Received by the editors: 04.11.2021 and final form 16.12.2021

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-45-52

UDC 330.43:658.7(479.24)

#### S. Maharramov,

e-mail: meherremov\_samir@yahoo.com, Azerbaijan Tourism and Management University, Baku, Azerbaijan

# ECONOMETRIC ASSESSMENT OF AZERBAIJAN'S LOGISTICS CAPABILITIES IN TERMS OF RELATIONS WITH TURKIC-SPEAKING STATES

Introduction. Despite of global crises pandemic "COVID-19" the international logistics sectors continue to grow. Unstable price of oil and other raw materials strongly affects to the economic relations of those countries are influence to trade over and logistics sectors in the last 10 years. Nowadays, the totals GDP of States is \$1089.18 B USD [23]. Turkic-Speaking States have economic potential but relation in economic, political and cultural field is promising. Every states have own economic potential but Azerbaijan plays a unique role in this tie. The load and containers start from the western part of Chine which is passing cross all the Turkic Speaking States reach to the Europe.

The academic paper aims to identify the economic communications export and import products and to explain the logistic role of Azerbaijan in the Turkic Speaking States using different trade and logistics indexes and economic investigations methods. Development of logistics sectors depend on to joint to different logistic projects such as the New Great Silk Road, TRACECA and others are automatically positively influences the sustainable development economy, social – economy, tourism, communication, investments climate and etc. Using the logistics potentials and logistics' corridors the states can make it to the main engine to relations and economy of the state. Implementation and mechanism of common policy are the interests of the stakeholders, privet sectors and all the Turkic Speaking States.

The current logistics development program for the Turkic Speaking State is as an impressively tool for all parts of economy such as increasing trade over, fast exchange national and international currencies, opens new jobs, development IT, and growths cultural and other communications. The main focuses of this article are the development trade over and logistics potential of those countries to one tie and role of Azerbaijan in this economy union. Approaching to logistics sectors as non – raw and non – petroleum is outstanding influence to all the State economy. Logistics and transports sectors of economy are one of the progressively fast income sectors.

**Research methods.** In this article has been used different research methods and programs such as Eviews Application Software Package for econometric modeling, the Darbin-Watson and Fisher statistic (F-statistic) statistic for determining the logistics

opportunity of Azerbaijan and finding the role among the Turkic Speaking States.

Literature Review. The author used logistics program of the states, development and statistics data of those implementation accepting logistics policy, attracting investing to this economic field, economy liberation to logistics sector, Logistics Performances Index of the Turkic Speaking States, historical and future perspectives, articles of professors. In this article author describe the measurement of the development of the logistics sector using different econometric models.

# About the States, the Natural Resources and trade over between them

Political reasons: Nowadays, the independence of Turkic states is Turkey, Azerbaijan, Kazakhstan, Uzbekistan, Turkmenistan and Kyrgyzstan. The location of those countries on the Great Silk Way and their large-scale coverage play an important role in the formation of union of these countries on the Eurasian continent and in the world economy.

Table 1
Turkic Speaking States [22; 23]

		0 1	
No.	Turkic states	Area	Population
1	Turkey	783 562	83,424 615
2	Azerbaijan	86 600	10,023 320
3	Kazakhstan	2 724 902	18,513 930
4	Uzbekistan	448 969	33,589 650
5	Turkmenistan	488 100	5,941 090
6	Kyrgyzstan	199 949	6,456 900
	Total	4 732 082	157,949 505

All of these reasons kick off all those countries to create political and economic alliance. In the capital of Azerbaijan, Baku was established the Parliamentary of Turkic States in 2009. The first members of assembly were Azerbaijan, Turkey, Kazakhstan and Kyrgyzstan. The main purpose of this organization is to tie in political, scientific and economic areas among Turkic-speaking peoples and to demonstrate unity in the international organizations [9].

# Economic potential of the Turkic – Speaking countries

Economic potential of the Turkic – Speaking countries is promising. The Turkic – Speaking countries mainly are Turkey, Azerbaijan, Kazakhstan, Uzbekistan, Turkmenistan and Kyrgyzstan.

Kazakhstan is the biggest countries among the Turkic – Speaking countries with big economical potentials. Economic growth of Kazakhstan noticeable since 2015 [12]. The economic crisis in the world affected the Kazakhstan national currency negatively, so as a result of the crisis the potential of the country decreased. The economy of Kazakhstan got power from 2016. The result of its country shipped US\$57.7 billion product in 2019. All this economy actions increased rate of tenge 26% against the US dollars but almost 5% dropped from 2018 to 2019 [20].

According to information of 2019, the GDP of Kazakhstan is 180 billion USA dollars. The economy of the country is highly dependent on oil and gas products almost 67% (US\$38.7 billion) of total exports. The other 33% of export products are ferrous metals, copper, aluminum, salt, sulphur, stone, cereals, zinc and uranium are the list of the export product. Italy, Chine, the Netherlands, Russia and France are the top of export partners. What about the Turkic states?

Uzbekistan made a huge income in export products especially oil, gas and gold. Uzbekistan made huge dollars in export product during 2019 [13]. Furthermore, Uzbekistan has a great opportunity in inorganic chemicals which grow up almost 300% in 2019, precious metals (silver and gold) via a 68.9% gain, and the last one is copper which increased approximately 28%.

The country is also the second largest cotton exporter in the world. The top of countries of product exports we can find Turkic states such as Turkey and Kazakhstan. The GDP of the country is 57.92 billion USD.

In comparison to Kazakhstan and Turkmenistan, the Kyrgyzstan does not have any direct access to the world economy depends on gold and stones which 34% of export [14]. Export countries for Kyrgyzstan are the United Kingdom, Kazakhstan, Russia and Uzbekistan. Furthermore, the country has economic partnership with China, Turkey, Turkmenistan and Afghanistan to whom Kyrgyzstan exports raw materials, consumer goods, animals, metals and other products.

Turkmenistan is one of the richest countries of natural gas resources in the world. The natural gas takes the main part of export economy of country but oil, cotton, polymers, textiles and vegetables also in export list product. All of these products make 40.76 USD billion in GDP. Turkmenistan exported US\$9.9 billion in 2019. It shipped 93% of product to Asia and 7% to Europe continent. Vegetables, plastics and textiles are the fastest grower export products in Turkmenistan in 2019 [10].

The main export partners are China, Turkey, Italy, UAE, Iran and others. Turkey is the main figure among the Turkic Speaking States. Turkmenistan exported 186 billion USA dollars products or other raw material (especially oil and oil products), and imported 253 billion USA dollars final goods. Economics relations are not so strong between Turkmenistan [15].

Azerbaijan is one of the small countries among Turkic Speaking States but with huge potential. Strategically location of Azerbaijan is on the intersection of southwestern Asia with southeastern Europe north of Iran and south of Russia makes country multifunctional economy traders. Using location potential Azerbaijan sold US\$19.6 billion of products, goods and services around the world in 2019 [16] Despite the Azerbaijani national currency lost -65.9% values against the dollar in 2015, the government of country started to implement economy plans for increasing economy activity. The GDP of the country is 48.05 USD billion. The main export product of state is oil and natural gas but sugar, fruits, metals and polymers also in the export list. Azerbaijan has a great potential in three products, the first one is plastics industry (it has grown up by 51.3% from 2018 to 2019), the second is gold (46.4%) and the last on is cotton (value up by 46.3%) [10].

Italy, UK, USA, Israel and Indonesia are on the top of the export list. Azerbaijan has a good economic and political relationship with Turkey and Kazakhstan.

Azerbaijan exported to Turkic Speaking States raw material, natural gas, fuels, intermediate goods, metals, mach and elec, food products, vegetables, stone and glasses, plastics or rubber, chemicals and other products.

Turkey passed a long and great way until 2019. The National currency of Turkish lira depreciated by -106% against the US dollar in 2015 [17]. It exported 100 named goods within US\$117.1 billion. GDP of Turkey grew up to \$2.347 trillion in 2019. The fastest grown products for exporting were refined petroleum oils, plastics and computers [10].

The main exports products are: 31% is machinery and transport equipment, 25% is manufactured goods, 18% is miscellaneous manufactured articles, food and live animals are 9 % and gold and non-monetary is 4% percent. Germany, the UK, the UAE, Iraq and the US are the main export partners of Turkey. Now we have to check economical relation among Turkic states from Turkey position.

### The role of Azerbaijan among Turkic Speaking State in the international logistics corridors aspect

Started from the Soviet period road and transport system of the Central Asia region has developed. This was the part of economy politics USSR to integrate countries one economy project. Six of countries of the Central Asia China, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Uzbekistan and Azerbaijan, started to join the Central Asia Regional Economic Cooperation (CAREC). It is part of "New Silk Road" project which will connect Europa and Asia through Turkey, bypass of Russia. Most of those countries have not direct access to the open sea. The distance of landlocked CAREC members to the closest seaport is Azerbaijan 800 km, Kazakhstan 3750 km, Kyrgyzstan 3600 km, Mongolia 995 km, Tajikistan 3100 km and Uzbekistan 2950 km [11].

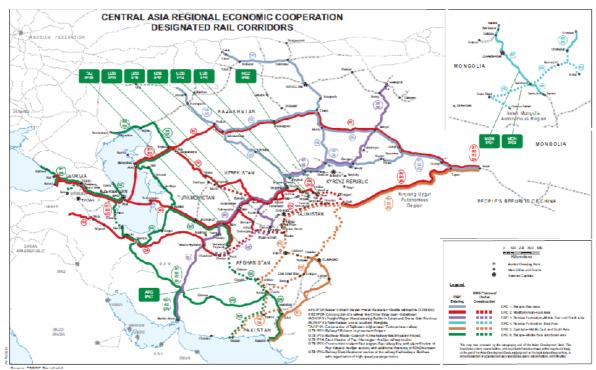


Fig. 1. Central Asia Regional Economic Cooperation [3]

The main contact between Azerbaijan and Central Asia is a water transport system, especially with the Caspian Sea. It has direct maritime connections to other Caspian littoral states: Russia, Azerbaijan, Iran, Turkmenistan and Kazakhstan. The maritime connection regularly works with Azerbaijan International port Alat, Aktau Kazakhstan and Turkmenbashi Turkmenistan. Azerbaijan has reconstructed Alat Internatioanl Seaport. But the Caspian Sea has some problem with deepness the maximum of loan is 6000 tons [11].

An extraordinary Summit of the Turkic Council was held through videoconference on the 10 of April 2020. The President of Azerbaijan was chairman of the Cooperation Council of Turkic-Speaking States. The aim of the videoconference was economic situation during the coronavirus pandemic period [18].

The President of Azerbaijan Mr. Ilham Aliyev highlighted good political and economic relationship between the Turkic-speaking States. Every economy scales trade relations of the country on the import-export operation. On this side, Azerbaijan plays strong role on economy partner on logistics and transit operations between Turkey and Central Asia. The main core of this relation plays mutual cooperation and good relations. The President noted that almost 180,000 tons of product and goods were transported from Central Asia to Turkey and back via Azerbaijan in the first quarter of 2020. It was huge progress because it was 40.000 tons at the same time as 2019.

The President of Turkmenistan emphasized that East-West logistic corridor plays a reliable role among the Turkic-Speaking States and especially the ferries between Baku and Turkmenbashi ports are carried most of the passengers and medical goods [21].

At the end, the President of Azerbaijan once more said the aim of this online meeting was to develop and support a relationship between the Turkic-speaking States during the pandemic time.

One of the main logistics project for Turkic Speaking States is Zangazur logistics and transport corridors which will pass the south part of Armenia. This agreement has been achieved after 44 days of the second Karabakh war which was finished of victory of Azerbaijan army and capitulation of Armenia. The Zangazur logistics and transport corridor will be the second traffic between Europe and Asia trough Azerbaijan. This project is the part of CAREC project [7].

As already mentioned, logistics not only provides cultural, religious and economic ties between countries on freight and passenger transportation, but also stimulates domestic economic activity. From the point of view of research, the opening of several questions would have increased the coherence of the research. These questions are mainly to determine the impact of the relationship between increased revenue, costs and transportation in the logistics sector in the country. In this regard, the database presented in Table 2 will be used.

As we can see from Table 2, freight transport have been steadily growing since 2007. This is not a coincidence, because Azerbaijan has begun special attention for development of this strategic plan to achieve the goals since 2006. Based on the given data and define we can apply and modeling of economic mathematical models.

Statistical indicators on transportation in the transport sector [8]

Years	Revenue from freight transportation in the transport sector, thousand manats (YDEEINCOME)	Expenditures on freight and passenger transportation in the transport sector, thousand manats (YDCCOST)	Cargo transportation in the transport sector, 1000 ton (NSYTRANSPORTATION)
1995	162 034	152 576	42 020
1996	164 783	183 279	41 331
1997	178 543	228 718	46 348
1998	235 608	255 538	55 029
1999	229 688	286 457	67 735
2000	241 000	284 038	80 180
2001	262 464	293 445	92 648
2002	285 512	307 799	98 445
2003	359 775	364 113	110 001
2004	383 518	455 905	117 314
2005	430 074	525 252	128 328
2006	571 200	679 519	145 596
2007	1 746 184	1 010 084	167 533
2008	2 068 242	1 211 689	183 093
2009	2 409 731	1 169 344	190 372
2010	2 543 135	1 248 354	196 452
2011	2 645 666	1 411 122	203 586
2012	2 638 641	1 561 089	210 862
2013	2 728 269	1 839 606	217 926
2014	2 811 232	1 990 343	221 991
2015	3 089 355	2 136 400	222 373
2016	3 775 392	2 583 043	222 461
2017	4 452 895	3 407 283	226 419
2018	4 871 247	3 902 532	230 144
2019	5 125 582	4 009 754	235 288

First of all, let's determine the impact of the costs of freight and passenger transport to the transport sector. For this reasons, interrelated econometric models have been studied in the following forms.

$$LOG(YDEEINCOME) = C(1) + + C(2)*LOG(YDCCOST) + u,$$
 (1)

here YDEEINCOME — income from freight transportation in the transport sector; YDCCOST—costs of freight and passenger transportation in the transport sector; u—shows random deviations. C(1) and C(2) are the parameters of the model (1) finding the parameters of regression equations and checking the adequacy of the purchased models was carried out in the Eviews Application Software Package using econometric modeling methods.

Revenue from freight traffic in the transport sector is a semi-arithmetic trend model (2) regression equation in Table 2 was econometrically assessed based on the data. The results of the evaluation in the Eviews system were as follows:

$$LOG(YDEEINCOME) = -2.78548579158 +$$
  
+ 1.21798561158\*LOG(YDCCOST); (2)

s.s. (0.648179) (0.047588) t-test: (-4.297404) (25.59449) p- probability: (0.0003) (0.0000)

 $R^2 = 0.966081$ ;  $R^{2*} = 0.964606$ ; DW = 2.546438.

1. The statistical characteristics of the model and the relevant tests show that the model is adequate (here: addition 1).

Thus, the standard errors of the parameters are much smaller than the values found by the method of smallest squares. Coefficient of determination (R<sup>2</sup>) and the modified determination coefficient (R<sup>2\*</sup>) prices are quite close, Fisher Statistics (F-statistic) The price is satisfactory, which indicates that the coefficient of determination is significant.  $R^2 = 0.966081$  The presence of freight and passengers in the transport sector shows that (YDCCOST) income from freight transportation in the transport sector (YDEEINCOME) explains the change by 96%. The remaining 4% of the change was due to other factors that were not taken into account. The fact that the Darbin-Watson statistic is 2.5 (2 is ideally desirable) indicates that the remainder of the model is not a first-order autocorrelation. This shows that the model is also important for forecasting.

(2) The model shows that a 1% increase in freight and passenger spending in the transport sector increases revenue from freight transport by 1.22%.

Now, another point of interest in the study is to determine the impact of freight in the transport sector on revenue from freight in the transport sector. For this purpose, interrelated econometric models have been studied in the following forms.

$$LOG (YDEEINCOME) = C(1) + C(2)*LOG (NSYTRANSPORTATION) + u,$$
 (3)

here, YDEEINCOME freight income from transportation in the transport sector, **NSYTRANSPORTATION** volume of cargo transportation in the transport sector, u - shows random deviations. C(1) and C(2) are the parameters of the model (3) finding the parameters of the regression equations and checking the adequacy of the obtained models was carried out in the Eviews Application Software Package using econometric modeling methods.

Revenue from transportation in the transport sector is regenerated econometrically based on the data in Table 2 of the regression equation of the semi-logarithmic trend model (3). The results of the evaluation in the Eviews system were as follows:

# LOG(YDEEINCOME) = -10.1328750982 + +2.02842140109\*LOG(NSY*TRANSPORTATION*); (4)

S.S.	(0.476172)	(0.059664)
t-test:	(-2.345676)	(12.65781)
p- probability	(0.0000)	(0.0003)
$R^2 = 0.944265$ ;	$R^{2*} = 0.89163;$	DW = 2.426789

2. The statistical characteristics of the model and the relevant tests show that the model is adequate (here: additional 1). Thus, the standard errors of the parameters are much smaller than the values found by the method of smallest squares. The values of the coefficient of determination (R2) and the modified coefficient of determination (R2\*) are very close, the value of the Fisher statistic (F-statistic) is satisfactory, which indicates that the coefficient of determination is significant.  $R^2 = 0.944265$  The presence of freight in the transport sector indicates that (NSY*TRANSPORTATION*) income from freight transportation in the transport sector (YDEEINCOME)

explains the change by 94%. The remaining 6% of the change was due to other factors that were not taken into account. The fact that the Darbin-Watson statistic is 2.4 (2 is ideally desirable) indicates that the remainder of the model is not a first-order autocorrelation. This shows that the model is also important for forecasting.

(2) The model shows that a 1% increase in freight traffic in the transport sector increases revenue from freight traffic in the transport sector by 2.02%.

# The Logistics Performance of Turkic Speaking States

The main key for getting to be one economic system for Turkic – Speaking States is integration into one logistics system of all those countries. Let's check the performance of all those counties on the Logistics Performance Index. There are six indicators for scaling of The Logistics Performance Index (LPI) on the below mentions [9].

- 1) Efficiency of the clearance process (i.e., speed, simplicity and predictability of formalities) by border control agencies, including customs;
- 2) Quality of trade and transport related infrastructure (e.g., ports, railroads, roads, information technology);
- 3) Ease of arranging competitively priced shipments;
- 4) Competence and quality of logistics services (e.g., transport operators, customs brokers);
  - 5) Ability to track and trace consignments;
- 6) Timeliness of shipments in reaching destination within the scheduled or expected delivery time.

According to all above the information we can clearly see Logistics Performance of the Turkic Speaking States (Table 3).

In order to increase the transport, logistics and transit potential of Turkic-Speaking States, it is neccessary to identify the logistics problems and improves opportunities, every component of the LPI (World Bank's) have to be analyze.

Table 3

Overall Logistics Performance Index [9]

Country	Codo	Code 2018		2016		2014		2012		2010		2007	
Country Code	Code	score	rank	score	rank	score	rank	score	rank	score	rank	score	rank
Turkey	TUR	3.15	47	3.42	34	3.50	30	3.51	27	3.22	39	3.15	34
Kazakhstan	KAZ	2.81	71	2.75	77	2.7	88	2.69	86	2.83	62	2.12	133
Uzbekistan	UZB	2.58	99	2.40	118	2.39	129	2.46	117	2.79	68	2.16	129
Kyrgyz Republic	KGZ	2.55	108	2.16	146	2.21	149	2.35	130	2.62	91	2.35	103
Turkmenistan	TKM	2.41	126	2.21	140	2.30	140	no c	late	2.49	114	no	date
Azerbaijan	AZE	no c	late	no d	late	2.45	125	2.48	116	2.64	89	2.29	111

Among Turkic Speaking State only Turkey has good Logistics Performance Index. LPI of Turkey is also not so strong. The best rank 27 for Turkey was in 2012. It dropped to 47 ranks and score was 3.15 after 6

years. Kazakhstan did huge jump from 2007 to 2018. The score of Kazakhstan was 2.12 and rank was 133 in 2007, but after 10 years it was 2.81 (score) and rank 71. It means that the State of Kazakhstan is interesting to

develop of logistics policy. For that reason Kazakhstan interested implementing several different logistics corridors. The first corridor is the route links the country to two of the largest economies in the world—the People's Republic of China (PRC) and the Russian Federation. The second is Baku (Azerbaijan)—Aktau—Beineu—Karakalpakstan—Nukus (Turkmenistan). This route is the strong gate to the Europe for Kazakhstan. Changeable political and economic connect of Russia with the western countries is influence to the business world. The third corridor is Rubtsovsk (Russian Federation)—Semey—Aktogai—Almaty—Shu—Lugovoi—Taraz—Shymkent—Tashkent (Uzbekistan) [1, p. 33-35].

As we can see Kazakhstan plays main logistics role in the central Asia. The common border with Turkmenistan, Uzbekistan and Kyrgyz Republic gives Kazakhstan advantages to be main figure among the countries.

The Logistics Performance Index the next 4 countries (Azerbaijan, Turkmenistan, Uzbekistan and Kyrgyzstan) are not so strong than others. Despite the 4 countries made huge logistics projects and policies for increasing logistics performance index of country [3].

Uzbekistan did great job for creating logistics projects. Uzbeks' government build's a transit hub between Uzbekistan and Afghanistan in 2011. It is the part of the CAREC Programme. The rail link between Hairatan Uzbekistan and the northern Afghan city Mazar-I Sharif is 75 km.

The main step for increasing of logistics performance of Uzbekistan is to construct of high speed train way between Kazakhstan city Turkestan and Uzbekistan's city Tashkent. This rail connection plans to create new jobs almost 22,000 people in tourism sectors. But the COVID-19 pandemic affects to this project [4].

Turkic Speaking States are already connected to one logistics belt. One of the main logistics program for Turkic Speaking States is the Central Asia Regional Economic Cooperation (CAREC) Program. The Program includes a partnership of 11 countries. CAREC program is new logistics corridors for Europe and Asia countries for long term strategic plan. According to CAREC 2030 it will help to connect people, unification on logistics policy and projects, tourism, sustainable development of social and economic platform of countries.

The CAREC program will provide integration of countries. Economic and social programs for countries will support to increase and fasten of business activities, industrial products, international trade relationships, tourism and decreasing of poverty.

One of the main direction CAREC transport corridor is to link between Chines to Europe and Turkic Speaking States (Azerbaijan and Kazakhstan) will play bright role [3].

Sustainable development of logistics sector and corridors positively impact to the environmental, social and economy communications and make chances for increasing mobility of people [2].

# The logistics potential and logistics belt of the Ukraine

Let's clarify the position of the Ukraine in the Turkic Speaking State belt. We have to attend that the Ukraine is door to Europe as Turkey. Geography position, large territory and border with Poland, Hungary, Slovakia and Romania gave to the companies to pass less border and custom to reach cargo to inside of the European Union. Annexation of the Crimea by the Russia Federation and the separating war (Donetsk and Luhansk oblast) in the western part of country obligates to the Ukraine to find out the new logistics route.

The World Bank publishes Logistics Performance Index (LPI) for each country every two year. "Customs"; Infrastructure; "International shipments"; "Logistics competence"; "Tracking & tracing"; "Timeliness" are indicators to assessment of positions country. According to the World Bank publish the Ukraine did some success from 2007 till 2018 (Table 4).

Table 4

**Logistics Performance Index** [9]

Country	Code	20	18	20	16	20	14	20	12	20	10	20	007
		score	rank										
Ukraine	UKR	2.83	66	2.74	80	2.98	61	2.85	66	2.57	102	2.55	73

The LPI uses standard statistical techniques to aggregate the data into a single indicator that can be used for cross-country comparisons.

As we can see the Logistics Performance Index of the Ukraine is stable. The score is variable from 2.55 in 2007 to 2.83 in 2018, only score was 2.98 and it is (2014) higher than other years. The rank of state was also unchagable. The rank was 73 in 2007, after 10 years the rank of the Ukraine is increased to 66 only 2014 it was 61. After analyze all components of LPI, we can clearly see the transport and logistics problems of the Ukraine.

The Ukraine already jointed to several international logistic and transport corridors such as Pan-European, Rail CO-Operation Corridors and the European Transport Corridors – Caucasus –Asia (TRACECA) and European – Asia. All those corridors will increase the Logistics Performance Index (LPI) of country.

**Conclusion and Recommendations.** The locations of Turkic Speaking States give them to be the main figures in the Eurasia continent. The economic potential of those countries is huge. More than one

trillions US dollars GDP of countries is not the final achievement of those. Economy relations and political alliance of Turkic Speaking States is necessary for all of them. Export products are less than imports in the Turkic Speaking States. The main part of export products is raw materials, natural resources such as oil and natural gas. Final product and services are not enough for export. Economy relations between the Turkic-speaking are not strong. The first reason is all of them exports raw materials, for that they have to change export point of view (from raw material to final product). The second economic relations between them are not strong, for changing this part economic policy those countries should be integrate. The third is economic diversification and economy liberation of those countries are not enough. The location of Azerbaijan and members of Turkic Speaking States gives strong bridge or link between western and eastern Turkic states. The logistics potential of Azerbaijan should work for increasing of role and economy aim of Turkic world and peace in the Eurasia continent. The Logistics Performance Index of Turkic Speaking States are not so strong; they cannot use own potential. They don't have any common policy for logistics, different logistics

tariffs, not common visa or passport policies. One of the main members of CAREC project is the Ukraine which huge logistics and economic potentials. Logistics Performance Index of the Ukraine is better some of Turkic Speaking States and it make the Ukraine to be main player of this logistics project.

- 1. To implement unique logistics tariffs and policies for all Turkic Speaking States.
  - 2. Visa and passport rules of all states.
- 3. Time lost on the costume and border procedures for TIR of Turkic Speaking Sates.
- 4. To change export products (from raw material to final goods).
  - 5. To control "New Great Silk Road" project.
  - 6. To make economic and political stability.
  - 7. To increase Logistics Performance Index.

The Logistics Performance Index of the States are not good then our expectations. Most of the LPI of them is not high. Only Turkey has high index then others. The position of infrastructure is higher than other State indexes. It explains that Turkey locates close to European Union Market then others and they take account it.

#### References

- 1. Cataloging-In-Publication Data Asian Development Bank. Kazakhstan: trade facilitation and logistics development strategy report. Mandaluyong City, Philippines: Asian Development Bank, 2009.
  - 2. Schafer, A. (1998). The global demand for motorized mobility. Transportation Research, A 32(6). 54 p.
- 3. Transport and Trade Logistics Kazakhstan. Retrieved from https://www.carecprogram.org/uploads/Transport-and-Trade-Logistics-Kazakhstan.
- 4. Turkestan Tashkent high speed line construction to begin. Retrieved from https://www.railwaypro.com/wp/turkestantashkent-high-speed-line-construction-to-begin/.
  - 5. Hairatan-Uzbekistan Rail Project. Retrieved from https://www.railway-technology.com/projects/hairatanuzbekistanra/.
  - 6. What is CAREC? Retrieved from https://www.carecprogram.org/?page\_id=31.
  - 7. Address by the President of the Republic of Azerbaijan Ilham Aliyev. Retrieved from https://en.president.az/articles/49798.
  - 8. The State Statistical Committee of the Republic of Azerbaijan. Retrieved from www.stat.gov.az.
  - 9. Global Rankings 2018. The World Bank. Retrieved from https://lpi.worldbank.org/international/global/2018.
  - 10. Global Rankings 2020. The World Bank. Retrieved from https://lpi.worldbank.org/international/global/2020.
- 11. Sze, Andy. (2009). Azerbaijan Trade facilitation and logistics Development Strategy. Azerbaijan Trade facilitation and logistics Development Strategy report "Asia Development Bank". Mandaluyoung, Philippines: RPT090344. 17 p.
  - 12. Kazakhstan Exports by Country. Retrieved from https://tradingeconomics.com/kazakhstan/exports-by-country.
  - 13. Uzbekistan Exports by Country. Retrieved from https://tradingeconomics.com/uzbekistan/exports-by-country.
  - 14. Kyrgyzstan Exports. Retrieved from https://tradingeconomics.com/kyrgyzstan/exports.
  - 15. Turkmenistan Imports by Country. Retrieved from https://tradingeconomics.com/turkmenistan/imports-by-country.
  - 16. Azerbaijan Imports By Country. Retrieved from https://tradingeconomics.com/azerbaijan/imports-by-country.
  - 17. Turkey Imports By Country. Retrieved from https://tradingeconomics.com/turkey/imports-by-country.
- 18. Extraordinary Summit of Turkic Council held through videoconferencing on the initiative of President Ilham Aliyev. Retrieved from https://en.president.az/articles/36412.
  - 19. TURKPA. Retrieved from https://www.turk-pa.org/az/content/about\_turkpa/tarix.
- 20. Workman, Daniel. (2020). Kazakhstan's Top 10 Exports. Retrieved from http://www.worldstopexports.com/kazakhstans-top-10-exports/.
  - 21. Azerbaijan Caspian Shipping. https://asco.az. Retrieved from https://asco.az/en/donanma/transportation-fleet.
  - 22. UN. http://data.un.org/en/. Retrieved from http://data.un.org/en/.
  - 23. WorldBank. (2020). Retrieved from https://data.worldbank.org.

# Магеррамов С. М. Економетрична оцінка можливостей логістики Азербайджану в умовах відносин з тюркомовними державами

Сучасний світ змінюється дуже швидко з кожним днем. Головною складовою економіки кожної держави є логістичний сектор, який зростає дуже динамічно. Тюркомовні держави знаходяться на історичному Великому шовковому шляху. Загальна територія та населення цих країн складають 4 732 082 км² та 157 949 505 чол. Після розпаду СРСР п'ять тюркомовних держав здобули незалежність (Азербайджан, Казахстан, Узбекистан, Туркменістан та Киргизстан), економіка та політика цих держав були змінені на сучасні ринкові правила. Більшість економік цих країн базується на сировині, газі та нафті. Для експорту всієї цієї сировини державам потрібні міцні логістичні системи. Стаття ілюструє економічний розвиток логістичних секторів та торгівлю між тюркомовними державами. Це дослідження допоможе відкрити проблеми та знайти рішення

реалізації логістичної політики для всіх них. Використовуючи потужні та різні фундаментальні бази даних, такі як статистика цих країн, торговельний баланс, логістичні відносини, дати імпорту та експорту, різні методи співвідношення та економічні моделі, міжнародні ресурси та потужна наукова література допомагають описати потенціал економічних відносин та реальні ситуації, перспективи, проблеми та логістичні можливості тюркомовних держав.

Ключові слова: експорт-імпорт, економічний потенціал, логістика, логістичні сектори.

### Maharramov S. Econometric Assessment of Azerbaijan's Logistics Capabilities in Terms of Relations with Turkic-Speaking States

Modern world grows very fast every day. The main arrow of every state economy is logistics sector, which is increasing very dynamically. The Turkic Speaking States are locating on the Historical Great Silk Road. The total of territory and population of those countries are 4 732 082 km² and 157 949 505 people. After collapsing the USSR, the five Turkic Speaking States get independence (Azerbaijan, Kazakhstan, Uzbekistan, Turkmenistan and Kyrgyzstan), economy and political policy of those states have been changed to the modern market rules. The most of those countries economy base on the raw materials, gas and petroleum. For exporting of all those raw materials the States need strong logistics systems. The article illustrates the economic development of logistics sectors and trade over between Turkic Speaking States. This research will help to open the problems and find out the solution, implementation of the logistics policy for all of them. Using strong and different fundamental databases, such as statistic of those countries, trade balance, logistics relations, import and export dates, different correlation methods and economic models, the international resource and powerful academic literature help to describe the potential of economy relation and real situations, perspectives, problems and logistics power of the Turkic Speaking States.

*Keywords*: export – imports, economy potential, logistics, logistics sectors.

# Магеррамов С. М. Эконометрическая оценка возможностей логистики Азербайджана в условиях взаимоотношений с тюркоязычными государствами

Современный мир меняется очень быстро с каждым днем. Основа экономики каждого государства – это логистический сектор, который очень динамично растет. Тюркоязычные государства располагаются на историческом Великом шелковом пути. Общая территория и население этих стран составляют 4 732 082 км² и 157 949 505 чел. После распада СССР пять тюркоязычных государств получили независимость (Азербайджан, Казахстан, Узбекистан, Туркменистан и Кыргызстан), экономика и политическая политика этих государств были изменены по современным рыночным правилам. Экономика большинства этих стран базируется на сырье, газе и нефти. Для экспорта всего этого сырья государствам нужна сильная система логистики. В статье показано экономическое развитие логистических секторов и торговли между тюркоязычными государствами. Это исследование поможет раскрыть проблемы и найти решение реализации логистической политики для всех. Использование сильных и различных фундаментальных баз данных, таких как статистика этих стран, торговый баланс, логистические отношения, даты импорта и экспорта, различные методы корреляции и экономические модели, международные ресурсы и мощная академическая литература помогают описать потенциал экономических отношений и реальные ситуации, перспективы, проблемы и логистическую мощь тюркоязычных государств.

Ключевые слова: экспорт-импорт, потенциал экономики, логистика, секторы логистики.

Received by the editors: 31.08.2021 and final form 16.12.2021

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-53-61

UDC 004.77:004.9:005.4:339.1

Yu. Shkrygun, graduate student, ORCID 0000-0002-7623-8213, e-mail: shkrigun.y@gmail.com,

Institute of Industrial Economics of NAS of Ukraine, Kyiv

# MANAGEMENT OF LOGISTICS ACTIVITIES OF ENTERPRISES IN THE CONTEXT OF INDUSTRY 4.0

Formulation of the problem. In modern conditions of rapid digitalization of many spheres of life, including business, special attention is paid to the aspect of logistics management as an integrated process. The digital economy is characterized by processes of digital transformation. David Terrar, an analyst at Agile Elephant Consulting, notes that the digital transformation is the process by which an organization moves to new ways of thinking and working based on the use of social, mobile and other digital technologies. This transformation includes changes in thinking, leadership styles, innovation promotion systems and the adoption of new business models to improve the work of employees of the organization, its customers, suppliers and partners [1].

From an economic point of view, according to a joint study by Capgemini Consulting and MIT Sloan School of Management (School of Management at the Massachusetts Institute of Technology), digital transformation has a significant impact on financial performance. For example, in the absence of these changes, the decline in profits compared to competitors will be 24% per year. The interdependence between technologies and new management methods is noted. In the case of synergy between the implementation of new technologies and the modernization of management methods, there is an increase in profits by 26%. In the presence of one aspect there is a decrease of 11% in the case of the introduction of only digital technologies and an increase of 9% in the case of modernization of only management methods [2].

The logistics processes of the enterprise are a significant component of the operational and long-term activities of the enterprise. Given the digitalization of the economy, it is advisable to consider logistics processes as part of the concept of "Logistics 4.0" [3]. Close interdependence and integrated nature of enterprise performance indicators determines the urgency of considering the theoretical aspects of logistics management in a digital economy.

Analysis of recent research and publications. The analysis of the professional literature on logistics shows the diversity of approaches of scientists to the definition of "management of logistics activities of the enterprise". Various scientific sources use such concepts as "logistics management", "logistics management",

"strategic logistics management", "logistics management of the enterprise", "logistics management in the company", "logistics management", "supply chain management", "marketing and logistics management" etc. [4-34].

Conceptual principles of improving management of logistics activities of enterprises of various industry specifics are highlighted in the works of such leading scientists as K. Barrat, J. Bauersocks, P. Blake, D. Wood, D. Kloss, F. Kotler, M. Christopher, P. Murphy, J.-W. Lamben, G. Sander, J. Stoke, M. Whitehead, A. Harrison, J. Schreibfeder, O. Amosha, N. Bryukhovetskaya, I. Buleev, M. Vaselevsky, M. Grigorak, Y. Zaloznova, V. Kisly, E. Krykavsky, V. Perebyinis, O. Posylkina, O. Pokhilchenko, R. Sagaidak-Nikityuk, O. Sumets, K. Tankov, O. Trifonova, N. Chornopyska and others.

Researchers have substantiated the logistics models of distribution; methodical approaches to determining the optimal volume of the delivery batch and calculating the indicators of efficiency and productivity of customer service; concepts, models of optimization and supply chain management strategies; scientific and methodological principles of risk management of enterprises and practical tools for determining logistical risk in conditions of uncertainty.

