

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ЗАПОРІЗЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ

**ФІНАНСОВІ СТРАТЕГІЇ
ІННОВАЦІЙНОГО РОЗВИТКУ ЕКОНОМІКИ**

Збірник наукових праць

Випуск 2 (62), 2024

Економіка та управління підприємствами
Економіко-математичне моделювання та інформаційні технології в економіці
Ринкові механізми обліку, аналізу та аудиту в національній економіці
Теоретико-прикладні аспекти економічних процесів в Україні та світі
Фінанси і грошовий обіг
Економіка праці, управління персоналом та маркетинг
Управління проектами та фінансово-економічна безпека в умовах глобалізації



Видавничий дім
«Гельветика»
2024

УДК 33(066)

B53

Фінансові стратегії інноваційного розвитку економіки

DOI: <https://doi.org/10.26661/vznuen-2414-0287>

Фінансові стратегії інноваційного розвитку економіки № 2 (62), 2024

DOI: <https://doi.org/10.26661/2414-0287-2024-2-62>

Financial Strategies of Innovative Economic Development.
Збірник наукових праць входить до міжнародної індексації

INDEX COPERNICUS (ПОЛЬЩА)

Index Copernicus Value 2018 – 72,75 (ICV 2017 – 55,96); цитування: 1

Усі статті отримують номер DOI

*Засновник – Запорізький національний університет
Виходить щоквартально. Збірник виходить з 2006 р.*

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*Рекомендовано до друку та поширення через мережу Internet Вченою радою ЗНУ
(протокол засідання № 9 від 26.03.2024 р.)*

Фінансові стратегії інноваційного розвитку економіки : збірник наукових праць. Запоріжжя : Видавничий дім «Гельветика», 2024. № 2 (62). 114 с.

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MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
ZAPORIZHZHIA NATIONAL UNIVERSITY

**FINANCIAL STRATEGIES
OF INNOVATIVE ECONOMIC DEVELOPMENT**

Proceedings Scientific Publications

Issue 2 (62), 2024

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Publishing House
"Helvetica"
2024

UDC 33(066)

B53

Financial Strategies of Innovative Economic Development.

DOI <https://doi.org/10.26661/vznuen-2414-0287>

Financial Strategies of Innovative Economic Development. № 2 (62), 2024.

DOI <https://doi.org/10.26661/2414-0287-2024-2-62>

Financial Strategies of Innovative Economic Development.

International journal indexing

INDEX COPERNICUS (POLAND)

Index Copernicus Value 2018 – 72,75 (ICV 2017 – 55,96); citation: 1

All journal articles have DOIs

Founder – Zaporizhzhia National University

Published 4 times a year. Scientific bulletin founded in 2006

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*Published and disseminated through the Internet by the decision of academic council of ZNU
(Protocol № 9, dated 26.03.2024)*

Financial Strategies of Innovative Economic Development : Proceedings Scientific Publications. Zaporizhzhia : Publishing House “Helvetica”, 2024. № 2 (62). 114 p.

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ECONOMICS AND BUSINESS MANAGEMENT

UDC 336.711(477):336.74/.76]:355.01

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-01>

ORGANIZATIONAL AND ECONOMIC MECHANISM AS A COMPONENT ENSURE OF SUSTAINABLE DEVELOPMENT

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Key words:

organizational and economic mechanism, sustainable development, competitiveness, rural areas, state support.

The current state of socio-economic development of rural areas, in which the country's resource potential and the country's recreational potential are concentrated, requires concerted actions by all management entities. It is rural areas and their inhabitants who are the custodians of traditions, peculiarities of cultural heritage and many other things, which is why the socio-cultural image of the whole country began.

In recent years, the organizational and economic mechanism of the development of rural territorial communities in Ukraine is conditioned by the social transformation taking place in the life of a modern village, namely, with the limited opportunities of villagers to receive high-quality, socially greater services, low incomes of villagers compared to local residents – which in own the process leading to population migration, a drop in agricultural production due to a lack of skilled labor. In this way, negative processes are taking place that require economic, social and administrative changes to create proper conditions for the rural population's life.

To solve the problems of the effective functioning of rural areas, it is necessary to improve the organizational and economic mechanism of their development, and qualitatively transform all its constituent elements. The organizational and economic mechanism of the development of rural areas provides a holistic conceptual position of the state regional policy regarding the determination of the competitive advantages of rural areas, which requires the continuation of implementation of decentralization programs, development of rural infrastructure, involvement of residents of rural areas in making management decisions to improve life in the countryside. Sustainable development of rural areas depends on the influence of external and internal factors and conditions. External factors such as the institutional environment; availability of resources; competitive environment; development of domestic demand; state support; development of sales markets; investment climate; price and tax policy; natural conditions; state of the environment and natural resources; social development of the village and others. The sustainable development of rural areas is influenced by internal factors such as location, specialization and concentration of production; the potential of economic and intellectual resources; internal infrastructure; quality and competitiveness of products; organizational and economic forms of enterprises; organization of production and management; investment and innovation activity; availability, resources, raw materials; work motivation.

Therefore, the current economic, social and ecological state of the agricultural sector has been unstable in recent years, and the inhabited rural area is sometimes shrinking. Therefore, in order to overcome the crisis situation and the transition of agriculture to sustainable development, it is necessary to improve the organizational and economic mechanism of the development of the agricultural sector, as a mechanism for ensuring its sustainable development.

ОРГАНІЗАЦІЙНО-ЕКОНОМІЧНИЙ МЕХАНІЗМ ЯК СКЛADOVA ЗАБЕЗПЕЧЕННЯ СТАЛОГО РОЗВИТКУ

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Ключові слова:

організаційно – економічний механізм, сталий розвиток, конкурентоспроможність, сільські території, державна підтримка.

Сучасний стан соціально-економічного розвитку сільських територій в яких зосереджений ресурсний потенціал країни та рекреаційний потенціал країни вимагає узгоджених дій з боку всіх суб'єктів управління. Саме сільські території, їх мешканці є берегинями традицій, особливостей культурної спадщини та багато в чому визначають соціально-культурний образ усієї країни.

В останні роки організаційно-економічний механізм розвитку сільських територіальних громад в Україні обумовлений суспільним перетворенням, що відбуваються в житті сучасного села, а саме обмеженими можливостями жителів села до отримання якісних, соціально необхідних послуг, низькі доходи селян в порівнянні з місцевими жителями – що в свою чергу призводить до міграції населення, падіння сільськогосподарського виробництва за рахунок нестачі кваліфікованої робочої сили. Отже відбуваються негативні процеси які потребують економічних, соціальних та управлінських змін для створення належних умов життєдіяльності сільського населення.

Для вирішення проблем ефективного функціонування сільських територій необхідно вдосконалення організаційно-економічного механізму їх розвитку, якісне перетворення всіх його складових елементів. Організаційно-економічний механізм розвитку сільських територій забезпечує цілісну концептуальну позицію державної регіональної політики, щодо визначення конкурентних переваг сільської місцевості, яка потребує продовження впровадження програм децентралізації, розвитку інфраструктури на селі, залучення мешканців сільських територій до прийняття управлінських рішень щодо покращення життя на селі. Сталий розвиток сільської місцевості залежить від впливу зовнішніх та внутрішніх факторів та умов. Зовнішні фактори, такі як інституційне середовище; доступність ресурсів; конкурентне середовище; розвиненість внутрішнього попиту; державна підтримка; розвиненість ринків збуту; інвестиційний клімат; цінова та податкова політика; природні умови; стан навколишнього середовища та природних ресурсів; соціальний розвиток села та інші. На сталий розвиток сільських територій впливають внутрішні чинники такі, як розміщення, спеціалізація та концентрація виробництва; потенціал економічних та інтелектуальних ресурсів; внутрішня інфраструктура; якість та конкурентоспроможність продукції; організаційно-господарські форми підприємств; організація виробництва та управління; інвестиційно-інноваційна активність; наявність, ресурсів, сировини; мотивація праці.

Отже, сучасний економічний, соціальний та екологічний стан аграрного сектору, останні роки нестійким та іноді відбувається скорочення обжитої сільської території. Тому для подолання кризового стану та переходу сільського господарства на сталий розвиток необхідно вдосконалення організаційно – економічного механізму розвитку галузі АПК, як механізму забезпечення його сталого розвитку.

Formulation of the problem

The current conditions of the functioning of the entire economy of Ukraine, its individual industries, in connection with the emergence of new risks associated with the unpredictable actions of the Russian aggressor and the multimillion-dollar losses of the Ukrainian economy, require a review and improvement of all existing mechanisms of the functioning of enterprises. Ensuring the effective management of the functioning of enterprises in our time is an important strategic task for enterprises of the

agricultural sector, which was most affected by military operations on the territory of Ukraine (occupied agricultural lands in the east of the country, mined fields in the de-occupied territories, loss of crops, agricultural machinery, etc.), and is aware of the need to apply all available methods and approaches, taking into account new factors influencing the external and internal environment, new previously unknown risks for the opportunity to quickly establish profitable work in new conditions, and the post-war development of the industry.

The organizational and economic mechanism, as one of the most important, the efficiency of the functioning of enterprises of any industry depends on the quality of its work, also needs changes and improvements. Organizational measures aimed at effective formation and use of all available resources of an agricultural enterprise to realize its main goal – profit and growth in the current and strategic periods, make up the organizational and economic mechanism. The functioning of this mechanism is aimed at protecting the domestic producer of agricultural products from unfair competition, finding and expanding domestic and foreign markets, to meet the needs of both owners and workers of the enterprise.

Analysis of latest research and publications

In the scientific and methodological works of domestic authors, the issue of improving the organizational and economic mechanism, in the context of ensuring effective management of the development of the enterprise, is raised quite often by domestic scientists, among whom it is necessary to note such researchers as O.O. Veklich, L.O. Vdovenko, O.M. Kobzar, V.M. Kolmakova, O.L. Ruda, D.V. Titov, N.V. Trusova, T.I. Yaroslavska, But in connection with the constant change of internal and external factors that affect the functioning of the organizational and economic mechanism, the emergence of new, previously unknown risks, the theoretical, methodological and applied aspects of the formation and effective functioning of the organizational and economic mechanism need to be improved.

Formulation of goals

The purpose of the article is the analysis of modern factors influencing the formation and effective functioning of the organizational and economic mechanism. Study of the stages of building an organizational and economic mechanism and their components, which ensure competitiveness and profitability of functioning in our time and in the long term.

Outline of the main material of the research

Comprehensive development of rural areas, which includes both economic, social and ecological directions, has been a strategic priority for the development of Ukraine since its independence. The rural population of our country is 31% of the existing population, and agricultural land is 70% of the country's land fund. Ukraine is one of the top five exporters of agricultural products, and in the pre-war period, it provided almost 400 million of the world's population, and its country with foreign exchange earnings, which made up more than 40% of the total foreign exchange earnings. Considering these facts, it should be understood that the socio-economic development of the country as a whole depends on the sustainable development of the agricultural industry.

To solve the problems of the development of rural areas, it is necessary to constantly improve the organizational and economic mechanism, qualitative transformation of all its constituent elements, including the increase and expansion of the composition of used resources, improvement of the quality of management influence, improvement of current

legislation, fiscal policy, etc., which will make the life of rural residents attractive for permanent residence and will preserve not only workplaces, for professional and creative self-realization, but also national identity, culture, and traditions.

The organizational and economic mechanism of the development of rural territorial communities represents a set of economic and organizational methods, methods, forms, tools and levers of influence on economic relations and internal integration processes of the STG in the rural settlement network, which determine real and possible criteria for ensuring the financial capacity of rural communities, taking into account alternative options for modernization of their infrastructure on an innovative basis [1, p. 147].

In our opinion, the organizational and economic mechanism of rural development is a managed resource of the process, at the input of which are cash resources (financial, material, labor, infrastructure), and at the output is an economic mechanism, that is, the composition and interaction of resources, its main parameters and characteristics, purpose, economic efficiency, compliance with the basic process.

Therefore, the organizational and economic mechanism of sustainable development of rural areas is a transition to a new quality of rural development, which combines the necessary resources in a certain combination and forms depending on the state of a specific rural area, as well as the coordinated participation of all management bodies, business structures and the public, on the basis of unified legislation. The main goal of creating an effective organizational and economic mechanism of the agricultural industry as a whole, and each enterprise working in rural areas separately, is to ensure profitability and improve performance indicators, thanks to the achievements of their skillful management, in modern conditions. That is, the setting of correct intermediate goals and their implementation with the minimum possible expenditure of resources will lead the enterprise to the desired goal – increasing profitability and meeting the needs of owners and workers, thanks to the effective operation of the organizational and economic mechanism (Fig. 1).

The system of state regulation and support for the development of rural areas is an important element of the organizational and economic mechanism, which is defined in the Concept of Rural Development until 2030 and takes into account the priorities of forecast attitudes, plans, intentions of government structures in recent (2015–2019) years and determines the long-term, the most fundamentally important goals, tasks for regional, district and local authorities and self-government in relation to the implementation of the system of measures. The 17 Sustainable Development Goals 2016–2030, approved in 2015 at the UN Summit on Sustainable Development, and adapted to national conditions serve as the fundamental basis of the Rural Development Concept, the guidelines of which are outlined in the National Report «Sustainable Development Goals: Ukraine» [2]. The concept of rural development until 2030 is aimed at:

- ensuring the development of a socially necessary, competitive, and ecologically safe agricultural economy for the population;

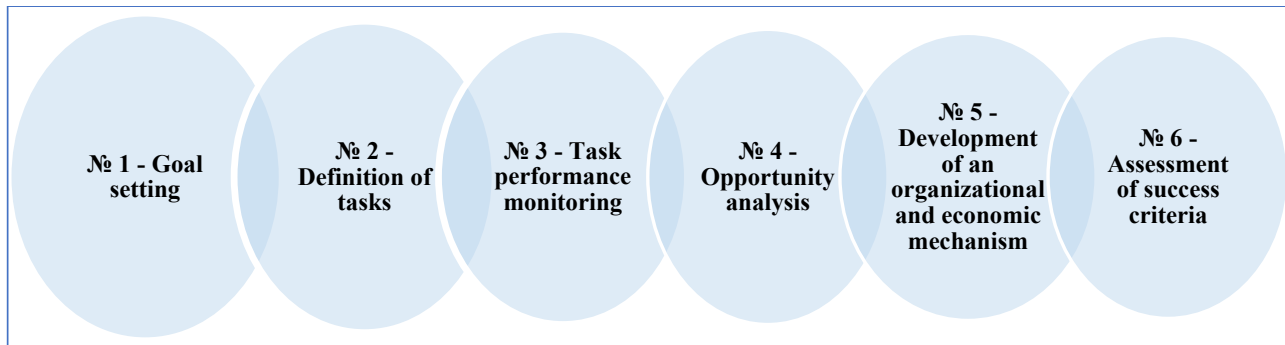


Figure 1 – Stages of building an organizational and economic mechanism

- improvement of the quality of life of the rural population, primarily its socially vulnerable strata – children, the disabled and the elderly, adjusted primarily to the basic (local) level of self-government development;

- maintenance of ecological balance with mandatory consideration of balanced use and increase of natural resources of rural areas.

The main strategic directions of the concept envisage the achievement of strategic and operational goals corresponding to various vectors of development, as well as their corresponding provision:

- Economic vector of sustainable development of rural areas (diversification of the rural economy; development of entrepreneurship and small forms of farming in the countryside; development of agritourism and recreation in the countryside; development of agricultural service cooperation).

- Social vector of sustainable development of rural areas (formation of the optimal rural settlement network and improvement of population reproduction in the countryside; ensuring employment and raising the standard of living of the rural population).

- Ecological vector of sustainable development of rural areas (rational use of natural resource potential of rural areas; man-made and ecological safety of rural areas).

- Institutional and financial and material support for the implementation of strategic directions of sustainable development of rural areas (improvement of management of sustainable development of rural areas; financial and credit support for sustainable development of villages and rural areas; material and technical support for the development of agricultural production; investment support for sustainable development of rural areas; innovative support; development of agricultural information and consulting activities).

Implementation of strategic and operational goals, according to various vectors of development, will have a positive impact on comprehensive rural development in the interests of society, and will contribute to the formation of competitive agriculture, a diversified rural economy, and a favorable environment for the rural population to live in.