However, despite such close attention to the problem outlined by scientists, it remains important to conduct research to improve the efficiency of logistics activities of enterprises, which must meet modern requirements of management in a globalized and digital economy.

With this in mind, the aim of this article is to analyze and generalize conceptual approaches to determining the theoretical foundations of logistics management in the digital economy and the author's interpretation of this definition in the context of modern transformational transformations.

**Presenting main material.** When studying approaches to defining the meaning of the term "logistics management", most scholars understand this definition as a tool, mechanism, synergy of management functions, integration of logistics and management, organization and management of various flows, integrated business process management, consolidated group of logistics operations, management decision making (Fig. 1).

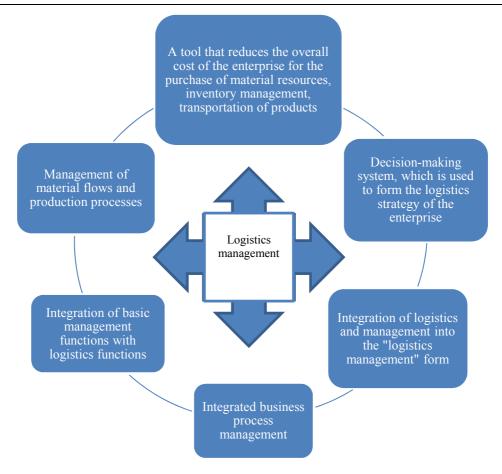


Fig. 1. Conceptual approaches to the definition of "logistics management" (built by the author)

The authors note the integrated nature of logistics management as a tool for planning, organizing, regulating, optimizing, coordinating and controlling material and information flows. From the point of view of planning, the term can be described as a decision-making system through which the formation of logistics and overall strategy and mission of the enterprise. The concept can be considered as a process of administration of the logistics system, the synergy of basic management functions with logistics functions. As a complex localized management system based on the principles of logistics theory, it is possible to consider the integration of logistics and management in the form of "logistics management".

In particular, the first category of authors defines logistics management as a tool that reduces the overall costs of the enterprise for traditional functions of procurement of material resources, inventory management, transportation and processing of products, information flow management.

The second category of scientists considers "logistics management" as a synergy of basic management functions (organization, planning, regulation, coordination, control, accounting, analysis and forecasting) with basic complex logistics functions to achieve short-term and long-term goals of logistics

system and synthesis of basic management functions – planning, organization, regulation, coordination and control of flow processes.

The third category of authors understand the term "logistics management" as the organization, planning and management of material and information flows. It is established that logistics management, using the methods of operational management, ensures the implementation of all processes with minimal total costs – the cost of production, including the purchase of materials and distribution of finished products with delivery to the final consumer.

Logistics management is also understood as the basis for the development of business strategy of enterprises for the management of material and information flows, production process.

The authors of the fourth category define "logistics management" as the management of integrated business processes related to product promotion and related flows from the moment of demand for products to the moment of meeting this need to improve business efficiency and customer loyalty.

It is noted that the company's logistics management system includes such subsystems as management of:

• information and software, document management, including digital;

- ensuring the purchase of products, managing relationships with suppliers;
- product distribution (definition and organization of optimal and customer-oriented product delivery, work with retail network, management of pricing in a changing market);
  - logistics infrastructure;
  - logistics costs;
- customer service processes, maintaining the quality of customer service on the basis of customer orientation.

The fifth category of scientists points out that the term "logistics management" means management in logistics systems based on the theory of logistics and is based on the integration of logistics and management in the form of "logistics management" as a comprehensive localized management system of material and information flows.

The analysis shows that some authors under "logistics management" indicate a tool on the basis of which you can reduce the cost of logistics, inventory management, transportation of products to consumers; others – synthesis of management functions (planning, organization,

regulation, coordination and control) of flow processes; third – management of material and information flows; fourth – management of integrated business processes, from logistics to sales of finished products to consumers; fifth – the integration of management theory and logistics.

Some authors use the term "logistics management", which includes management: inquiries from consumers, proposals from market participants and establishing a relationship between them; information flows; procurement and supply processes; production activities; stocks and warehousing; financial and marketing activities; service; pricing; other components of production activities and relationships with the end user. Logistics management is aimed at optimizing the movement of goods, inventories and costs, ensuring high quality service in the supply chain.

Given the components of the subsystems of logistics management, in determining the content of the concept of "logistics management", most scientists pay attention, as a rule, to the management of material and information flows, material and technical resources, stocks, trade, customer satisfaction. (Fig. 2).

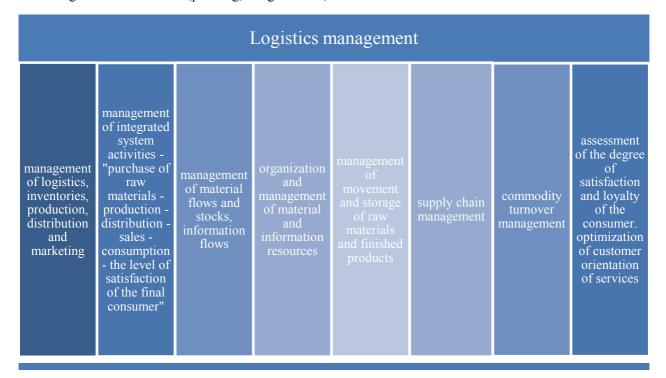


Fig. 2. Scientists' approaches to defining the concept of ''logistics management''

(built by the author)

According to the scientific concepts of various scientists under logistics management is considered:

- the process of managing the movement and storage of raw materials, components and finished products in economic circulation from the moment of payment to suppliers until the receipt of funds for the supply of finished products to end users;
- the process of managing the storage and movement of raw materials and finished products from the supplier through the manufacturer to consumers;
- the process of managing the movement and stocks of goods from the point of purchase to the point of consumption;
- the process of strategic management of procurement, movement and storage of materials, components and finished products (and relevant information flows) of the organization and its marketing channels, which maximizes current and future profitability by fulfilling orders with maximum cost minimization;

- the process of managing logistic support, inventories;
  - process of material resources management;
- the process of managing the promotion of resources from markets for factors of production to markets for goods;
- a set of organizational measures, which includes the purchase of material resources, their transportation, warehousing and packaging;
- the process of movement management and logistics:
- direction of economic activity, which includes the management of material and information flows in the areas of production, circulation, customer orientation;
- the process of managing material flows and stocks in order to meet the needs of consumers and optimize the supply, production, marketing costs associated with the movement and preservation of material values;
- a set of technical means, activities (operations, works, processes, integrated technologies) and methodological rules aimed at effective planning, organization, practical implementation and management of material and information flows, their legal, informational, financial, engineering, scientific and methodological and digital provision and implementation in accordance with the current, strategic objectives of the enterprise or specific objectives;
- purposeful influence on the movement and coordination of material and related business processes, which maximizes the usefulness and assumes the presence of synergies in interaction;
- the process of managing the integrated system activities of the company's functional divisions to promote products in the chain "purchase of raw materials production distribution sales consumption customer feedback" based on the coordination of functionality, procedures and operations performed in this process;
- a set of activities to manage product flows, coordinate the use of resources and markets at a given level of services with minimal costs;
- the process of managing differentiated functions of supply, production, sales, customer orientation;
- the cycle of economic activity in the context of a single whole, from the choice of appropriate tasks, including the definition of effective methods for their solution and management of practical application of these methods, and to the organization and management of sales and sales;
- the process of managing the processes of logistics, production, distribution and marketing of products;
- procurement, inventory, production and sales management process;
- time-dependent location of resources, strategic management of the entire supply chain;

- the part of supply chain management related to the planning, implementation and control of the efficiency and productivity of direct and reverse flows of goods, services and related information on the full cycle of activities;
  - the process of goods management.

In the scientific literature there is the concept of "logistics management of the enterprise", which considers a strategic tool to ensure the activity, without distinguishing between different types of logistics in the areas of its use or functional characteristics. The advantage of logistics management is the integration of functionally diverse activities of the enterprise (eg, production and distribution activities, as well as investment and innovation in the modernization of production), in the implementation of key strategic goals — the company's mission and competitive advantage in the market.

Some experts use the term "logistics management in the company" as an integrated management of business processes to promote products and related flows from the point of origin to the end user to ensure maximum efficiency of the company, as well as a system that integrates management into a single entity internal business processes and external business processes as relationships with partners.

It is noted that the essence of logistics management is to develop a set of processes for planning, organizing, controlling and managing transportation, warehousing and other tangible and intangible operations, including digital, in the process of bringing raw materials to the enterprise, processing raw materials, bringing finished products to the consumer with the interests and requirements of the latter, as well as the transfer, storage and processing of relevant information.

The constituent concepts of "supply chain management" can be defined as the management of customer relationships; customer service; demand; execution of orders; production flow; supply; product development and bringing it to commercial use; reverse flows.

Scientists pay special attention to the development of the concept of marketing and logistics management, which means the integration of marketing and logistics. According to some authors, within the marketing philosophy, the concept of logistics directs the company's activities to minimize the total cost of moving and storing inventory, ranging from the choice of suppliers to after-sales service.

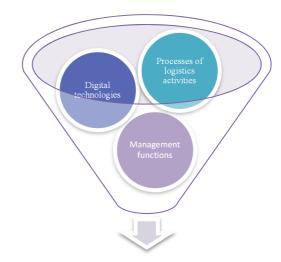
Thus, it can be noted that there are currently a large number of definitions on the topic of logistics management of enterprises. Various terms are used in scientific sources: "logistics management", "logistics management", "logistics management of the enterprise", "logistics management in the company", "logistics management", "supply chain management", "marketing and logistics management", which are based on various scientific concepts and positions.

It is established that the majority of scientists include only the organization in the functions of logistics management; planning, implementation and control; planning and control.

The analysis may show that when covering the issue of "management of logistics activities of the enterprise" scientists do not always consider the full range of components of the term.

Given the current changing market conditions, global and accelerated digitization processes, the high probability of black swan events, such as the COVID-19 pandemic, which directly determines the new conditions and objectives of management, it is advisable to consider the whole concept taking into account the impact of digital technologies (Fig. 3).

Thus, the meaning of the term "management of logistics activities of the enterprise" can be clarified as a continuous integrated process carried out through the implementation of management functions (forecasting, planning, organization, accounting, control, analysis and regulation), processes of logistics activities in a single complex and supply of material resources (MR), contract work with suppliers, warehousing of MR, formation of production and storage stocks, production of products, formation of inventories, recycling of

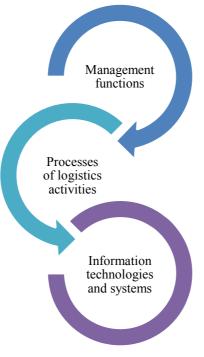


Logistics activity management

Fig. 3 Components of management of logistic activity of the enterprise in digital economy (offered and created by author)

industrial waste, customer service, transportation of products, sales of finished products) and digital technologies and information systems (Fig. 4).

purchase and supply of MR storage of MR formation of production reserves production waste recycling customer service transportation of products sales of products to consumers



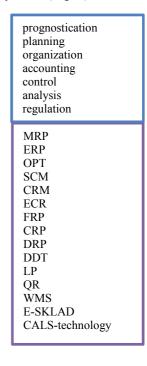


Fig. 4 Structural and logical scheme of management of logistics activities of the enterprise in the digital economy (author's development)

**Conclusions.** Based on the above, we can conclude that in modern business conditions, the digitalization of business processes will help streamline flows, improve service quality, increase efficiency and flexibility of logistics services. For example, the preparation of paper documents and delivery delays associated with its registration is 10-15% of transport costs. With the introduction of digital logistics on the basis of legally

recognized electronic document management, these costs and delivery times can be reduced by 20-40% [18]. According to Customer Service experts, increasing customer loyalty helps increase profits. At the same time, according to the American Consumers Association, attracting new customers is 5 times more expensive than maintaining existing ones. Experts from the Canadian Imperial Bank of Commerce estimate that a 2% increase in consumer loyalty could lead to a 2% increase in net income.

As a result of the research, various theoretical approaches to the essence of the concepts of "logistics management", "logistics management" are generalized and systematized. And on this basis, the author's interpretation of the term "management of logistics activities of the enterprise", which differs from the

existing ones is the symbiosis and integration of management functions, logistics processes and technological and information systems.

Prospects for further research are to study the foreign practice of digital transformation of business processes of companies and determine the content and essence of the concept of "digital transformation of logistics activities of enterprises".

#### Literature

- 1. Agile Elephant. What is Digital Transformation? February 15, 2015. URL: http://www.theagileelephant.com/what-is-digital-transformation/.
- 2. Гарифуллин Б. М., Зябриков В. В. Цифровая трансформация бизнеса: модели и алгоритмы. *Creative Economy*. 2018. № 12(9). С. 1345-1358. DOI: https://doi.org/10.18334/ce.12.9.39332.
- 3. Winkelhaus S., Grosse E. Logistics 4.0: a systematic review towards a new logistics system. *International Journal of Production Research.* 2020. Vol. 58(1). P. 18-43. DOI:https://doi.org/10.1080/00207543.2019.1612964.
- 4. Бауэрсокс Доналд Дж., Клосс Дейвид Дж. Логистика: интегрированная цепь поставок: пер. с англ.. 2-е изд. Москва: Олимп-Бизнес, 2005. 640 с.
  - 5. Кристофер М., Пэк Х. Маркетинговая логистика: пер. с англ. Москва: ИД «Технологии», 2005. 200 с.
  - 6. Сток Дж., Ламберт Д. Стратегическое управление логистикой. Москва: ИНФРА-М, 2005. 669 с.
- 7. Перебийніс В. І., Перебийніс О. В. Транспортно-логістичні системи підприємств: формування та функціонування: монографія. Полтава: Полтавський ун-т споживчої кооперації України, 2006. 207 с.
- 8. Карнаухов С. Логистика как управленческая теория и система управления материальным потоком. *РИСК*. 2006. № 2. С. 79-90.
- 9. Васелевський М., Білик І., Крикавський €. та ін. Економіка логістичних систем: монографія. Львів: Нац. ун-т «Львівська політехніка», 2008. 596 с.
- 10. Пилипенко А. А., Поспелов А. М. Организация логистического управления деятельностью промышленного предприятия. *Бизнес Информ.* 2008. № 1. С. 100-106.
- 11. Wallenburg Carl Marcus. Der differenzierte Einfluss unterschiedlicher Performance-Level auf die Kundenbindung bei Logistikdienstleistungen // Zeitschrift für Betriebswirtschaft. −Forschungsperspektiven der betriebswirtschaftlichen Logistik. 2008. № 4. Special Issue. S. 55-82.
- 12. Кислий В.М., Біловодська О. А., Олефіренко О. М., Смоляник О.. Логістика: теорія та практика. Київ: Центр учбової літератури, 2010. 360 с.
- 13. Пономаренко В. С., Таньков К. М., Лепейко Т. І. Логістичний менеджмент / за ред. В. С. Пономаренка. Харків: ІНЖЕК, 2010. 440 с.
  - 14. Таньков К. М., Леонова Ю. О., Бахурець О. В. Логістика. Харків: Харківський нац. економічний ун-т, 2011. 132 с.
- 15. Логістичний менеджмент фармацевтичного виробництва: монографія / О.В. Посилкіна, Р.В. Сагайдак-Нікітюк, Г.В. Загорій та ін.; за заг. ред. О.В. Посилкіної. Харків: Нац. фармацевтичний ун-т, 2011. 272 с.
- 16. Крикавський €. В., Похильченко О. А., Чорнописька Н. В. та ін. Економіка логістики / за заг. ред. €. В. Крикавського, О.А. Похильченко. Львів: Вид-во НУ «Львівська політехніка», 2014. 640 с.
- 17. Шевців Л. Стратегічне логістичне управління діяльністю машинобудівних підприємств в умовах євроінтеграційних процесів. Вісник Дніпропетровського університету. Серія: Світове господарство і міжнародні економічні відносини. 2017. Т. 25. Вип. 9. С. 118–136.
- 18. Кушнір О. К., Фасолько Т. М. Управління виробничою логістикою з використанням ОРТ систем. Вісник Кам'янець-Подільського національного університету імені Івана Огієнка. Економічні науки. 2019. Вип. 14. С. 197-204. URL: http://nbuv.gov.ua/UJRN/vkpnuen 2019 14 30.
- 19. Ковальова М. Л. Логістичне управління: особливості та принципи. *Інтелект XXI*. 2019. № 5. С. 45-48. URL: http://nbuv.gov.ua/UJRN/int\_XXI\_2019\_5\_10.
- 20. Савенко І. І., Седіков Д. В. Логістичний менеджмент, як інструмент оптимізації логістичних. *Економіка харчової промисловості*. 2020. Т. 12, Вип. 3. С. 42-50. URL: http://nbuv.gov.ua/UJRN/echp 2020 12 3 6.
- 21. Ярова Н. В., Омельчук К. С. Логістичний менеджмент як інструмент ефективного управління транспортною системою підприємств регіону. Вісник Харківського національного технічного університету сільського господарства імені Петра Василенка. 2019. Вип. 202. С. 422-430. URL: http://nbuv.gov.ua/UJRN/Vkhdtusg\_2019\_202\_42.
- 22. Shifting patterns the future of the logistics industry [Internet; cited 2018 February 15]. PwC. URL: https://www.pwc.com/transport.
- 23. Dördüncü H., Oruç Z.C. Industry 4.0, digitalization, and big data: perspective of logistics and supply chain management. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergis*. 2021. Cilt: 30- No: 3. Sayfa: 170-180. URL:https://www.researchgate.net/publication/357877368\_INDUSTRY\_40\_DIGITALIZATION\_AND\_BIG\_DATA\_PERSPECTI VE\_OF\_LOGISTICS\_AND\_SUPPLY\_CHAIN\_MANAGEMENT.
- 24. Zhurynov G. M., Tulemetova A. S., Sadykbekova A. A., Jazdykbayeva D. P., Talassov M. Zh. Ways to improve the organization of logistics management at enterprises. December 2020. DOI: https://doi.org/10.32014/2020.2518-1467.192. URL:https://www.researchgate.net/publication/348000995\_WAYS\_TO\_IMPROVE\_THE\_ORGANIZATION\_OF\_LOGISTICS\_M ANAGEMENT AT ENTERPRISES.
- 25. Miller T., Liberatore M.J. Logistics management: an analytics based approach. Publisher: Business Expert Press. April 2020. URL: https://www.researchgate.net/publication/340582146\_LOGISTICS\_MANAGEMENT\_AN\_ANALYTICS\_BASED\_APPROACH.
- 26. Smoliar L., Zhygalkevych Zh., Tiukh N. Management of logistics activities of the enterprise. *Investytsiyi Praktyka ta Dosvid*. January 2022. DOI: https://doi.org/10.32702/2306-6814.2022.1.5 URL: https://www.researchgate.net/publication/357951170\_MANAGEMENT\_OF\_LOGISTICS\_ACTIVITIES\_OF\_THE\_ENTERPRISE.

- 27. Chung Y-J., Kang N-J. A Study on Logistics Strategy and Importance of Logistics Activity. *Journal of Korea Research Association of International Commerce*. Vol. 20 (1). P. 45-62. February 2020. DOI: https://doi.org/10.29331/JKRAIC.2020.02.20.1.45. URL: https://www.researchgate.net/publication/340055008 A Study on Logistics Strategy and Importance of Logistics Activity.
- 28. Makarenko O.N., Danko Y.I. Theoretical and methodological basis for managing the logistics activities of enterprises. January 2020. DOI: https://doi.org/10.31359/2312-3427-2020-4-1-75. URL: https://www.researchgate.net/publication/355044666\_Theoretical\_and\_methodological\_basis\_for\_managing\_the\_logistics\_activities\_of\_enterprises.
- 29. Bykova O., Garnov A., Garnova V., Repnikova V. Improving Logistics Activities in the Face of Global Challenges. *Scientific Research and Development Economics of the Firm.* March 2021. Vol. 10(1). P. 42-47. DOI: https://doi.org/10.31359/2312-3427-2020-4-1-75. URL: https://www.researchgate.net/publication/350326776\_Improving\_Logistics\_Activities\_in\_the\_Face\_of\_Global\_Challenges.
- 30. Трушкіна Н. В., Шкригун Ю. О. Управління логістичною діяльністю підприємства в цифровій економіці: теоретичні засади. *Наукові інновації та передові технології*. 2021. №2(2). С.152-166. DOI: https://doi.org/10.52058/2786-5274 -2021-2(2)-152-166.
- 31. Трушкіна Н. В., Шкригун Ю. О. Концептуальні підходи до визначення суті й змісту терміна «клієнтський досвід». Věda a perspektivy. 2021. № 4(4) 2. С. 125-138. DOI: https://doi.org/10.52058/2695-1592-2021-4(4)-125-138.
- 32. Трушкіна Н. В., Сергєєва О. Р., Шкригун Ю. О. Концептуальні підходи до визначення поняття «електронна комерція». *Проблеми економіки*. 2020. № 4. С. 231-240. DOI: https://doi.org/10.32983/2222-0712-2020-4-231-240.
- 33. Шкригун Ю. О. «Електронний бізнес», «електронна комерція» та «електронна торгівля»: відмінності й особливості. Управління економікою: теорія та практика. Чумаченківські читання: зб. наук.праць / НАН України, Ін-т економіки промсті; редкол.: О. О. Хандій (голов. ред.), В. І. Ляшенко (відп. ред.), В. Є. Куриляк та ін. Київ, 2020. С. 312-325. DOI: https://doi.org/10.37405/2221-1187.2020.312-325.
- 34. Шкригун Ю. О. Теоретичні підходи до визначення поняття «цифрова логістика». *Економічний вісник Донбасу*. 2021. №3(65). DOI: https://doi.org/10.12958/1817-3772-2021-3(65)-137-146.

#### References

- 1. Agile Elephant. (2015). What is Digital Transformation? <u>Retrieved from http://www.theagileelephant.com/what-is-digital-transformation/.</u>
- 2. Garifullin, B. M., Zyabrikov, V. V. (2018). Tsifrovaya transformatsiya biznesa: modeli i algoritmy [Digital transformation of business: models and algorithms]. *Creative Economy*, 12(9), pp. 1345-1358. DOI: https://doi.org/10.18334/ce.12.9.39332 [in Russian].
- 3. Winkelhaus, S., Grosse, E. (2020). Logistics 4.0: a systematic review towards a new logistics system. *International Journal of Production Research*, Vol. 58(1), pp. 18-43. DOI:https://doi.org/10.1080/00207543.2019.1612964.
- 4. Bowersox, Donald J., Kloss, David J. (2005). Logistika: integrirovannaya tsep' postavok [Logistics: an integrated supply chain]. Transl. from Engl. 2nd ed. Moscow, Olimp-Business. 640 p. [in Russian].
- 5. Christopher, M., Peck, H. (2005). Marketingovaya logistika [Marketing logistics]. Transl. from Engl. Moscow, Publishing house "Technologies". 200 p. [in Russian].
- 6. Stock, J., Lambert, D. (2005). Strategicheskoye upravleniye logistikoy [Strategic management of logistics]. Moscow, INFRA-M. 669 p. [in Russian].
- 7. Perebyinis, V. I., Perebyinis, O. V. (2006). Transportno-lohistychni systemy pidpryiemstv: formuvannia ta funktsionuvannia [Transport and logistics systems of enterprises: formation and functioning]. Poltava, Poltava University of Consumer Cooperation of Ukraine. 207 p. [in Ukrainian].
- 8. Karnaukhov, S. (2006). Logistika kak upravlencheskaya teoriya i sistema upravleniya material'nym potokom [Logistics as a management theory and material flow management system]. *RISK*, No. 2, pp. 79-90 [in Russian].
- 9. Vaselevskyi, M., Bilyk, I., Krykavskyi, Ye. et al. (2008). Ekonomika lohistychnykh system [Economics of logistic systems]. Lviv, National Lviv Polytechnic University. 596 p. [in Ukrainian].
- 10. Pilipenko, A. A., Pospelov, A. M. (2008). Organizatsiya logisticheskogo upravleniya deyatel'nost'yu promyshlennogo predpriyatiya [Organization of logistical management of an industrial enterprise]. *Business Inform*, No. 1, pp. 100-106 [in Russian].
- 11. Wallenburg Carl Marcus. (2008). Der differenzierte Einfluss unterschiedlicher Performance-Level auf die Kundenbindung bei Logistikdienstleistungen. Zeitschrift für Betriebswirtschaft, № 4 (Special Issue), s. 55-82 [in German].
- 12. Kyslyi, V.M., Bilovodska, O. A., Olefirenko, O. M., Smolianyk, O. (2010). Lohistyka: teoriia ta praktyka [Logistics: theory and practice]. Kyiv, Center for Educational Literature. 360 p. [in Ukrainian].
- 13. Ponomarenko, V. S., Tankov, K. M., Lepeiko, T. I. (2010). Lohistychnyi menedzhment [Logistics management]. Kharkiv, INZhEK. 440 p. [in Ukrainian].
- 14. Tankov, K. M., Leonova, Yu. O., Bakhurets, O. V. (2011). Lohistyka [Logistics.]. Kharkiv, Kharkiv National. University of Economics. 132 p. [in Ukrainian].
- 15. Posylkina, O. V., Sahaidak-Nikitiuk, R. V., Zahorii, H. V. et al. (2011). Lohistychnyi menedzhment farmatsevtychnoho vyrobnytstva [Logistics management of pharmaceutical production]. Kharkiv, National Pharmaceutical University. 272 p. [in Ukrainian].
- 16. Krykavskyi, Ye. V., Pokhylchenko, O. A., Chornopyska, N. V. et al. (2014). Ekonomika lohistyky [Economics of logistics]. Lviv, Publishing House of Lviv Polytechnic University. 640 p. [in Ukrainian].
- 17. Shevtsiv, L. (2017). Stratehichne lohistychne upravlinnia diialnistiu mashynobudivnykh pidpryiemstv v umovakh yevrointehratsiinykh protsesiv [Strategic logistics management of the activities of machine-building enterprises in the conditions of European integration processes]. Visnyk Dnipropetrovskoho universytetu. Seriia: Svitove hospodarstvo i mizhnarodni ekonomichni vidnosyny Bulletin of Dnipropetrovsk University. Series: World economy and international economic relations, Vol. 25, Issue 9, pp. 118–136 [in Ukrainian].
- 18. Kushnir, O. K., Fasolko, T. M. (2019). Upravlinnia vyrobnychoiu lohistykoiu z vykorystanniam OPT system [Management of production logistics using OPT systems]. Visnyk Kamianets-Podilskoho natsionalnoho universytetu imeni Ivana Ohiienka. Ekonomichni nauky Bulletin of Kamianets-Podilskyi National University named after Ivan Ohienko. Economic sciences, Issue 14, pp. 197-204. Retrieved from http://nbuv.gov.ua/UJRN/vkpnuen\_2019\_14\_30 [in Ukrainian].
- 19. Kovalova, M. L. (2019). Lohistychne upravlinnia: osoblyvosti ta pryntsypy [Logistics management: features and principles]. *Intelekt XXI Intelligence XXI*, 5, pp. 45-48. Retrieved from http://nbuv.gov.ua/UJRN/int\_XXI\_2019\_5\_10 [in Ukrainian].

- 20. Savenko, I. I., Sedikov, D. V. (2020). Lohistychnyi menedzhment, yak instrument optymizatsii lohistychnykh [Logistics management as a tool for logistics optimization]. *Ekonomika kharchovoi promyslovosti Economics of the food industry*, Vol. 12, Issue 3, pp. 42-50. Retrieved from http://nbuv.gov.ua/UJRN/echp 2020 12 3 6 [in Ukrainian].
- 21. Yarova, N. V., Omelchuk, K. S. (2019). Lohistychnyi menedzhment yak instrument efektyvnoho upravlinnia transportnoiu systemoiu pidpryiemstv rehionu [Logistics management as a tool for effective management of the transport system of regional enterprises]. Visnyk Kharkivskoho natsionalnoho tekhnichnoho universytetu silskoho hospodarstva imeni Petra Vasylenka Bulletin of the Petro Vasylenko Kharkiv National Technical University of Agriculture, Issue 202, pp. 422-430. Retrieved from http://nbuv.gov.ua/UJRN/Vkhdtusg\_2019\_202\_42 [in Ukrainian].
- 22. Shifting patterns the future of the logistics industry [Internet; cited 2018 February 15]. PwC. Retrieved from https://www.pwc.com/transport.
- 23. Dördüncü, H., Oruç, Z. C. (2021). Industry 4.0, digitalization, and big data: perspective of logistics and supply chain management. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergis*. Cilt: 30- No: 3. Sayfa: 170-180. Retrieved from https://www.researchgate.net/publication/357877368\_INDUSTRY\_40\_DIGITALIZATION\_AND\_BIG\_DATA\_PERSPECTIVE\_OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT.
- 24. Zhurynov, G. M., Tulemetova, A. S., Sadykbekova, A. A., Jazdykbayeva, D. P., Talassov, M. Zh. Ways to improve the organization of logistics management at enterprises. (December 2020). Retrieved from https://www.researchgate.net/publication/348000995\_WAYS\_TO\_IMPROVE\_THE\_ORGANIZATION\_OF\_LOGISTICS\_MANAGEMENT\_AT\_ENTERPRISES. DOI: https://doi.org/10.32014/2020.2518-1467.192.
- 25. Miller, T., Liberatore, M. J. (April 2020). Logistics management: an analytics based approach. Publisher: Business Expert Press. Retrieved from https://www.researchgate.net/publication/340582146\_LOGISTICS\_MANAGEMENT\_AN\_ANALYTICS\_BASED\_APPROACH.
- 26. Smoliar, L., Zhygalkevych, Zh., Tiukh, N. (January 2022). Management of logistics activities of the enterprise. *Investytsiyi Praktyka ta Dosvid.* DOI: https://doi.org/10.32702/2306-6814.2022.1.5 Retrieved from https://www.researchgate.net/publication/357951170 MANAGEMENT OF LOGISTICS ACTIVITIES OF THE ENTERPRISE.
- 27. Chung, Y-J., Kang, N-J. A (2020). Study on Logistics Strategy and Importance of Logistics Activity. *Journal of Korea Research Association of International Commerce*, Vol. 20 (1), pp. 45-62. DOI: https://doi.org/10.29331/JKRAIC.2020.02.20.1.45. Retrieved from https://www.researchgate.net/publication/340055008\_A\_Study\_on\_Logistics\_Strategy\_and\_Importance\_of\_Logistics\_Activity.
- 28. Makarenko, O. N., Danko, Y. I. (2020). Theoretical and methodological basis for managing the logistics activities of enterprises. DOI: https://doi.org/10.31359/2312-3427-2020-4-1-75. Retrieved from https://www.researchgate.net/publication/355044666 Theoretical and methodological basis for managing the logistics activities of enterprises.
- 29. Bykova, O., Garnov, A., Garnova, V., Repnikova, V. (2021). Improving Logistics Activities in the Face of Global Challenges. *Scientific Research and Development Economics of the Firm*, Vol. 10(1), pp. 42-47. DOI: https://doi.org/10.31359/2312-3427-2020-4-1-75. Retrieved from https://www.researchgate.net/publication/350326776\_Improving\_Logistics\_Activities\_in\_the\_Face\_of\_Global Challenges.
- 30. Trushkina, N. V., Shkryhun, Yu. O. (2021). Upravlinnia lohistychnoiu diialnistiu pidpryiemstva v tsyfrovii ekonomitsi: teoretychni zasady [Management of logistics activities of the enterprise in the digital economy: theoretical foundations]. *Naukovi innovatsii ta peredovi tekhnolohii Scientific innovations and advanced technologies*, 2(2), pp. 152-166. DOI: https://doi.org/10.52058/2786-5274 -2021-2(2)-152-166 [in Ukrainian].
- 31. Trushkina, N. V., Shkryhun, Yu. O. (2021). Kontseptualni pidkhody do vyznachennia cuti y zmistu termina «kliientskyi dosvid» [Conceptual approaches to defining the meaning and content of the term "customer experience"]. *Věda a perspektivy*, 4(4) 2, pp. 125-138. DOI: https://doi.org/10.52058/2695-1592-2021-4(4)-125-138 [in Ukrainian].
- 32. Trushkina, N. V., Serhieieva, O. R., Shkryhun, Yu. O. (2020). Kontseptualni pidkhody do vyznachennia poniattia «elektronna komertsiia» [Conceptual approaches to defining the concept of "electronic commerce"]. Problemy ekonomiky Problems of the economy, 4, pp. 231-240. DOI: https://doi.org/10.32983/2222-0712-2020-4-231-240 [in Ukrainian].
- 33. Shkryhun, Yu. O. (2020). «Elektronnyi biznes», «elektronna komertsiia» ta «elektronna torhivlia»: vidminnosti y osoblyvosti ["Electronic business", "e-commerce" and "e-commerce": differences and features.]. Upravlinnia ekonomikoiu: teoriia ta praktyka. Chumachenkivski chytannia Management of Economy: Theory and Practice. Chumachenko's Annals, pp. 312-325. Kyiv, IIE of NAS of Ukraine. DOI: https://doi.org/10.37405/2221-1187.2020.312-325 [in Ukrainian].
- 34. Shkryhun, Yu. O. (2021). Teoretychni pidkhody do vyznachennia poniattia «syfrova lohistyka» [Theoretical approaches to the definition of "digital logistics"]. *Ekonomichnyi visnyk Donbasu Economic Herald of the Donbas*, 3(65), pp. 17-146. DOI: https://doi.org/10.12958/1817-3772-2021-3(65)-137-146 [in Ukrainian].

### Шкригун Ю. О. Управління логістичною діяльністю підприємств у контексті індустрії 4.0

У сучасних умовах цифрової економіки та великої кількості форс-мажорних подій, як економічного, так і соціального характеру, особливої актуальності набувають питання забезпечення виробництва необхідними матеріальними та інформаційними ресурсами й ефективного їх використання; удосконалення оперативного та стратегічного управління складським господарством, запасами продукції, диференційованими транспортними потоками, збутовою діяльністю та клієнтським досвідом.

З метою забезпечення ефективної діяльності підприємства мають організовувати свою діяльність таким чином, щоб досягти нівелювання ризиків, мінімізації збитків і витрат, які пов'язано з організацією процесів матеріально-технічного забезпечення, виробництва продукції, транспортування, логістичного обслуговування та збуту, а також максимізувати рентабельність від реалізації. Насамперед вищезазначені завдання можливо здійснити за рахунок підвищення ефективності управління логістичною діяльністю підприємств з урахуванням аналізу його складових, їх взаємозв'язку та наявності прискореного і нерівномірного процесу цифровізації.

Встановлено, що доцільно розробляти й впроваджувати управлінські рішення за такими ключовими напрямами: управління закупівлями та поставками матеріальних ресурсів (розрахунок оптимального обсягу партії поставки матеріальних ресурсів, оптимізація закупівельної стратегії підприємства, удосконалення управління процесом закупівель з використанням методу багатокритеріальної оцінки вибору оптимального постачальника матеріальних ресурсів); управління транспортними потоками (впровадження інформаційних систем управління вантажопотоками, застосовування автоматизованої обробки документів при оформленні процесу транспортування вантажів, розробка пропозицій щодо оптимізації завантаження

транспорту, використання інтернет-технології для автоматизації транспортних процесів); управління клієнтським досвідом (аналіз обсягів відвантаження продукції, прогнозування обсягів відвантаження продукції споживачам, розробка пропозицій щодо підвищення рівня логістичного обслуговування, формування системи контрактних взаємовідносин зі споживачами, удосконалення клієнтоорієнтованого підходу до обслуговування різних категорій споживачів у контексті концепції маркетингу взаємовідносин); управління збутовою діяльністю (обґрунтування доцільності застосування мережевого підходу до організації збутової діяльності підприємств; удосконалення механізму реалізації державно-приватного партнерства при управлінні збутовою діяльністю підприємств на основі організаційно-правової форми синдикату, методичного підходу до вибору оптимального каналу збуту готової продукції; визначення пріоритетних напрямів розвитку електронної комерції як дієвого інструменту просування продукції на ринок).

*Ключові слова:* логістичний менеджмент, логістичне управління, управління логістикою, управління ланцюгами постачань, маркетингово-логістичне управління, управління логістичною діяльністю, пріоритетні напрями, цифрові технології, інформаційні системи, ефект.