The Institute of Economics of Nature Use and Sustainable Development of the National Academy of Sciences of Ukraine has developed the conceptual principles of sustainable development of natural resource potential, a national

paradigm and a program basis for the perspective sustainable development of Ukraine are proposed. Scientists have indicated that due to the reserve possibilities of activation of the policy of sustainable development, it is possible to create a fairly powerful basis for the future development of a new «green economy» [3].

Scientists of the institute have researched the economic mechanisms of the national environmental policy in the system of sustainable development. It is noted that one of the ways to implement the tasks of sustainable development is the formation of a «green economy» model capable of resisting the synergistic impact of environmental, financial and economic and other crises, which overlap one another. threaten the safe existence and sustainable development of both individual nations and entire regions. At the same time, the development of the system of environmental taxation is of great importance, in which environmental taxes should perform an ecological, not a fiscal function, i.e. contribute to the growth of the effectiveness of the use of natural resources and benefits, the improvement of the quality of the environment. It is emphasized the need to form mechanisms of local territorial policy of sustainable development through the creation of sustainable local spatial formations that territorial communities can become. The main task of such entities is the generation and reproduction of economic, ecological and social sustainability at the local territorial level [4, p. 212-216].

Therefore, the sustainable development of rural areas is impossible without the development of the main directions and mechanisms of this process, because only with the interaction of state administration bodies and the local community, it is possible to rationally choose the directions of development of a specific area, using useful elements of European experience. The state of economic growth of a particular region depends on the financial capacity of rural communities located in this territory and their ability to engage in the development of their region and also the effective organization of the life activities of its residents, using unused, internal sources of development of the territory. It should be noted that the inclusion of the growth of the financial capacity of rural territorial communities is a multifaceted component system of their financial potential and corresponds to the priorities of the implementation of modern decentralization, which is determined by state and regional policy on the platform of

a systemic approach, thus ensuring economic growth and development, both on the state, as well as at local levels [5, p. 122]. Optimum combination, as well as systematic and coordinated use of financial resources of all subjects capable of ensuring the financial independence of the rural area [6, p. 2893] is extremely important for the growth of the financial capacity of rural territorial communities. This coherence allows to improve the functions of production and non-production facilities, their economic and social status and, ultimately, to develop the business environment, taking into account the interests of interested parties in this process. At the same time, the effectiveness of the system for ensuring the inclusion of the growth of the financial capacity of rural territorial communities should take into account the needs and interests of the local population of the community in a separate district of a certain region of the country [5, p. 128].

Therefore, effective functioning and sustainable development of rural areas is impossible without increasing

interaction of the main spheres of the rural community and activation of internal reserves of rural areas. It is necessary to develop the production sphere of activity so that the village is represented not only by producers of agricultural products, so that enterprises of various organizational and legal forms work in the village and vary in size from FOP to agricultural holdings. – economic efficiency. Effective development of the production infrastructure is also required (transport connections, material and technical support of business entities and local residents, network of information and communication support), and effective functioning is absolutely impossible without the development of modern social infrastructure (educational institutions, medical institutions, cultural institutions, trade, household services, access to the Internet, various types of communication, regular passenger connections with other settlements). Local self-government bodies should be responsible for ensuring the development of their communities.

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UDC 334.012.61-022.51:338.246.8

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-02>**DEVELOPMENT OF SMALL BUSINESS IN THE POSTWAR PERIOD****¹Dashko I.M., ¹Mykhailichenko L.V., ¹Cherep O.H., ²Oleynikova L.H.**¹Zaporizhzhia National University

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Key words:

business, tax system, taxes, government, war, Victory, loans, enterprises, tender programs business, tax system, government, war, Victory, loans, enterprises, tender programs.

The article analyzes the activities of Ukrainian enterprises since the beginning of the war. An assessment of the activities of Ukrainian enterprises that have ceased their operations or temporarily suspended them is provided. The general state of Ukrainian business is studied, which shows that Ukrainian business is going through difficult times, accompanied by rising prices for energy, transportation, materials and raw materials. The positive aspects for Ukrainian business are characterized. The author describes the state support, which is accompanied by the provision of benefits and loans for development. The author analyzes the actions taken by the Ukrainian government to support business since the beginning of the full-scale war. The steps and actions of the state in supporting business development in Ukraine are characterized. The situation on the credit market in Ukraine is studied. The number of loans granted to Ukrainian entrepreneurs in 2021-2023 is analyzed. The tax payment system is characterized and a number of adjustments to the tax system of Ukraine are revealed. The structure of destroyed buildings by region in Ukraine from the beginning of the war to the end of 2022 is analyzed. The principles of the tender program for enterprises are highlighted. An alternative algorithm for creating a tender program for the participation of construction and furniture enterprises in the development of Ukraine after the Victory is presented. The conclusions on the development of small business in the postwar period are presented.

РОЗВИТОК МАЛОГО БІЗНЕСУ У ПОВОЄННИЙ ПЕРІОД**¹Дашко І.М., ¹Михайліченко Л.В., ¹Череп О.Г., ²Олейнікова Л.Г.**¹Запорізький національний університет

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Ключові слова:

бізнес, податкова система, податки, уряд, війна, Перемога, кредити, підприємства, тендерні програми.

Проаналізовано діяльність українських підприємств з початку війни. Надано оцінку діяльності українських підприємств, які припинили свою діяльність або тимчасово призупинили. Досліджено загальний стан українського бізнесу, де видно що український бізнес переживає тяжкі часи, які супроводжуються зростанням цін на енергоносії, перевезення, матеріали та сировини. Охарактеризовано позитивні сторони для українського бізнесу. Надано характеристику державної підтримки, яка супроводжується наданням пільг та кредитів на розвиток. Досліджено дії, які були зроблені українським урядом на підтримку бізнесу з початку повномасштабної війни. Охарактеризовано кроки та дії держави у підтримці розвитку бізнесу в Україні. Досліджено ситуацію на ринку кредитування в Україні. Проаналізовано кількість кредитів наданих підприємцям України за 2021-2023 р. Охарактеризовано систему сплати податків та розкрито низку коректив в Податковій системі України. Проаналізовано структуру зруйнованих будинків за областями в Україні з початку війни і до кінця 2022 року. Виділено принципи тендерної програми для підприємств. Наведено альтернативний алгоритм створення тендерної програми для участі будівельних та меблевих підприємств у розбудові України після Перемоги. Надано висновки щодо розвитку малого бізнесу в післявоєнний період.

Problem statement

Ukrainian businesses are the «blood vessels» of Ukraine, as the payment of taxes is the main revenue to the state budget. Since the outbreak of the war in Ukraine, thousands of companies have ceased operations, while others have been forced to relocate their facilities and re-qualify their activities. No matter how hard the Russian Federation tries to destroy Ukrainian business, most of our companies have not only continued to operate, but have also managed to make profits and pay taxes. That is why the study of small business development after the war is a relevant topic for this research, because such business is flexible and the most «resilient» and our government needs to do everything possible for its further development. The study of small business development after the war is a completely new area, as we have not yet had experience in rebuilding business after military operations, which is why this topic is completely unexplored and unstudied, which once again proves its relevance.

Analysis of recent research and publications

A small number of scholars have studied the issues of business support in the postwar period, in particular: I. Goncharenko, V. Dykan, I. Klimova, K. Kucheriava, T. Melnyk, N. Frolova, I. Khmarska, Y. Tsymbalis, and others. Thus, I. Khmarska, K. Kucheryavata and I. Klimov emphasized that the main priority for business in recovering from the consequences of the war remains cooperation between the government and business representatives to create a recovery strategy and the best tactics. Taking into account the information obtained as a result of research by scientists, it is worth noting that the issue of ensuring the prospects for the recovery of Ukrainian business in the post-war period, as well as the practical aspect, has hardly been considered, so this topic is relevant and little studied.

Formulation of the article’s objectives

The purpose of this article is to highlight the prospects for the recovery of Ukrainian business in the post-war period.

Summary of the main research material

The war in Ukraine has led not only to huge destruction of infrastructure and deaths of civilians, but also to the total collapse of Ukraine’s business, which was literally destroyed, so to understand the overall picture of the state of Ukraine’s business, we propose to analyze the activities of enterprises (Fig. 1).

As can be seen from the data in Fig. 1, almost half of Ukrainian enterprises ceased their operations, and 29% temporarily suspended their activities, mostly those located in the occupied territories.

Having examined the general state of Ukrainian business, it is clear that Ukrainian business is going through difficult times, accompanied by rising prices for energy, transportation, materials and raw materials, all against the backdrop of rising exchange rates and inflation, which has reached a critical level over the past six months.

Government support, which is accompanied by the provision of benefits and loans for development, is positive for Ukrainian business, as entrepreneurs are the main taxpayers to the state budget.

We propose to examine a number of actions taken by the Ukrainian government to support business since the beginning of the full-scale war (Figure 2).

It is safe to say that the Ukrainian government has taken the most beneficial steps to develop Ukrainian business and support it during the war. Since the beginning of the war, the government has abolished excise taxes on fuel, which has helped to stabilize prices and halt inflation. Another important step was the expansion of the 5-7-9 program among commercial banks, which was used by most Ukrainian entrepreneurs. Since the beginning of the war, more than 800 businesses have been relocated to western Ukraine, which have successfully continued their operations and support the Ukrainian economy. An important step taken by the government was the development of an electronic employment program called «Job in Action,» which has helped 20,000 unemployed Ukrainians find jobs [3]. Also, since the beginning of the war, the President of

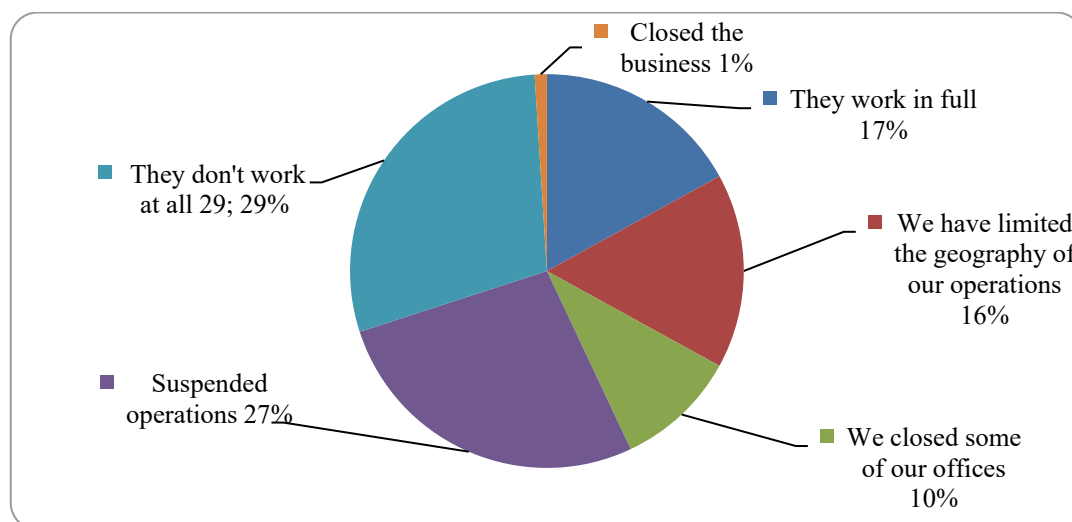


Figure 1 – Analysis of the activities of Ukrainian enterprises since the beginning of the war [1]

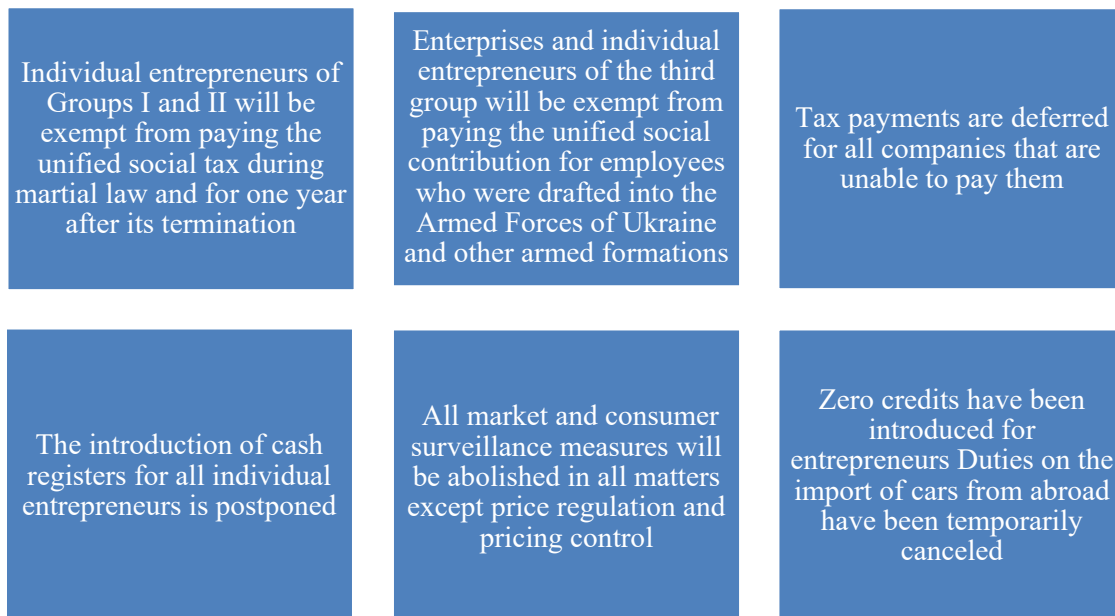


Figure 2 – Steps and actions of the state to support business development in Ukraine [2]

Ukraine, together with the New York Stock Exchange, has developed an «Innovative Program for Investments in the Development of Ukrainian Business» [4].

Since the beginning of the war in Ukraine, the government has modified the tax payment system and developed a number of adjustments to the tax system of Ukraine (Fig. 3).

As can be seen from the above, the Ukrainian authorities made a number of adjustments to taxation in a short period of time, which had a positive impact on business development, as the tax burden was reduced, enabling businesses to recover from the crisis.

The war also had a huge impact on the banking sector, which, since the beginning of Russia's full-scale invasion, has been experiencing times of unstable exchange rates and rising NBU discount rates, so we propose to examine the situation in the Ukrainian lending market. To begin with, it is advisable to analyze the loans that commercial banks provided to Ukrainian businesses during the year and in the first month of the war. Figure 4 provides an opportunity to assess the relationship between the state and banks in supporting business development, as most loans were issued under preferential programs aimed at supporting business. Today, business is the future of our country, working not only to make a profit but also to support the Ukrainian economy in the fight against the occupier.

Fig. 4 shows that despite the war, Ukrainian banks not only continued to issue loans but also increased their amounts. Analyzing the period of 2021-2022, we see that the amount of loans in this period was significantly lower than at the beginning of the full-scale war in 2022. This figure demonstrates the support of business by the banking sector and the state, which is extremely important for the growth and development of the economy.

The actions taken by the Ukrainian government since the beginning of the war in Ukraine can be equated to

the actions taken during all the years of Ukraine's independence. In such a short period of time, the government has done even more, which shows that it understands the importance of business for Ukraine as the main source of funds for the country's budget and a driver of economic growth.

As for the development of small business in the period after the war, we believe that the main focus should be on the development of the construction and furniture industries, as Ukrainians will need to restore their buildings and purchase furniture. The construction industry should be in great demand and important for the development of our country, but it is necessary and important to monitor the integrity of construction companies and state funds and make everything as transparent as possible.

The reason to consider the construction and furniture industries as one of the key ones after the war is the daily destruction of infrastructure by the Russian military (Fig. 5).

Figure 5 shows that about 100,000 residential buildings have already been destroyed since the beginning of the war, and they will definitely need to be restored after the Victory. Kyiv, Kharkiv, and Donetsk regions suffered the most damage, as they are subject to daily attacks by the Russian Federation.

It is proposed to create tender platforms for companies wishing to participate in the development of the country and, at the same time, to create a group of independent experts to check the documentation and tender prices. The same applies to furniture companies, for which similar programs will also be created. The creation of such tender programs will help companies not only to resume their operations after the war, but also to develop their business, as there will be more than enough work.