### Shkrygun Yu. Management of Logistics Activities of Enterprises in the Context of Industry 4.0

In the modern conditions of digital economy and a large number of force majeure events, both economic and social, the issues of providing production with the necessary material and digital resources and their efficient use become especially relevant; improving the operational and strategic management of warehousing, inventories, differentiated transport flows, sales activities and customer experience.

In order to ensure the effective operation of enterprises should organize their activities in such a way as to avoid risk, loss and costs associated with the organization of logistics processes, production, transportation and marketing, customer focus, and maximize revenue. First of all, these goals can be achieved by improving the management of logistics activities of enterprises, taking into account the analysis of the components of the concept, their relationship and taking into account the presence of accelerated and uneven digitization process.

It is established that it is expedient to develop and implement management decisions in the following key areas: procurement and supply of material resources (calculation of the optimal volume of the supply of material resources, optimization of procurement strategy, improving procurement management using the method of multicriteria assessment) traffic flow management (introduction of cargo flow management information systems, use of automated document processing in the design of the cargo transportation process, development of proposals for optimizing transport loading, use of Internet technology to automate transport processes); customer experience management (analysis of shipment volumes, forecasting shipment volumes to consumers, development of proposals to increase the level of logistics services, formation of a system of contractual relations with consumers, improvement of customer-oriented approach to service of different categories of consumers in the context of relationship marketing); sales management (justification of the network approach to the organization of sales activities of enterprises; improving the mechanism of public-private partnership in sales management of enterprises based on the organizational and legal form of the syndicate, methodological approach to choosing the optimal sales channel for finished products; commerce as an effective tool for promoting products on the market).

Keywords: logistics management, logistics control, administration of logistics, supply chain management, marketing-logistics management, logistics activity management, priority areas, digital technologies, information systems, effect.

### Шкригун Ю. О. Управление логистической деятельностью предпритий в контексте индустрии 4.0

В современных условиях цифровой экономики и большого количества форс-мажорных событий, как экономического, так и социального характера, особую актуальность приобретают вопросы обеспечения производства необходимыми материальными и информационными ресурсами и эффективного их использования; усовершенствование оперативного и стратегического управления складским хозяйством, запасами продукции, дифференцированными транспортными потоками, сбытовой деятельностью и клиентским опытом.

С целью обеспечения эффективной деятельности предприятия должны организовывать свою деятельность таким образом, чтобы достичь нивелирования рисков, минимизации убытков и затрат, связанных с организацией процессов материально-технического обеспечения, производства продукции, транспортировки, логистического обеслуживания и сбыта, а также максимизировать рентабельность от реализации. В первую очередь, вышеупомянутые задачи можно осуществить за счет повышения эффективности управления логистической деятельностью предприятий с учетом анализа его составляющих, их взаимосвязи и наличия ускоренного и неравномерного процесса цифровизации.

Установлено, что целесообразно разрабатывать и внедрять управленческие решения по следующим ключевым направлениям: управление закупками и поставками материальных ресурсов (расчет оптимального объема партии поставки материальных ресурсов, оптимизация закупочной стратегии предприятия, усовершенствование управления процессом закупок с использованием метода многокритериальной оценки выборов) управление транспортными потоками (внедрение информационных систем управления грузопотоками, применение автоматизированной обработки документов при оформлении процесса транспортировки грузов, разработка предложений по оптимизации загрузки транспорта, использование интернет-технологии для автоматизации транспортных процессов); управление клиентским опытом (анализ объемов отгрузки продукции, прогнозирование объемов отгрузки продукции потребителям, разработка предложений по повышению уровня логистического обслуживания, формирование системы контрактных взаимоотношений с потребителями, усовершенствование клиентоориентированного подхода к обслуживанию разных категорий потребителей в контексте концепции маркетинга взаимоотношений); управление сбытовой деятельностью (обоснование целесообразности применения сетевого подхода к организации сбытовой деятельностью предприятий на основе организационноправовой формы синдиката, методического подхода к выбору оптимального канала сбыта готовой продукции; определение приоритетных направлений коммерции как действенного инструмента продвижения продукции на рынок).

*Ключевые слова:* логистический менеджмент, логистическое управление, управление логистикой, управление цепями поставок, маркетингово-логистическое управление, управление логистической деятельностью, приоритетные направления, цифровые технологии, информационные системы, эффект.

Received by the editors: 08.11.2021 and final form 16.12.2021

### Management

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-62-67

**UDC** 005:664.6(477)

V. Ostrovetskyy, economist, ORCID 0000-0003-3985-5236, e-mail: v.ostrovetskyy@gmail.com,

Kyiv

# SOME ASPECTS OF IMPROVING THE MANAGEMENT SYSTEM OF ENTERPRISES OF THE BAKING INDUSTRY IN UKRAINE

**Introduction**. Food security implies such a state of the economy, in which every citizen is guaranteed access to food, drinking water and other food products in quality and volume sufficient for the physical and social development of the individual, as well as ensuring health.

The bakery industry is an important strategic component of the Ukrainian food industry, the main purpose of which is to provide the population with food. The activity of bakery enterprises is of great socioeconomic importance, therefore, it requires timely identification of the problems faced by enterprises in the industry, as well as the search for ways to improve the efficiency of their activities and determine the prospects for further development.

In conditions of the COVID-19 pandemic, the containment of which involves the use of certain measures for social restrictions, as well as other complications of economic activity, the issues of improving the management system of enterprises in the bakery industry are of particular importance.

The issues of regulating food markets, including socially significant ones, were studied by such scientists as A. N. Vasilchenko, V. I. Vlasov, E. I. Goychuk, T. M. Lozinskaya, V. B. Rodchenko, A. A. Shevchenko and others. Despite the huge number of theoretical and applied developments, the issues of managing food industry enterprises, in particular, the bakery industry, including those associated with the use of various tools to improve the efficiency of economic activity, do not lose their relevance.

The purpose of this research is to substantiate the expediency of popularizing the use of some management accounting tools to improve the efficiency of the economic activity of enterprises in the baking industry of Ukraine.

The statement of basic materials. Baking of bread and bakery products belongs to the processing industry (Section C, Section 10, Group 10.7) [1]. Bread and bakery products are goods that have significant social significance [2]. The sale price of such goods in retail chains is subject to state regulation by way of their declaration. The list of enterprises engaged in baking

bread is approved by order of the Ministry of Agrarian and Food Policy of Ukraine [3].

Today, the production of bread and bakery products in Ukraine is carried out by commercial enterprises that carry out this activity at their own risk to make a profit and achieve other economic and social results [4]. There are about 5.5 thousand such enterprises in Ukraine, according to the State Statistics Service of Ukraine, 80% of which operate as individuals – business entities. Table 1 shows that the number of enterprises that bake bread is gradually decreasing. At the same time, the proportion of private entrepreneurs is increasing.

Up to 60% of bread and bakery products on the territory of Ukraine are produced by several large companies, including, Private Joint-Stock Company «Kyivkhlib», Ltd «Khlibni Investitsii», Private Joint-Stock Company «KONTSERN KHLIBPROM», Lauffer Group. Up to 30% - less powerful bakery plants. About 10% of bread and bakery products are baked by mini-bakeries located in food retail chains [5].

The data in Fig. 1 indicate a decrease in the production of bread and bakery products in Ukraine, the production of which in physical terms has decreased by more than 2 times over the past 10 years. Also noteworthy is the reduction in the production of wheat flour, the production of which forms the main cost part in the production of bread. There is a close functional relationship between the production volumes of wheat flour and fresh bread, the correlation coefficient is 0.96.

The production of bread and flour products is a low-profit economic activity. This explains the low investment attractiveness of this type of activity. Large enterprises of the bakery industry demonstrate high profitability, more than 10%. At the same time, there is a positive trend in the reduction of unprofitable enterprises in this area.

Among the main factors for the decline in the level of production of bakery products in Ukraine are the rise in prices for raw materials and energy resources and the increase in social standards. Also, there is an impact on the development of craft production of bakery products in network mini-bakeries and at low-capacity

Table 1

Number of active business entities by type of economic activity in 2010-2020

		71 manufacture			2 manufacture o		10.73 manufacture of macaroni,			
	manuf	acture of fresh p	oastry goods	biscuits; manufacture of preserved			noodles, couscous and similar			
		and cakes			pastry goods and	d cakes	fa	rinaceous pro	ducts	
Years	total, units	including natural entities- entrepreneur s, units	in % to the total of business entities of correspondi ng type of economic activity	total, units	including natural entities- entrepreneur s, units	in % to the total of business entities of correspondi ng type of economic activity	total, units	including natural entities- entreprene urs, units	in % to the total of business entities of correspondi ng type of economic activity	
2010	4410	3352	76,0%	1070	743	69,4%	253	139	54,9%	
2011	3460	2431	70,3%	882	539	61,1%	208	101	48,6%	
2012	3644	2753	75,5%	894	610	68,2%	192	114	59,4%	
2013	3873	2902	74,9%	957	643	67,2%	197	120	60,9%	
2014	4188	3363	80,3%	977	714	73,1%	199	129	64,8%	
2015	4206	3400	80,8%	963	708	73,5%	213	141	66,2%	
2016	4055	3338	82,3%	906	669	73,8%	192	139	72,4%	
2017	4020	3285	81,7%	867	629	72,5%	173	110	63,6%	
2018	4250	3501	82,4%	895	638	71,3%	157	88	56,1%	
2019	4491	3722	82,9%	911	644	70,7%	150	84	56,0%	
2020	4450	3699	83,1%	852	595	69,8%	140	79	56,4%	

Source: State Statistics Service of Ukraine.

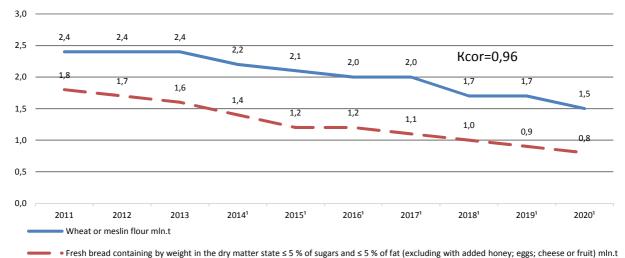


Fig. 1. Production of some types industrial products in 2011–2020, mln t

Source: State Statistics Service of Ukraine.

enterprises, and an increase in the percentage of homebaked products. The dynamics of production was negatively affected by the loss of sales markets, including in the temporarily occupied territories, and the decline in the purchasing power of the population. In addition, there is a discrepancy between domestic standards and technical regulations (normative and technical documentation) of the technological process and technological equipment with European Standards. Among other factors, the excessive tax burden and state regulation of the selling price of bakery products, the simplification of customs procedures in the trade of crop

products, and the promotion of a healthy lifestyle are distinguished [6-7].

In the weight structure of the consumer price index, bread occupies 3%, and flour products -0.5%. Thus, changes in the retail price of bread and flour products affect, albeit slightly, the inflation index [8]. As can be seen from the figure, the average consumer prices in Ukraine over the past 5 years have increased: for wheat bread from premium flour, wheat bread from first grade flour, rye bread, rye-wheat bread – 2.2 times, long loaf – 2.1 times, pasta and wheat flour -1.8 times.

<sup>&</sup>lt;sup>1</sup> Excluding the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and a part of temporarily occupied territories in the Donetsk and Luhansk regions.

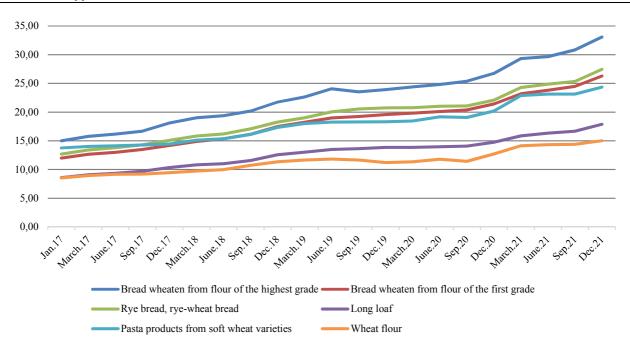


Fig. 2. Average consumer prices for goods (services) in Ukraine in 2017-2021, UAH

Source: State Statistics Service of Ukraine.

The variability of the modern market environment, which is determined by a number of factors that form the modern landscape of entrepreneurial activity, determines the improvement of enterprise management technologies that ensure its sustainable socially responsible development. The basis of such approaches is to ensure the adaptability of the enterprise to changes in the external environment, maintaining and increasing its competitiveness, as well as expanding the ability to quickly respond to diverse threats, including economic ones.

The effectiveness and timeliness of any management decision is directly dependent on its information and analytical support, formed on the basis of verified statistical data that are accumulated in the tax accounting and management accounting system.

The main indicators for managing the economy of an enterprise are revenue from the sale of finished products, costing, profit and profitability. Planning and forecasting of these indicators, taking into account various factors of influence, allows reducing the factor of the uncertainty of the future and the risks of possible losses, including when entering new markets, expanding the market share in already developed ones, and releasing new types of goods (services).

Effective management is carried out on the basis of detailed information on the volumes, directions and conditions for the implementation of expenses, which allows them to be optimized and to find additional reserves for increasing profits, including on an innovative and investment basis.

Therefore, the main task in managing an enterprise is the formation, storage and systematization of information about the results of the economic activities of the enterprise, which, after regrouping and preparation, form the basis for the development and adoption of management decisions.

The key indicator for managing the economic activity of any enterprise, including the baking industry, is the cost of products. To account for and calculate the cost, a variety of methods have been developed that are characterized by different classification features.

One of these features is the completeness of the inclusion of costs in the cost of production and sales of products, goods (services). Therefore, in practice, the following management accounting methods are distinguished:

- full inclusion of costs in the cost of products (works, services);
- limited (incomplete) inclusion of expenses by any criterion.

Costing is a key element in the company's accounting policy instruments. The calculation is usually made at the stage of launching products into production, followed by tracking deviations of actual indicators from those that were taken into account in the process of planning the production period [9].

The procedure for the formation of the cost of production when applying national accounting standards is regulated by the Ukrainian Accounting standard No. 16 [10]. Manufacturing enterprises are also guided by special methodological recommendations [11], in the field of transportation [12], in the field of construction [13].

In practice, enterprises use several types of product costing. The simple calculation is carried out by the selling price method (coefficient method), according to which production costs are distributed among individual

objects in proportion to the cost of production at the selling price.

In the case of production to order, the order-byorder costing method is used, which is more often used in the manufacture of single products. In organizations with a continuous cycle of mass production, a processby-process method of costing is used, according to which direct and indirect costs are distributed over the entire output.

A preventive costing method is also used, in which costs are taken into account depending on the stage of the production process. Recently, in the practice of domestic enterprises for the purposes of cost

administration, progressive modern methods of management accounting, in particular, the ABC method, as well as direct costing, standard costing and JIT systems are gaining popularity [14].

An example of a simple calculation of one unit of Long loaf and Bread wheaten from flour of the highest grade is shown in Table 2.

In theory, the calculation of the cost of production (works, services) is considered as a set of techniques and methods that ensure the calculation in monetary terms of the unit cost of certain types of products (works, services) produced by an enterprise in the context of cost items. Allocate planned and actual (reporting) costing.

Table 2

The structure of the selling price of bakery products

Cost items	Long loa	af, 0,5 kg	Bread wheaten from flour of the highest grade, 1 kg			
	Structure, %	Amount, UAH	Structure, %	Amount, UAH		
Raw materials	75,7%	9,084	73,2%	16,836		
Fuel and energy	3,6%	0,432	4,7%	1,081		
Wage	2,2%	0,264	2,4%	0,552		
Single social contribution	1,0%	0,12	1,1%	0,253		
General production costs	6,9%	0,828	7,7%	1,771		
Selling costs	7,0%	0,84	8,0%	1,84		
Administrative costs	3,6%	0,432	2,9%	0,667		
Full cost	100%	12	100%	23		
profit	10%	1,2	10%	2,3		
Total		13,2		25,3		
VAT	20%	2,64	20%	5,06		
Factory price		15,84		30,36		
Retail		18		33		

Source: compiled by the author of Shpyrko O. M., Semenova S. M. (2018). Accounting of production stocks and analysis of the effectiveness of their use [monograph]. Kyiv, Artek. 239 p.

Planned costing is compiled before the start of the planning period on the basis of predictive, technically justified norms and economic standards. Planned costing determines the level of costs associated with the production of products (works, services), which must be achieved on average for the planned period (year or quarter). The actual (reporting) cost estimate is compiled at the end of the reporting period. Actual costing allows to evaluate the effectiveness of planning and forecasting at the enterprise, as well as identify and analyze the causes of deviations of planned indicators from actual ones.

The calculation is given in table 2 assumes the sale of products through business entities — individuals who are not payers of value added tax. As can be seen from Table 2, the bulk of the cost of baking bread is the cost of purchasing raw materials and materials, i.e. flour, margarine, vegetable oil and other components of the recipe for making bread. Therefore, the increase in purchase prices for these products has the greatest impact on the formation of the selling price. Thus, in order to ensure sustainable development, an enterprise in the baking industry must first of all monitor the dynamics of price changes in the flour-grinding industry, as well as in crop markets in the segments of interest to it.

The monitoring of changes in the components of the sale price of bread and bakery products and its comparison with price dynamics in the commodity markets is possible organizing in various management accounting systems. Recently, due to the expansion of the application of international financial reporting standards, Direct-Costing-System is gaining popularity in practice.

Direct-Costing-System is based on the distribution of costs into fixed and variable, which involves accounting and analysis of costs by their types, place of origin and carriers. Variable costs are directly linked to the products produced, while fixed costs are taken into account in the financial result. The key indicator of the direct costing system is marginal income, which is calculated as the difference between sales revenue and variable costs.

Direct-Costing-System allows to determine the forms and degree of dependence of costs on production volumes based on information about the results of economic activity, calculate the critical point of sales volumes, regulate pricing policy, predict costs depending on various impact factors and solve several other tasks, including information support of the economic security system of the enterprise [15].

Direct-Costing-System allows to quickly identify and track the negative dynamics of marginal income both for the enterprise as a whole and in the context of the range of goods (services) and product distribution channels. This allows taking timely measures to neutralize the identified threats, including the negative impact of environmental factors (expansion of competitors, changes in consumer sentiment, macroeconomic shifts, etc.). In practice, for this purpose, a type of product is determined (distribution channel, region, Centre of economic activity) with high profitability rates, which are recognized as "standard". In the future, other structural elements of the enterprise are compared with such a "standard".

Modern software and computing systems, which are an integral part of the infrastructure of any enterprise (accounting programs, in particular, 1C, as well as ERP class systems (Enterprise Resource Planning), CAFM (Computer Aided Facility Management), IWMS (Integrated Workplace Management System), BI (Business Intelligence) allows management accounting at the enterprise with Direct-Costing-System. An integral part of such complexes is the formation and storage of information in a form convenient for use.

Direct-Costing-System is also an effective marketing tool that is focused on improving the efficiency of product promotion in the face of market uncertainty and free competition. The detected undesirable deviations from the main economic guidelines for the development of the enterprise make it possible to optimize and restructure the marketing policy. An accurate calculation of production costs simplifies the processes of rationing, planning, accounting and cost control. The cost price becomes more transparent, and certain types of costs are better controlled.

The system allows tracking the relationship between the output of finished products (production volume), profit, cost, profitability at any time. Comparison of the results achieved with the reporting data of previous reporting periods in the context of geography, Centre of economic activity, product range and distribution channels allows to make conclusions and reduce the uncertainty of the future. Direct-Costing-System allows controlling the company's break-even

point in real-time, as well as quickly assessing the threshold level of fixed costs that the company can afford while maintaining a given level of profitability.

Direct-Costing-System, like other management accounting methods, has its advantages and disadvantages. In this regard, the management of the enterprise should analyze and evaluate each method, taking into account the specifics of the enterprise, and organize and use at the enterprise the method that would maximize the effectiveness of management decisions. The main problem of implementing and administering a Direct-Costing-System is the difficulty of determining and separating fixed and variable costs. Difficulties arise in their classification and assignment to any specific group of costs in the process of real production activities.

Conclusions. In Ukraine, there is a decrease in the production of bread and bakery products in physical terms against the backdrop of a constant increase in prices for products of the bakery industry. The production of bread and bakery products is a low-profit type of entrepreneurial activity. The number of bread-baking enterprises is gradually decreasing. At the same time, there is an increase in the share of bread producers who carry out their economic activities on a simplified taxation system.

The main indicator for managing the economic activity of any enterprise, including the baking industry, is the cost of products. Costing is a key element in the company's accounting policy instruments. The calculation of the cost is developed at the stage of launching products into production, followed by tracking deviations of actual indicators from those that were taken into account in the process of planning the production period.

In theory, the calculation of the cost of production (works, services) is considered as a set of techniques and methods that ensure the measurement of the cost of a unit of production in monetary terms in the context of cost items. It is advisable to organize monitoring of changes in the components of the sale price of bread and bakery products and its comparison with price dynamics in commodity markets in the Direct-Costing-System management accounting system, which is gaining popularity due to the expansion of the use of international financial reporting standards.

### References

- 1. Classification of economic activities of the DC 009:2010. (2010). State Committee of Ukraine for Technical Regulation and Consumer Policy National Classifier of Ukraine. Retrieved from https://zakon.rada.gov.ua/rada/show/vb457609-10#Text.
- 2. Decree of the Cabinet of Ministers of Ukraine of April 22, 2020 № 341 "On measures to stabilize prices for goods of significant social importance, anti-epidemic goods". Retrieved from https://zakon.rada.gov.ua/laws/show/341-2020-%D0%BF#n13.
- 3. Order of the Ministry of Agrarian Policy and Food of Ukraine dated 05.01.2022 № 3 "On approval of the list of economic entities whose main activity is, in particular, the production of food products of significant social importance." Retrieved from https://zakon.rada.gov.ua/rada/show/v0003932-22#Text.
- 4. Economic Code of Ukraine of January 16, 2003 № 436-IV. (2003). *Information of the Verkhovna Rada of Ukraine* (VVR), № 18, № 19-20, № 21-22, Art. 144. Retrieved from https://zakon.rada.gov.ua/laws/show/436-15#Text.
  - 5. Information Bulletin "Bakery Industry", № 5 (26), October-December 2020.
- 6. Navolska, N. V. (2016) Research of the market of bread and bakery products in Ukraine. *Global and national economic problems*, Vol. 11. Retrieved from http://global-national.in.ua/archive/11-2016/93.pdf.

- 7. Novoitenko, I. V., Malinovsky, V. V. (2020). Status and main trends in the development of the bakery industry of Ukraine. *Efficient econom*, №11. Retrieved from http://www.economy.nayka.com.ua/pdf/11\_2020/54.pdf, DOI: https://doi.org/10.32702/2307-2105-2020.11.52.
- 8. State Statistics Service of Ukraine. (2022). Weight structure for calculating the CPI according to the Classification of Individual Consumption by Purpose. Retrieved from http://www.ukrstat.gov.ua/.
- 9. Gnylytska, L. V. (2020). Customer-oriented approaches to cost accounting: the essence and prospects of implementation in Ukraine. *Development Strategy of Ukraine: Financial, Economic and Humanitarian Aspects*: Proceedings of the VII International Scientific and Practical Conference. (pp. 153-156). Kyiv, Information and Analytical Agency,
- 10. National Accounting Regulation (Standard) 16 "Expenditures". (1999). Order of the Ministry of Finance of Ukraine dated 31.12.99 № 318 "On approval of the National Regulation (standard) of accounting". Retrieved from https://zakon.rada.gov.ua/laws/show/z0027-00#Text.
- 11. Order of the Ministry of Industrial Policy of Ukraine dated 09.07.2007 № 373 "On approval of Methodical recommendations for the formation of the cost of products (works, services) in industry". Retrieved from https://zakon.rada.gov.ua/rada/show/v0373581-07#Text.
- 12. Order of the Ministry of Transport of Ukraine dated 05.02.2001 №65 "On approval of Methodical recommendations for the formation of the cost of transportation (works, services) on transport". Retrieved from https://zakon.rada.gov.ua/rada/show/v0065361-01#Text
- 13. Order of the Ministry of Regional Development and Construction of Ukraine dated 31.12.2010 №573 "On approval of a new version of the Guidelines for the formation of the cost of construction and installation work". Retrieved from https://zakon.rada.gov.ua/rada/show/v0573738-10#Text.
- 14. Onishchenko, O. V., Kurenna, O. O., Krikunenko, A. S. (2017). Methods of cost accounting and costing of products: domestic and foreign experience. Scientific Bulletin of the International Humanities University. Series: Economics and Management, 25 (2), pp. 153-157.
- 15. Svistun, L. A., Levkova, R. M. (2017). Improving the cost management system of the enterprise in an unstable economy. *Economy and region*, 4, pp. 57-62.

## Островецький В. І. Деякі аспекти вдосконалення системи управління підприємствами хлібопекарської промисловості України

У статті розглядаються окремі питання щодо вдосконалення системи управління підприємствами хлібопекарської галузі України. Зазначається, що хлібопекарська галузь є важливою стратегічною складовою харчової промисловості України. Проблеми, що виникають у цій галузі, негативно впливають на продовольчу безпеку України, а також погіршують макроекономічну динаміку, стимулюючи інфляцію. Обґрунтовується, що ключовим елементом забезпечення сталого розвитку підприємств хлібопекарської галузі України є калькулювання собівартості продукції. Калькуляція дозволяє здійснювати моніторинг та відслідковувати відхилення фактичних показників від тих, що були враховані у процесі планування виробничого періоду. Організацію моніторингу зміни складових ціни реалізації хліба та хлібобулочних виробів та її порівняння з ціновою динамікою на сировинних ринках доцільно здійснювати у системі управлінського обліку Direct-Costing-System, яка набирає популярності у зв'язку з розширенням застосування міжнародних стандартів фінансової звітності. Ключові слова: хліб та хлібобулочні вироби, ринок хліба та хлібобулочних виробів, калькуляція собівартості.

#### Ostrovetskyy V. Some Aspects of Improving the Management System of Enterprises of the Baking Industry in Ukraine

The article deals with certain issues of improving the management system of the enterprises of the baking industry in Ukraine. It is noted that the baking industry is an important strategic component of the Ukrainian food industry. Problems arising in this industry have a negative impact on the food security of Ukraine, as well as worsen macroeconomic dynamics, stimulating inflation. It is substantiated that the key element in ensuring the sustainable development of the enterprises of the baking industry in Ukraine is the calculation of the cost of manufactured products. Costing allows to monitor and track deviations of actual indicators from those that were taken into account in the planning process of the production period. It is advisable to organize monitoring of changes in the components of the sale price of bread and bakery products and its comparison with price dynamics in commodity markets in the Direct-Costing-System management accounting system, which is gaining popularity due to the expansion of the use of international financial reporting standards.

Keywords: bread and bakery products, bread and bakery products market, costing.

# Островецкий В. И. Некоторые аспекты совершенствования системы управления предприятиями хлебопекарной промышленности Украины

В статье рассматриваются отдельные вопросы совершенствования системы управления предприятиями хлебопекарной отрасли Украины. Отмечается, что хлебопекарная отрасль является важной стратегической составляющей пищевой промышленности Украины. Проблемы, возникающие в этой отрасли, негативно влияют на продовольственную безопасность Украины, а также ухудшают макроэкономическую динамику, стимулируя инфляцию. Обосновывается, что ключевым элементом обеспечения устойчивого развития предприятий хлебопекарной отрасли Украины есть калькулирование себестоимости выпускаемой продукции. Калькуляция позволяет осуществлять мониторинг и отслеживать отклонения фактических показателей от тех, которые были учтены в процессе планирования производственного периода. Организацию мониторинга изменения составляющих цены реализации хлеба и хлебобулочных изделий и ее сравнения с ценовой динамикой на сырьевых рынках целесообразно осуществлять в системе управленческого учета Direct-Costing-System, которая набирает популярность в связи с расширением применения международных стандартов финансовой отчетности.

Ключевые слова: хлеб и хлебобулочные изделия, рынок хлеба и хлебобулочных изделий, калькуляция себестоимости.

Received by the editors: 30.11.2021 and final form 16.12.2021

UDC 338.24:35.071

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-68-74

Ye. Bolotina, PhD (Philosophy), ORCID 0000-0001-6939-3840, e-mail: taxiigle@gmail.com,

O. Shubna, *PhD (Economics)*, e-mail: Shubnaalena@gmail.com,

**A. Kvasha,** *PhD (Political)*,

V. Melchenko, PhD (Legal),

Donbass State Engineering Academy, Kramatorsk

# POLITICAL ASPECTS OF PUBLIC ADMINISTRATION IN THE PUBLIC SECTOR OF UKRAINE

Formulation of the problem. The processes of globalization in the world economy require a special attitude to public administration, which plays a significant role in ensuring the proper functioning of society and its interaction with government. Today, when the state system of the world and the mechanisms of functioning of market systems are changing, Ukraine is trying to meet modern challenges and carry out reforms in the spheres of power and law. However, the system of public administration remains imperfect. The state bureaucracy creates a struggle for spheres of influence, public opinion is not properly taken into account in resolving issues of power, which reduces the efficiency of state structures and the ability to respond in a timely manner to the needs of society. Solving the problem of improving the efficiency of government in Ukraine, it is advisable to study the experience of leading countries and apply the best achievements in practice. Accordingly, domestic experts must take into account the real socio-economic situation and develop theoretical and methodological approaches to public administration.

Analysis of recent research and publications. Issues related to public administration in the works were considered by such researchers as A. Averyanov, G. Atamanchuk, M. Minenko, O. Obolensky, Y. Surmin and others. The works of I. Hrytsyak, V. Kovalenko, A. Kolodiy, N. Meltyukhova and others are devoted to public administration. Among the researchers of public administration we can distinguish L. Gonyukova, V. Golub, V. Kozakova, V. Rebkalo. Many works of Ukrainian and foreign scientists are devoted to the study of public risk management, including political. Among them are the scientific works of T. Aven, G. Bhatta, K. Vashchenko, J. Jenny, V. Krivoshein, E. Krokhina, M. Power, O. Rennes, K. Hardy and others. At the same time, in domestic science little attention is paid to the relationship between the concepts of "public

administration", "public administration" and "public administration" and the justification of the need to move from the concept of public administration to public administration during the transformation processes of Ukraine.

The purpose of the article is to study the features of public administration in the public sector of Ukraine and to formulate recommendations for decentralization of management in the context of domestic reforms.

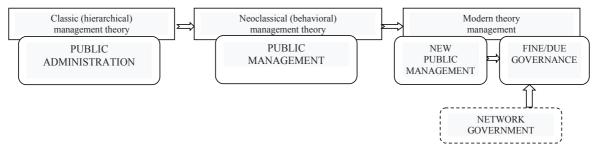
Presentation of the main research material. State power is the foundation of society's development, the regulator of its vital activity, stability, and order. And the development of society, in turn, is not possible without interaction with the authorities. The issue of the relationship between government and society is one of the most important and on the solution of which depends the stability of the democratic state as a whole.

In the context of government reform, it is important to define the essence of the concepts of public administration and administration. The Encyclopedia of Public Administration [1] states that the approach to management problems from the standpoint of "governance" is becoming more widespread not as government – government, but as "governance" – public (public) government, which involves all stakeholders: government, business, civil society. It contains the connotation of going beyond government,

"Privatization" of management functions, the transfer of a significant part of them from the government to other public actors in order to achieve better governance of society, its order and focus on achieving strategic goals. This term means the transition from understanding management as a hierarchical (vertical) control system from top to bottom to its perception as a process aimed at horizontal, network interaction, through which the direction of public actors to certain desirable or useful goals. Another is the meaning of the concept of public administration.

Administration – a type of organizational and administrative activities aimed at preparing and implementing decisions, personnel management, provision of services to the population [1].

The classical theory of management in the public sector was implemented in practice through the model of public administration; neoclassical theory of management — through the model of public administration, the focus of which is already the person, not the organizational structure; modern management theory - through the model of new public administration (New Public Management), concerning the effective functioning of the entire system of political institutions (Fig. 1).



**Fig. 1. Evolution of the management model in the public sector** (formed by the authors based on source [1])

According to scholars [2], public administration is "management that is carried out on the basis of the will of the community (group of people) and implemented by entities identified by the community to meet the needs and goals of the community as an object of government."

In Ukraine, unfortunately, the current system of public administration still remains inefficient, internally contradictory and corrupt. In addition, other factors are negative, such as insufficient level of transparency and openness in public administration, unclear demarcation of political and administrative spheres, insufficient professional level of civil servants, lack of a unified system for assessing their competence, low level of disciplinary responsibility, imperfect political mechanism. and administrative control in the system of public administration.

Inefficiently constructed system of public administration has its consequences: deterioration of macro- and microeconomic indicators of the state and increase of distrust in public authorities. This is a significant obstacle to positive change in society and the state. In the field of public administration, as in any field of public relations, one of the key elements influencing the functioning of the system is the human factor.

According to the public figure, Doctor of Economics Bohdan Havrylyshyn, in Ukraine, despite its current difficult situation, the quality of human capital is very high, and this factor with its reasonable use can be key in building a national system of public administration [3]. Important in this aspect are the personal characteristics of the civil servant, moral principles, personal responsibility and level of culture, inner sense of duty, observance of norms of official ethics, which in combination will be the ethics of public administration.

Improving the compliance of civil servants with the statutory general ethical norms would serve as a kind

of foundation for building public confidence in government at all levels and would help create a positive image of the entire sphere of public administration. Public administration is the management of society together with society [4]. Public administration arises as a result of a kind of social contract between the state and society, when the powers are vested in the relevant bodies and officials.

At the same time, the main bearer of power remains the people, the population of the country. Interaction of subjects of public administration and the population is provided by means of the organization of public hearings, questionnaires, carrying out focused interviews, etc. in accordance with current regulations [5, p. 90]. State regulation of the quality of human resources cannot be considered as a completely separate sphere of state influence, but only in close connection with state policy in the fields of education, health, culture, social protection and social security, environmental security, employment, etc. (Fig. 2).

Reforming the system of public administration should help optimize the functions of public authorities, the division of powers and the definition of areas of responsibility using effective management models, the implementation of which involves a new structure of relations "government - public". Priority areas are building an effective socially oriented system of public administration, the main objectives of which are to provide quality administrative services to citizens at a level that meets European standards, timely and adequate response to socio-economic, foreign policy and other challenges. Improving the quality of administrative services requires a comprehensive reform that will improve and harmonize regulations governing the mechanism of providing administrative services and ensure their simplification, including through the introduction of modern information technology.

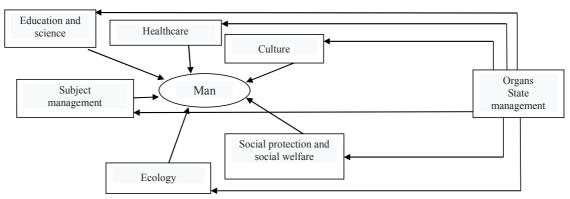


Fig. 2. Directions of regulatory influence of the state on improving the quality of human resources (formed by the authors based on source [6])

The Concept of reforming local self-government and territorial government, adopted in April 2014, contains directions for improving the system of local government service delivery. In particular, one of the tasks of the reform is to ensure the availability and quality of public services in accordance with state standards, taking into account the need to ensure: territorial accessibility, which provides for the provision of services in the community where the person lives; adequate material and technical base for the provision of basic forms of public services (local governments must have in their available relevant premises and infrastructure); openness of information about services, the procedure and conditions of their provision; professionalism of public services [7].

The components of the stages of development of the system of providing administrative services in Ukraine are [8]: scientific substantiation of the principles, types, forms and methods of providing services by public authorities; solving a number of tasks related to the "shredding" of administrative services, ie the artificial division of one administrative service into several separate "paid services", the administration of funds, received for such services, directing all funds for administrative services to the state or local budgets, creating centers for the provision of administrative services at the city and district levels, a ban on the provision of administrative services through enterprises; improving the quality of administrative services; delegation of powers to provide administrative services to local governments and the development of centers for the provision of administrative services as integrated offices, the multi-stage transfer of services to the centers for the provision of administrative services.

An important specificity of the state approach to political risk management, but rather a significant obstacle to building an effective system of public risk management, focused on the strategy of risk acceptance as a constant, the negative impact of which can only be reduced to a safe level, is traditionally stable risk aversion by public authorities. As a tool for public policy risk management, information or risk communication refers to the actions of decision-makers to discuss risks with as many stakeholders as possible.

This ensures that all stakeholders are also aware of the risks faced by the policy maker of a particular decision or program, and that a possible policy decision or program form will reflect this level of risk awareness among stakeholders [9]. In Western democracies, according to the methodological literature, this approach is considered an extremely useful way to minimize the negative consequences of direct government action on the management of political risks at the stage of formation of public policy, ie the choice of ways to mitigate such risks, which were described above. The main advantage of risk communications as an effective ancillary method of managing political risks at the state level, especially in the early stages of public policymaking, is that it allows decision-makers to better and timely inform stakeholders about risks, as well as to implement effective data exchange between different parts of the public administration system, including on effective mitigation measures.

In general, incorrect information about the risks that arise in society, naturally leads to a vacuum of information about them, which is a major factor in the social increase of risks, ie their politicization. In particular, without proper information, society, and often state institutions of power, begin to perceive a higher level of risk than is actually present. And overcoming ingrained notions of risk, which are already widespread in the social environment, is a thankless task, with almost no chance of success [10].

In the Report on Global Competitiveness of the 2017-2018 World Economic Forum, Ukraine ranked 83rd out of 140 countries in terms of the level of competitiveness 4.0, compared to 2017, the indicator decreased by 2 positions [11]. However, in 2015, Ukraine ranked 76th among 144 countries, and therefore, for the period 2014-2018, it worsened its position in 4 of the 12 key indicators [11]. The most lost (minus 13 points) on the component "Labor market efficiency" [12].

The tendency to worsen this indicator was observed in the studies of previous years, and Ukraine worsened its position by 17 points. Also, the country suffered losses according to the innovative component of the Index - (minus 9 points), infrastructure (minus 3

points) and the component that characterizes higher education and training (minus 2 points). This result is one of the worst not only in relation to the EU and other developed economies, but also in comparison with the nearest neighbors.

Among the positive changes, it is worth noting some progress in the fight against corruption (106th place), while the government's performance indicators have significantly deteriorated – 123rd place [12].

The quality of the current legal framework of local self-government, its ability to be a solid basis for those processes that occur in the legal regulation of local self-government and are characteristic features of the current stage of development of regional socio-economic systems, in particular in the Public Administration Reform Strategy, is important in these conditions. Ukraine for 2016-2020 is about the formation of effective and efficient personnel management services in each government agency [13].

The problems of determining the method of constitutional and legal regulation of the powers of local self-government bodies are becoming especially relevant in the context of reforming the system of territorial organization of power in Ukraine. The value of the local approach to the legal regulation of the status of local self-government bodies and local law-making in general is lost, in fact depriving the subject of legal regulation.

Changes in theoretical approaches to regional and local self-government, namely the focus on territorial initiative, lead to a reorientation of policy towards decentralization, which creates the conditions for cooperation with horizontal a more understanding of real problems. Emphasis is shifting from the development of physical infrastructure to the development of human potential. At the same time, there is a growing need to understand the archetype of direct democracy, to study its nature and to create the preconditions for the effective influence of the archetype on socio-political processes.

The main goal is to clearly define the region's place in the world economy and to promote the development of clusters in the sectors that have the highest potential and can support the development of other sectors. Self-sufficient growth has become a new form of regional success. The democratization of regional institutions and agencies can open them up to a wider range of actors. These trends are exacerbated by changes in the system of public administration, the abandonment of a centralized approach and unified policies in favor of decentralization.

The main motive for reforming public services in terms of approaches and mechanisms of public administration was to increase the efficiency of government in the context of meeting the needs of society in a professionally qualified government. Ukraine's desire to successfully overcome crisis situations, the focus on European values of public administration are inextricably linked with solving

problems of improving the efficiency of the system of public authorities on an innovative basis.

In this context, it is extremely important to implement initiatives on constitutional changes in the decentralization of power, the priority objectives of the Public Administration Reform Strategy of Ukraine for 2016-2020 [14]; development of a new version of the Law of Ukraine "On Civil Service" [15], which regulates the basic principles, legal and organizational principles of public service.

However, their successful implementation is hampered by a wide range of pressing painful issues that hinder the timely, large-scale and high-quality implementation of certain innovations. In particular, this is a rather low level of readiness of civil servants for pronounced innovation; in their environment educational heterogeneity with a small percentage of professionals with special education in public administration. In addition, it should be noted the inadequate level of development of innovation culture, the lack of trained leaders of the reformist type, as well as a common resistance to innovations such as "competence incompatibility" [16].

Corruption in the economy is caused by inefficient management of the economy, inconsistency of proportions, when regulation is either too much or too little. Experts from the World Bank, more closely associated with the reform of economic and social resource management, in 1992 named three aspects that affect the type of governance in the country: the type of political regime; the process by which power is exercised for the purpose of development in the management of economic and social resources; the government's ability to formulate policy and ensure its effective implementation. Controllability in society is determined by certain indicators, in particular: the intensity of demand for public policies, ie how satisfied the community is with services and changes in regulations; the intensity of political conflict and the ability to resolve it proportionately and meet public demand; such as obstacles to meeting society's demands, in particular whether they are the result of chronic problems or outdated structures. Thus, most modern concepts of public administration are characterized by the development of new mechanisms of relations with society, politicians and citizens. The complication of the social structure of society, the transformation of civil society into an essential factor in the political life of society forces us to look for new mechanisms of relations between government agencies and the population and organizations that express different interests. Development is taking place in two directions: on the one hand, efforts are being made to improve the quality of services provided by the state to the population, in particular in education, health care, social insurance, etc., on the other hand, new mechanisms are being formed to involve citizens in the process of making and implementing government decisions. This contributes to the efficient use of

resources to solve social problems, more accurately define public policy priorities and meet the rights of citizens to professional, capable and responsible government. The principles of modern European governance in their applied dimension determine the emphasis on organizational principles that ensure clarity and effectiveness of management procedures based on the competence and responsibility of civil servants.

Conclusions. Public administration by its nature is aimed at achieving the ultimate goal of the mechanism of public administration – the effective implementation of rights, freedoms and legally protected interests. Human activity, as a bearer of rights and freedoms, is characterized as lawful and active if there is a direct realization of rights and freedoms. And the activity of state bodies is manifested through the implementation of functions – protection, defense, control, law enforcement functions and so on. At the same time,

public administration is characterized by its internal expression – that is, public administration is carried out in relation to the system of bodies and institutions of the state, the objects of state ownership. The object of public administration is the state apparatus itself, which in turn is built and designed to carry out public administration as an external function, thus providing a public service to the society that created this state and the beneficiary and bearer of power in respect of which it is. The system of public administration in Ukraine today is not very effective due to a number of problems that exist in this system. To solve them, first of all it is necessary to better implement administrative and political functions in the executive branch, voluntarily follow the established democratic principles, such as rule of law, legality, openness, transparency, efficiency, effectiveness, efficiency, accountability, accountability and responsibility.

#### Literature

- 1. Енциклопедія державного управління: у 8 т. / наук.-ред. кол. : Ю. В. Ковбасюк (голова) [та ін.] ; Національна академія державного управління при Президентові України. Київ : НАДУ, 2011. Т. 8.
- 2. Оболенський О. Ю. Публічне управління: цивілізаційний тренд, наукова теорія і напрям освіти. URL: http://academy.gov.ua/NMKD/library nadu/Mater konf NADU/cd2037c0-71c9-458f-aad6-946f6e8488c8.pdf.
- 3. Гаврилишин: не вірю, що люди, які тепер при владі, поправлять стан України. URL: https://hromadskeradio.org/programs/kyiv-donbas/gavrylyshyn-ne-viryu-shcho-lyudy-yaki-teper-pry-vladipopravlyat-stan-ukrayiny.
- 4. Молошна О. Л. Особливості формування державно-службових відносин в умовах становлення системи публічного адміністрування в Україні. URL:http://www.dridu.dp.ua/vidavnictvo/2009/2009-02(2)/Moloshna,%20Bashtannyk.pdf.
- Тодосійчук В. Л. Публічне адміністрування в Україні. Економіка та управління підприємствами. 2018. № 34. С. 87-91
- 6. Іорданов А. €. Державне регулювання якості людських ресурсів на регіональному рівні : автореф. дис. на здобуття наук. ступеня канд. наук з держ. управління : спец. 25.00.02 «Механізми державного управління». Харків, 2011. 20 с.
- 7. Богомолова К. С., Подольська О. В. Розвиток кадрового потенціалу органу публічної служби. *Український журнал прикладної економіки*. 2020. № 1. С. 74-81. DOI: https://doi.org/10.36887/2415-8453-2020-3-7.
- 8. Черниш Я. В. Адміністративні послуги один із символів реформи («еволюція» розвитку). *Актуальні питання сучасної економічної науки*: зб. матеріалів ІІ Всеукр. наук.-практ. конф. (4 грудня 2019р., Полтава). С. 149-152.
- 9. Bhatta G. Public sector governance and risks: a proposed methodology to do risk assessments at the program level. Mandaluyong City, Phil.: Asian Development Bank, 2008. 52 p.
- 10. Communicate Risk / OECD, Public Management Service, Public Management Committee, PUMA/MPM(2001)5, 10 October 2001. URL: http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=PUMA/MPM(2001)5&docLanguage=En.
- 11. Індекс глобальної конкурентоспроможності 2017-2018 (The Global Competitiveness Index). URL http://edclub.com.ua/analityka/pozyciya ukrayiny v reytyngu krayin svitu za indeksom globalnovi konkurentospromozhnosti/.
- 12. Індекс глобальної конкурентоспроможності (позиції України за всіма компонентами Індексу, 2018 рік). URL: http://edclub.com.ua/sites/default/files/files/indeks globalnoyi konkurentospromozhnosti 2018.pdf.
- 13. Деякі питання реформування державного управління України: Розпорядження Кабінету Міністрів України від 24 червня 2016 р. № 474-р. URL: http://zakon.rada.gov.ua/laws/show/ru/4742016.
- 14. Стратегія реформування державного управління України на 2016–2020 роки № 474-р від 24 червня 2016 року. URL: http://zakon2.rada.gov.ua/laws/show/474-2016-%D1%80.
- 15. Fersman G., Novak-Kalyayeva L., Zemlinskaya T. Improvement of Public Administration Based On Human Rights: *Theoretical Approaches and Practical Implementation*. Proceedings of the 30th International Business Information Management Association Conference (IBIMA) (8 9 November 2017). [S. p.:s. n.]. P. 945-952.
  - 16. Про державну службу: Закон України від 10.12.2015 р. № 889-VIII. URL: http://zakon2.rada.gov.ua/laws/show/889-19.
- 17. Дяченко Н. П., Дяченко В. С. Аналіз основних тенденцій розвитку сфери інноваційної діяльності в Україні. *Економічний вісник Донбасу*. 2021. № 1 (63). С. 123–128. DOI: https://doi.org/10.12958/1817-3772-2021-1(63)-123-128.

### References

- 1. Kovbasiuk, Yu. V. et al. (Eds.). (2011). Entsyklopediia derzhavnoho upravlinnia [Encyclopaedia of public administration]. In 8 vols. Kyiv, National Academy of Public Administration under the President of Ukraine. Vol. 8 [in Ukrainian].
- 2. Obolenskyi, O. Yu. Publichne upravlinnia: tsyvilizatsiinyi trend, naukova teoriia i napriam osvity [Public administration: civilizational trend, scientific theory and direction of education]. Retrieved from http://academy.gov.ua/NMKD/library\_nadu/Mater\_konf\_NADU/cd2037c0-71c9-458f-aad6-946f6e8488c8.pdf [in Ukrainian].
- 3. Havrylyshyn: ne viriu, shcho liudy, yaki teper pry vladi, popravliat stan Ukrainy [Havrylyshyn: I do not believe that the people who are now in power will improve the state of Ukraine]. Retrieved from https://hromadskeradio.org/programs/kyivdonbas/gavrylyshyn-ne-viryu-shcho-lyudy-yaki-teper-pry-vladipopravlyat-stan-ukrayiny [in Ukrainian].
- 4. Moloshna, O. L. Osoblyvosti formuvannia derzhavno-sluzhbovykh vidnosyn v umovakh stanovlennia systemy publichnoho administruvannia v Ukraini [Peculiarities of the formation of public-service relations in the conditions of the formation of the system

- of public administration in Ukraine]. Retrieved from http://www.dridu.dp.ua/vidavnictvo/2009/2009-02(2)/Moloshna,% 20Bashtannyk.pdf [in Ukrainian].
- 5. Todosiichuk, V. L. (2018). Publichne administruvannia v Ukraini [Public administration in Ukraine]. *Ekonomika ta upravlinnia pidpryiemstvamy Economics and enterprise management*, 34, pp. 87-91 [in Ukrainian].
- 6. Iordanov, A. Ye. (2011). Derzhavne rehuliuvannia yakosti liudskykh resursiv na rehionalnomu rivni [State regulation of the quality of human resources at the regional level]. *Extended abstract of candidate's thesis*. Kharkiv [in Ukrainian].
- 7. Bohomolova, K. S., Podolska, O. V. (2020). Rozvytok kadrovoho potentsialu orhanu publichnoi sluzhby [Development of personnel potential of the public service body]. *Ukrainskyi zhurnal prykladnoi ekonomiky Ukrainian Journal of Applied Economics*, 1, pp. 74-81. DOI: https://doi.org/10.36887/2415-8453-2020-3-7 [in Ukrainian].
- 8. Chernysh, Ya. V. (2019). Administratyvni posluhy odyn iz symvoliv reformy («evoliutsiia» rozvytku) [Administrative services are one of the symbols of reform ("evolution" of development)]. *Aktualni pytannia suchasnoi ekonomichnoi nauky Current issues of modern economic science*, pp. 149-152. Proceedings of the 2nd All-Ukrainian Scientific and Practical Conference. Poltava [in Ukrainian].
- 9. Bhatta, G. (2008). Public sector governance and risks: a proposed methodology to do risk assessments at the program level. Mandaluyong City, Phil.: Asian Development Bank. 52 p.
- 10. Communicate Risk. OECD, Public Management Service, Public Management Committee, PUMA/MPM(2001)5, 10 October 2001. Retrieved from http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=PUMA/MPM(2001)5&docL anguage=En.
- 11. Indeks hlobalnoi konkurentospromozhnosti 2017-2018 [Global Competitiveness Index 2017-2018]. Retrieved from http://edclub.com.ua/analityka/pozyciya\_ukrayiny\_v\_reytyngu\_krayin\_svitu\_za\_indeksom\_globalnoyi\_konkurentospromozhnosti/[in Ukrainian].
- 12. Indeks hlobalnoi konkurentospromozhnosti (pozytsii Ukrainy za vsima komponentamy Indeksu, 2018 rik) [Global Competitiveness Index (Positions of Ukraine in all components of the Index, 2018)]. Retrieved from URL: http://edclub.com.ua/sites/default/files/files/indeks globalnoyi konkurentospromozhnosti 2018.pdf [in Ukrainian].
- 13. Deiaki pytannia reformuvannia derzhavnoho upravlinnia Ukrainy: Rozporiadzhennia Kabinetu Ministriv Ukrainy vid 24 chervnia 2016 r. № 474-r [Some issues of reforming the state administration of Ukraine: Decree of the Cabinet of Ministers of Ukraine of June 24, 2016 No. 474-r]. Retrieved from http://zakon.rada.gov.ua/laws/show/ru/4742016 [in Ukrainian].
- 14. Stratehiia reformuvannia derzhavnoho upravlinnia Ukrainy na 2016–2020 roky № 474-r vid 24 chervnia 2016 roku [State Administration Reform Strategy of Ukraine for 2016–2020 No. 474 dated June 24, 2016]. Retrieved from http://zakon2.rada.gov.ua/laws/show/474-2016-%D1%80 [in Ukrainian].
- 15. Fersman, G., Novak-Kalyayeva, L., Zemlinskaya, T. (2017). Improvement of Public Administration Based On Human Rights: *Theoretical Approaches and Practical Implementation*. Proceedings of the 30th International Business Information Management Association Conference (IBIMA) (8 9 November 2017). [S. p. : s. n.]. P. 945-952.
- 16. Pro derzhavnu sluzhbu: Zakon Ukrainy vid 10.12.2015 r. № 889-VIII [On civil service: Law of Ukraine dated 10.12.2015 No. 889-VIII]. Retrieved from http://zakon2.rada.gov.ua/laws/show/889-19 [in Ukrainian].
- 17. Diachenko, N. P., Diachenko, V. S. (2021). Analiz osnovnykh tendentsii rozvytku sfery innovatsiinoi diialnosti v Ukraini [Analysis of the Main Trends in the Development of the Sphere of the Innovation Activity in Ukraine]. *Ekonomichnyi visnyk Donbasu Economic Herald of the Donbas*, 1 (63), pp. 123-128. DOI: https://doi.org/10.12958/1817-3772-2021-1(63)-123-128 [in Ukrainian].

## Болотіна Є. В., Шубна О. В., Кваша А. П., Мельченко В. І. Політичні аспекти публічного адміністрування в державному секторі України

У статті розкрито основні теоретичні засади публічного адміністрування. Досліджено етапи становлення й розвитку публічного адміністрування. З'ясовано, що публічне адміністрування, як система державного управління в Україні, потребує реформування в умовах ринкової економіки та демократизації суспільства. Розглянуто основні проблеми формування та розвитку системи публічного адміністрування в умовах відповідності європейському політичному тренду інтегрованості публічного та особистісного чинників, розширення сфери впливу держави при максимізації прав і свобод, абсолютизації адміністративного чинника суспільних трансформацій. Встановлено, що публічне адміністрування: реалізує рішення органів влади; застосовує демократичні, публічні, ліберальні форми та методи управління суспільним, соціальним та економічним розвитком країни. Визначено основні чинники, що вплинули на появу в багатьох країнах світу такої нової форми управління у державному секторі, як публічне адміністрування. На основі осмислення особливостей еволюції моделі управління в державному секторі обґрунтовується необхідність впровадження у науковий обіг поняття «публічне адміністрування». Запропоновано рекомендації щодо децентралізації управління в контексті вітчизняних реформ підвищення ефективності системи органів публічної влади на інноваційних засадах. У цьому контексті надзвичайно важливим є втілення ініціатив щодо конституційних змін з децентралізації влади, пріоритетних завдань Стратегії реформування державного управління України на 2016—2020 роки; розроблення нової редакції Закону України «Про державну службу», що регулюють основні принципи, правові та організаційні засади функціонування публічної державної служби.

*Ключові слова*: публічне управління, публічне адміністрування, державне управління, еволюція моделі управління у державному секторі, суспільство, влада, децентралізація, держава.

## Bolotina Ye., Shubna O., Kvasha A., Melchenko V. Political Aspects of Public Administration in the Public Sector of Ukraine

The article reveals the basic theoretical principles of public administration. The stages of formation and development of public administration are studied. It was found that public administration, as a system of public administration in Ukraine, needs to be reformed in a market economy and democratization of society. The main problems of formation and development of the system of public administration in terms of compliance with the European political trend of integration of public and personal factors, expanding the sphere of state influence while maximizing rights and freedoms, absolutization of the administrative factor of social transformations are considered. It is established that public administration: provides implements the decisions of the authorities; applies democratic, public, liberal forms and methods of managing the social, social and economic development of the country. The main factors that influenced the emergence in many countries of the world of such a new form of government in the public sector as public administration.

Based on the understanding of the peculiarities of the evolution of the management model in the public sector, the need to introduce the concept of "public administration" into scientific circulation is substantiated. Recommendations for decentralization of management in the context of domestic reforms to increase the efficiency of the system of public authorities on an innovative basis are offered. In this context, it is extremely important to implement initiatives on constitutional changes in the decentralization of power, the priorities of the Public Administration Reform Strategy of Ukraine for 2016-2020; development of a new version of the Law of Ukraine "On Civil Service", which regulates the basic principles, legal and organizational principles of public service.

*Keywords*: public administration, public administration, public administration, evolution of the management model in the public sector, society, power, decentralization, state.

## Болотина Е. В., Шубная Е. В., Кваша А. П., Мельченко В. И. Политические аспекты публичного администрирования в государственном секторе Украины

В статье раскрыты основные теоретические основы публичного администрирования. Исследованы этапы становления и развития публичного администрирования. Выяснено, что публичное администрирование, как система государственного управления в Украине, нуждается в реформировании в условиях рыночной экономики и демократизации общества. Рассмотрены основные проблемы формирования и развития системы публичного администрирования в условиях соответствия европейскому политическому тренду интегрированности публичного и личностного факторов, расширения сферы влияния государства при максимизации прав и свобод, абсолютизации административного фактора общественных трансформаций. Установлено, что публичное администрирование: реализует решения органов власти; применяет демократические, публичные, либеральные формы и методы управления общественным, социальным и экономическим развитием страны. Определены основные факторы, которые повлияли на появление во многих странах мира такой новой формы управления в государственном секторе, как публичное администрирование. На основе осмысления особенностей эволюции модели управления в государственном секторе обосновывается необходимость внедрения в научное обращение понятия «публичное администрирование». Предложены рекомендации относительно децентрализации управления в контексте отечественных реформ повышения эффективности системы органов публичной власти на инновационных началах. В этом контексте чрезвычайно важным является воплощение инициатив относительно конституционных изменений по децентрализации власти, приоритетных задач Стратегии реформирования государственного управления Украины на 2016-2020 года; разработка новой редакции Закона Украины «О государственной службе», что регулируют основные принципы, правовые и организационные основы функционирования публичной государственной службы.

*Ключевые слова*: публичное управление, публичное администрирование, государственное управление, эволюция модели управления в государственном секторе, общество, власть, децентрализация, государство.

Received by the editors: 08.10.2021 and final form 16.12.2021

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-75-79

K. Simakov,

PhD (Economics), Associate Professor, ORCID 0000-0003-0094-2930, e-mail: irinas.dgma@gmail.com,

#### O. Simakova,

master,

Donbass State Engineering Academy, Kramatorsk

# FEATURES OF TEACHING ANALYTICAL AND ACCOUNTING DISCIPLINES IN HIGHER EDUCATION INSTITUTIONS

Formulation of the problem. The purpose of educational programs of accounting and analytical orientation - to provide students with general and special competencies related to accounting and taxation, which will enable them to solve complex accounting, analytical, and control tasks in terms of national and international accounting standards during training and professional activities, formation of the personality of a specialist capable of conducting research and making sound management decisions using effective international methods and practices of accounting and taxation.

Analysis of recent research and publications. Problems are devoted to the problems of application of information technologies in accounting F. Butynets, V. Guzhva, V. Zavgorodny, S. Ivakhnenkov, V. Isakov, Y. Kuzminsky, P. Kutsyk, V. Shkvir, O. Volot, N. Dechow, J. Mouritsen, T. Davenport and others. The analysis of the latest literature and periodicals allowed us to conclude that the issue of introduction and use of modern information technologies in the accounting of domestic enterprises is very acute.

Presentation of the main research material. Peculiarities of curricula of accounting-analytical orientation are the emphasis directed on the acquisition of knowledge, analytical, communicative, organizational skills within the formation of general and special competencies of future specialists of acquisition of knowledge, analytical, communicative, organizational skills within the formation of general and special competencies of future masters. namely:

- focus on international standards of accounting and control activities;
- emphasis on the preparation of accounting and analytical justification of management decisions;
- in-depth attention to various forms of financial control (internal, state financial audit, financial monitoring, and compliance);
- focus on in-depth acquaintance with taxation systems;
- implementation in an active research environment.

The student-centred approach to teaching in educational and professional programs is carried out through the following methods:

- problem-oriented learning, self-study;
- combination of lectures, practical classes, independent work;
- consultations with the decision of situational tasks, the performance of course work, research works, testing on a paper / electronic carrier, passing of practice;
  - the performance of master's qualification work;
- use of problem-based, interactive, informationcomputer, collective and integrated, contextual learning technologies;
- active teaching methods that develop professional and communication skills, and the ability to work in a team [1].

Requirements for the availability of a system of internal quality assurance in higher education are determined by European standards and recommendations for quality assurance in higher education (ESG) and Article 16 of the Law of Ukraine "On Higher Education".

The internal quality assurance system must comply with the principles of:

- compliance with European and national quality standards of higher education;
- autonomy of the institution of higher education, which is responsible for ensuring the quality of educational activities and the quality of higher education;
  - quality monitoring;
- a systematic approach that involves quality management at all stages of the educational process;
  - constant quality improvement;
- involvement of students, employers, and other stakeholders in the quality assurance process;
- the openness of information at all stages of quality assurance.

The system of internal quality assurance of higher education should provide for the implementation of the following procedures and measures:

- planning of educational activities: development,
   approval, monitoring, and periodic review of educational programs;
  - ensuring the quality of staff;

- ensuring the availability of the necessary resources for the organization of the educational process and support for higher education;
- development of information systems for effective management of educational activities;
- ensuring publicity of information about the activities of higher education institutions;
- prevention and detection of academic plagiarism in scientific and educational works of teachers, articles in scientific periodicals, dissertations of applicants for scientific degrees and qualifying bachelor's and master's theses of students;
- participation in national and international rating surveys of higher education institutions.

The composition of courses in educational programs should be formed taking into account the interdisciplinary approach [2]. A scientifically substantiated sequence of mastering academic disciplines should ensure the development of educational competencies required for a specific qualification. This ensures the existence of unions of specialists (for example, the Federation of Professional Accountants and Auditors of Ukraine), which unite likeminded professionals and have a high potential to raise the content level of educational standards. One of the most important conditions for the successful development of the digital economy is the staffing of processes at all levels. That is why in educational institutions it is necessary to carry out appropriate work to clarify curricula, curricula, basic educational programs, and forms of education. There is a need to focus on the specialization of students in the development of educational programs and especially work programs of disciplines. To develop effective educational programs, close cooperation of educational institutions with stakeholders (employers) must be established. It is advisable to allocate blocks of general, basic, and selective competencies for accounting and analytical areas, in particular for the training of applicants in the speciality "Accounting and Taxation".

In this case, when studying accounting disciplines there is no need for a detailed presentation of all areas of the accounting process, it is necessary to give the concept of the main stages of accounting work: basic and selective competencies for accounting and analytical areas, in particular for the training of applicants in the speciality "Accounting and Taxation". In this case, when studying accounting disciplines there is no need for a detailed presentation of all areas of the accounting process, it is necessary to give the concept of the main stages of accounting work: basic and selective competencies for accounting and analytical areas, in particular for the training of applicants in the speciality "Accounting and Taxation". In this case, when studying accounting disciplines there is no need for a detailed presentation of all areas of the accounting process, it is necessary to give the concept of the main stages of accounting work:

- accounting policy and its role in the formation of accounting and analytical information;
- chart of accounts, primary documents, and accounting registers;
  - main forms of reporting and their content [4].

Therefore, it is necessary to identify the discipline that most fully reveals the features of accounting and reporting about the speciality. This determines which sections of the accounting policy, the objects of accounting must be disclosed in more detail when lecturing, conducting practical classes, and organizing independent work of students. It is in the study of this discipline that it is necessary to show the unity of accounting, analysis, and control of areas typical of specific professionals working in production, construction, trade, budget, etc.

The main task of training is to acquire skills in working with information, including its search, systematization, and processing, which can be obtained only by independent work of the student, which involves the development of cases, creative tasks, discussions, and other situational materials that the student must perform, organizations in direct contact with the future employer, not on abstract materials. A special role is in the use of higher education videos of lectures, educational films, presentations. Recommendations for the use of online resources are related to the simplicity and realism of their use. Online consultations (using communication technologies) provide an opportunity to provide timely assistance to applicants who are interested in the in-depth study of disciplines and scientific work. The purpose of independent work is to find and acquire new and consolidate, deepen already acquired knowledge and skills, including skills of independent work not only with educational material but also an independent solution of a new task for him. Independent direction of work becomes especially important in the digitalization of the economy because in this case the independent work of the applicant can be performed based on finding the necessary information using modern technologies, to increase the validity of conclusions, interpretation of information conjunction with decision making.

Analysis of some educational programs shows a lack of consistency in the study of disciplines. But, as practice shows, it is impossible to start studying the practical part without a thorough study of the theoretical foundations of the discipline [4].

In addition, the curricula provide for a different combination of the study of accounting disciplines with other related disciplines. For the direction of training "Accounting and Taxation" financial accounting should be taught in combination with accounting theory, management accounting, and for the direction of "Management" – a comprehensive study of financial analysis. When teaching accounting and financial accounting, it is necessary to put different emphasis on students studying in different areas.

It should be borne in mind that the initial knowledge of students differs significantly depending on the level of mathematical and computer training of applicants at the time of study of the discipline. Also, the process of perception of the discipline is significantly complicated by the lack of accounting experience, as well as experience of practical work.

Educational processes of the XXI century – is the transition from active to interactive teaching methods, as evidenced by a sufficient number of modern developments in the field of pedagogy, which reveal the essence of teaching professional disciplines.

Interactive methods, in contrast to active ones, are focused on the wider interaction of students with the teacher, with each other and on the dominance of student activity in the learning process. Interactive ("inter" is a mutual, "act" - to act) method, a method that means interaction, being in a mode of conversation, dialogue with anyone. The lesson plan should include interactive tasks and exercises, performing which students learn new material, and not just consolidate what has already been learned. When training a specialist in any field in a market economy, a certain number of classroom classes should be given to accounting theory, as an understanding of the process of the interconnection of all facts of economic activity and changes in the financial position of the organization and its potential. To do this, it is advisable to develop a course of video lectures by different teachers [5].

Accounting disciplines are a kind of alphabet in the system of economic disciplines, so the teacher must place different motivational accents for applicants who study in different educational programs. Sufficient professional training of the teacher allows finding these accents. Intensification of education can be achieved through interactive methods in vocational education, it meets the requirements of quality, competitiveness, continuity, mobility, safety for student health.

The therapeutic potential of interactive methods in terms of their systematic use in the educational process is also obvious. Discussion, analysis of real situations, brainstorming, role-playing or simulation, lead to a favourable psychological atmosphere in the classroom, enhance the language and intellectual activity of students, increase their interest, self-confidence, reduce anxiety and create a meaningful context of communication.

There are several models of constructing an interactive seminar and a practical lesson. One of the ways to organize a discussion of an issue is the so-called "round table". The purpose of the discussion is to generalize opinions on the problem, and all participants of the round table act as proponents (the one who supports and argues the thesis in the debate). All participants in the discussion are equal, no one has the right to dictate their will and decisions. As a rule, the "round table" plays more of an advocacy role than a tool for making concrete decisions. The "round table" can be

considered part of the seminar, which is a free discussion of the topic.

In practical classes, you can use the method of brainstorming – an operational method of solving the problem based on stimulating creative activity, in which participants are asked to express as many solutions as possible, including unrealistic. Then, from the total number of expressed ideas, the most successful ones are selected, which can be used in practice. Practical experience shows that students do not care too much about the normative justification of their ideas. But this does not mean that this method cannot be used in the study of accounting disciplines.

A case study is a specially prepared training material that reflects a specific problematic business situation that requires management decisions by the company's management. During classes, the teacher directs students to find such solutions, build situations that are focused and take into account the specifics of a particular area of student learning.

Modern education is characterized by large amounts of information and strict requirements for the knowledge of applicants. Education needs new approaches and methods to the organization of the educational process, based on advanced information technologies. Digital technologies come to the aid of traditional pedagogical methods.

Classes with the use of multimedia presentations are held in computer classrooms with the use of multimedia projectors to increase the pace of information assimilation. Lecture material is provided in presentations made in PowerPoint or others. On the slides of the presentation are the main provisions of the research topic: definitions, accounting records for the research account, samples of primary documents and accounting registers, examples of solving situational problems. Also, this material is used in distance learning using educational platforms Moodle, Zoom, Microsoft Teams and others. Also, assignments in the disciplines are sent to the group's e-mail and are performed by each student on a separate computer. Modern students actively use automated information technology (personal computer, electronic textbooks, Internet). Students use multimedia technologies in the preparation of reports, abstracts, speaking at conferences, in the defence of term papers and qualifications.

Currently, even in those organizations where accounting is automated, do not do without the use of Microsoft Excel tools. The number of reports that must be provided by all departments of the organization is growing steadily. Microsoft Excel spreadsheets allow you to refine reports, submit information obtained during unloading from 1C, in the required form [6].

The program allows you to select the necessary information, creating separate tables, organize the available information on the necessary grounds and calculate the results. With the help of Microsoft Excel package, students can keep auxiliary calculations and tables, accounting of inventory, calculation of wages,

accounting of settlements with suppliers and buyers (in terms of delivery and shipment of products and goods), accounting of revenues, calculation of taxes to be transferred in the budget, etc.

To consolidate the studied material and to test knowledge, a survey is conducted, both orally and in writing. A written survey is a test in which students are asked to answer questions from the material, to make accounting records on the proposed facts of economic activity or to analyze the main indicators of financial condition and economic activity of the entity.

Within the teaching of disciplines "Modern information technologies in accounting, analysis, auditing and taxation" and "Management accounting and analytical support of the management system" are used configurations of the licensed program "1C: Accounting 8" and others. But the form of education involves a small amount of study time devoted to the study of disciplines [1].

To provide preferential terms for the purchase of software products and assistance in the development of economic software products "1C", the company "1C" offers a special type of contract - an agreement on the use of software products in the educational process in higher education. According to this agreement for educational purposes in 2018 the product "1C: Accounting of the enterprise 8" was got.

In distance learning, tests and exams are performed in the Moodle system in the form of test tasks and tasks in essay format.

Upon completion of the educational program "Tax Accounting" students must have the amount of theoretical knowledge and practical skills necessary for successful work as an accounting specialist in budgetary and commercial organizations.

There is a certain order of teaching the discipline "Accounting". After studying the technology of accounting for individual areas, students are asked to solve a cross-cutting problem that allows students to imagine themselves in the role of current accountants. The cross-cutting task is a conditional example of the

reflection in the accounting of the facts of the economic activity of the organization. The task is based on the example of a small business, which applies a simplified system of taxation, and covers the most typical transactions for the month. Solving a cross-cutting problem allows students to:

- 1. Gain skills in the preparation of primary documents: when carrying out cash transactions (formation of income cash order and expenditure cash order), current account operations (registration of bank statements in the accounting database), when making payments to accountable persons (advance report), settlements with service providers (rent), settlements with employees of the organization on remuneration.
- 2. Learn to summarize information in accounting registers (account cards) for the month, quarter.
- 3. Gain skills in calculating mandatory payments to the budget and extrabudgetary funds, and the formation of regulated reports for transfer to tax and other government agencies.

Thus, there are many features and problems in the teaching of accounting disciplines for non-specialized areas of bachelor's degree, but it is necessary to overcome stereotypes, change the established practice and strive to improve the effectiveness of classroom classes.

Conclusions. The use of modern multimedia and Internet technologies in the teaching of information accounting systems allows to clearly show the capabilities of the researched software, which allows increasing the productivity and effectiveness of training. Students are allowed to observe the demonstration by the teacher of the technology of work in accounting programs both visually and in remote applications. Thus, there are many features and problems in the teaching of accounting disciplines for non-specialized areas of bachelor's degree, but it is necessary to overcome stereotypes, change the established practice and strive to improve the effectiveness of classroom classes.

#### Literature

- 1. Концепція розвитку цифрової економіки та суспільства України на 2018–2020 роки : Розпорядження Кабінету Міністрів України від 17 січня 2018 р. № 67-р. URL: http://zakon5.rada. gov.ua.
- 2. Положення про порядок розроблення та реалізації освітніх програм Донбаської державної машинобудівної академії. URL: http://www.dgma.donetsk.ua.
- 3. Положення про підвищення кваліфікації педагогічних і науково-педагогічних працівників Донбаської державної машинобудівної академії. URL: http://www.dgma.donetsk.ua/.
- 4. Якість вищої освіти: компетентнісний підхід у підготовці сучасного фахівця : матеріали XLIII Міжнародної науковометодичної конференції (м. Полтава, 14–15 листопада 2018 року). Полтава : ПУЕТ, 2019. 328 с.
- 5. Гаркуша С. А. Теоретичні основи визначення ефекту від впровадження автоматизованих інформаційних систем обліку, аналізу та аудиту. URL: http://www.pdaa.edu.ua/sites/default/files/nppdaa/5.2/81.pdf.
- 6. Овчарик Р. Ю. Аудит на базі комп'ютерних програм: продуктивність, рентабельність та тенденції розвитку. *Інтер наука. Серія «Економічні науки»*. 2017. № 1. С. 68–72.
- 7. Аль-Джамалі А. М., Мацків О. Сфери застосування інформаційних технологій: матеріали Всеукр. наук. конф. аспірантів та молодих вчених (25 березня 2014 р.). Одеса: ОНЕУ, 2014. С. 49–53.
- 8. Грибкова С. М., Цинько І. О. Аналіз стану основних засобів промислових підприємств України. *Вісник економічної науки України*. 2016. № 2 (31). С. 48–52.
- 9. Синявіна Ю. В. Аналіз українського ринку інформаційних систем бухгалтерського обліку. *Економічний аналіз*. 2015. Т. 21. № 2. С. 305–308.