Thus, the tender program for enterprises should be based on the following principles:

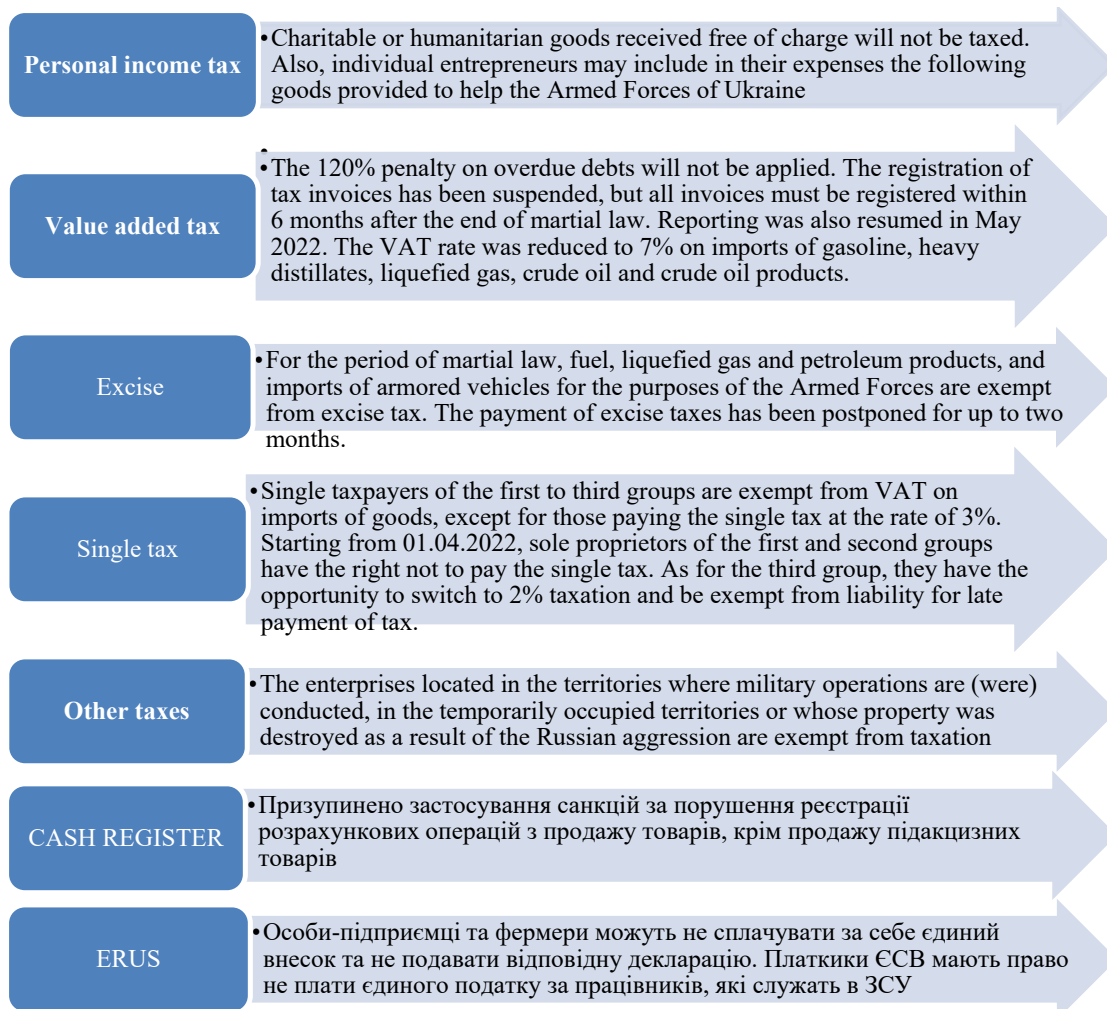


Figure 3 – Characteristics of tax payments in Ukraine since the beginning of the war

Source: developed by the authors on the basis of data analysis [5]

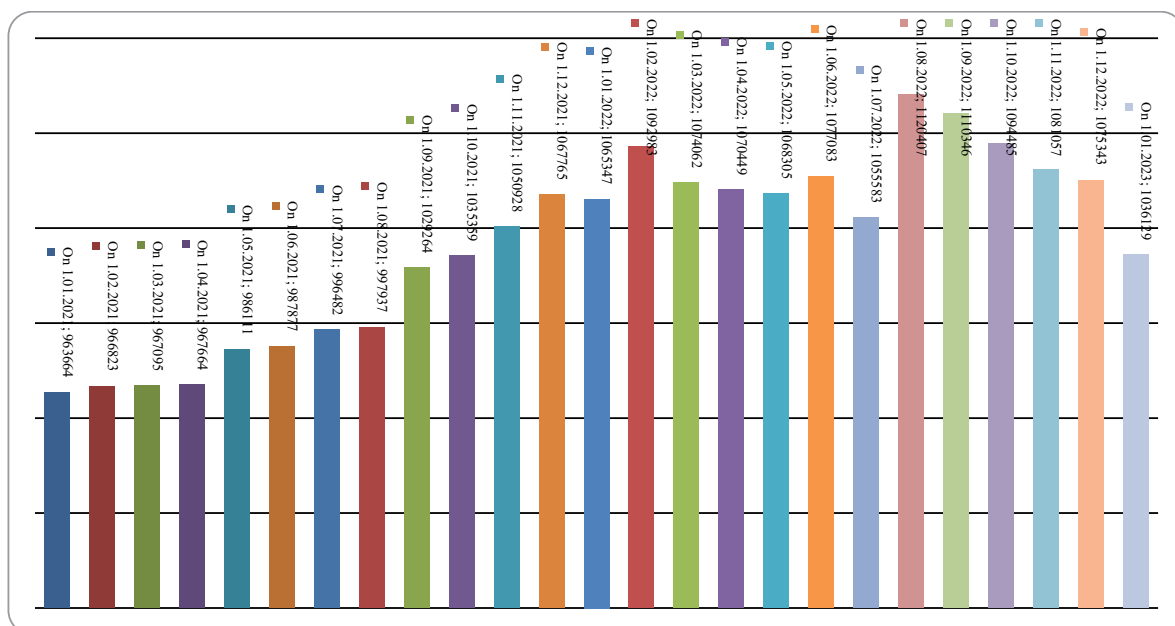


Figure 4 – Number of loans granted to Ukrainian entrepreneurs in 2021-2023, UAH million [6]

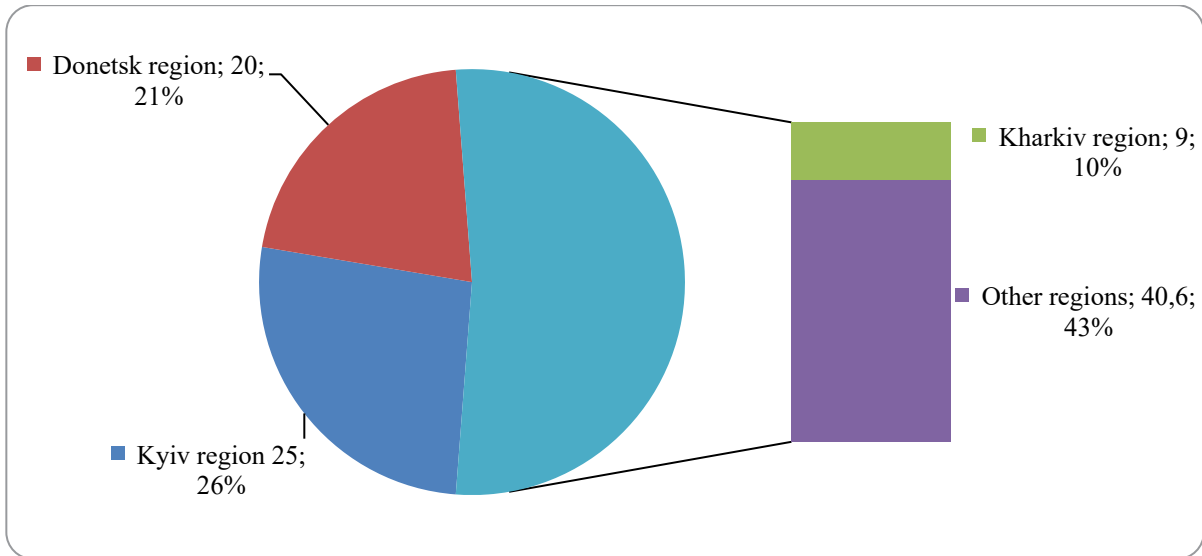


Figure 5 – The structure of destroyed houses by region in Ukraine from the beginning of the war to the end of 2022, thousand houses [6]