- 10. Дикий А. П., Довгаль Ю. Д. Особливості вибору програмного забезпечення для комп'ютеризації бухгалтерського обліку великих підприємств. Вісник ЖДТУ. Економічні науки. 2008. № 4 (46). С. 61–70.
- 11. Завгородний В. П. Автоматизация бухгалтерского учета, контроля, анализа и аудита : монография. Киев : А.С.К., 1998. 768 с.

#### References

- 1. Kontseptsiia rozvytku tsyfrovoi ekonomiky ta suspilstva Ukrainy na 2018–2020 roky : Rozporiadzhennia Kabinetu Ministriv Ukrainy vid 17 sichnia 2018 r. № 67-r [The concept of development of the digital economy and society of Ukraine for 2018-2020: Order of the Cabinet of Ministers of Ukraine of January 17, 2018 № 67-r]. Retrieved from http://zakon5.rada. gov.ua [in Ukrainian].
- 2. Polozhennia pro poriadok rozroblennia ta realizatsii osvitnikh prohram Donbaskoi derzhavnoi mashynobudivnoi akademii [Regulations on the procedure for developing and implementing educational programs of the Donbas State Machine-Building Academy]. Retrieved from http://www.dgma.donetsk.ua [in Ukrainian].
- 3. Polozhennia pro pidvyshchennia kvalifikatsii pedahohichnykh i naukovo-pedahohichnykh pratsivnykiv Donbaskoi derzhavnoi mashynobudivnoi akademii [Regulations on professional development of pedagogical and scientific-pedagogical workers of Donbass State Machine-Building Academy]. Retrieved from http://www.dgma.donetsk.ua/ [in Ukrainian].
- 4. Yakist vyshchoi osvity: kompetentnisnyi pidkhid u pidhotovtsi suchasnoho fakhivtsia [The quality of higher education: a competency-based approach in the training of modern specialists]. (2019). Proceedings of the XLIII International Scientific and Methodological Conference (Poltava, November 14-15, 2018). Poltava, PUET. 328 p. [in Ukrainian].
- 5. Harkusha, S. A. Teoretychni osnovy vyznachennia efektu vid vprovadzhennia avtomatyzovanykh informatsiinykh system obliku, analizu ta audytu [Theoretical bases of definition of effect from introduction of the automated information systems of the account, the analysis and audit]. Retrieved from http://www.pdaa.edu.ua/sites/default/files/nppdaa/5.2/81.pdf [in Ukrainian].
- 6. Ovcharyk, R. Yu. (2017). Audyt na bazi kompiuternykh prohram: produktyvnist, rentabelnist ta tendentsii rozvytku [Audit based on computer programs: productivity, profitability and development trends]. *Inter nauka. Seriia «Ekonomichni nauky» Inter science. Economic Sciences Series*, 1, pp. 68–72 [in Ukrainian].
- 7. Al-Dzhamali, A. M., Matskiv, O. (2014). Sfery zastosuvannia informatsiinykh tekhnolohii [Spheres of application of information technologies]. *Proceedings of the All-Ukrainian Science Conference graduate students and young scientists* (March 25, 2014). (pp. 49–53). Odesa, ONEU [in Ukrainian].
- 8. Hrybkova, S. M., Tsynko, I. O. (2016). Analiz stanu osnovnykh zasobiv promyslovykh pidpryiemstv Ukrainy [Analysis of the state of fixed assets of industrial enterprises of Ukraine]. *Visnyk ekonomichnoi nauky Ukrainy*, 2 (31), pp. 48–52 [in Ukrainian].
- 9. Syniavina, Yu. V. (2015). Analiz ukrainskoho rynku informatsiinykh system bukhhalterskoho obliku [Analysis of the Ukrainian market of accounting information systems]. *Ekonomichnyi analiz Economic analysis*, Vol. 21, No. 2, pp. 305–308 [in Ukrainian].
- 10. Dykyi, A. P., Dovhal, Yu. D. (2008). Osoblyvosti vyboru prohramnoho zabezpechennia dlia kompiuteryzatsii bukhhalterskoho obliku velykykh pidpryiemstv [Peculiarities of software selection for computerization of accounting of large enterprises]. *Visnyk ZhDTU.Ekonomichni nauky Bulletin of ZhSTU. Economic sciences*, 4 (46), pp. 61–70 [in Ukrainian].
- 11. Zavgorodniy, V. P. (1998). Avtomatizatsiya bukhgalterskogo ucheta, kontrolya, analiza i audita [Automation of accounting, control, analysis and audit]. Kyiv, A.S.K. 768 p. [in Russian].

#### Сімаков К. І., Сімакова О. К. Особливості викладання аналітично-облікових дисциплін у закладах вищої освіти

У статті описані основні особливості навчальних програм обліково-аналітичної спрямованості та аспекти викладання обліково-аналітичних дисциплін: проведення лекцій та практичних занять з використанням мультимедійних технологій, прикладних програм для бухгалтерії та фінансового аналізу, розглядається організація дистанційного навчання, для якого потрібно забезпечити доступ до сучасних програмних продуктів, також містить конкретні пропозиції для підвищення ефективності сприйняття облікових дисциплін.

*Ключові слова*: обліково-аналітичні дисципліни, освітня програма, забезпечення якості вищої освіти, інтерактивні технології, дистанційне навчання.

#### Simakov K., Simakova O. Features of Teaching Analytical and Accounting Disciplines in Higher Education Institutions

The article describes the main features of curricula of accounting and analytical orientation and aspects of teaching accounting and analytical disciplines: lectures and practical classes using multimedia technologies, applications for accounting and financial analysis, the organization of distance learning, which requires access to modern software products. also contains specific suggestions for improving the perception of accounting disciplines.

Keywords: accounting and analytical disciplines, educational program, quality assurance of higher education, interactive technologies, distance learning.

## Симаков К. И., Симакова А. К. Особенности преподавания аналитически-учетных дисциплин в учреждениях высшего образования

В статье описаны основные особенности учебных программ учетно-аналитической направленности и аспекты преподавания учетно-аналитических дисциплин: проведение лекций и практических занятий с использованием мультимедийних технологий, прикладных программ для бухгалтерии и финансового анализа, рассматривается организация дистанционного обучения, для которого нужно обеспечить доступ к современным программным продуктам, также содержит конкретные предложения для повышения эффективности восприятия учетных дисциплин.

*Ключевые слова*: учетно-аналитические дисциплины, образовательная программа, обеспечение качества высшего образования, интерактивные технологии, дистанционное обучения.

Received by the editors: 12.10.2021 and final form 16.12.2021

#### **Management of Innovations**

UDC 005.591.6:334.72(477)

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-80-88

#### I. Fomichenko,

PhD (Economics), ORCID 0000-0002-9180-9344, e-mail: Inna fomichenko@ukr.net, Donbass State Engineering Academy, Kramatorsk,

#### V. Bashtovvi,

director of Druzhkivka Professional College, ORCID 0000-0002-4314-8879, Donbass State Engineering Academy, Druzhkivka,

#### S. Barkova,

assistant, ORCID 0000-0002-7894-2108. e-mail: sveta-barkova@ukr.net, Donbass State Engineering Academy, Kramatorsk,

#### O. Pakhomova.

head's assistant, ORCID 0000-0001-9326-0589.

Donbass State Engineering Academy, Druzhkivka

#### PECULIARITIES OF INNOVATIVE RISK MANAGEMENT AT INDUSTRIAL ENTERPRISES OF UKRAINE

**Formulation of the problem.** The formation of a market management system and the development of perfect competitive relations between its subjects in Ukraine require the introduction of both managerial and managed organizational and economic mechanism capable of ensuring stable and efficient highprofit operation of key structural units - industrial enterprises - and mobile intensify reproduction processes both locally and at the global level. Therefore, in practice it is important to find effective ways to improve the efficiency of enterprises.

The unpredictability and instability of post-conflict conditions are forcing companies to find new ways of economic growth. The implementation of innovative projects in modern economic conditions is becoming a key factor in maintaining the position and competitiveness of industrial enterprises in the market. The implementation of innovative activities is always accompanied by a number of risks. One of the main factors hindering the innovative activity of enterprises is the high level of riskiness of innovative measures.

Analysis of recent research and publications. Scientific aspects of innovation processes are considered in scientific works of domestic and foreign scientists. Among them are researchers: N. Krasnokutskaya, V. Ilenkova, V. Popova, T. Skripko, R. Fatkhutdinova, S. Kravchenko, Yu. Vertakova, I. Afonin, J. Schumpeter, E. Dandon and others. Issues of risks during the implementation of innovative projects, the prerequisites for their occurrence are considered in the

works of many scientists. It should be noted M. Denisenko, O. Volkov, who outlined in their textbook on innovation the main trends, features, strategies and mechanisms of innovation [1]; M. Grachev, S. Lyapin, who highlighted in their textbook the knowledge that forms the necessary skills, basic competencies: from risk identification and analysis to the development of solutions in the organization of risk management to overcome them, which are necessary for managers and specialists in innovation management [2].

The purpose of the article there is an analysis of the features of innovation risks of industrial enterprises in post-conflict conditions.

Presentation of the main research material. The formation of economic relations at the present stage of development in Ukraine requires companies to find new approaches to their activities, new approaches to business management and new approaches to meet consumer needs. The solution of the above problems should be innovation, which should become a priority of the enterprise in the face of fierce competition and marketing orientation of enterprises.

Innovation is a process aimed at developing and implementing the results of completed research and development or other scientific and technical achievements in a new or improved product sold on the market, in a new or improved technological process used in practice, as well as related research and development [3, p. 19].

The main factor that hinders the successful implementation of innovation activities by enterprises, on a par with the lack of financial resources, the weak effectiveness of state support mechanisms is the increased innovation risk. Risk is generally associated with the possibility or threat of deviation of the results of specific actions or decisions from those expected. Yes, the risk may be manifested in the fact that in a particular market or its part of the new product may not be sold in the amounts that were calculated on based on the results of insufficient marketing research. Or, when choosing a pricing strategy to enter new markets, it is not possible to say with certainty that the company expects success, because competitors can respond with adequate action. As a result – the possibility of losses or loss of income [4]. It should be noted that in foreign dictionaries to denote the category of "risk" consonant words are used: in English – "risk", in French – "risque", in German - "risiko" and so on. According to philologists, this category comes from the Latin term "resecum", which means "rock" or "danger", it was used by ancient sailors to denote the danger of colliding with a coastal rock. In the modern economic literature, risk is often defined as an element of uncertainty that may affect the business of an entity or the outcome of a particular economic transaction. When carrying out

innovation activities, the company faces various risks: macro risks (inflation risk; tax risk; risk of instability; risk of changes in legislation; political risk; foreign economic risk; environmental risk); micro-risks (market risk; marketing risk; purchasing risk; sales risk; competitive risk; assortment risk; price risk; price risk; communication risk; personnel risk; integrity risk; financial risk [5, p. 174]. The process of risk management in the enterprise in the framework of innovation (innovation risks) should include the following stages: monitoring and analysis of external and internal risk factors, assessment of innovation risks, planning of risk management, development of measures to reduce innovation risks. Monitoring and analysis of external and internal risk factors should provide management with information on the ranking of risk factors by risk probability and degree of risk.

This is necessary for management decisions regarding the ongoing monitoring of those factors that are a source of probable occurrence of high and medium risk. In order to solve this problem, when monitoring external and internal risk factors, such indicators as the probability of risk and the degree of risk should be analyzed. The map of risk factors depending on the probability of risk and the degree of risk is presented in Fig. 1.

	Characteristics of risk probability	minimal	small	insignificant	significant	high		
Characteristics of the degree of risk	No risk							
	Low	Factors that do not require much attention during monitoring						
	Minor							
	Average							
Ch	High	Factors that require great attention during monitoring						

Fig. 1. Map of risk factors depending on the probability of risk and the degree of innovation risk (compiled by the authors based on sources [2])

The problem of improving production efficiency is to ensure the maximum possible result for each unit of labor, material, financial and other resources spent. Therefore, the criterion for the efficiency of production on a macroeconomic scale is the growth of social labor productivity. In general, all measures to improve the efficiency of enterprises can be reduced to three areas: 1) cost and resource management; 2) development and improvement of production and other activities; 3) improving the management system of the enterprise and all its activities. Forming a system of performance indicators of economic entities, it is advisable to adhere to certain principles, namely: ensuring an organic relationship between the criterion and the system of performance indicators; reflecting efficiency of use of all types of resources used; possibilities of application of efficiency indicators to

management of various links of production at the enterprise (activity in the organization); performance of the leading indicators of the stimulating function in the process of using the existing reserves to increase the efficiency of production (activity) [6, p. 453 – 454].

Having studied the directions and measures to increase the innovative activity of industrial enterprises, there is a need to specify the directions of action and use of the main internal and external factors, among which are: 1) innovation. Technological innovation innovations, especially modern forms of automation and information technology, have the most significant impact on the level and dynamics of production efficiency (services); 2) equipment. The equipment has a leading place in the program of increase of efficiency first of all production, and also other activity of subjects of managing; 3) material resources. Materials and

energy have a positive effect on the level of efficiency if the problems of resource conservation, reduction of material consumption and energy intensity of products (services) are solved, management of stocks of material resources and sources of supply is streamlined; 4) finished products (products). The products of labor offered by the company for sale must appear on the market in the right place, at the right time and at a wellthought-out price. In this regard, the entity should ensure that there are no organizational or economic barriers between production (provision of services) and individual stages of marketing research; 5) employees. The main source and determining factor in the growth of efficiency are employees - managers, managers, specialists, workers. Business qualities of employees, increase of productivity of their work are in many respects conditioned by the effective motivational mechanism at the enterprise, maintenance of a favorable social microclimate in labor collective; 6) organization and systems. Unity of labor collective, rational delegation of responsibility, proper management standards characterize the proper organization of the enterprise, which provides the necessary specialization and coordination of management processes, and hence a higher level of efficiency (productivity) of any complex production and economic system; 7) methods of work. With the predominance of labor-intensive processes, more advanced methods of work become promising enough to ensure increased efficiency of the enterprise.

The assessment of innovation risks of industrial enterprises should include an expert assessment of the level of risk and risk acceptability. In the system of innovation risk management of the enterprise considerable attention should be paid to the subsystem of planning work on risk management, because the effectiveness of the innovation risk management system as a whole depends on this process [7, p. 62]. Planning of work on innovation risk management should include: planning of research of external and internal risk factors; analysis of the parameters of the risk object; development of proposals for improving the object of risk; economic justification of work on risk management; stimulating the performance of works at a high level; formulation of principles of risk management organization; development of organizational structure of risk management; choice of measures and models for risk management; ensuring the adaptability of risk management processes; automation of work on innovation risk management; development of information architecture of risk management system [5, p. 176]. The development of measures to reduce innovation risks should include a choice from the total mass of methods to reduce innovation risks, those whose use is more appropriate, ie their use can lead to the desired result and for which the company has the necessary potential.

Methods that should be considered as alternatives are: preventive methods, risk avoidance method, risk allocation method (between project co-executors), risk diversification method, risk source localization method,

risk dissipation method, risk compensation method, risk compensation method, risk insurance method and hedging method. You should choose those methods of reducing the risks of innovation, which received a high and medium rating of acceptability. It should be noted that innovation is not only the use of high technology, but also innovation in the field of management decisions. To implement the innovative tasks facing the company requires a reorganization of the enterprise management system based on new management technologies - innovative approaches in enterprise management. The model of innovation organization management is characterized by the management of innovations on the scale of the expanded organization, ie including consumers, suppliers, strategic partners. An important innovative resource of the enterprise is the staff, the innovative potential of which is based on the ability of employees to produce and effectively implement both their own and third-party new ideas and projects.

If the innovation is successfully implemented, the company significantly changes its competitive position in front of other actors in a particular industry, increases profits and more. In the textbook "Commodity Innovation Policy" by S. Ilyashenko and Yu. Shipulina gives a table of positive and negative features of innovation risk for the enterprise-innovator (Table 1) [8, p. 146].

The high level of risk in innovation is explained by the fact that the implementation of innovations requires significant costs, while not all innovations bring the expected profit. It is necessary to take into account the peculiarities of the implementation of innovative developments, such as the long period of their implementation and the significant number of participants involved in this process, including from various sectors of the economy and other countries. There are several types of innovation risks, the most characteristic of modern business conditions [9]: the risk of erroneous choice of innovation projects [10].

The reasons for this type of risk may be insufficiently reasoned choice of priorities of economic and market strategy of the enterprise. The prospects of the company's market position and its financial stability may be erroneously assessed. In addition, the author of an innovative project often overestimates its importance to the consumer - in this case, the cause of the risk is an erroneous assessment of the consumer market; risks of failure to provide the innovation project with a sufficient level of funding. Includes the risk of underfunding for project development and the risk of incorrect choice of funding sources (inability to implement the project at its own expense, lack of available sources of borrowed funds, etc.); risks of non-performance of economic agreements, namely: the risk of the partner's refusal to enter into an agreement after negotiations (in the event of a sharp change in economic conditions), the risk of concluding agreements on unfavorable terms, the risk of concluding agreements with insolvent partners, the risk

#### Positive and negative features of innovation risk

(compiled by the authors based on source [8, p. 146])

Constraining factor (negative side)	Chance of success (incentive side)		
– Direct financial losses due to non-acceptance of the	<ul> <li>Outpacing competitors;</li> </ul>		
novelty by the market;	– the opportunity to take advantage of the discoverer,		
<ul> <li>lost opportunities due to the concentration of efforts</li> </ul>	in particular the pricing strategy of "removal of cream";		
on unpromising areas;	<ul> <li>expanding the adaptive capabilities of the enterprise-</li> </ul>		
<ul> <li>restructuring of the established system of interaction</li> </ul>	innovator to change the market situation;		
with economic counterparties;	<ul> <li>maintaining the interest of consumers by providing</li> </ul>		
- difficulties in financing innovation, the outcome of	them with better products;		
which is uncertain;	– growth of the image of the enterprise-innovator;		
– restructuring of the traditional system of functioning	- penetration into new, most economically attractive		
of the enterprise and its management;	areas of activity;		
<ul> <li>high costs for attracting highly qualified specialists</li> </ul>	- realization of creative potential of employees and		
from other institutions;	managers of the enterprise-innovator;		
<ul> <li>loss of image due to the failure of innovations</li> </ul>	- improving the organizational structure of		
	management;		

of non-fulfillment of contractual obligations by partners in time (mainly due to sharp fluctuations in economic conditions); marketing risks of current supply and marketing. This group is quite large, but in most cases is determined by the lack of professionalism of marketing services of the company or the lack of such [11].

A necessary condition for making effective decisions based on innovation risks is the ability to manage them, which is not to completely eliminate them, but to determine acceptable limits, which will minimize the negative consequences of a risky event. Innovation risk management is a process by which the company identifies innovation risks, estimates their

magnitude, monitors and controls, and identifies measures to reduce their impact [12].

- improving financial results

The process of innovation risk management includes a set of measures aimed at increasing the effectiveness of innovation activities of the enterprise and minimizing (or almost complete elimination) of possible losses (losses) in the process of its implementation. The process of innovation risk management requires the implementation of certain stages. Scientists have developed different approaches to the division of this process into stages, they do not differ much in essence, but have certain features. In Fig. 2 shows the authors' generalized approach to the process of innovation risk management.

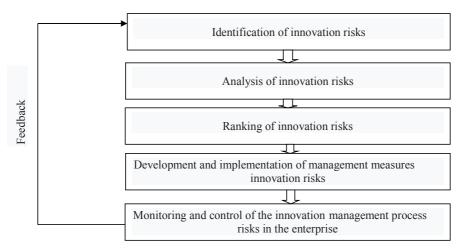


Fig. 2. The process of innovation risk management in the enterprise (compiled by the authors based on source [13])

The first and perhaps the most important stage of the process of innovation risk management is their identification. Because the timely detection of innovation risks allows you to make informed management decisions to minimize their negative impact on the effectiveness of innovation. The next step is to analyze the already identified innovation risks. This stage is the most responsible and methodologically complex, the effectiveness of the whole process of innovation risk management depends on the quality of

its implementation. At this stage, a qualitative and quantitative analysis of innovation risks is envisaged. Qualitative analysis of innovation risks involves identifying sources and causes, stages and works that most often cause innovation risk, ie identifying potential areas of innovation risk, as well as identifying practical benefits and possible negative consequences that may arise in the process of innovation. The main task of qualitative analysis of innovation risk is to identify factors of innovation risks, as well as to identify its potential areas [14].

The results of qualitative analysis of innovation risks serve as an important source of information for the implementation of quantitative analysis of innovation risk, which involves the quantification of individual innovation risks and project risk (decision) as a whole. Quantitative analysis is performed provided that sufficient information is available. Quantitative analysis is based on probability theory, mathematical statistics, theory of operations research [13]. The task of quantitative analysis of innovation risks is to numerically measure the impact of changes in project factors that are tested on the risk and behavior of project performance criteria. The main goal is to obtain the necessary information for making management decisions on the feasibility of innovative activities and

develop measures to protect the company from possible losses

The development of measures to manage innovative risks requires an assessment of the acceptability of the risk level and the choice of risk management methods. It should be noted that in theory and practice the most common methods of responding to innovation risks are [13]: avoidance of innovation risks, most often by eliminating the cause of such risks (acquisition of property rights for ready-made innovative developments, involvement of a qualified contractor in the implementation of an innovative project, etc.); transfer of innovation risks, which consists in shifting responsibility for risk to another party; acceptance of innovative risks, which can be as passive (when those risks are consciously accepted, which have a low level of negative impact on the implementation of the innovation project) and active (when developing an action plan in case of risks that threaten the innovation project); optimization (reduction) of the degree of innovation risks (through the creation of appropriate reserves, risk insurance, etc.).

Here are six basic rules to follow in order to improve the efficiency of innovation risk management (Fig. 3).

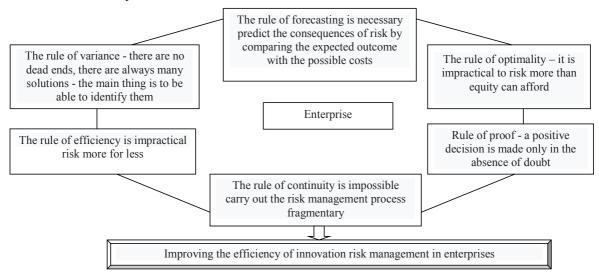


Fig. 3. Rules that must be followed in order to increase the effectiveness of innovation risk management in domestic enterprises (compiled by the authors based on source [12])

O. Petukhov and G. Silakov distinguishes the following types of risks of innovation: risks caused by R&D and trial launch, or technological (negative R&D results, failure of tests, non-compliance of the technical level of production with the requirements of innovation); risks associated with production (equipment failure, disruptions in logistics); marketing risks (incorrect assessment of consumer preferences, poor product positioning, problems with "naming", trademark registration); risks of financing an innovation project (underestimation of project costs, inflation

processes, crisis processes in the economy, increase in costs); staffing risks (insufficient staff qualifications, staff turnover, resistance to staff changes); risks of the organization and management system (significant transaction costs, unskilled management, problems within the team, non-fulfillment of instructions and agreements, failures of suppliers, etc.); legal risks (infringement of intellectual property rights, problems of licensing and certification); information risks (information leakage, information system failures, etc.); environmental risks (threat to environmental safety in

connection with the implementation of an innovative project) [16].

V. Zhezhukha in his work identifies types of innovation risks depending on the consequences they

may have for the enterprise-innovator in the process of direct implementation of the innovation project [17]. Consider them in the form of a table (Table 2).

Table 2

# Innovation risks and their impact on innovation projects (compiled by the authors based on source [17])

The power of				
influence on	Risks			
innovative				
projects				
Significant impact (microenvironment risks)	<ul> <li>Organizational risks (inefficient strategy of innovative activity of the enterprise, poor organization of units engaged in innovative developments, inefficiently constructed channels of information dissemination in the process of innovative activity, possible conflicts in the process of innovative developments, unsuccessful leadership styles and forms of government, etc.);</li> <li>marketing risks (ineffective selection of appropriate marketing strategies to promote and implement innovations);</li> <li>product risks (inefficient selection of appropriate technologies, resource suppliers, contractors, poorly organized inventory management system, etc.);</li> <li>financial risks (lack of funds needed for the implementation of innovative projects, deterioration of the financial condition of the enterprise, the difficulty of obtaining external loans to finance innovative projects, etc.);</li> <li>risks of personnel management (inability of full-time employees of the enterprise to independently implement an innovative project staff turnover inefficient system of metionic projects.</li> </ul>			
	independently implement an innovative project, staff turnover, inefficient system of motivation of employees involved in the process of innovation, etc.)			
Average	- Difficulty in forecasting the situation in a particular area of activity;			
impact (market	– increasing the level of competition;			
risks)	– Existence of various barriers to entering the market with innovative products, etc.			
Least impact	–Difficulty in forecasting the situation at the national and global levels;			
(macro risks)	- change in exchange rates, interest rates;			
	- change in the principles of taxation;			
	- change of customs rules;			
	– political circumstances;			
	- change of tastes and preferences of consumers;			
	– reduction of their purchasing power, etc.			

A systematic analysis of risks that have a medium level of impact on innovation shows that post-conflict conditions do not significantly affect the significance of these risks. The same situation is observed with regard to the difficulty of forecasting the situation in a particular area of activity. It is necessary to dwell on the analysis of the risk of increasing the level of competition. It is seen that post-conflict conditions affect the likelihood of these risks, their overcoming and avoidance. This is directly related to the loss of enterprises, and sometimes completely production, scientific capacity due to military conflict, loss of access to certain resources necessary for the conduct and improvement of economic activity, the severance of economic ties. All these factors have significantly complicated the competitive position of enterprises in the Ukrainian market and in the world. Regarding the existence of different barriers to entering the market with innovative products, the conditions for these risks and their overcoming are also different [20].

As a result of the military conflict in eastern Ukraine, economic relations with Russia as an aggressor were effectively suspended for some time, so companies that focused on trade with eastern partners and / or had production cycles related to Russian companies needed to find new ones. partners, new markets. The loss of production capacity, raw materials market and sales market significantly affected both the overall activities of the company as a whole and the ability to implement innovative projects. The least impact on innovation is exerted by risks that have the same conditions for all Ukrainian enterprises, in particular the difficulty of forecasting the situation at the national and global levels, changing tax risks, reducing the level of purchasing power.

**Conclusions.** Thus, innovation risk management is a complex process that requires clear management decisions to identify and reduce risks. The problem of improving the efficiency of production and innovation of the enterprise as a whole is to ensure the maximum

possible result for each unit of labor, material and financial resources spent. The main factors in improving the efficiency of the enterprise are to increase its innovation and technological level, improve management, organization of production and labor,

change the volume and structure of production, improve the quality of natural resources and more. Only the skillful use of the whole system of these factors can ensure a sufficient rate of growth of production efficiency and reduce innovation risks.

#### Literature

- 1. Волков О. І., Денисенко М. П. та ін. Економіка й організація інноваційної діяльності : підручник. Київ : ВД «Професіонал», 2004. 960 с.
- 2. Грачева М. В., Ляпина С. Ю. Управление рисками в инновационной деятельности : учебное пособие. Москва : ЮНИТИ-ДАНА, 2015. 352 с.
  - 3. Балабанов И. Т. Инновационный менеджмент. Санкт-Петербург: Питер. 2000. 208 с.
- 4. Захарченко В. І., Корсікова Н. М., Меркулова М. М. Інноваційний менеджмент: теорія і практика в умовах трансформації економіки: навч. посіб. Київ: Центр учбової літератури, 2012. 448 с.
- 5. Полонська Л. А., Лохман Н. В. Інноваційна політика торговельних підприємств: теорія та методологія: монографія. Донецьк. ДонНУЕТ. 2009. 221 с.
- 6. Економіка підприємства : підручник / ЗА заг. ред. С. Ф. Покропивного. [вид. 2-ге, перероб. та доп.]. Київ : КНЕУ, 2011. 528 с.
- 7. Ілляшенко С. М. Управління інноваційним розвитком: проблеми, концепції, методи: Навчальний посібник. Суми. ВТД «Університетська книга». 2003.278 с.
- 8. Ілляшенко С. М., Шипуліна Ю. С. Товарна інноваційна політика : підручник. Суми : Університетська книга, 2007. 281 с.
- 9. Калиновська Н. Л., Григор'єв О. Ю. Ризики інноваційної діяльності підприємств. *Проблеми формування та розвитку інноваційної інфраструктури*: тези доповідей Міжнародної науково-практичної конференції (Львів, 19-21 травня 2011 р.). Львів: Видавництво Львівської політехніки, 2011. С. 272 273.
- 10. Shalneva M. S., Zaitseva K. A., & Chernysheva M. A. Features of Corporate Innovation Risk Management. In S. I. Ashmarina, V. V. Mantulenko, M. I. Inozemtsev, & E. L. Sidorenko (Eds.), *Global Challenges and Prospects of the Modern Economic Development*. 2021. Vol. 106. P. 1363-1372. European Proceedings of Social and Behavioural Sciences European Publisher. DOI: https://doi.org/10.15405/epsbs.2021.04.02.162.
- 11. Manvelidze A. B. Operating Expenses for Large American Air Carriers. *Strategic decisions and risk management*. 2018. Vol. 4. P. 72-91. DOI: https://doi.org/10.17747/2078-8886-2018-4-72-91.
- 12. Пастушенко М. В. Удосконалення системи управління ризиками на підприємстві. *Збірник наукових праць Уманського національного університету садівництва*. Умань: Економічні науки, 2010. 332 с.
- 13. Вербіцька І. І. Ризик-менеджмент як сучасна система управління ризиками підприємницьких структур. *Сталий розвиток економіки*. 2013. № 5. С. 282 291.
- 14. Штефанич Д. А. Управління підприємницьким ризиком / за заг. ред. Д.А. Штефанича. Тернопіль: Економічна думка, 1999. 224 с.
- 15. Григор'єва О. Є. Проблеми ризиків, що виникають під час реалізації інноваційних проектів, та методи їхнього кількісного вимірювання. Вісник Національного університету «Львівська політехніка». 2008. № 628. С. 64 71.
- 16. Пєтухова О. М., Сілакова Г. В. Управління ризиками інноваційної діяльності. *Підвищення ефективності діяльності підприємств харчової та переробної галузей АПК*: матеріали Всеукраїнської науково-практичної конференції (м. Київ, 22—23 листопада 2012 року). Київ: НУХТ, 2012. С. 145—147.
- 17. Жежуха В. Й. Ризики інноваційної діяльності підприємств. *Науковий вісник НЛТУ України*. 2009. Т. 19. № 2. С. 177—182.
- 18. Падерін І. Д., Горященко Ю. Г. Стратегічні пріоритети інноваційного розвитку підприємництва. *Економічний вісник Донбасу.* 2021. № 1 (63). С. 103–107. DOI: https://doi.org/10.12958/1817-3772-2021-1(63)-103-107.
- 19. Malakhovskyi Yu., Gamaliy V., Kulazhenko V., Cherednichenko M. Assessment of the Risks of Entrepreneurship as a Prerequisite for the Implementation of Innovation Projects. *Journal of Entrepreneurship Education*. 2019. Vol. 22. P. 1-6.
- 20. The Basics of Innovation Risks: Make Smarter Decisions. (2021). URL: https://www.acceptmission.com/blog/innovation-risk/.
- 21. Олексенко Л. В. Інноваційна ультраструктура як необхідний компонент національної інноваційної системи. *Економічний вісник Донбасу.* 2021. № 2 (64). С. 156–168.
- 22. Землянкін А. І., Підоричева І. Ю., Ніколаєнко А. І. Проект нової редакції Концепції розвитку національної інноваційної системи України (на період 2016 2026 років). *Економічний вісник Донбасу*. 2016. № 3 (45). С. 197–206.

#### References

- 1. Volkov, O. I., Denysenko, M. P. et al. (2004). Ekonomika y orhanizatsiia innovatsiinoi diialnosti [Economics and organization of innovative activity]. Kyiv, PH Professional. 960 p. [in Ukrainian].
- 2. Gracheva, M. V., Lyapina, S. Yu. (2015). Upravleniye riskami v innovatsionnoy deyatel'nosti [Risk management in innovation activities]. Moscow, UNITI-DANA. 352 p. [in Russian].
  - 3. Balabanov, Y. T. (2000). Ynnovatsyonnыi menedzhment [Innovative management]. St. Petersburg, Piter. 208 p. [in Russian].
- 4. Zakharchenko, V. I., Korsikova N. M., Merkulova M. M. (2012). Innovatsiinyi menedzhment: teoriia i praktyka v umovakh transformatsii ekonomiky [Innovative management: theory and practice in the conditions of transformation of the economy]. Kyiv, Center for Educational Literature. 448 p. [in Ukrainian].
- 5. Polonska, L. A., Lokhman, N. V. (2009). Innovatsiina polityka torhovelnykh pidpryiemstv: teoriia ta metodolohiia [Innovative policy of trade enterprises: theory and methodology]. Donetsk, DonNUET. 221 p. [in Ukrainian].
- 6. Pokropyvnyi, S. F. (Ed.). (2011). Ekonomika pidpryiemstva [Enterprise economics]. 2nd ed., processing and additional. Kyiv, KNEU. 528 p. [in Ukrainian].

- 7. Illiashenko, S. M. (2003). Upravlinnia innovatsiinym rozvytkom: problemy, kontseptsii, metody [Management of innovative development: problems, concepts, methods]. Sumy, University book. 278 p. [in Ukrainian].
- 8. Illiashenko, S. M., Shypulina, Yu. S. (2007). Tovarna innovatsiina polityka [Commodity innovation policy]. Sumy, University book. 281 p. [in Ukrainian].
- 9. Kalynovska, N. L., Hryhoriev, O. Yu. (2011). Ryzyky innovatsiinoi diialnosti pidpryiemstv [Risks of innovative activity of enterprises]. *Problemy formuvannia ta rozvytku innovatsiinoi infrastruktury* [*Problems of formation and development of innovative infrastructure*]: Proceedings of the International Scientific and Practical Conference (Lviv, May 19-21, 2011). (pp. 272 273). Lviv, Publishing House of Lviv Polytechnic [in Ukrainian].
- 10. Shalneva, M. S., Zaitseva, K. A., & Chernysheva, M. A. (2021). Features of Corporate Innovation Risk Management. In S. I. Ashmarina, V. V. Mantulenko, M. I. Inozemtsev, & E. L. Sidorenko (Eds.), *Global Challenges and Prospects of the Modern Economic Development*, Vol. 106, pp. 1363-1372. European Proceedings of Social and Behavioural Sciences European Publisher. DOI: https://doi.org/10.15405/epsbs.2021.04.02.162.
- 11. Manvelidze, A. B. (2018). Operating Expenses for Large American Air Carriers. *Strategic decisions and risk management*, Vol. 4, pp. 72-91. DOI: https://doi.org/10.17747/2078-8886-2018-4-72-91.
- 12. Pastushenko, M. V. (2010). Udoskonalennia systemy upravlinnia ryzykamy na pidpryiemstvi [Improvement of the risk management system at the enterprise]. Zbirnyk naukovykh prats Umanskoho natsionalnoho universytetu sadivnytstva [Collection of scientific works of the Uman National University of Horticulture]. Uman, Economic Sciences [in Ukrainian].
- 13. Verbitska, I. I. (2013). Ryzyk-menedzhment yak suchasna systema upravlinnia ryzykamy pidpryiemnytskykh struktur [Risk management as a modern risk management system of business structures]. *Stalyi rozvytok ekonomiky Sustainable economic development*, 5, pp. 282-291 [in Ukrainian].
- 14. Shtefanych, D. A. (1999). Upravlinnia pidpryiemnytskym ryzykom [Management of entrepreneurial risk]. Ternopil, Ekonomichna dumka [in Ukrainian].
- 15. Hryhorieva, O. Ye. (2008). Problemy ryzykiv, shcho vynykaiut pid chas realizatsii innovatsiinykh proektiv, ta metody yikhnoho kilkisnoho vymiriuvannia [Problems of risks arising during the implementation of innovative projects and methods of their quantitative measurement]. Visnyk Natsionalnoho universytetu «Lvivska politekhnika» Bulletin of the Lviv Polytechnic National University, 628, pp. 64-71 [in Ukrainian].
- 16. Pietukhova, O. M., Silakova, H. V. (2012). Upravlinnia ryzykamy innovatsiinoi diialnosti [Management of risks of innovative activity]. *Pidvyshchennia efektyvnosti diialnosti pidpryiemstv kharchovoi ta pererobnoi haluzei APK [Increasing the efficiency of the enterprises of the food and processing industries of the agricultural industry*]: Proceedings of the All-Ukrainian scientific and practical conference (Kyiv, November 22-23, 2012). (pp. 145–147). Kyiv, NUHT [in Ukrainian].
- 17. Zhezhukha, V. Y. (2009). Ryzyky innovatsiinoi diialnosti pidpryiemstv [Risks of innovative activity of enterprises]. *Naukovyi visnyk NLTU Ukrainy Scientific bulletin of NLTU of Ukraine*, Vol. 19, No. 2, pp. 177–182 [in Ukrainian].
- 18. Paderin, I. D., Horiashchenko, Yu. H. (2021). Stratehichni priorytety innovatsiinoho rozvytku pidpryiemnytstva [Strategic Priorities for Innovative Development of Entrepreneurship]. *Ekonomichnyi visnyk Donbasu Economic Herald of the Donbas*, 1 (63), pp. 103–107. DOI: https://doi.org/10.12958/1817-3772-2021-1(63)-103-107 [in Ukrainian].
- 19. Malakhovskyi, Yu., Gamaliy, V., Kulazhenko, V., Cherednichenko, M. (2019). Assessment of the Risks of Entrepreneurship as a Prerequisite for the Implementation of Innovation Projects. *Journal of Entrepreneurship Education*, Vol. 22, pp. 1-6.
- 20. The Basics of Innovation Risks: Make Smarter Decisions. (2021). Retrieved from https://www.acceptmission.com/blog/innovation-risk/.
- 21. Oleksenko, L. V. (2021). Innovatsiina ultrastruktura yak neobkhidnyi komponent natsionalnoi innovatsiinoi systemy [Innovative Ultrastructure as a Necessary Component of the National Innovation System]. *Ekonomichnyi visnyk Donbasu Economic Herald of the Donbas*, 2 (64), pp. 156–168. DOI: https://doi.org/10.12958/1817-3772-2021-2(64)-156-168 [in Ukrainian].
- 22. Zemliankin, A. I., Pidorycheva, I. Yu., Nikolaienko, A. I. (2016). Proekt novoi redaktsii Kontseptsii rozvytku natsionalnoi innovatsiinoi systemy Ukrainy (na period 2016 2026 rokiv) [Draft of the new edition of the Concept of the Development of the National Innovation System of Ukraine (for the period 2016-2026)]. *Ekonomichnyi visnyk Donbasu Economic Herald of the Donbas*, 3 (45), pp. 197-206 [in Ukrainian].

## Фоміченко І. П., Баштовий В. П., Баркова С. О., Пахомова О. В. Особливості управління інноваційними ризиками на промислових підприємствах України

Стаття присвячена дослідженню управління інноваційними ризиками на підприємстві, що обумовлює необхідність вивчення і узагальнення інноваційного досвіду України та інших країн. Обґрунтувано та висвітлено питання, що пов'язані з поліпшенням процесу управління інноваційними ризиками на підприємстві. Досліджено процес управління інноваційними ризиками на вітчизняних підприємствах. Виявлено існуючі проблеми, що виникають під час здійснення цього процесу, та визначено основні шляхи їх розв'язання. Виділено важливі правила, яких необхідно дотримуватися з метою підвищення ефективності управління інноваційними ризиками на вітчизняних підприємствах.

*Ключові слова*: інноваційна діяльність, інноваційний ризик, підприємство, процес управління інноваційними ризиками на підприємстві, постконфліктні умови.

## Fomichenko I., Bashtovyi V., Barkova S., Pakhomova O. Peculiarities of Innovative Risk Management at Industrial Enterprises of Ukraine

The article is devoted to the study of enterprise risk management in innovation, which necessitates the study and generalization of innovation experience in Ukraine and other countries. Substantiated and highlighted issues related to improving the process of innovation risk management in the enterprise. The process of innovation risk management at domestic enterprises is studied. Identified existing problems that arise during this process, and identify the main ways to solve them. Important rules that need to be followed in order to increase the effectiveness of innovation risk management in domestic enterprises are highlighted.

*Keywords*: innovation activity, innovation risk, enterprise, process of innovation risk management at the enterprise, post-conflict conditions.

## Фомиченко И. П., Баштовой В. П., Баркова С. А., Пахомова А. В. Особенности управления инновационными рисками на промышленных предприятиях Украины

Статья посвящена исследованию управления инновационными рисками на предприятии, которое обусловливает необходимость изучения и обобщения инновационного опыта Украины и других стран. Обоснованы и освещены вопросы, которые связаны с улучшением процесса управления инновационными рисками на предприятии. Исследован процесс управления инновационными рисками на отечественных предприятиях. Выявлены существующие проблемы, которые возникают во время осуществления этого процесса, и определены основные пути их решения. Выделены важные правила, которых необходимо придерживаться с целью повышения эффективности управления инновационными рисками на отечественных предприятиях.

*Ключевые слова*: инновационная деятельность, инновационный риск, предприятие, процесс управления инновационными рисками на предприятии, постконфликтные условия.

Received by the editors: 12.11.2021 and final form 16.12.2021

#### Management of Labour and Safety

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-89-98

UDC 331.101(477)

**V. Stolyarova,** *PhD (Economics),*ORCID 0000-0002-9483-5126,

**O. Shynkaryuk,** *PhD (Economics),*ORCID 0000-0002-3004-0404.

Institute of Physical Economy named after S. A. Podolynskyi, Kyiv,

V. Stolyarov,

DrHab (Economics), Professor, ORCID 0000-0002-4399-7117, e-mail: stolyarovvf@ukr.net,

**V. Antoshkin,** *DrHab (Economics),*ORCID 0000-0003-2769-0825,

**O. Goryacha,** *PhD (Economics),*ORCID 0000-0001-9211-4547,

**G. Frolova,** *PhD (Economics),*ORCID 0000-0001-9119-1161,

Berdyansk University of Management and Business LLC

# MONITORING OF HUMAN DEVELOPMENT IN REGIONS IN UKRAINE (integrated approach)

The draft State strategy for regional development of Ukraine for the period up to 2027 identified the problems of monitoring and evaluating State regional policy, noting that in the field of regional development policy in Ukraine, several indicator systems are implemented by separate regulatory acts of the Cabinet of Ministers of Ukraine (Government Resolutions No. 476 of 2009, No. 856 of 2015, No. 932 of 2015, No. 787 of 2016 and No. 1029 of 2017).

The problems of monitoring and evaluation of State regional policies are contained in an excessive number of sets of indicators, the mixing of indicators of the socio-economic development of regions and the implementation of regional policies, together with the need to develop a significant number of periodic reports, which creates an additional burden on State authorities (in particular the Ministry of Regional Development of Ukraine), without creating comprehensive and synthetic information that would be useful [1].

But for some reason, unfortunately, the listed list of Government decisions does not include national methods for measuring human development for regions and measuring regional human development, which was approved:

– joint resolution of the Board of the State Statistics Committee of Ukraine and the Presidium of the National Academy of Sciences of Ukraine in 2001 No. 182/76 of 05. 04. 2001 and 14. 03. 2001.

– by the decision of the Presidium of the National Sciences Academy of Ukraine and the board of the State Statistics Service of Ukraine of 13. 06. 2013 No. 123, which was developed by the Ptoukha Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine together with the Ministry of Economic Development and Trade of Ukraine.

Using these Methods 2001 and 2012, the State Statistical Committee and the State Statistics Service issued the annual statistical bulletin "Regional Human Development." It contained the calculation results of the components and integral value of the Regional Human Development Index (RHDI) on nine aspects of human development and 92 indicators on the 2001 Methodology and on six aspects of human development, and 33 indicators on the 2012 Methodology.

Statistical bulletins "Regional Human Development" almost always included the RHDI Measurement Methodology 2012 and the results of the rating assessment of places of administrative regions on a single scale, as well as its significance in Ukraine as a whole. RHDI recalculations of all areas according to the 2012 Methodology have been carried out on a statistical basis since 2004.

That is, there were reasons for the transition from statistical RHDI observations of the administrative regions of Ukraine to its planning and forecasting calculations with possible elements of designing and optimizing components.

The action plan for 2015-2017 for the implementation of the State Strategy for Regional Development until 2020, which Cabinet approved of Ministers Resolution No. 821 of October 7, 2015, provided for the development and submission to the Government of a draft act of the Cabinet of Ministers of Ukraine on the procedure and methodology for calculating the Regional Competitiveness Index by October 1, 2016 (RCI) and the Regional Human Development Index (RHDI) and the calculation of their forecast values for the period up to 2020 [2, p. 13].

But this measure was not carried out either in terms of content or timing. But, *more than a year after the deadline for its implementation*, on December 20, 2017, the Cabinet of Ministers of Ukraine adopted Resolution No. 1029, "Some Issues of Improving the Monitoring and Evaluation System for the Implementation of State Regional Policy," which approved the simplified Procedure and Methods for Calculating RCI and RHDI [3].

At the same time, for example, if the Action Plan for 2015-2017 was supposed to develop the Procedure and Methodology for carrying out RHDI forecast calculations, then by a Government resolution of December 20, 2017 – only for generalized analytical calculations of the actual RHDI values by administrative areas (according to a simplified evaluation scheme with posting, as an information certificate, on the website of the Ministry of Regional Development of Ukraine without use in short-, medium- and long-term strategic planning or in operational management).

The provisions coordination of the draft Government Decree on these issues took place on April 13, 2017, in the Ministry of Region of Ukraine. The authors presented the RHDI prediction technique for 6 blocks with 33 indicators, which was tested at the Khmelnytsky Region State Administration during the development of the "Regional Program for Human Development of the Khmelnytsky Region in 2016-2020" [4-5]. But it was not taken into account by the Ministry of Regional Development of Ukraine because it was prepared without grant financing by foreign funds and control by domestic curators.

That is, the Ministry of Regional Development of Ukraine intended, but not implemented, to call time for the development of methodological support for the measurement and forecast of RHDI for the design regulation of its components.

In addition, by Government Decree No. 821 of October 7, 2015, when approving the Action Plan for 2015-2017 for the implementation of the State Regional Development Strategy for the period up to 2020, strategic indicators for assessing the effectiveness of their implementation were given taking into account

forecast values only as of January 1, 2017, that is, in fact for one the year 2016.

Unfortunately, indicators for assessing the performance of tasks in 2015-2017 were not defined for such events as: restoration of life safety and economic rehabilitation of Donetsk and Luhansk regions; protecting national interests and preventing violations of the constitutional rights of Ukrainian citizens in temporarily occupied parts of these areas; creating conditions to address the urgent problems of the displaced; the creation of conditions for strengthening ties between regions and communities, as well as the development of border territories.

But, the strategic indicators of the development of administrative regions were brought by the Government for the Region State Administration **two months later** (October 07, 2015) and, as we have already noted, with forecast calculations - only for the 2016 year. That is, in compliance with previous government decisions, the Region State Administration and the Regional Council did not have real-time and could not take these indicators into account when bringing Regional Development Strategies into line with both the State Regional Development Strategy for the period up to 2020, and when developing Action Plans for their implementation for 2015-2017 years.

The main reasons for the lack of coherence of management decisions and the government's strategic instructions in 2014 can be considered the following.

Firstly, the Ministry of Regional Development of Ukraine, which was given the authority from the Ministry of Economic Development of Ukraine to guide the improvement of regional development strategies and action plans for their implementation, as well as to monitor and evaluate their final performance (including using the corresponding state order).

Secondly, the absence of a subordinate departmental-sectoral (in the regional sector of the national economy) scientific institutions or agencies and their branches would bias the development of appropriate information and methodological support and carry out forecast calculations. The central apparatus of the ministry could not cope with this, and our proposals were ignored.

By its orders from 24.06.2016 No. 474, the Government of Ukraine adopted, and from 18.12.2018 No. 1102, approved the new edition of the Reform Strategy of Public Administration for the period up to the 2021 year and the Plan of Measures for its implementation for 2019-2021 years. The Strategy allegedly complies with the European standards of good governance and public administration SIGMA's European principles.

The 10 ministries of Ukraine are experimenting with this strategy's scenario by establishing separate structural units for the reform of the public service to improve the quality of State policy-making and coordination of its implementation. The corresponding Directorates are created, in which specialists for the

posts of state experts with salaries of 30.0-50.0-70.0 thousand UAH are involved on a competitive basis. This is ten times more than the official salaries of associate professors and professors in the field of education and science of Ukraine, but, unfortunately, not invited to state experts' posts because they are more competent in territorial planning and management problems.

The draft State strategy for regional development of Ukraine for the period up to 2027 does not define or consider such a requirement for institutional support for regional development as "timely preparation discipline observance, making, bringing to performers and monitoring the implementation of relevant state decisions" that was inherent in the State Plan of Ukraine of past times, as well as in the first years of gained independence, when the Ministry of Economy worked the retained personnel potential of professionals of a high level of spirituality and competence.

Resolution of the Government of August 6, 2014, No. 385, which approved the State Strategy for Regional Development of Ukraine for the period up to 2020, simultaneously violated the principle of "historical continuity" of state regional policy proclaimed in it, recognized the "Procedure for the development, monitoring, and evaluation of the results of the implementation of the State Strategy for Regional Development" of November 16, 2011, as invalid. (para. 2).

The relevant authorities were instructed to ensure the Action Plan's development for the implementation of the Strategy within six months (para. 3). That is, by February 2015. But these government decisions were implemented eight months later: The Action Plan for 2015-2017 for the implementation of the State Strategy for Regional Development until 2020 (first stage) was approved on October 7, 2015, by Resolution No. 821. It was quite informative, but with forecast values of indicators as of January 1, 2017, that is, only for one the year 2016 and after nine months of 2015, and not earlier – in September 2014 (quarter before the start of the planning period according to the regulations of the former State Planning Commission of Ukraine).

The new procedure for the improvement of State and Regional Development Strategies and Action Plans for their implementation, as well as the monitoring and evaluation of their realization, was approved on November 11, 2015, by Government Resolutions No. 931 and No. 932. Until that time, the Procedure would have to be in force, which was approved by Government Resolution No. 1189 of November 16, 2011, according to which the relevant government decisions should be monitored.

The Action Plan for 2018-2020 for the implementation of the State Strategy for Regional Development of Ukraine for the period up to 2020 (second stage) was approved on September 12, 2018, by Government Resolution No. 733, and according to the regulatory requirements of 2011 this should be executed

in July 2017, and in accordance with the requirements of 2015 - in September 2017. That is, this happened 12 months later according to the requirements of 2011 and after 8 months of delay according to the requirements of 2015 regarding the beginning of the first stage of its implementation.

The leaders of the Government of Ukraine during these years were A. Jacenjuk and V. Grojsman. Strategic indicators of regional development were identified and proved to regional authorities with delays of one and two years, and regulatory requirements should be approved in September of the year, which precedes the planned period of three and four years.

Unlike the State Strategy for Regional Development of Ukraine for the period up to 2015, the new Strategy for the period up to 2020 excluded the following sections:

- "Scientific and methodological support for the implementation of the Strategy";
- "Priority areas of regional development for the period of the Strategy";
- "Indicators for assessing the implementation of the Strategy (including indicators of activities coordination of central and local executive bodies and compulsory medical insurance for the development of the regions)."

Government Decree approved the list of annual indicators aimed at achieving the predicted values of the State Strategy for Regional Development for the period up to 2020 (by year, starting in 2014) in the context of three goals for Ukraine and the regions No. 1089 of December 20, 2017. That is, after three years (2015, 2016, 2017) of implementation of the Strategy until 2020.

Government Decree No. 1189 of November 16, 2011, approved the procedure for monitoring and evaluating the results of the Development Strategy for the period up to 2015 by conducting annual monitoring of the state of realization of the Plans of measures for the implementation of the Strategy with relevant proposals for the next calendar year (item 7.8).

Despite the recommendations of domestic economic science regarding the consistency of the Strategy's indicators until 2015 with the Millennium Development Goals until 2015 and with the RHDI indicator system, they were not taken into account [6, 7]

The list of annual indicators, the State Strategy for Regional Development for the period up to 2020, was aimed at achieving the predicted values (approved by Government Decree No. 1089 of December 20, 2017), included the following rates as RHDI indicators for the goal "Territorial socio-economic integration and spatial development":

- 1) demographic burden of the population aged 16-59 years:
  - 2) the overall attrition rate of the rural population;
  - 3) total mortality rate;

4) the unemployment rate of the population aged 15-70 years.

But, the alignment of these indicators with the RHDI indicators was not achieved by the Medium Term Plan until 2020.

The initial reference to the need to prepare the Strategy for the period up to 2020 was the completion of the previous strategy's implementation period for the period up to 2015. But in the future, there was a clarification and addition of the Strategy sections by the years of its implementation compared to the text of 2014.

Thus, the hasty, with a reduction of one year, preparation of the State Strategy for Regional Development for the period until 2020 was justified not only by the extraordinary elections of the fifth President of Ukraine and the new composition of the Verkhovna Rada of Ukraine but also by the start of the ATO in the Ukrainian Donbas and the transfer of powers of its formation from the Ministry of Economic Development to the Ministry of Regional Development of Ukraine. That is, in order to ensure the timely implementation of the recommendations of domestic economic science (in time and volume), it is necessary to introduce criminal liability of the governing bodies of national and regional authorities, compulsory medical insurance, and united territorial communities (by analogy as in the final section V "Control over compliance with budget legislation and liability for violation of budget legislation" of the Budget Code of Ukraine).

Recommendations for the implementation of pilot projects "Luganshhyna-MDG," "Donechchyna-MDG," "Lviv-MDG" since 2005, "AR Crimea-MDG" since 2010, the development of "National and Regional Human Development Programs" from 2005-2006, as well as the use of financial standards for budgetary security for human development since 2011 have not been institutionalized by current legislation and therefore, apparently, cannot be grounds for opening criminal cases against officials. But Ukrainian legal science should overcome this shortcoming in the near future.

The draft laws of Ukraine on long-term planning provided for the development of a State strategy for regional development for ten years. The regional development strategies of Ukraine, which were adopted in 2014 and 2015, provided for a six-year period for their implementation and the draft State regional development strategy for the period until 2027 – seven years. The introduction of such a strategic planning timeline is justified by the need to move to its organization based on EU member countries' experience, despite more urgent own experience with developed domestic scientific and methodological support for 20, 15, 10, 5 years.

Thus, monitoring of human-centric development in the regions should begin with an assessment of compliance with the deadlines for the development of new state decisions, their delivery to the executors, and the frequency of control.

Khmelnytsky University of Management and Law (founder of the Khmelnytsky Regional Council) in May 2016 addressed the Prime Minister of Ukraine V. B. Grojsman with a proposal on the use of methodological recommendations to improve the assessment of the effectiveness of the implementation of state regional policy based on the use of methodological allotments "Statistical modeling of socio-economic development."

The Ministry of Regional Development of Ukraine reported that in the near future, together with other central and local executive authorities, work will be carried out to improve the assessment and monitoring of the socio-economic development of the regions, taking into account the best practices and methodologies of the European Union. Within this work framework, the submitted methodological recommendations will be processed (from 14.06.2016 No. 9/31.1-288-16).

In addition, the proposed recommendations were also sent to the Ministry of Regional Development for consideration in the work of the Ministry of Economic Development and the State Statistics.

That is, in this issue of methodological support for monitoring socio-economic development, the Government of Ukraine turned out to be not independent but under "external influence."

The invitation to Dr.Econ.Sci., professor O. I. Kulynych in the structure of the Working group Khmelnytsky Region State Administration on problems of introduction of a system of fire safety regulations inactivity of the Regional State Administration provided use of his methodical practices for forecasting of RHDI for 2016-2020 by the Technique of his measurement of 2012 on statistical base since 2004. The results of the forecast calculations were used in the development of the first Regional Human Development Program in Ukraine of the Khmelnytsky region as an administrative region [4, 5].

The dissemination of this experience could be carried out back in 2017 when the regional state administrations developed Action Plans for 2018-2020 to implement the State and Regional Development Strategies simultaneously with their clarification for the period until 2020.

On December 20, 2017, the Government of Ukraine adopted Resolution No. 1029, "Some Issues of Improving the Monitoring and Evaluation System for the Implementation of State Regional Policy," in which it approved the simplified Methodology and Procedure for Calculating the Regional Human Development Index. This 2017 Methodology includes three blocks with 8 indicators that supposedly characterize regional human development components.

In the simplified RHDI assessment system, only one indicator is used as a destimulator – the mortality rate from intentional self-harm per 100 thousand people of the existing population, prosantimile.

In the previous 2012 Methodology, out of 33 indicators, 22 were considered as indicators-stimulants of human development, and 11 – as indicators – dissimulators, the results of their forecast calculations became the basis for substantiating specific proposals in the Action Plans for 2018-2020 for the implementation of Regional Strategies for the period up to 2020.

The simplified scheme of monitoring and rating of RHDI is quite laborious both in the hierarchy and in time and therefore has a purely informational nature. Its use does not provide for feedback from the central executive authorities to the authorities of administrative regions and administrative regions to implement state regulation of regional human development.

In September 2018, the Directorate of Regional Ministry Development of Ukraine published RHDI calculations for 2017 on 8 indicators of three aspects of human development in 22 administrative regions of Ukraine (except Luhansk, Donetsk, and Crimea).

RHDI estimates for 2017 for areas are presented not as aspects of regional human development but as areas of research: "Long and healthy life," "Well-being and decent working conditions," "Education." At the same time, the dynamics of the change in the integral values of the RHDI have been presented since 2013 in all areas and in Ukraine as a whole.

In the Luhansk and Donetsk regions and the Autonomous Republic of Crimea since 2014, the implementation of RHDI calculations has been recognized as incorrect due to the lack of information on the part of the temporarily occupied territories of Ukraine.

In 2017, in Ukraine as a whole, according to this methodology (three aspects, eight indicator indicators that were not tested for the validity of the measurement of human development), the RHDI was 0.65. The numerical value of RHDI in the whole of Ukraine is the same order as the value of HDI when comparing countries in the world dimension.

That is, it seems that the Ministry of Regional Development, invented on the initiative of the Government, has a new method of measuring RHDI in order to demonstrate the following: after the 2014 Dignity Revolution, Ukraine will indeed enter the 50 best countries in the world in 2020 according to the "Medium-Term Plan of Priority Actions of the Government for the Period until 2020" (by order of the Cabinet of Ministers of Ukraine of 03.04.2017 No. 275-r signed by V. Groysman). Perhaps the leadership of the Government did not distinguish the indicators of the HDI (Human Development Index) from the RHDI (Regional Human Development Index)!

The first ten places of the RHDI ranking in line with the results of 2017, according to the briefly considered Methodology, were occupied by Kyiv (0.80) and the following regions: Lviv (0.71), Kyiv (0.70), Chernivtsi (0.69), Kharkiv (0.68), Ternopil (0.67), Zakarpattja (0.66), Volyn (0.65), Ivano-Frankivsk (0.65), Rivne (0.65).

The results of the RHDI calculations according to the 2017 Methodology indicate the presence of a negative value of the total population growth (reduction) rate per 1000 people of the existing population other than Kyiv.

But how or to what extent this affected the growth in the volume of expenditures of local budgets, taking into account inter-budget transfers per person, is not estimated.

But the results of the analysis of the dynamics of such RHDI components assessment as the level of employment of registered unemployed people, the ratio of the average wage to minimum wage, the mortality rate from deliberate self-harm per 100 thousand people of the existing population are possible and will serve to justify the corresponding additional measures a year after their measurement, that is, for 2019.

The numerical estimates of RHDI for administrative regions according to the 2017 Method are determined to be the same for the following groups of regions: 0.65 – Volyn, Ivano-Frankivsk, Rivne, Ukraine as a whole; 0.64 – Dnipropetrovsk, Sumy, Cherkasy, Khmelnytsk; 0.63 – Poltava, Mykolaiv, Odesa, Vinnytsia, Zakarpattja; 0.62 – Zhytomyr, Kherson; 0.61 – Kirovograd and Chernihiv.

That is, the simplified Methodology of 2017 does not allow to carry out rating assessments of the locations of regions on a single scale of measurement of their RHDI, as well as to compare RHDI in regions with the average value of the RHDI of Ukraine as a whole, as a criterion for financial equalization of regional human development, as well as a possible criterion for the distribution of funds from the State Fund for Regional Development.

In addition, there is no differentiation of the rating of the components and integral value of the RHDI of the administrative regions of Ukraine to assess the effectiveness of state regional policy and to justify measures to increase it only in these three "areas" of human development and using only 8 indicators, of which only one is destructive, as a dissimulator of human development.

But in August-September 2018, according to the State Statistics Service of Ukraine, RHDI 2017 ratings remain more productive to substantiate the relevant measures based on the results of assessing the dynamics of 33 indicators – indicators of all 6 aspects of human development in the regions according to the 2012 Methodology. Rating estimates of administrative regions of Ukraine according to the RHDI should be supplemented with the following recommendations and proposals completed by the authors of the search scientific and methodological support mechanism of state regulation of regional human development.

The general algorithm for the integrated rating of components and the integral value of RHDI is implemented in four stages.

The first three stages of the integrated rating assessment include analysis of the development and

ranking of administrative areas according to the relevant characteristics:

- the first stage: on the main components of socioeconomic development of the regions;
- the second stage: factorial analysis of the socioeconomic development of areas that are grouped into appropriate clusters;
- the third stage: on the state of socio-economic security of the development of regions.

In the fourth stage of integrated human development rating of administrative areas, calculations of RHDI components and integral value are carried out by regions grouped in the first three stages. These procedures ensure the achievement of a comprehensive rating of the human development of the administrative regions of Ukraine, as more objective than the existing schemes and systems – indicators of their implementation.

At the first stage, the rankings of Ukraine regions according to RHDI are grouped by the 4th main components proposed by O. A. Rjadno and O. V. Berkut [8, p. 63].

Three indicators form the first main component with the most positive factor load: retail turnover; employment rate; the average monthly nominal wage of workers, as well as one indicator with a significant negative factor load - the share of the population with an average per capita equivalent total income per month below the subsistence minimum.

The second component includes the following indicators with a positive load – capital investments; foreign direct investment in the regions of Ukraine; the volume of sold products (goods, services), financial results of enterprises to taxation.

The third main component consists of one indicator with a positive load – the coefficient of export coverage by import and one indicator with a negative load – the population's coefficient of migration growth (reduction).

The fourth main component is formed by only one indicator with a positive load — the total expenditure in innovation areas.

In the future, at the second stage of the integrated rating assessment of the regional human development of administrative regions for certain indicators-factors, a cluster analysis is carried out on all data sets that they performed for each time slice separately for 2009-2013 and simultaneously for all five years of observation.

The results of clustering regions are described as follows.

Cluster 5 formed the Donetsk and Luhansk regions as the most stable.

The first major component is determined by the high value of industrial development and wage levels.

The second major component is below the Ukrainian average. The third main component (the level of foreign trade development in monetary terms) is the largest in Ukraine, which compensates for the negative impact of migration in these regions.

The fourth main component demonstrates the importance of the "innovativeness" of both regions as a whole of the lower average level in Ukraine.

Cluster 4 contains Kyiv, Odessa, and Kharkiv regions. For the first main component, these three areas occupy the first positions in Ukraine: the components' indicators have maximum values.

The second main component is the average in Ukraine (the transition between clusters – from the 1st to the 2nd, and then to the 4th in 2009-2010 was due to increased foreign direct investment).

The decrease in the third main component was due to a decrease in imports' export coverage ratio while increasing the migration growth (decline) ratio of the population. This component tends to decrease, and the fourth main component – "innovation" – is below the Ukrainian average.

Cluster 3 formed the Dnipropetrovsk, Zaporizhzhya, and Poltava regions. The value of the first main component is close to the average in Ukraine, and the value of the second main component is the largest in Ukraine – in terms of the efficiency of enterprises, all three regions are leaders in Ukraine.

The third main component's high values are inferior only to cluster 5, and the value of the fourth main component is the maximum among all clusters. The quality of life of the population of the regions is higher than the average in Ukraine.

Cluster 2 is characterized by an unstable composition, which includes the regions contained in cluster 1: Crimea, Vinnytsa, Volyn, Ivano-Frankivsk, Kirovograd, Lviv, Sumy, Cherkasy, Chernihiv, Chernivtsi (only Mykolaiv region stably includes in cluster 2).

Cluster 1 is conversely characterized by stable region composition throughout the study period (2009-2013). These are Zhytomyr, Zakarpattja, Rivne, Ternopil, Kherson, Khmelnytsky.

In general, both latter clusters are characterized by the lowest economic development indicators and quality of life of the population compared to other clusters. That is, in the second stage of integrated rating assessment of administrative regions of Ukraine according to RHDI, it is advisable to carry them out within each of the five clusters of factor analysis according to the considered components.

At the third stage of the integrated rating assessment of RHDI administrative areas, it is recommended to carry out statistical clustering of areas according to the level of socio-economic security according to the criteria proposed by V. K. Antoshkin [9-11].

The first statistical cluster forms a group of regions with a high level of socio-economic security, which is characterized by high indicators of macroeconomic, social, and foreign economic security. Thanks to the territorial placement and accumulation of large amounts of labor reserves, industrial and investment-innovation potential, such regions can create and mobilize a

significant share of the total financial resources (through taxation) and value-added to meet their own needs for an adequate amount of resources.

The second statistical cluster consists of areas with low indicators of macroeconomic, social, and foreign economic security since the importance of their components is below the average level in Ukraine as a whole. These are areas with low levels of socioeconomic security.

V. K. Antoshkin believes that the low level of socio-economic security of the regions is caused by lower incomes, a decline in fertility, an increased number of pensioners who cannot work, and create value-added and lead to a decrease in local budget revenues through taxation.

In this regard, there is a need for additional funds to support industrial enterprises, provide new jobs and attract investment resources.

The results of studies by V. K. Antoshkin indicate the presence of:

- first, the direct relationship between existing strong industrial capacities and large human resources levels to ensure socio-economic security and resilience to economic crises;
- secondly, the feedback between the low level of social security and the economic development of the regions is due to the identification of disincentives such as high values of the economically inactive population and an increase in unemployment. Together, this reduces the region's labor potential and indicates its inability to meet development needs independently.

Based on the study, V. K. Antoshkin proposed determining the state of stability of the regions of Ukraine depending on the level of socio-economic security [11, c. 70].

- 1. Sustainable development (regions belonging to a specific cluster throughout the period from 2004 to 2013; migration of regions on clusters doesn't happen) the Dnipropetrovsk, Donetsk, Odessa, Kharkiv regions, Kyiv, Sevastopol, Vinnytsia, Volyn, Zhytomyr, Zakarpattia, Ivano-Frankivsk, Rivne, Ternopil, Khmelnytsky, Cherkasy, Chernivtsi, Chernihiv regions (% in the total number of regions of Ukraine).
- 2. *The average level* of stability (migration of regions is recorded at a time for the entire period) is Zaporizhzhja, Sumy, Kherson, Kirovograd regions (14% in the total number of regions of Ukraine).
- 3. *Unstable state* (double change of regional positions in clusters) Luhansk, Kyiv, Mykolaiv, Poltava regions (14% in the total number of regions of Ukraine);
- 4. *Turbulent state* (three-fold and more changes in regional positions in clusters) AR Crimea and Lviv region (7% in the total number of Ukraine regions).

The migration of regions in clusters with a high level of socio-economic security (SES) to clusters with a low level of SES inclusive after 2007 was due to a sharp decline in the quantitative values of security components and the reverse movement of regions took

place only after 2012. That is, Ukraine has not yet reached the SES level of the regions of the pre-crisis period of 2007-2008.

At the same time, according to the results of the study of V. K. Antoshkin found that 62% of the regions of Ukraine have a stable state relative to the level of SES and were not subject to crisis phenomena in the periods 2007-2008. It is advisable to take this into account when conducting a rating assessment of administrative regions of Ukraine according to individual components and integral RHDI values.

At the third stage of the integrated rating assessment of regions according to the RHDI, it is also advisable to use a set of indicators for assessing the state of environmental, social, and economic security of regions in the corporate governance system (business, government, public), which V. F. Stoljarov substantiated and S. V. Kukarceva [12, p. 21].

They consider it necessary and advisable to move to corporate security management in the region, which involves achieving social coherence and balancing the interests of local authorities, businesses, and the organized public.

Under such conditions, it becomes possible to determine the ecological, socially, and economically effective scale of economic activity in the territory within the limits of environmental (11 indicators), social (9 indicators without indicators of social diseases), and economic (13 indicators) security of the region.

At the same time, integrated indicators of environmental, social, and economic security of the region, on the one hand, are calculated in percent, UAH, years and estimates per 100 thousand people, and, on the other hand, they are normalized, as a rule, as a percentage of the gross added value of the territory.

That is, in the processes of monitoring regional human development at the level of administrative areas, problematic issues of monitoring and analysis of indicators of environmental safety, social security, and economic security require priority attention.

In this regard, the powers of the regional State administrations should include determining the threshold values of these indicators and ensuring, on their basis, social standards of life of the population of a subordinate territory, regardless of their location in relation to the regional and district centers. The fundamental revision of the criterion for determining economic security indicators at the regional level (as a kind of framework of national security that ensures the stability of the state) in the context of improving the accounting, analysis, and management of foreign economic activity (FEA) proposes to implement by M. M. Oleksijenko [13].

He, as an expert analyst of the regional development of the Lviv CPO "Institute of International Economic Research" and an applicant of the National Institute of Strategic Research, substantiated, taking into account national interests, procedures for early identification and minimization of possible external and

internal risks and threats of an effective FEA of the region.

Considering the integral nature of the foreign economic security of the state as a number of interconnected structural components, he, as a researcher, simultaneously reveals them as a set of conditions for ensuring the sustainable self-development of the national economy and generating innovative shifts in it, as the fullest realization of national advantages in the international division of labor, the preservation of national wealth and the ecological state of the environment for the next generations.

At the fourth stage of the regional rating for RHDI at the regional level, it is advisable to use methodological approaches to the construction of subindexes of regional human development with the determination of imbalances in the development of urban settlements and rural areas, which M. V. Otkydach substantiated [14, p. 154].

It should also be emphasized that one of the main features of the disaggregation of national targets of the 17 global Sustainable Development Goals for 2030 is also the classification "by type of locality – urban or rural" in 23 indicators of eight targets out of 172 indicators of eighty-six targets [15, p. 128-147].

Thus, the differentiation of the system of indicators and procedures for monitoring regional human development at the subnational (regional) level makes it possible to more objectively assess the socio-economic policies of local executive authorities to improve the quality of life of the population of villages, towns, cities (including united territorial communities), districts and regions as a whole.

In addition to the current methodology for measuring regional human development, the introduction of sub-indices of human development in urban and rural areas will contribute to more systematic State regulation of inter-settlement processes while addressing regional imbalances in the current context of the establishment of united territorial communities.

Monitoring of regional human development is the third leading element of the mechanism of state regulation at the level of administrative regions of Ukraine, which was developed in the doctoral dissertation of PhD, assistant professor of finance at the Berdyansk University of Management and Business Shynkarjuk Oksana Vjacheslavivna during the years of internship at the Research Financial Institute of the Ministry of Finance of Ukraine and in doctoral studies at the Research Economic Institute of the Ministry of Economy of Ukraine [16-20].

In the framework of state regulation of regional human development, the first leading element is the definition of development goals, modeling, forecasting, and planning of human development in the region, and the second leading element is the financing of relevant tasks and events.

Each of these main elements has three main procedural components, common among which are the

procedures for the development, analysis, and monitoring of the implementation of National and Regional Programmes and National and Regional Action Plans for Balanced Sustainable Development, which organically accumulate social (human), environmental and economic aspects.

The algorithm for the functioning of the mechanism of state regulation of regional human development includes a block of calculations of the components' level and dynamics and, in general, the RHDI to evaluate its success and effectiveness.