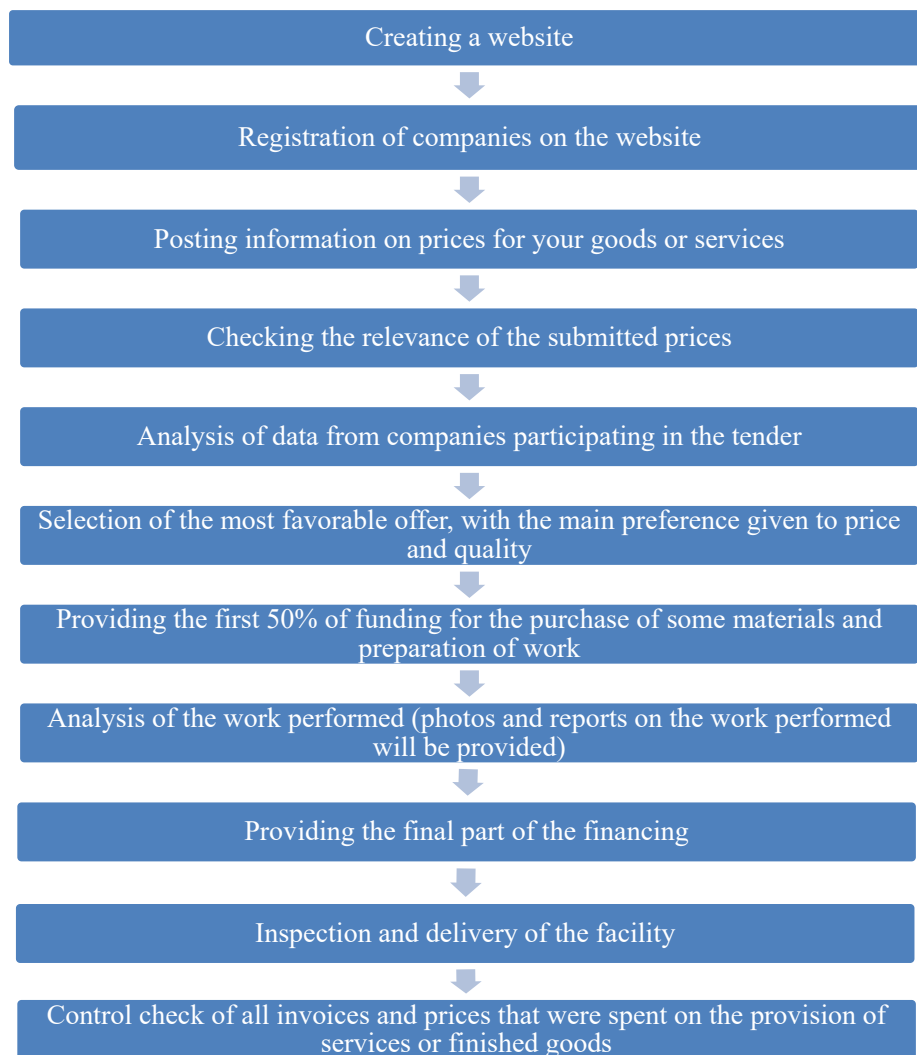


Figure 6 – Algorithm for building a tender program for rebuilding Ukraine after the victory

Source: developed by the authors

1. Integrity – all prices set by companies for materials, finished products or services will be checked by the commission.

2. Free participation – any company can participate in tenders, regardless of their size or management status.

3. Results-oriented – the work will be completed as soon as possible.

4. Quality – all delivered goods, materials or services must be of the highest quality.

5. Belief in a better future – nothing sets you up for a positive result like the belief that everything will change for the better.

To create tender programs, it is necessary to involve programmers who, on the basis of the ProZorro website, should create a simple and accessible website for companies wishing to participate in the tender.

Thus, we propose an alternative algorithm for creating a tender program for the participation of construction and furniture companies in the development of Ukraine after the Victory (Fig. 6).

It should be noted that every tender program should have such an algorithm, as this will help to avoid the use of various corruption schemes and agreements that unfortunately still exist today.

Thus, the development of small business after Ukraine's victory lies in the rebuilding of its damaged infrastructure, because before rebuilding the country, it is necessary to return all Ukrainian citizens who were forced to leave due to the full-scale invasion of Ukraine by Russia, in particular because of the destruction of Ukrainian citizens' homes.

Conclusions

Having studied the prospects for small business development in Ukraine after the end of the war, the following conclusions can be drawn:

1. During the war, thousands of businesses closed in Ukraine, and even more retrained and moved their facilities from the war zone to other parts of Ukraine.

2. The state made every effort to support Ukrainian business by removing certain taxes and simplifying the provision of state loans, which encouraged entrepreneurs to continue their activities.

3. The future of our small business is the development of the country, so the construction and furniture industries will be key, as they will be able to repair the damaged homes of millions of Ukrainians through open and competitive bidding programs.

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UDC 658:005.332.4]:338.246

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-03>

INCREASING THE COMPETITIVENESS OF ENTERPRISES AS A PREREQUISITE FOR THE GROWTH OF ECONOMIC SECURITY IN THE CONTEXT OF DIGITALIZATION OF THE ECONOMY¹

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Key words:

competition, competitiveness, competitive advantages, digitalization of the economy, economic security, efficiency, innovation.

The article determines that in the context of a changing market environment, an important issue for enterprises is the formation of competitive advantages. It is established that increasing the competitiveness of enterprises will ensure not only an improvement in efficiency, but also an increase in economic security. A study of scholars' approaches to the definition of competitiveness is carried out. Based on the results of the study, approaches to defining the essence of economic security are allocated. An analysis of the indicators of competitiveness and economic security is carried out on the example of the enterprise LLC «Shchedro». It is determined that competitiveness is one of the factors influencing the state of economic security of enterprise. The competitiveness index of the EU and Ukraine is studied. The problems of competitiveness and economic security of Ukrainian enterprises are identified. The directions of digitalization of enterprises, which will help to increase competitiveness, are allocated. Proposals are made to improve the competitiveness of enterprises as a component of economic security, namely: concluding contracts with new suppliers; increasing the range of products; reducing production costs through the use of innovative technologies; improving the skills of employees; investing in the development of new products; automating business processes; studying the experience of foreign enterprises; expanding markets for products; implementing software; quality management; improvement of personnel policy; expanding the range of products. The article identifies the tools for improving competitiveness, which will allow forming competitive advantages, contribute to improving economic security and, as a result, increase the profitability of operation. The tools for increasing competitiveness include: strategic partnerships; international marketing campaign; flexible production processes; advertising campaigns; education and training.

ПІДВИЩЕННЯ КОНКУРЕНТОСПРОМОЖНОСТІ ПІДПРИЄМСТВ ЯК ПЕРЕДУМОВА ЗРОСТАННЯ ЕКОНОМІЧНОЇ БЕЗПЕКИ В УМОВАХ ЦИФРОВІЗАЦІЇ ЕКОНОМІКИ

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Ключові слова:

конкуренція, конкурентоспроможність, конкурентні переваги, цифровізація економіки, економічна безпека, ефективність, інновації.

У статті визначено, що в умовах змінності ринкового середовища важливим питанням для підприємств є формування конкурентних переваг. Встановлено, що підвищення конкурентоспроможності підприємств забезпечить не лише покращення ефективності роботи, але й зростання економічної безпеки. Проведено дослідження підходів вчених до визначення поняття конкурентоспроможності. За результатами дослідження виокремлено підходи до визначення сутності економічної безпеки. Проведено аналіз показників конкурентоспроможності та економічної безпеки на прикладі підприємства

¹ Disclaimer («Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or [name of the granting authority]. Neither the European Union nor the granting authority can be held responsible for them.»)