In the conditions of reforming local self-government bodies and the territorial organization of power, when substantiating a new regional map of the state, the procedures and results of a comprehensive rating assessment of the components and, in general, the RHDI can become arguments for reformatting the socio-economic space and administrative-territorial structure of the state.

The average value of RHDI in options for grouping regions when reformatting the socio-economic and territorial space of Ukraine may become an additional criterion for the formation of a new regional map of the state in accordance with the requirements of EU economic and statistical principles.

In the current conditions for the development and adoption of the Region State Administration and Regional Councils of Regional Strategies of Administrative Regions for the period up to 2027 and Action Plans for 2021-2023 for their implementation, it is advisable to recognize the following priority components of monitoring regional human development:

- assessing and analyzing the status of implementation of localized national targets of the Millennium Development Goals up to the year 2015 and, if necessary, developing events to complete their achievement in 2021-2023;
- selection and disaggregation of strategic indicators of national Sustainable Development Goals 2027 targets;
- predictive calculations of 33 human development indicators according to 6 blocks with the definition of dynamics of indicators-dissimulators to develop appropriate measures to neutralize their negative impact or change in positive dynamics in each region for the period up to 2027;
- ensuring statistical and methodological consistency of strategic indicators 7 of the Millennium Development Goals (2000-2015) with strategic indicators 17 of the Sustainable Development Goals (2016-2030) and a system of indicators-stimulants and indicators-dissimulators of human development in the regions of Ukraine with optimization of components and in general RHDI.

Using the experience of the Khmelnytsky Region State Administration Working Group on the problems of implementing the fire safety rules system in the regional state administration, it becomes appropriate to recommend that all institutions of higher education in the regions approve the topics of coursework and graduation qualification of the educational degree "Bachelor" and "Master" in practical issues of the life of

the population of the basic, district and regional levels in the context of the human-centric development of the regions and the state as a whole.

#### References

- 1. State strategy of regional development for the period up to 2027. (2019). Development and unity focused on people (project). Ministry of Regional Development of Ukraine, 80 p. [in Ukrainian].
- 2. Some issues of implementation in 2015-2017 of the State Strategy for Regional Development until 2020. (2015). Resolution of the Cabinet of Ministers of Ukraine №821. Retrieved from https://zakon.rada.gov.ua/[in Ukrainian].
- 3. Some issues of improving the system of monitoring and evaluation of the effectiveness of the implementation of state regional policy. (2017). Resolution of the Cabinet of Ministers of Ukraine 1029. Retrieved from https://zakon.rada.gov.ua/laws/show/1029-2017 [in Ukrainian].
- 4. Korniychuk, O. O., Stolyarov, V. F., Shinkaryuk, O. V., Korniychuk, O. O. (2017). Formation of the mechanism of state regulation of sustainable human development of Khmelnytsky region (from idea to experiment: Part 1. Status and problems of state regulation). *Economy and state*, 3, pp. 4–15 [in Ukrainian].
- 5. Korniychuk, O. O., Stolyarov, V. F., Shinkaryuk, O. V., Korniychuk, O. O. (2017). Formation of the mechanism of state regulation of sustainable human development of Khmelnytsky region (from idea to experiment: Part 2 perspectives of state regulation in a new way). *Economy and state*, 4, pp. 4–15 [in Ukrainian].
- 6. Millennium Development Goals "Ukraine 2010". (2010). *National report*. Kyiv, Ministry of Economy of Ukraine. 108 p. [in Ukrainian].
- 7. Shinkaryuk, O. V. (2016). Formation of preconditions for the introduction of state regulation of regional human development in Ukraine (from the goals of human development to the tasks of sustainable development). *Economy and state,* (8), pp. 70–78 [in Ukrainian].
- 8. Ryadno, O. A., Berkut, O. V. (2016). Research of structure and dynamics of differentiation of social and economic development of regions of Ukraine on the basis of the cluster analysis. *Economic Herald of the Donbas*, 1 (43), pp. 60–67 [in Ukrainian].
- 9. Antoshkin, V. K. (2015). Assessment of regional processes of formation of social and economic security. *Bulletin of Berdyansk University of Management and Business*, 1 (29), pp. 111–115 [in Ukrainian].
- 10. Antoshkin, V. K. (2015). The level of socio-economic security of the regions of Ukraine. *Bulletin of Berdyansk University of Management and Business*, 2 (30), pp. 65–70 [in Ukrainian].
- 11. Antoshkin, V. K. (2015). Dominants of the organizational and economic mechanism of management of social and economic security of regions. *Bulletin of Berdyansk University of Management and Business*, 4 (32), pp. 76–79 [in Ukrainian].
- 12. Stolyarov, V. F., Kukartseva, S. V. (2006). The mechanism of regional development of the national economy. Kyiv, Kyiv National University of Technology and Design. 36 p. [in Ukrainian].
- 13. Oleksienko, M. M. (2016). Improving the accounting and analytical aspect of the development of socio-economic systems of the regions of Ukraine as an urgent prerequisite for strengthening the economic security of the state. *Financial mechanism for sustainable development of socio-economic systems*. (pp. 121-141). Berdyansk, Tkachuk O. V. [in Ukrainian].
- 14. Otkidach, M. V. (2016). Methodical approaches to the construction of sub-indices of regional human development. *Demography and social economy*, 1, pp. 145–157 [in Ukrainian].
  - 15. Sustainable Development Goals "Ukraine 2030". (2017). Kyiv, Ministry of Economy of Ukraine. 174 p. [in Ukrainian].
- 16. Shinkaryuk, O. V., Sigayov, A. O. (2016). Institutionalization of the leading elements of the mechanism of state regulation of regional human development (Part I: goal setting, forecasting and development planning). *Bulletin of Berdyansk University of Management and Business*, 3 (35), pp. 80–92 [in Ukrainian].
- 17. Shinkaryuk, O. V., Sigayov, A. O. (2016). Institutionalization of the leading elements of the mechanism of the main components of the mechanism of state regulation of regional human development (Part II: financing of human development). *Bulletin of Berdyansk University of Management and Business*, 4 (36), pp. 121–138 [in Ukrainian].
- 18. Shinkaryuk, O. V., Sigayov, A. O., Stolyarova, V. V. (2017). Institutionalization of the leading elements of the mechanism of the main components of the mechanism of state regulation of regional human development (III preliminary part: monitoring of human development). *Bulletin of Berdyansk University of Management and Business*, 1 (37), pp. 60–72 [in Ukrainian].
- 19. Shinkaryuk, O. V., Sigayov, A. O., Stolyarova, V. V. (2018). Institutionalization of the leading elements of the mechanism of the main components of the mechanism of state regulation of regional human development (III main part: human development monitoring). *Bulletin of Berdyansk University of Management and Business*, 1 (41), pp. 74–88 [in Ukrainian].
- 20. Shinkaryuk, O. V., Sigayov, A. O., Stolyarova, V. V. (2018). Institutionalization of the leading elements of the mechanism of the main components of the mechanism of state regulation of regional human development (III final part: monitoring of human development). *Bulletin of Berdyansk University of Management and Business*, 2 (42), pp. 73–84 [in Ukrainian].

## Столярова В. В., Шинкарюк О. В., Столяров В. Ф., Антошкін В. К., Горяча О. Л., Фролова Г. І. Моніторинг людського розвитку в регіонах України (інтегрований підхід)

У статті узагальнено основи інформаційно-методичної метрології регіонального людського розвитку, становлення та розвиток яких затверджувались Урядом України у 2001, 2012 і 2017 роках. Особливу увагу зосереджено на проблемах узгодженості оцінки динаміки складових Індексу регіонального людського розвитку (ІРЛР) з показниками Державних стратегій регіонального розвитку на періоди до 2015, 2020 і 2027 років.

У контексті оцінки результативності і ефективності механізму державного регулювання регіонального людського розвитку на основі його прогнозування розкриті сутність і зміст чотирьох етапів алгоритму комплексної рейтингової оцінки ІРЛР. Використано методи кластеризації регіонів за відповідними компонентами, прийоми і процедури композиції та декомпозиції складових ІРЛР з метою забезпечення соціально-економічної безпеки регіонів.

Диференціація системи показників і процедур моніторингу регіонального людського розвитку на субнаціональному (обласному) рівні дозволяє більш об'єктивно визначити соціально-економічну політику регіональних і місцевих органів

виконавчої влади щодо підвищення якості життя населення сіл, селищ, міст, районів та адміністративних областей України загалом

*Ключові слова:* метрологія, регіональний людський розвиток, складові, індикатори, показники моніторингу, алгоритм комплексної рейтингової оцінки, методи кластеризації.

## Stolyarova V., Shynkaryuk O., Stolyarov V., Antoshkin V., Goryacha O., Frolova G. Monitoring of Human Development in Regions of Ukraine (Integrated Approach)

The article summarizes the basics of information and methodological metrology of regional human development, the formation and development of which were approved by the Government of Ukraine in 2001, 2012 and 2017. Particular attention is paid to the problems of coordination of the assessment of the dynamics of the components of the Regional Human Development Index (RHDI) with the indicators of the National Regional Development Strategies for the periods up to 2015, 2020 and 2027.

In the context of assessing the effectiveness and efficiency of the mechanism of state regulation of regional human development on the basis of its forecasting revealed the essence and content of the 4 stages of the algorithm of comprehensive rating assessment of RHDI. Methods of clustering of regions by appropriate components, methods and procedures of composition and decomposition of components of RHDI were used in order to ensure socio-economic security of regions.

Differentiation of the system of indicators and procedures for monitoring regional human development at the subnational (regional) level allows to more objectively determine the socio-economic policy of regional and local executive bodies to improve the quality of life of villages, towns, cities, districts and administrative regions of Ukraine.

Keywords: metrology, regional human development, components, indicators, monitoring indicators, algorithm of complex rating assessment, clustering methods.

## Столярова В. В., Шинкарюк О. В., Столяров В. Ф., Антошкин В. К., Горячая О. Л., Фролова Г. И. Мониторинг человеческого развития в регионах Украины (интегрированный подход)

В статье обобщены основы информационно-методической метрологии регионального человеческого развития, становление и развитие которых утверждались Правительством Украины в 2001, 2012 и 2017 годах.

Особое внимание было уделено проблемам согласованности оценки динамики составляющих Индекса регионального человеческого развития (ИРЧР) с показателями Государственных стратегий регионального развития на периоды до 2015, 2020 и 2027 годов.

В контексте оценки результативности и эффективности механизма государственного регулирования регионального человеческого развития на основе его прогнозирования раскрыты сущность и содержание четырех этапов алгоритма комплексной рейтинговой оценки ИРЧР. Были использованы методы кластеризации регионов по соответствующим компонентам, приемы и процедуры композиции и декомпозиции составляющих ИРЧР с целью обеспечения социально-экономической безопасности регионов.

Дифференциация системы показателей и процедур мониторинга регионального человеческого развития на субнациональном (областном) уровне позволяет более объективно определить социально-экономическую политику региональных и местных органов исполнительной власти по повышению качества жизни населения сел, поселков, городов, районов и административных областей Украины в целом.

*Ключевые слова*: метрология, региональное развитие человека, составляющие, индикаторы, показатели мониторинга, алгоритм комплексной рейтинговой оценки, методы кластеризации.

Received by the editors: 20.07.2021 and final form 16.12.2021

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-99-103

UDC 330.341:334.7

A. Abbasov,

DrHab (Economics), e-mail: alıcan.abbasov@gmail.com, Azerbaijan State University of Economics (UNEC),

S. Abbasov,

DrHab (Economics), e-mail: server.abbasov@gmail.com, Baku State University, Azerbaijan

#### PROBLEMS OF DEVELOPMENT OF SOCIAL BUSINESS

#### 1. Introduction

During the transition to a market economy, the welfare of the population of Azerbaijan declined, and a sharp economic differentiation of society occurred. In post-Soviet countries, including Azerbaijan, the system of social services for the population did not meet the requirements of the market. A modern market strategy involves the production of what people buy, but the social system still sold what it produced. As a result, low-quality social services were provided to the population. In the absence of competition, state-owned enterprises are not interested in producing quality products; therefore, they have a stable and steady supply. Social enterprises were not encouraged to develop and improve their activities, which led to a further increase in the difference between producers and consumers of social services.

One of the most important resources for the country's economic development is the non-profit sector, although this resource has not yet been used efficiently. At the same time, the budget sector of Azerbaijan is not able to provide the country's population with high-quality social services, therefore it is important to attract non-profit organizations to social services.

In the modern era, the effective and dynamic development of the social sphere is possible only through the development of social business. From this point of view, issues related to the use of innovative forms of social business development and its role in the development of the social sphere are very relevant and their scientific research is urgently needed.

#### 2. The socialization of business

In recent years, companies' interest in corporate social responsibility has grown significantly, as their activities in the field of social responsibility have a positive impact on their business reputation and increase the sustainability of business development.

The concept of "corporate social responsibility" (CSR) is widely used in public life in the modern world. The concept of CSR, which appeared in the middle of the 20th century, remains relevant today.

Corporate social responsibility is a concept whereby an organization assumes responsibility for

influencing the company and other stakeholders in the public sphere and takes into account the public interest. This commitment goes beyond what is required by law and requires the organization to take additional steps to improve the living standards of its employees and their families

In recent years, the concept of CSR has been widely used in the world. This concept was first used in corporate governance practices in the United States and Canada in the 1950s and 1960s. Today, in economically developed countries, CSR has become an instrument of social cooperation between the government and society as a whole.

The level of corporate social responsibility is an important criterion for the actual participation of the company in solving socio-economic problems of society. At the same time, a company that achieves more strategic goals in the form of social and economic programs receives a competitive advantage.

The formation of social reporting is carried out on a voluntary basis. The social reporting form is presented in the form of the principles of CSR, the social policy of the company and its environmental project, charity. If measures on CSR and sustainable development lead to lower risks, increase business reputation, increase the company's capitalization and financial results, then this should be considered as an additional factor, and not as a result of CSR.

Despite the voluntary nature of using the principles of corporate social responsibility, the state should act as a regulator and create conditions for the widespread use of corporate social and environmental responsibility.

The results of the company's activities are presented in the form of social reporting, which contains information about economic, environmental and social results.

Thus, the assessment of corporate social responsibility refers to a series of sequential actions to analyze a large number of economic, environmental and social indicators.

In the economic literature there are three approaches to assessing CSR [1, p. 190]:

- minimalist approach;

 an approach based on the separation of the main areas of implementation of the company's social policy;

– systems approach.

The stages of a company's life cycle, industry affiliation, scale of operations, financial stability, purpose of evaluation and transparency should be taken into account in the evaluation process.

There are three levels of CSR determination [2]:

- at the lower level, CSR ensures employment of people, professional attitude to their duties and compliance with tax discipline;
- at the average level, the search for regulatory and ethical principles of doing business continues and the establishment of legal relations with state institutions in various fields continues;
- a high level is characterized by the creation of philanthropic ideas, which are manifested in various charity events.

Studies show that business has a negative tendency to develop its social behavior. Under these conditions, the state cannot cope with the heavy social burden placed on it. It is necessary to increase the social responsibility of companies and entrepreneurs in resolving social issues. In this regard, the mechanism of state regulation of CSR and the process of socialization of business should be considered as one of the strategic directions of the economic function of the state.

Any business entity cannot work solely for financial gain and profit without taking into account public interests. In business, it is important to find a common language between society and government at all levels, which requires transparency and publicity on the part of business. In other words, the socialization of business is an important condition for the effectiveness of the economic system. In this regard, it is necessary to find a compromise between business profitability and meeting the needs of society.

Currently, CSR is the most effective public policy instrument. Modern companies strive to meet the needs of society and the state. The state benefits greatly from implementing policies aimed at improving corporate social responsibility. This allows you to identify the "sore point" and identify priority areas for applying the principles of corporate social responsibility. Evaluation results play a key role in decision-making in the field of economic, environmental and social management of the company.

Social partnerships play an important role in the socialization of business. There are various approaches to determining the meaning and importance of the term "social cooperation" [3, p. 688-689]:

- the first approach defines social cooperation as a special category of social relations established between social professional groups, social classes, population groups and state structures;
- the second approach characterizes social cooperation through a certain type of relationship between the organization's workforce, employers and the government;

- the third approach considers social cooperation as any basis for harmonizing the interests of various social groups, enterprises and government bodies.

In fact, social cooperation is a mutually conditioned relationship between participants in the educational process and, on the other hand, the relationship between government agencies that are interested in a certain stage of interaction.

The function of business structures as a social partner is not only to identify the material and technical support of the company, to apply existing forms and mechanisms of social partnership, but also to develop and use new, innovative approaches.

## 3. Characteristics, principles and philosophy of social business

Social business, as an innovative form of social development, uses economic tools to solve socially significant problems. The organizational form of social business depends on local conditions and opportunities, social and environmental requirements, as well as on the characteristics of each country: legal framework, social security, cultural and historical traditions, and so on. The diversity of social business is reflected in the vision of its sharp social initiative.

The philosophy of social business is a combination of the position of business entities. Proponents of this philosophy believe that all people and their activities are essentially a product of the market, therefore, each and everyone has its own value. Proponents of free-market social business believe that a person can serve society, but only by serving himself [3].

In the implementation of social business, the consumer is considered as an equal participant in commercial activities. The main participants in commercial activities in the field of social business are not only business structures, but also consumers. An important factor for an entrepreneur when concluding a contract is income (economic benefit), and for a consumer-a necessary product (service) that more fully covers his needs.

The complex task of commercial activities in the field of social business is solved by meeting the needs of the population. When a consumer makes a deal in the market, he or she directly affects the behavior of social entrepreneurs, the choice of market segment, the organization of the supply and sale of goods, the formation of the range and pricing policy. The commercial activities of social enterprises can differ in their goals and objectives, and in most cases it should be profitable, which is subsequently invested and sent to the company's social mission (mission).

Azerbaijan is actively developing the idea of social business, implementing social projects aimed at improving the living standards of the population and at the same time earning money. Companies are increasingly investing in social technologies. According to experts, progressive changes in the management

culture are also necessary for the wider application of social technologies.

Entrepreneurs use social technologies mainly in business processes, and also use social experience to support their clients' initiatives. Social tools and practices are used in both internal and external communications of companies. Business is socialized to improve customer service, increase productivity and business processes, stimulate innovation and make good management decisions.

Nobel prize winner Professor Muhammad Yunus made a great contribution to the formation of social business as an independent systematic scientific and practical direction and published the book "the banker of the poor". In this book, he defined social business as an important part of the overall business and reveals its philosophy and distinctive features.

The main goal of a social business is not to maximize profits, an entrepreneur does not receive dividends from profits, profits are invested and directed to business development. More precisely, business profits are invested in improving the quality of products or services manufactured by the company, as well as in subsidizing a social mission and investing in social projects. Social business, on the other hand, is not dependent on donations or private and state grants. Unlike non-profit organizations that spend only once per location, social business funds are invested unlimited in multiplying and improving business operations.

M. Yunus identifies two main motives of a person: selfishness and self-sacrifice. A selfish person seeks income through business, but his or her social business is based on the ultimate motivation of people through charity services in places like churches, mosques, synagogues, art museums, public parks, medical clinics or community centers. For M. Yunus, the benefits of social business are less important than charitable services for society. He created the Yunus Social Business (YSB) to train and support investment in young social companies.

Yunus notes that in many cases when we involve the poor and non-poor in joint programs, the poor are soon forced out of the program by non-poor. If no precautions are taken at this stage, it will continue forever. As a result, non-poor people will receive all the benefits. According to Gresham's law, if there are two forms of commodity money in circulation that are legally recognized as similar in face value, the more valuable commodity will gradually disappear from circulation.

M. Yunus worked day and night to fulfill the mission of lifting the country out of poverty, starting with the practical implementation of the idea of social business. As an experiment M.HYunus starts by providing \$ 27 to low-income families for a total of 42 people, and then provides a large loan to people who serve the community. Grameen Bank, which in 1976 had a loan portfolio of \$1,050, in 1998 allocated \$ 2.4 billion to 2,330 borrowers. As a result of the

development of social business, poverty in Bangladesh with a population of 120 million people has significantly decreased, which makes Grameen Bank a historic success in saving people from suicide, hunger and loss of faith. Thanks to long-term effective measures, Grameen has gained a reputation as a "bank of the poor. The public trust gained by such a bank has led to a review of the banks' exploitative reputation.

- M. Yunus developed the basic principles of social business:
- 1) the goal of a business is to fight poverty or one or more problems that affect people and society; the goal is not to maximize profits;
  - 2) economic and financial sustainability;
- 3) only the capital invested by them is returned to investors. Dividends are not paid in addition to investment money;
- 4) after the initial investment has been repaid, the profit remains inside the business to finance its expansion and improvement;
- 5) gender-sensitive and environmentally conscious;
- 6) employees receive a salary that meets market conditions, but with better working conditions;
  - 7) do it with joy.

#### 4. Family Farms as a Form of Social Business

Family-owned enterprises with a long history are the most common form of business in the world. In addition to production, family firms perform a number of socially oriented functions and contribute to the preservation of the rural lifestyle, which is considered to be the bearer of national traditions and values.

The term "family economy" is widely used by domestic and foreign economists and farmers. A. V. Chayanov was the first economist who analyzed the activities of family farms and revealed their legitimacy. He developed a methodological framework for the study of family farms, to which modern scholars refer. Among them R. E. Proust confirms that family farming is the basic structure of agriculture. At a family farm, individuals or groups of citizens are engaged in labor activities with their relatives and are responsible for joint economic activities on land without creating a legal entity [5, p. 44-45].

Some scientists distinguish between the terms "family business" and "family farm". The main argument here is that in developed countries the main form of agricultural production is high-tech agriculture, and in most developing countries it is an extensive family farm. In foreign countries, the technological family farm prevails among organizational and economic forms of farming.

The Law of the Republic of Azerbaijan on family agriculture (2005) stipulates that family farming is the joint implementation of production and other economic activities (production, processing, storage, transportation and sale of products) in rural areas without creating a legal entity based on personal property and

property, owned or rented by family members and their partners. The composition of a household may consist of one person or members of his family and persons working together on the basis of kinship or other relationships. Less than 50% of all employees can be employed in the family economy, provided that the contribution of employees does not exceed the contribution of the family. Family business is a social business model in which family members participate. and management and inheritance are embodied in family traditions. The father leads the creation of a family business, and then the mother, children and grandchildren join him. All family members are equally involved in the management of income and capital in the household, income does not go beyond the family budget, and in case of financial difficulties, employees agree to work for low wages and even for free.

Famous family business firms have evolved and become large companies that influence the global economy. So, 75% of companies in the UK, 85% in the EU and 90% in the USA are family-owned enterprises.

Family business is also developing in the Republic of Azerbaijan. So, on April 4, 2016, President of the Republic of Azerbaijan Ilham Aliyev signed a decree "On additional measures to ensure self-employment of the population". The public legal entity "ABAD", run by the State Agency for Public Service and Social Innovations under the President of the Republic of Azerbaijan, was created in accordance with the Decree of the President of September 23, 2016. In accordance with the decree, family business support centers (ABAD) were established to support active participation of citizens in the socio-economic development of the country, the development of small and medium-sized businesses, increasing employment and creating competitive family farms.

ABAD Centers implement family business projects in the field of arts and crafts and the agricultural sector, as well as provide business planning, marketing, branding and design, financial accounting and legal assistance to family businesses. "ABAD" carries out certification of products on the basis of a "single window" (one-stop-shop), and also organizes sales and logistics of products. Along with the brand name of the manufacturer's family, each product also has a special label that indicates its production under the control of ABAD.

As part of supporting families involved in arts and crafts, there are ABAD craft centers in the State Historical and Architectural Reserve Icheri Sheher and at the Heydar Aliyev International Airport. In these centers there is an exhibition and sale of handicrafts from different regions of the country.

#### **Conclusions**

- 1. Socialization of business, that is, responsibility to people and society, is one of the strategic directions for the implementation of the economic function of the state, a necessary condition for improving the efficiency of the economic system and has become an important tool for cooperation with the government and society as a whole.
- 2. Social business, an innovative form of development of the public sector that uses economic instruments to solve socially oriented problems that can achieve the desired result at lower cost. The social problem that a businessman is trying to solve in his business is the exit point from the business. The forms of organization of social business depend on local conditions and opportunities, socio-economic demand and the specifics of each country: the legal framework, social security, cultural and historical traditions, and so on.
- 3. The oldest and most common form of social business is family business. A family firm may have family members, relatives, or employees who do not constitute fifty percent of the total number of employees. Family businesses are an exemplary model of social business in which management and inheritance are carried out in accordance with family traditions.
- 4. The philosophy of social business is that the investor does not receive dividends from profits received from entrepreneurial activity, he receives only as much money as the investments that he / she invests, and the rest of the profits are invested in expanding the company's activities and implementing socially significant projects.
- 5. In order to strengthen the institution of the family, which has weakened material interests, create additional sources of income for people at home, preserve folk arts and crafts and ensure self-employment, it is necessary to develop and implement the concept of family business development in the regions of Azerbaijan within the framework of the Strategic road map for the development of the national economy.

#### References

- 1. Kaitmazov, V. A., Polatidi, K. O. (2015). On the issue of corporate social responsibility. *Collection of articles of the International scientific-practical conference* (pp. 190-194).
- 2. Mukhtarova, A. V. (2012). State regulation of corporate social responsibility as a factor in sustainable development. *Bulletin of the University of Finance*, No. 6.
  - 3. Economics and entrepreneurship. 2017. No. 2. 1233 p.
  - 4. Muhammad Yunus. (2016). The banker to the poor. Baku. 304 p.
- 5. Praust, R. E. (2002). Socio-economic aspects of the typology of family farms. Socio-economic problems of agricultural policy and development of agro-industrial markets. (pp. 36-47). M., ERD.
- 6. Golubeva, N. A. (2010). A study of the evolution of corporate social reporting of Russian enterprises. *International accounting*, 9, pp. 2-11.

- 7. Korotun, A. V. (2015). State regulation of corporate social responsibility: history, development trends. *Bulletin of social and humanitarian education and science*, No. 1, pp. 19-23.
  - 8. Abbasov, A. B., Abbasov, S. A. (2017). The basics of business. Baku, Science and Education. 456 p.

#### Аббасов А. Б., Аббасов С. А. Проблеми розвитку соціального підприємництва

У статті розкрито корпоративну соціальну відповідальність, соціалізацію бізнесу, сутність, значення та критерії соціального підприємництва. Зроблено відповідні узагальнення щодо різноманітних науково-теоретичних поглядів економістів на оцінку соціальної відповідальності підприємств.

Детально пояснюється характеристика, основні принципи та філософія соціального підприємництва. Філософія соціального підприємництва грунтується на тому, що інвестору не виплачуються дивіденди на прибуток, який отримано від підприємницької діяльності, – він отримує лише суму вкладених грошей, а решта інвестицій вкладається у розвиток бізнесу та реалізацію соціально значущих проєктів.

Розкрито особливості формування сімейного господарства (сімейного бізнесу) як важливої форми соціального підприємництва та перспективи розвитку на регіональному рівні. Сімейний бізнес – це соціальна бізнес-модель, у якій члени сім'ї беруть участь в управлінні та спадкоємності у сімейних традиціях. Фірми сімейного бізнесу розвивалися і стали великими компаніями, що впливають на світову економіку.

В Азербайджанській Республіці АВАD (спрощена підтримка сімейного бізнесу) надає підтримку сімейним підприємствам у сфері мистецтва та ремесел, а також у бізнес-плануванні, маркетингу, дизайні, фінансах, бухгалтерській та юридичній допомозі. Крім цього, підтримка здійснюється і при сертифікації виробленої продукції відповідно до принципу «єдиного вікна», організації логістики та збуту. Розроблено практичні рекомендації щодо посилення ролі соціального підприємництва у підвищенні добробуту населення та сталому розвитку національної економіки.

*Ключові слова*: соціалізація бізнесу, корпоративна соціальна відповідальність, соціальне підприємництво, сімейні фірми, сімейний бізнес, соціальне партнерство.

#### Abbasov A., Abbasov S. Problems of Development of Social Business

The article reveals corporate social responsibility, business socialization, the essence, meaning and criteria of social business. Appropriate generalizations were made on the various scientific and theoretical views of economists on the assessment of corporate social responsibility.

The characteristics, basic principles and philosophy of social business are explained in detail. The philosophy of social business is based on the fact that the investor is not given dividends on profits received from entrepreneurial activity, he receives only the amount of money invested, and the rest of the investment is invested in business development and the implementation of socially significant projects.

The features of the formation of family farms (family business) as an important form of social entrepreneurship and development prospects at the regional level are revealed. Family business is a social business model in which family members participate in management and succession in family traditions. Famous family business firms have evolved and become large companies influencing the global economy.

In the Republic of Azerbaijan, ABAD (Simplified Support to Family Business) provides support to family enterprises in the field of arts and crafts, as well as business planning, marketing, design, finance, accounting and legal assistance. Certification of manufactured products according to the "one-stop shop" principle, organization of logistics and sales is carried out by ABAD. Suggestions were made to increase the role of social business in improving the welfare of the population and in the sustainable development of the national economy.

Keywords: business socialization, corporate social responsibility, social business, family firms, family business, social partnership.

#### Аббасов А. Б., Аббасов С. А. Проблемы развития социального предпринимательства

В статье раскрыты корпоративная социальная ответственность, социализация бизнеса, сущность, значение и критерии социального предпринимательства. Сделаны соответствующие обобщения различных научно-теоретических взглядов экономистов на оценку социальной ответственности предприятий.

Детально разъясняется черта, главные принципы и философия социального предпринимательства. Философия социального предпринимательства основывается на том, что инвестору не выплачиваются дивиденды на прибыль, полученную от предпринимательской деятельности, - он получает только сумму вложенных денег, а остальные инвестиции вкладываются в развитие бизнеса и реализацию социально значимых проектов.

Раскрыты особенности формирования семейного хозяйства (семейного бизнеса) как важной формы социального предпринимательства и перспектив развития на региональном уровне. Семейный бизнес — это социальная бизнес-модель, в которой члены семьи принимают участие в управлении и преемственности в семейных традициях. Фирмы семейного бизнеса развивались и стали крупными компаниями, влияющими на мировую экономику.

В Азербайджанской Республике ABAD (упрощенная поддержка семейного бизнеса) оказывает поддержку семейным предприятиям в сфере искусства и ремесел, а также в бизнес-планировании, маркетинге, дизайне, финансах, бухгалтерской и юридической помощи. Кроме того, поддержка осуществляется и при сертификации производимой продукции в соответствии с принципом «единого окна», организации логистики и сбыта. Разработаны практические рекомендации по усилению роли социального предпринимательства в повышении благосостояния населения и устойчивом развитии национальной экономики.

*Ключевые слова:* социализация бизнеса, корпоративная социальная ответственность, социальное предпринимательство, семейные фирмы, семейный бизнес, социальное партнерство.

Received by the editors: 10.08.2021 and final form 16.12.2021

#### **Digital Economy and Information Technologies**

DOI: https://doi.org/10.12958/1817-3772-2021-4(66)-104-111

UDC 338.24:338.48:004

N. Boretska,

DrHab (Economics), Professor,
ORCID 0000-0003-2372-2519,
e-mail: nataliya-boretskaya@ukr.net,

Kyiv National University of Technology and Design,

G. Krapivina,

PhD (Public Administration), Associate Professor,
ORCID 0000-0002-9549-2794,
e-mail: galina3910@gmail.com,
Priazovsky State Technical University, Mariupol

## WORLD EXPERIENCE IN THE DIGITALIZATION OF PUBLIC ADMINISTRATION IN THE DEVELOPMENT OF THE TOURIST AND RECREATIONAL SPHERE

Formulation of the problem. Recently, there have been enough publications devoted to the problems of digitalization of public administration. In particular, the world experience in the digitalization of public administration in the development of the tourist-reactionary sphere demonstrates the feasibility of introducing digitalization in the process of adapting public administration to the realities of the modern world. The digitalization of public administration in the development of the tourism and recreation sphere is a means that allows public administration to obtain the desired result, namely: to create conditions that bring excellent results to visitors to destinations, and higher profits to enterprises in the tourism and recreational sphere.

The relevance of the topic is understood by the authors in the global socio-economic and political aspects in the context of permanent changes and new realities characteristic of modern society. digitalization taking place in Ukraine at the present time also applies to the tourist and recreational sphere. Thus, there are practically no obstacles to starting activities in the tourism and recreation sector, which, together with a relatively short payback period for investments in the development of destinations, often leads to the absence of strategies for the development of its economic components. Investments in the tourism and recreation sphere do not differ in significant volumes, but the financing of tourism and recreational activities is risky, which is partially determined by the lack of a unified system of state management of the development of the tourism and recreation sphere.

The study of the impact of digitalization on enterprise development has been reviewed by many scholars. G. Bowman, M. de Revere, A. Osterwalder, M. Rachinger, W. Voraber, K. Linz, G. Müller-Stevens, A. Zimmermann and others made a significant contribution. Among domestic scientists, one can single out V. Makhovka, I. Sirenko, S. Tsvilogo, G. Bubley, in

whose works the processes of digitalization of the economy, its promising industries and individual enterprises are studied. Analysis and generalization of theoretical developments of domestic scientists, among which A. Mazaryaki; O. Lyubitseva; Y. Mironov; G. Gorin; S. Kovalchuk., S. Nikolashina; T. Kuklina, V. Zaitseva; D. Soloviev; E. Falko; N. Fomenko; M. Bondarenko; A. Kirillova et al. Allows to summarize the world experience in the digitalization of state management of the development of the tourist and recreational sphere.

Selection of previously unsolved parts of a common problem. In the tourist and recreational sphere, only those destinations can be successful, the state management of which creatively and non-standardly uses the conceptual provisions of scientific research, is in constant search for new means of adaptation to market conditions that change and actively regulate the tourist and recreational market and consumer values of the population and operates information on the resource and recreational rating of the constituent destinations and the overall assessment in points of their tourist and recreational development in the rating of Ukrainian destinations.

**The purpose** of the article is to summarize the world experience in the digitalization of public administration in the development of the tourist and recreational sphere.

Main part. Currently, due to the rapid development of tourism and its role in the modern world economy, the public administration of a number of countries has accumulated significant experience in the successful digitalization of management of the development of the tourism and recreation sphere and, as a result, increases revenues and receives significant amounts of foreign currency revenues to the budgets of countries (Table 1). The place and importance of the tourist and recreational sphere in the economy of some countries is evidenced by:

Table 1

Analysis of the world experience in the digitalization of public administration in the development of the tourist and recreational sphere

	in the development of the tourist and recreational sphere						
No	Land	Digitalizat	Problems on which public	Basic principles of public administration			
		ion	administration makes decisions	decision making			
1	Israel	+	An increase in the volume of	Assessment of the effect of making			
			freely convertible currency	alternative decisions by public			
			coming from tourism and its share	administration			
			in the budget revenues, as well as				
			saving resources for the				
			development of local tourism				
2	Turkey	+	1. Assessment of the state of	1. The usefulness of public administration			
_	Turkey	'	affairs in the field of tourism and	decisions as a reflection of the public			
			recreation.	attractiveness of destinations.			
			2. Making investment decisions	2. The importance of investment projects.			
				3. The cumulative impact on the budget of			
				the development of the tourist and			
				recreational sphere.			
3	Pacific Ocean Region	+	Comprehensive linking of	1. Comprehensive, starting from the point of			
	States		destination, time period, means of	departure, customer service.			
			transportation, communication	2. Detailed forecast of the flow of visitors by			
			and information	points of departure, destination and time			
				period			
4	Bulgaria (Golden Sands,	+	Design, construction and	Comprehensive and centralized decision			
	Sunny Beach, Albena,		operation	making for the development of destinations			
	etc.)			- î			
5	Dubrovnik, South	+	Planning a one-time reception of a	1. Regulation of labor resources for seasonal			
	Adriatic		large number of visitors	employment.			
	1 Idilatic		large nameer of visitors	2. Evaluation of visitor flows by category.			
				3. Coordination of development with other			
				industries.			
6	Poland	+	Further expansion of the	Rational use of existing and organization of			
0	1 Gland	'	destination area	new destinations			
			destination area	new destinations			
			D: 1 1				
7	France	+	Design development of programs	Regulation of the main factors in the			
			for the development of territories	development of destinations			
			suitable for tourism and recreation				
			in the southern part of the Biskai				
			Bay and the Breton coast				
8	USA (Yorktown,	+	Creation of reserves and tourist	State investments are directed only to			
	Colonial Williamsburg,		and recreational centers in	restoration and creation of information			
	etc.)		historical places	centers; single complex economy			

Italy with revenues from foreign tourism covered the deficit of the foreign trade balance for a long time;

in France, the tourist and recreational sphere as a source of foreign exchange takes a leading place along with the products of the ferrous metallurgy and the automotive industry;

in Switzerland, the tourist and recreational sphere occupies one of the first places along with the export of mechanical engineering, chemical and watch industries;

in the UK, the tourist and recreational sphere has long been the main source of hard currency.

In world practice, the digitalization of state management of the development of the tourist and recreational sphere is based on:

statistical description of tourist and recreational problems;

creation of models for predicting the consequences of government decisions on the development of the tourism and recreation sphere;

means of measuring the economic efficiency from the development of various forms of organizing the use of the free time of the population [1; 2]. In particular, the digitalization of state management of the development of the tourist and recreational sphere in Israel, Turkey and Puerto Rico demonstrates the feasibility of the goal of digitalizing the problems of managing the intensity of visitor flows from the center of concentration of the population to the destination and predicting the economic effect of this.

In Israel, the digitalization of state management of the development of the tourist and recreational sphere is aimed at increasing the volume of foreign currency entering the country through tourism and its share in budget revenues, as well as maximizing the saving of resources for the development of local tourism [3; 4]. For this, a quantitative assessment of the effect of alternative public administration decisions is used [5]. Considerable attention in the digitalization of state management of the development of the tourist and recreational sphere is paid to taking into account the multiplier effect with an increase in the costs of visitors to destinations [6-8]. Moreover, the digitalization of visitor flows, both indirect and induced, reveals the sectors of the economy of the destination that are

promising for investment, which highlights the feasibility of using the multiplier effect in the digitalization of public management of the development of the tourism and recreation sphere [9; 10].

The determination of the potential demand for tourist and recreational services in Israel is carried out in the context of the digitalization of public administration using (as a target function of the economic efficiency of public administration of the development of the tourist and recreational sphere) an increase in the value of the equivalent volume of foreign currency added by the industry under the conditions of local factors constraints, the most significant of which are:

using only existing facilities;

lack of skilled labor;

formed structure of destinations;

exogenous forecasts under various assumptions as an information base for determining demand.

The results of the digitalization of the development of the tourism and recreation sphere are used by the Israeli Ministry of Tourism to manage the intensity of visitor flows based on a numerical assessment of seasonal fluctuations and the frequency of various components. In particular, the following are analyzed:

dependence of the results of the activities of destinations on the number of visitors using air transportation services;

the number of inbound visitors to the country's sphere;

the volume of foreign currency entering the Israeli budget from the tourism and recreation sphere;

the number of visitors leaving the country;

the number of places in the country's hotels intended for visitors, including foreign [11; 12].

The Israeli Ministry of Tourism uses the results of digitalization to predict the effectiveness of the country's tourism and recreation sphere, depending on the seasonality, that is, on the percentage of recreation and entertainment places that operate throughout the year, and the total number of those that are used only during the season. Based on digitalization, the ministry decides to extend the season, namely: organizes additional events in the off-season, that is, announces the second (and possibly third) season, etc. Decisions are made taking into account the advantages of the extended season, which include a number of social factors, namely:

the best conditions for recreation for a significant number of visitors due to the lack of overcrowding in the high season in the country;

the most efficient use of customer service facilities; equalizing the load on the economy and ecology of the country's destinations;

equal employment of the service personnel of the enterprises of the tourist and recreational sphere;

improving the quality of restaurant and other forms of customer service.

The digitalization of the Turkish Ministry of Tourism began with an assessment of the state of the country's tourism and recreation sphere in order to

develop prospects for the development of 65 destinations and their classification according to the degree of development. At the same time, the effect of the digitalization of public administration is calculated using the method of assessing the usefulness of government decisions [13]. It should be noted that (already from the first stage of digitalization of the resources of the tourism and recreation sphere in Turkey), the utility function reflects the degree of public attractiveness of destinations. Weighting factors are assigned to different destinations [14]. They are determined on the basis of expert assessments of the factors of attractiveness of different destinations, taking into account the criteria of the relative importance of factors and the calculation of the value of the criterion of utility or relative attractiveness for specific tourist and recreational facilities of the destination.

In the digitalization of state management of the development of a strategy for investment in the tourism and recreation sphere in Turkey, the weighting factors reflect the relative importance of investment projects and satisfy the additivity property for options for plans for the allocation of financial resources, which allows public administration of the program for the development of the tourism and recreation sphere.

At the same time, the digitalization of state management of the development of the tourism and recreation sector in Turkey does not use estimates of the reduced net profit from investing in specific investment projects. The authorities considered this assessment unacceptable for several reasons:

there are a large number of investment projects on a regional and national scale;

in addition to projects for the construction of hotels, summer cottages, etc., which really cause an inflow of funds, there are also projects such as the construction of roads, archaeological excavations or the construction of museums, which do not provide monetary benefits, but are significantly expendable, which must be taken into account when allocating funds for development tourist and recreational sphere. As an estimate of the profit, the average value of the volumes of profit from different variants of investment projects was chosen.

The digitalization of public administration uses a mixed assessment to determine the cumulative impact of the development of the tourist and recreational sphere on the country's budget through the receipt of currency. Such an assessment is the limit of utility, reflecting the contribution of the investment project to the enhancement of the factor of attractiveness of destinations for visitors. That is, the project for the construction of a hotel in the destination is considered only when the state administration has already made a decision to build a road to the site where the hotel is planned to be located. Thus, digitalization allows the Turkish government to make decisions, taking into account the fact that the investment project for the construction of the road immediately precedes the project for the construction of the hotel.

Likewise, the digitalization of public administration takes into account a prerequisite: any

project can be preceded by more than one project. This is because for each destination there is a planned investment project and an associated infrastructure project that precede any destination investment project. The goal of the digitalization of public administration is, first of all, to ensure an appropriate level of planning for the social development of the components of the destination before starting real actions for the development of the destination and thus guarantee each of them an appropriate infrastructure that meets the minimum public requirements.

The digitalization of the state management of the development of the tourism and recreation sphere in Turkey allows:

to obtain, for decision-making, an assessment of the probable and optimal economic effect from the development of destinations and their qualitative structure in the regional economy;

balance the maximum supply and demand of tourism and recreation projects;

calculate the surplus and deficit of tourist and recreational services:

to maximize the level of costs required for the optimal economic effect from the development of the tourism and recreation sphere;

optimize the distribution of funds by destination, depending on the potential for the development of the tourism and recreation sphere in each of them;

to optimize the seasonal distribution of factors of activity of the tourist and recreational sphere;

Determine the latent or existing cost limit associated with changing key assumptions, inputs, and optimal outcomes for the development of destinations.

The digitalization of state management of the development of the tourism and recreation sphere in the Pacific Ocean allows us to determine:

tourist and recreational centers that attract visitors in different seasons, which is determined by the specifics of the destination;

logistic connections and characteristics of transport and information means of realizing the possibilities of communication between the point of departure and the tourist and recreational center in a certain period of time [15-17]. Taking these factors into account, as well as the total number of visitors leaving a particular destination and the distance between the destination and the destination, the digitalization of public administration makes it possible to predict the flows of visitors who leave the destination and must reach the destination within a certain period of time.

An analysis of the factors affecting the development of the tourism and recreation sphere, as well as a generalization of world experience in the digitalization of public administration by it, show that one of the conditions for the rational formation of the material base of destinations is to ensure complexity based on the creation of a system of multifunctional enterprises for receiving and servicing visitors. Thus, the practice of digitalization of state management of the development of the tourist and recreational sphere in Bulgaria (Golden Sands, Sunny Beach, Albena, etc.)

shows that the introduction of the principle of integrated and centralized digitalization of state management of their development deserves a positive assessment.

In the countries of the South Adriatic, the digitalization of state management of the development of the tourist and recreational sphere makes it possible to substantiate the estimated and project estimates for the modernization of destinations. Thus, in the program for the development of the tourist and recreational sphere in Dubrovnik, digitalization makes it possible to develop a wide range of problems of the interrelated development of various components of the destination, taking into account the leading importance of tourist and recreational activities. Especially carefully researched:

use of labor resources due to seasonal employment; assessing the volumes of different categories of visitor flows;

coordination of the development of the tourism and recreation sphere with other industries.

Taking into account the significant volume of tourist and recreational resources: the sea, mountain landscape, monuments of the ancient city, digitalization allows the public administration to structure and plan the volume of visitor flows in order to protect the landscape from destruction.

It is interesting to note that in the countries of Western Europe and America, where the tourist and recreational sphere develops depending on the conjuncture of demand, and in the countries that were previously part of the socialist camp, the digitalization of state management of the development of destinations makes it possible to make government decisions on the implementation of project development of expansion programs. territories favorable for tourism and recreation and regulate the main parameters of their development. Thus, the digitalization of state management of the development of the tourist and recreational sphere of France makes it possible to develop the southern part of the coast of the Bay of Biscay with a length of 235 km with a tourist and recreational purpose based on the development of an urban planning scheme that provides for the preservation of the existing landscape and maintenance of ecological balance. For this, 13 sites have been allocated for the creation of reserves and 9 main planning zones for the placement of destinations. The digitalization of French public administration in the development of the Breton coastline allows for the creation of a coastal destination scheme, in which the main emphasis is on the planning of destinations inland, along axes perpendicular to the coastline.

In the United States, the digitalization of the National Park Service is making it possible to implement projects to create nature reserves and tourist and recreational centers in historic cities. In a number of projects (for example, in Yorktown), public administration directs investments mainly in the restoration and creation of information centers, while the development of the tourist and recreational sphere is entrusted to private business. The Colonial Williamsburg Tourism and Recreation Center is an

interesting example of the digitalization of US government by the development of the tourist and recreational sphere. The development project for this small town, which in the 15th century was the center of the British colony of Virginia, has well preserved old houses and structures, which are now used as display objects, at the same time adapted to serve visitors. New low-rise hotels are located outside the historical zone of the city. In order to completely isolate the ancient part of the city from transport, a transit car tunnel was built under its central zone. It is important to note that digitalization allows the directorate of the tourist and recreational center-reserve to coordinate issues of preserving monuments, the activities of museums, organizing a souvenir economy and all forms of receiving and servicing flows of visitors. The US government notes that digitalization allows the Colonial Williamsburg Tourism and Recreation Center to function as a single complex of tourism and recreation businesses.

All countries have official tourist and recreational bodies and organizations that implement the principles of digitalization of state management of the development of the tourist and recreational sphere. Their functions depend on the degree of development of tourism and recreation in the country and the level of direct intervention of state administration in the tourism and recreation sphere. Such conditions affect the structure and status of the digitalization of state management of the development of the tourism and recreation sector:

in some countries, the functions of state management of the tourist and recreational sphere are performed by components of the direct state structures (Spain, France);

in some countries, official tourist and recreational bodies and organizations have a semi-autonomous status and function not as government structures, but as professional independent communities (typical for countries with a developed tourist and recreational sphere, in which the private sector plays a leading role, in particular, the United States);

in countries where public administration is just beginning to develop the tourism and recreation sphere and is trying to activate it, therefore it actively interferes in tourism and recreation policy, resorting to administrative measures for its implementation (Nepal, India, Tunisia).

As for Spain, the positive of the digitalization of public management of the development of the tourist and recreational sphere is as follows. In this country, the official state management of tourist and recreational resources, the supply of services and the development of tourism is carried out, as well as an official protectionist policy in the field of nature protection, culture, architecture, which requires a developed system of digitalization. The digitalization of public management of the development of the tourist and recreational sphere in Spain works to increase the level of income and economic efficiency of this sphere, employment of the population and growth of the country's budget. To

strengthen private initiative in the tourism and recreation sphere, digitalization carries out financial and other controls over the observance of established norms and laws.

The structure of government in Spain for the development of the tourism and recreation sphere includes digitalization, which ensures the adoption of government decisions on the volume of public investment in national tourism and recreation and the determination of the contribution of the tourism and recreation sphere to the national economy (excluding political and social motives). That is, the digitalization of Spanish public administration is an important means of state influence on the tourism and recreation sphere and state budget investments in it.

In some countries, the digitalization of public management of the development of the tourism and recreation sphere is the basis for financing destinations and individual projects not only directly from the state budget, but also from deductions from the tourism and recreation sphere.

In a number of countries, all functions of managing the development of the tourist and recreational sphere are carried out at the state level. The digitalization of state management of the development of the tourism and recreational sphere allows the ministries of tourism or related bodies to make decisions on the tourism and recreation policy of the country. The digitalization of state management of the development of the tourist and recreational sphere in such a centralized system allows better regulation of economic policy in the tourist and recreational sphere and attracting investments in it. A negative feature of digitalization is the danger of bureaucratization (Spain, France, Italy). In another group of countries, digitalization by the development of the tourist and recreational sphere is part of a special state institution or an independent organization that is part of a wider state structure (Canada, Japan). The third type of digitalization of public management of the development of the tourist and recreational sphere is based on the use of national semi-official institutions or private associations that are created by enterprises or public corporations (Great Britain (British Tourist Authority), Hong Kong (Hong Kong Tourist Association)). The advantage of digitalization of this form of organization of public administration of the tourist and recreational sphere is to increase the mobility of public administration of the development of tourist and recreational activities in comparison with the private form.

World practice shows that the effectiveness of the digitalization of state management of the development of the tourist and recreational sphere increases due to the implementation of the development of destinations as a multifunctional industry, in which infrastructure is only a necessary, but far from the most profitable share of the tourist and recreational sphere. The most important source of income in the tourism and recreation sphere are enterprises of various types of additional services for the free time of visitors, a relatively small amount of financial investments in which and their digitalization

with a significant rate of return provides the economic effect of the tourism and recreation sphere as a whole.

Conclusions and offers. The article reflects the world experience in the digitalization of the development of the tourist and recreational sphere, which made it possible to determine the following:

a separate area of scientific research is the digitalization of state management of the development of the tourist and recreational sphere, which makes it possible to form the structure of the tourist and recreational market in order to increase the efficiency of service to visitors and the influence of state administration on the realities of the tourist and recreational sphere, as well as the supply of tourist and recreational products, which affects public interest in them on the part of visitors as consumers of tourist and recreational services [18];

the processes of digitalization of state management of the development of tourist and recreational resources and the diversification of destinations have a positive effect on the intersectoral nature of the tourist and recreational sphere due to the multiplier effect for related sectors of the economy of the destinations that are directly involved in serving visitors;

digitalization of state management of the development of destinations characterized by a significant territorial concentration of labor, visitors, related industries and services, increases their attractiveness for enterprises in the tourism and recreation sector in terms of minimizing costs;

when determining the role and procedures of digitalization of state management of the development of the tourist and recreational sphere and the formation of strategic goals for the development of a regime for promoting its development, it is advisable to study the consequences on the state of the tourist and recreational market of the destination;

To achieve a positive effect of the digitalization of public management of the development of the tourist and recreational sphere, it is necessary to closely coordinate the efforts of the enterprises of the destination, starting with the definition of a goal and support for changing the behavior of visitors to tourism services in specific destinations or the region as a whole.

To determine further steps of the digitalization of state management of the development of the tourist and recreational sphere in Ukraine, it is necessary to ensure the fulfillment of the main goal of the qualitative improvement of state management of the development of the tourist and recreational sphere, namely: increasing its openness, expanding goodwill towards the population, accelerating management processes, effective development of tasks, increasing the mobility of workers in tourism and recreation enterprises and their job satisfaction.

#### Literature

- 1. Burton L. and Noad P. Recreation Research Methods. Occasional Paper. Birmingham, University of Birmingham, Centre for Urban and Regional Studies. 1968. No. 3. 78 p.
  - 2. Cesario J. Operation Research in Outdoor Recreation. Joint Leisure Res. 1969. Vol. 1. P. 33-51.
- 3. Bargur J. and Arbel A. Comprehensive Approach to the Planning of the Tourist Industry. Paper presented at the ORSA/TIMS, Joint National Meeting. Puerto Rico, San Juan, 1974.
- 4. Powers T. Appraising International Tourism Projects. Papers on Project Analisis. Washington: Inter-American Development Bank, 1974, No. 1.
- 5. Armstrong C. W. G. International tourism: Coming or going: The methodological problems of forecasting, Futures. 1972. Vol. 4, Issue 2. P. 115–125. DOI: https://doi.org/10.1016/0016-3287(72)90036-5.
  - 6. Archer B. H. The Primary and Secondary Beneficiaries of Tourist Spending. Tourist Rev. 1972. Vol. 27. P. 42-45.
- 7. Archer B. H. The Uses and Abuses of Multipliers. A Paper presented the Fourth Annual Travel Research Conference held in Sun Valley, Idaho. 1973.
  - 8. Archer B. H. and Owen C. B. Towards a Tourist Regional Multiplier. Regional Stud. 1971. Vol. 5. P. 224-294.
- 9. Baron R. and Shechter N. Simultaneous Determination of Visits to a System of Visits to a System of Outdoor Recreation Parks with Capacity Limitations. Regional and Urban Econ. 1973. Vol. 4. P. 327-359.
  - 10. Baron R. Seasonality in Tourism. Int. Tourism Quart, 1972. Vol. 6. Part. 1.
- 11. Baron R. Seasonality in Tourism. *Int. Tourism Quart*. 1972. Vol. 6. Part. 2. 12. Gearing C.E., Swart W.W. and Var T. Establishing a Measure of Touristic Attractiveness. *Joint Travel Res.* 1974. Vol. 12. P. 1–8. DOI: https://doi.org/10.1177/004728757401200401.
- 13. Gearing C. E. et al. Determining the Optimal Investment Policy for the Tourism Sector of a Developing Country. Management Sci. 1973. Vol. 20, No. 4. Part. 1. P. 487-497.
- 14. McMahon J. J. Tourism Planning and Project Evaluation The Puerto Rican Case. Paper presented at the ORSA/TIMS. Joint National Meeting. Puerto Rico, San Juan. 1974.
  - 15. Crampon L. J. and Tan K. T. A. Model of Tourism Flow into the Pacific. Tourist Rev. 1973. P. 98-104.
- 16. Crampon L. J. Factors Influencing Travel Flow into and Within the Pacific Basin. Paper presented at the ORSA/TIMS. Joint National Meeting. Puerto Rico, San Juan. 1974.
  - 17. Hsi B. P. and Burych D. M. Games of Two Players. Appl. Stat. 1971. Vol. 20. P. 86-92.
- 18. Борецька Н. П., Крапівіна Г. О. Напрями дослідження туристично-рекреаційної сфери як об'єкта державного управління. Економічний вісник Донбасу. 2021. №3(65). С. 147-155. DOI: https://doi.org/10.12958/1817-3772-2021-3(65)-147-

#### References

- 1. Burton, L. and Noad, P. (1968). Recreation Research Methods. Occasional Paper, 3. Birmingham, University of Birmingham, Centre for Urban and Regional Studies.
  - 2. Cesario, J. (1969). Operation Research in Outdoor Recreation. Joint Leisure Res., Vol. 1, pp. 33-51.
- 3. Bargur, J. and Arbel, A. (1974). Comprehensive Approach to the Planning of the Tourist Industry. Paper presented at the ORSA/TIMS, Joint National Meeting. Puerto Rico, San Juan.

- 4. Powers, T. (1974). Appraising International Tourism Projects. *Papers on Project Analisis*, 1. Washington, Inter-American Development Bank.
- 5. Armstrong, C. W. G. (1972). International tourism: Coming or going: The methodological problems of forecasting, *Futures*, Vol. 4, Issue 2, pp. 115–125. DOI: https://doi.org/10.1016/0016-3287(72)90036-5.
  - 6. Archer, B. H. (1972). The Primary and Secondary Beneficiaries of Tourist Spending. Tourist Rev., 27, pp. 42-45.
- 7. Archer, B. H. (1973). The Uses and Abuses of Multipliers. A Paper presented the Fourth Annual Travel Research Conference held in Sun Valley, Idaho.
  - 8. Archer, B. H. and Owen, C. B. (1971). Towards a Tourist Regional Multiplier. Regional Stud., 5, pp. 224–294.
- 9. Baron, R. and Shechter, N. (1973). Simultaneous Determination of Visits to a System of Visits to a System of Outdoor Recreation Parks with Capacity Limitations. *Regional and Urban Econ.*, 4, pp. 327-359.
  - 10. Baron, R. (1972). Seasonality in Tourism. Int. Tourism Quart., 6, Part. 1.
  - 11. Baron, R. (1972). Seasonality in Tourism. Int. Tourism Quart., 6, Part. 2.
- 12. Gearing, C.E., Swart, W.W. and Var, T. (1974). Establishing a Measure of Touristic Attractiveness. *Joint Travel Res.*, Vol. 12, pp. 1–8. DOI: https://doi.org/10.1177/004728757401200401.
- 13. Gearing, C. E. et al. (1973). Determining the Optimal Investment Policy for the Tourism Sector of a Developing Country. *Management Sci.*, Vol. 20, No. 4, Part. 1, pp. 487–497.
- 14. McMahon J. J. Tourism Planning and Project Evaluation The Puerto Rican Case. Paper presented at the ORSA/TIMS. Joint National Meeting. Puerto Rico, San Juan. 1974.
  - 15. Crampon L. J. and Tan K. T. A. Model of Tourism Flow into the Pacific. Tourist Rev. 1973. P. 98-104.
- 16. Crampon L. J. Factors Influencing Travel Flow into and Within the Pacific Basin. Paper presented at the ORSA/TIMS. Joint National Meeting. Puerto Rico, San Juan. 1974.
  - 17. Hsi B. P. and Burych D. M. Games of Two Players. Appl. Stat. 1971, 20, P. 86–92.
- 18. Boretska, N. P., Krapivina, G. O. (2021). Napriamy doslidzhennia turystychno-rekreatsiinoi sfery yak obiekta derzhavnoho upravlinnia [Directly, the development of the tourist and recreational sphere yak of the state government]. *Ekonomichnyi visnyk Donbasu Economic Herald of the Donbas*, 3 (65), pp. 147-155. DOI: https://doi.org/10.12958/1817-3772-2021-3(65)-147-154.

### Борецька Н. П., Крапівіна Г. О. Світовий досвід діджиталізації державного управління розвитком туристично-рекреаційної сфери

У статті узагальнено світовий досвід діджиталізації державного управління розвитком туристично-рекреаційної сфери та демонструється доцільність запровадження діджиталізації в пристосуванні державного управління до реалій сучасного світу. Показано, що у світовій практиці діджиталізація державного управління розвитком туристично-рекреаційної сфери грунтується на статистичному описі туристично-рекреаційних проблем; створенні моделей прогнозування наслідків державних рішень з розвитку туристично-рекреаційної сфери; засобах виміру економічної ефективності від розвитку різноманітних форм організації використання вільного часу населення. Зокрема, діджиталізація державного управління розвитком туристично-рекреаційної сфери Ізраїлю, Туреччини та Пуерто-Ріко демонструє доцільність мети діджиталізації проблем управління інтенсивністю потоків відвідувачів з центру зосередження населення до дестинацій та прогнозування економічного ефекту від цього, що особливо цікаво та докладно обгрунтовано. В Ізраїлі діджиталізація державного управління розвитком туристично-рекреаційної сфери має за мету збільшення обсягів іноземної валюти, яка надходить у країну завдяки туризму, та її частки в доходах бюджету, а також максимальну економію ресурсів на розвиток місцевого туризму. Діджиталізація міністерства туризму Туреччини дозволяє одержати для прийняття рішень оцінки ймовірного й оптимального економічного ефекту від розвитку дестинацій та їх якісну структуру в межах регіональних економік; урівноважити максимальний попит та пропозицію проєктів розвитку туристично-рекреаційної сфери; розрахувати надлишок та дефіцит туристично-рекреаційних послуг; максимізувати рівень витрат, необхідних для оптимального економічного ефекту щодо розвитку туристично-рекреаційної сфери; оптимізувати розподіл коштів по дестинаціям залежно від потенційних можливостей розвитку туристично-рекреаційної сфери в кожній з них; оптимізувати сезонний розподіл чинників діяльності туристично-рекреаційної сфери; визначити приховану чи наявну межу вартості, пов'язану із зміною основних припущень, вхідних даних та оптимальних результатів розвитку дестинацій. Практика діджиталізації державного управління розвитком туристично-рекреаційної сфери Болгарії (Золоті Піски, Сонячний Берег, Албена та ін.) доводить, що впровадження принципу комплексної і централізованої діджиталізації державного управління їх розвитком заслуговує на позитивну оцінку. Діджиталізація державного управління розвитком туристично-рекреаційної сфери у районі Тихого океану дозволяє визначити місця призначення відвідувачів, які приваблюють в різні сезони, що окреслює особливості дестинацій; логістичні зв'язки та характеристики транспортних та інформаційних засобів для реалізації можливостей зв'язку між пунктом відправлення і пунктом призначення у певному періоді часу. У країнах Південної Адріатики діджиталізація державного управління розвитком туристично-рекреаційної сфери дозволяє обгрунтувати розрахункові та проєктні кошториси відновлення дестинацій. Діджиталізація державного управління розвитком дестинацій Франції дає підставу для прийняття державних рішень з виконання проєктних розробок програм опанування сприятливими для туризму і рекреації територіями та регламентувати основні параметри їхнього розвитку. У США діджиталізація Національної служби парків дозволяє реалізувати проєкти щодо створення заповідників і туристично-рекреаційних центрів в історичних містах.

*Ключові слова:* діджиталізація, туристично-рекреаційна сфера, досвід Ізраїлю, досвід Туреччини, досвід Пуерто-Ріко, досвід країн Південної Адріатики, досвід США.

## Boretska N., Krapivina G. World Experience in the Digitalization of Public Administration in the Development of the Tourist and Recreational Sphere

The article summarizes the world experience in the digitalization of public administration in the development of the tourist-reactionary sphere and demonstrates the feasibility of introducing digitalization in the adaptation of public administration to the realities of the modern world. It is shown that in the world practice, the digitalization of state management of the development of the tourist and recreational sphere is based on a statistical description of tourist and recreational problems; creation of models for predicting the consequences of government decisions on the development of the tourism and recreation sector; means of measuring the economic efficiency of the development of various forms of organizing the use of the free time of the population. In particular, the digitalization of state management of the development of the tourist and recreational sphere in Israel, Turkey and Puerto Rico demonstrates the feasibility of the goal of digitalization for the state solution of the problems of managing the intensity of visitor flows from the centers

of population concentration in the destination and predicting the economic effect of this. In Israel, the digitalization of state management of the development of the tourist and recreational sphere is aimed at increasing the volume of foreign currency entering the country through tourism, and its share in budget revenues, as well as maximizing the saving of resources for the development of local tourism. The digitalization of the Turkish Ministry of Tourism allows government decisions to be made to assess the likely and optimal economic effect from the development of destinations and their qualitative structure within the regional economy; balance the maximum supply and demand of tourism and recreation projects; calculate the surplus and deficit of tourist and recreational services; to maximize the level of costs necessary for the optimal economic effect on the development of the tourist and recreational sphere; optimize the distribution of funds by destination, depending on the potential for the development of the tourist and recreational sphere in each of them; to optimize the seasonal distribution of factors of activity of the tourist and recreational sphere; Determine the latent or existing cost limit associated with changing key assumptions, inputs, and optimal outcomes for the development of destinations. The practice of digitalization of state management of the development of the tourist and recreational sphere in Bulgaria (Golden Sands, Sunny Beach, Albena, etc.) shows that the introduction of the principle of integrated and centralized digitalization of state management of their development deserves a positive assessment. The digitalization of state management of the development of the tourist and recreational sector in the Pacific Ocean region makes it possible to determine the destinations of visitors that attract visitors in different seasons, which determines the characteristics of the destinations; logistic connections and characteristics of transport and information means for realizing the possibilities of communication between the point of departure and the point of destination in a certain period of time. In the countries of the South Adriatic, the digitalization of state management of the development of the tourist and recreational sphere makes it possible to justify the estimated and project estimates for the renewal of destinations. The digitalization of public administration in the development of French destinations gives rise to government decisions on the implementation of design programs for the use of territories favorable for tourism and recreation and to regulate the main parameters of their development. In the United States, the digitalization of the National Park Service is making it possible to implement projects to create nature reserves and tourist and recreational centers in historic cities.

*Keywords*: digitalization, tourism and recreation, the experience of Israel, the experience of Turkey, the experience of Puerto Rico, the experience of the South Adriatic countries, the experience of the United States.

## Борецкая Н. П., Крапивина $\Gamma$ . А. Мировой опыт диджитализации государственного управления развитием туристско-рекреационной сферы

В статье обобщен мировой опыт диджитализации государственного управления развитием туристско-рекреационной сферы и демонстрируется целесообразность внедрения диджитализации в адаптации государственного управления к реалиям современного мира. Показано, что в мировой практике диджитализация государственного управления развитием туристскорекреационной сферы основывается на статистическом описании туристско-рекреационных проблем; создании моделей прогнозирования последствий государственных решений по развитию туристско-рекреационной сферы; средствах измерения экономической эффективности развития разнообразных форм организации использования свободного времени населения. В частности, диджитализация государственного управления развитием туристско-рекреационной сферы Израиля, Турции и Пуэрто-Рико демонстрирует целесообразность цели диджитализации по государственному решению проблем управления интенсивностью потоков посетителей из центров сосредоточения населения в дестинации и прогнозирования экономического эффекта от этого. В Израиле диджитализация государственного управления развитием туристско-рекреационной сферы преследует цель увеличения объемов иностранной валюты, поступающей в страну благодаря туризму, и ее доли в доходах бюджета, а также максимальную экономию ресурсов на развитие местного туризма. Диджитализация министерства туризма Турции позволяет принимать государственные решения по оценке вероятного и оптимального экономического эффекта от развития дестинаций и их качественной структуры внутри региональной экономики; уравновесить максимальный спрос и предложение проектов развития туристско-рекреационной сферы; рассчитать излишек и дефицит туристско-рекреационных услуг; максимизировать уровень затрат, необходимых для оптимального экономического эффекта по развитию туристскорекреационной сферы; оптимизировать распределение средств по дестинациям в зависимости от потенциальных возможностей развития туристско-рекреационной сферы в каждой из них; оптимизировать сезонное распределение факторов деятельности туристско-рекреационной сферы; определить скрытый или имеющийся предел стоимости, связанный с изменением основных предположений, входных данных и оптимальных результатов развития дестинаций. Практика диджитализации государственного управления развитием туристско-рекреационной сферы Болгарии (Золотые Пески, Солнечный Берег, Албена и др.) показывает, что внедрение принципа комплексной и централизованной диджитализации государственного управления их развитием заслуживает положительной оценки. Диджитализация государственного управления развитием туристско-рекреационной сферы в районе Тихого океана позволяет определить места назначения посетителей, которые привлекают посетителей в разные сезоны, что определяет особенности дестинаций; логистические связи и характеристики транспортных и информационных средств для реализации возможностей связи между пунктом отправления и пунктом назначения в определенный период времени. В странах Южной Адриатики диджитализация государственного управления развитием туристско-рекреационной сферы позволяет обосновать расчетные и проектные сметы обновления дестинаций. Диджитализация государственного управления развитием дестинаций Франции дает основание для принятия государственных решений по выполнению проектных разработок программ использования благоприятных для туризма и рекреации территорий и регламентировать основные параметры их развития. В США диджитализация Национальной службы парков позволяет реализовать проекты по созданию заповедников и туристскорекреационных центров в исторических городах.

*Ключевые слова*: диджитализация, туристско-рекреационная сфера, опыт Израиля, опыт Турции, опыт Пуэрто-Рико, опыт стран Южной Адриатики, опыт США.

Received by the editors: 05.11.2021 and final form 16.12.2021

#### OFFICIAL DEPARTMENT

# VII International Scientific and Practical Seminar "Ukrainian-Polish Scientific and Educational Integration: a Two-Way Road"

The generalization of the European cooperation experience in the scientific, educational and innovative space confirms that its establishment is a complex and lengthy process. It does not admit artificial measures and considers numerous institutional and economic conditions and factors. There is every reason to say that such cooperation, launched in 2018 by the University of Lodz, the Institute of Industrial Economics (IIE) of the National Academy of Sciences of Ukraine, the Academy of Economics of Ukraine, and SI "Luhansk Taras Shevchenko National University" (LNU) is based on a clear understanding of the content and purpose of modern European scientific and educational cooperation of countries and directly - institutions.

One of the proofs of such actual cooperation was the holding of the traditional, already the VII Ukrainian-Polish scientific and practical seminar on December 16-17, 2021. This year the seminar was held in a combined offline-online mode in the context of the trip of LNU scientists to Poland to sum up the project of the Ministry of Education and Science of Ukraine and the Polish National Agency for Academic Exchange (NAWA) "National business cultures of Poland and Ukraine: improving the scientific and practical foundations of cooperation in European and world markets". Unlike the previous Ukrainian-Polish seminar, the founders were joined by scientists from another leading Polish institution with a European name, the Silesian University of Technology.

Greetings of the Director of IIE, Academician of the National Academy of Sciences of Ukraine O. Amosha; Deputy Director of the IIE, Doctor of Economic Sciences, Corresponding Member of the National Academy of Sciences Y. Zaloznova, and the Head of the Research and Scientific Cooperation Center: Poland – Ukraine, Dr. hab., professor

B. Glinkowska-Krauze, were not protocol-declarative, they had a practical business orientation.

To achieve the goal of the scientific event, Professor of the University of Lodz B. Kaczmarek outlined the problems of harmonization of the institutional framework of cooperation between Poland and Ukraine in the scientific and research field. Candidate of Economic Sciences Ie. Chebotarov (LNU) substantiated proposals to improve regulatory regimes to ensure innovative activities of enterprises in Ukraine. Candidates of Economic Sciences O. Tatarchenko and N. Chebotarova (LNU) highlighted the prospects of involving students of educational institutions in international scientific cooperation. Candidates of Economic Sciences N. Burda and G. Shtapauk (LNU) identified the marketing component of such cooperation.

The Doctor of Economic Sciences V. Liashenko (IIE) report was devoted to the issues of institutional support of Ukrainian-Polish scientific-educational and innovative European integration. Doctor of Economic Sciences Y. Kharazishvili (IIE) revealed the relevant strategic aspects. Candidate of Economic Sciences N. Trushkina (IIE) considered the problems of creating a transport and logistics cluster in Ukraine and Poland. Doctor of Economic Sciences I. Pidoricheva (IIE) outlined the prospects of Ukraine's European integration in the field of innovation. Doctor of Economic Sciences O. Vishnevsky (IIE) identified strategic directions of Ukraine's integration in education, research and innovation spheres. Also of great interest were the reports of young scientists from the Faculty of Management of the University of Lodz S. Kaczmarek, E. Gwiaździński, M. Kachmarek, T. Noga, J. Banasiak and others.

#### V. Liashenko,

Doctor of Economic Sciences (Institute of Industrial Economics, National Academy of Sciences of Ukraine),

#### B. Glinkowska-Krauze, DrHab (Management), Professor

(University of Lodz),

Ie. Chebotarov,
Candidate of Economic Sciences
(SI "Luhansk Taras Shevchenko National University"),
(Silesian University of Technology)

# Інститут економіки промисловості Національної академії наук України

Державний заклад «Луганський національний університет імені Тараса Шевченка»

# **Економічний вісник Донбасу** № 4 (66) 2021

Підп. до друку 16.12.2021 р. Формат 60х84 1/8. Папір офсет. Гарнітура Times New Roman. Друк ризографічний. Обл.-вид. арк. 13,8. Ум. друк. арк. 12,8. Наклад 350 прим. Зам. № 1506. Ціна вільна.

#### Виготовлювач

#### Відділ інформатизації наукової діяльності Інституту економіки промисловості НАН України

вул. Марії Капніст, 2, м. Київ, 03057 Тел.: (050) 476 55 63 E-mail: slaval.aenu@gmail.com

#### Надруковано

# Вищий навчальний заклад Укоопспілки «Полтавський університет економіки і торгівлі»

к. 115, вул. Коваля, 3, м. Полтава, 36014; тел.: (0532) 50-24-81 Свідоцтво суб'єкта видавничої справи ДК № 3827 від 08.07.2010 р.