ТОВ «Щедро». Встановлено, що конкурентоспроможність виступає як один із чинників впливу на стан економічної безпеки підприємства. Досліджено індекс конкурентоспроможності країн ЄС та України. Визначено проблеми конкурентоспроможності та економічної безпеки підприємств України. Виокремлено напрями цифровізації підприємств, що сприятиме підвищенню конкурентоспроможності. Запропоновано пропозиції до підвищення конкурентоспроможності підприємств як складової економічної безпеки, а саме: заключення договорів з новими постачальниками; збільшення асортименту продукції; зниження витрат на виробництво продукції шляхом застосування інноваційних технологій; підвищення кваліфікації робітників підприємства; інвестиції в розробку нових продуктів; автоматизація бізнес-процесів; дослідження досвіду іноземних підприємств; розширення ринків збуту продукції; впровадження програмного забезпечення; якісний менеджмент; вдосконалення кадрової політики; розширення асортименту продукції. Визначено інструменти підвищення конкурентоспроможності, що дозволить сформувати конкурентні переваги, сприятиме покращенню економічної безпеки та, як результат, підвищенню прибутковості функціонування. Серед інструментів підвищення конкурентоспроможності визначено: стратегічні партнерства; міжнародна маркетингова кампанія; гнучкі виробничі процеси; рекламні кампанії; навчання та тренінги.

Statement of the problem

Increasing the level of competition in the domestic and foreign markets requires enterprises to continuously improve in order to form competitive advantages. One of the areas of competitive advantage formation is the automation of business processes, which affects not only the improvement of financial performance, but also the level of economic security. In the context of the digitalization of the economy, enterprises are faced with the task of adapting to new realities and using digital tools to increase efficiency and competitiveness. In addition, competitiveness is one of the factors influencing the state of economic security, which makes the topic of the study relevant.

Analysis of recent studies and publications

The issues of increasing competitiveness, ensuring economic security and the introduction of digital technologies have been studied in the following works: Voronkova A. E. [1]; Kuznetsova K. O. [2]; Oberemchuk V. F. [3]; Partuta T. O., Fesenko T. V. [4]; Bugai V. Z., Sidorenko V. O. [5]; Hapak N. M. [6]; Ohrenych Yu. O., Kurdupa V. S. [10]; Dergachova V. V., Vorzhakova Y. P., Khlebynska O. I. [11]; Prystemskyi O. S., Hryvkivska O. V., Sakun A. Zh. [13]; Stanislavyk O. V. [15].

At the same time, the issue of determining the tools for increasing competitiveness, directions of digitalization of enterprises, the role of competitiveness as a factor of influence on the state of economic security remains unaddressed, which requires more detailed research.

Objectives of the article

The purpose of the article is to study the indicators of competitiveness and economic security on the example of Shchedro LLC, to identify the problems of competitiveness, economic security and the formation of directions for the digitalization of enterprises, proposals for increasing competitiveness, and to identify tools for increasing competitiveness.

The main material of the research

The issue of increasing the competitiveness of enterprises in the context of the digitalization of the economy is extremely important. In addition, competitiveness is one of the factors influencing the economic security of an enterprise. The use of digital technologies affects the processes of production, marketing and management. In the direction of forming competitive advantages, it is important to study the experience of the European Union countries. Taking into account the experience of EU countries that have already gone this way can serve as a valuable source of experience for Ukrainian enterprises. One of the ways to build competitive advantages is to introduce digital technologies into production, which will allow to produce quality products and ensure profit growth. Increasing competitiveness and stabilizing economic security will contribute to the efficient functioning of enterprises and their development.

There are different approaches of scientists to the definition of “competitiveness” (Table 1).

Thus, it is important for an enterprise to manage competitiveness in order to form competitive advantages. We believe that the competitiveness of an enterprise should be considered as the ability of an enterprise to produce quality products or provide services to meet customer needs, which will expand markets for products, highlight strengths, as well as a set of competitive advantages, a factor in the growth of economic security, which will contribute to the effective functioning and development in the context of digitalization.

In order to form competitive advantages, a company must take into account the influence of market environment factors, use its own capabilities and strengths, and identify threats and risks. Given that competitiveness is a factor in the growth of economic security, it is advisable to study this concept and identify approaches (Fig. 1).

“The economic security of an enterprise is a complex characteristic, which means the level of protection

Table 1 – Definition of the essence of "competitiveness"

Voronkova A. E.	"Competitiveness is a complex phenomenon, and the overall level of a country's competitiveness can only be improved through a wide range of reforms in various areas" [1].
Kuznetsova K. O.	"Competitiveness (literally translated as "the ability to compete") is the availability of certain advantages (resources) and the ability and ability to use them correctly in competition with other "players" to achieve their goals" [2].
Oberemchuk V. F.	"Competitiveness is a complex comparative characteristic of an enterprise that reflects the degree of superiority of the set of evaluative indicators of an enterprise's performance that determine its success in a particular market over a certain period of time in relation to the set of indicators of competitors' enterprises" [3].
Partuta T. O., Fesenko T. V.	"Competitiveness is the ability of an enterprise to offer a product that meets certain requirements of the buyer, i.e. a certain quality, in the right quantity, on time and on more favorable terms of delivery than competitors" [4, p. 92].
Stanislavyyk O. V.	"Ensuring competitiveness is a systematic, consistent, relevant process that provides organizational and functional support for strategic management and rational measures to improve competitiveness in the industrial complex based on various indicators of competitive advantage" [15].

Source: compiled by the authors based on [1; 2; 3; 4; 15]

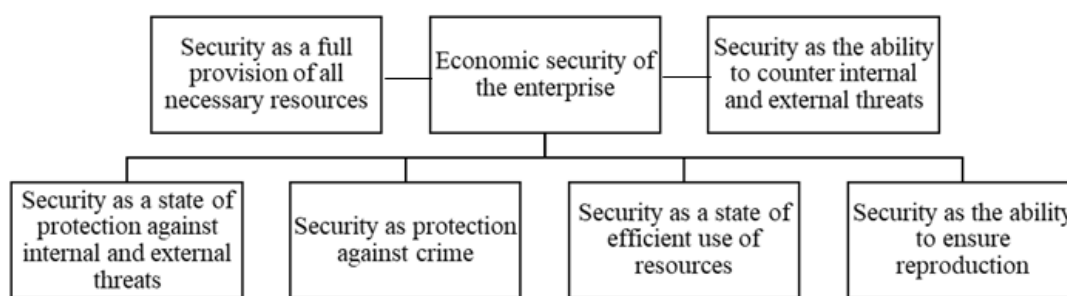


Figure 1 – Approaches to defining the concept of “economic security”

Source: compiled by the authors based on [6; 9]

of all types of enterprise potential from internal and external threats, which ensures stable functioning and effective development and requires management by the enterprise management” [6]. Some approaches to defining the concept of economic security of an enterprise are shown in Fig. 1.

Thus, there are different approaches to the definition of economic security, and some researchers emphasize elements of economic resilience to external and internal shocks, while others focus on ensuring social balance and human capital development. Most scholars are of the opinion that economic security should be viewed as a systematic approach to ensuring sustainable economic development, taking into account threats, risks, and the impact of market environment factors in order to ensure the stability of enterprises.

It should be noted that the competitiveness of an enterprise plays an important role in enhancing the economic security of enterprises and the country as a whole, in particular: the rational use of resources, the quality of raw materials and supplies. This helps to save resources and ensures production efficiency; introduction of innovations and technologies into production helps to improve product quality, minimize costs, expand sales markets, and improve financial performance; the enterprise’s entry into international markets helps to reach new consumers and strengthen positions; creation of new jobs, which is important for social stability and unemployment reduction; ensuring financial stability through growth of performance

indicators, timely identification of risks, neutralization of their influence and adaptation to the market environment; professional development of personnel through training of employees; attraction of both internal and external investments; protection of the enterprise from the negative influence of external factors. In general, the competitiveness of enterprises is an important factor for ensuring economic security, as it determines the ability to attract investment and ensure stable economic development.

The study of indicators of competitiveness and economic security on the example of the enterprise “Shchedro” LLC for 2019-2022 is carried out (Tables 2-3).

After analyzing the competitiveness indicators of Shchedro LLC for 2022 compared to 2021, the following trends can be identified: return on equity increased by 59.61%, indicating positive changes in production activities; autonomy ratio increased by 15.38%, indicating an improvement in financial stability; absolute liquidity ratio decreased by 97.30%, indicating the company’s limited ability to immediately pay its obligations; return on sales increased by 107.14%; the relative product competitiveness indicator increased by 52.63%, indicating a high level of competitiveness. In calculating the integral competitiveness indicator, we used the method of Furik V. G., Titova K. S. [16], according to which, if the value of the integral competitiveness indicator is greater than 0.27, the enterprise has a high level of competitiveness.

In general, the enterprise is competitive, but there is a need to improve liquidity indicators. Recommendations

Table 2 – Competitiveness indicators of "Shchedro" LLC for 2019-2022

Figures	2019	2020	2021	2022	Relative deviation of 2022 to 2021, %.
1. Efficiency of production activities					
1.1. Return on equity, UAH	46,74	42,20	42,54	67,90	59,61
1.2. Product profitability, %.	0,28	0,21	0,16	0,41	156,25
1.3. Labor productivity	-0,06	-0,01	-0,01	-0,01	0,00
2. Financial condition of the enterprise					
2.1. Коефіцієнт автономії	-0,08	-0,11	0,13	0,15	15,38
2.2. Absolute liquidity ratio	0,02	0,26	0,37	0,01	-97,30
2.3. Working capital turnover ratio	3,48	2,16	2,86	1,75	-38,81
3. Efficiency of sales and promotion organization					
3.1. Return on sales, %.	0,22	0,17	0,14	0,29	107,14
3.2. Relative indicator of product competitiveness	50,60	44,88	46,19	70,50	52,63
Integral indicator of competitiveness	0,28	0,28	0,29	0,38	31,03
The level of competitiveness	high	high	high	high	

Source: calculated based on [7; 12]

Table 3 – Economic security indicators of "Shchedro" LLC for 2019-2022

Figures	2019	2020	2021	2022	Relative deviation of 2022 to 2021, %.
Indicators that determine financial stability:					
Financial stability ratio	-0,08	-0,1	0,14	0,18	28,57
Coverage ratio of own working capital	-0,19	-0,18	0,06	0,12	100,00
Gearing ratio or financial risk ratio	-13	-9,75	6,92	5,7	-17,63
Indicators that determine solvency:					
Absolute liquidity ratio	0,02	0,26	0,37	0,01	-97,30
Quick ratio	0,64	0,71	0,79	0,87	10,13
Current liquidity ratio	0,87	0,86	1,1	1,16	5,45
Indicators that determine business activity:					
Receivables turnover ratio	12,8	21,19	12,42	23	85,19
Inventory turnover ratio	9,68	10,52	8,47	4,91	-42,03
Return on equity	46,74	42,2	42,54	67,9	59,61
Integral indicator of economic security	0,38	0,64	0,39	0,70	79,49

Source: calculated based on [7]

may include optimizing working capital management and improving strategies for paying off liabilities to improve solvency.

In order to ensure economic security, liquidity management and improved financial management strategies are advisable. Such measures will help ensure an increased level of security, identify areas of development, and support the growth of economic resilience in the future.

According to the data in Table 3, it can be noted that in 2022, compared to 2021, there was a positive trend in the financial condition of the enterprise and the financial stability ratio increased by 28.57%. The provision of own working capital increased by 100%, which indicates an improvement in the financial strategy. The decrease in the financial risk ratio by 17.63% indicates a decrease in the level of dependence on borrowed funds. At the same time, the absolute liquidity ratio decreased by 97.30%, quick and current liquidity indicators increased by 10.13% and 5.45%, respectively, reflecting changing trends in the company's solvency.

In order to improve the studied indicators, it is necessary to investigate the competitiveness index of the EU

countries and determine the advantages of their enterprises compared to Ukrainian ones. Taking into account the data of Fig. 2, it should be noted that Ukraine's place in the competitiveness index ranking has improved during the period under review, i.e., Ukrainian enterprises are actively developing and increasing their competitive advantages in the market. It should also be noted that in 2022-2023, no study of Ukraine's competitiveness was conducted due to martial law.

It should be noted that the performance of EU enterprises is much better due to the following advantages: most large customers prefer enterprises from safe areas; European enterprises have more advanced technologies; higher quality standards; European countries have well-known brands that consumers buy without paying attention to quality and price; greater support for enterprises by the state, provision of tax benefits, loans on favorable terms; high level of investment in enterprises.

In order to develop ways to improve the competitiveness of Ukrainian enterprises, it is necessary to consider the problems in terms of competitiveness and economic security (Table 4).

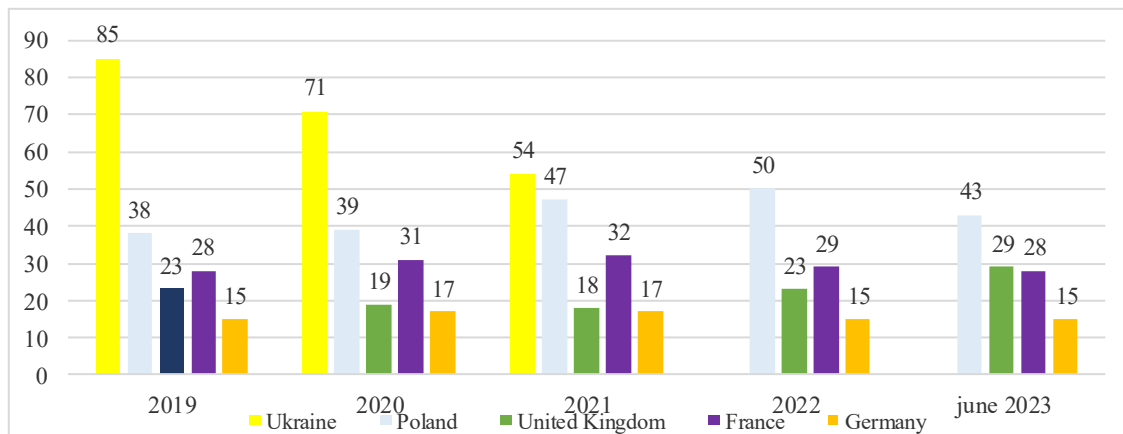


Figure 2 – Competitiveness Index of the EU and Ukraine in 2019-2023 by ranking

Source: compiled by the authors based on [8]

Table 4 – Problems of competitiveness and economic security of Ukrainian enterprises

Problems of competitiveness:	
Competition in the market	Significant competition among companies may lead to a reduction in the number of customers, as this may affect the number of people using products or services
Innovations	Lack of innovation may affect the company's ability to adapt to changes in the market and the loss of competitive advantage
Marketing and brand	Weak marketing and low advertising activity can lead to low brand awareness and lagging behind competitors
Problems of economic security:	
Financial stability	The financial stability of the company is impaired due to the high level of accounts receivable
Production efficiency	Low productivity and high costs can affect production efficiency and profitability
Legal and regulatory risks	Changes in legislation and regulation may create uncertainty and additional costs for the company

Source: compiled by the authors

To increase the competitiveness of enterprises in the context of the digitalization of the economy, we can take into account the experience of EU countries and offer the following recommendations: providing enterprises with access to advanced digital technologies, such as artificial intelligence, data analytics, and the Internet of Things; promoting the introduction of digital innovations through financial incentives and subsidies; implementing European digitalization standards to facilitate the exchange of information between enterprises; strengthening measures to protect against cyber threats and creating cyber processing centers.

Along with this, in order to increase competitiveness in the digitalized economy, companies can take into account several strategic proposals based on the experience of the European Union. First, it is important to improve IT infrastructure by implementing modern technologies to increase the productivity of business processes. In addition, training and development of personnel aimed at increasing the digital literacy of staff can ensure more efficient use of new technologies. Secondly, creating innovation ecosystems and partnering with startups can help stimulate an innovative environment.

In order to stimulate innovation in the field of digitalization, it is important to provide financial support for research and development. The creation of innovation clusters and technology parks will help facilitate the exchange

of ideas and the development of innovative solutions. In general, these proposals are aimed at creating a favorable environment for the development of the digital economy and increasing the competitiveness of enterprises, based on the best practices of EU countries.

“In the context of Russia’s full-scale invasion of Ukraine, digital transformations in our country in September 2023 were aimed at expanding digital opportunities to achieve the sustainability of the domestic economy” [14].

The digitalization of enterprises is an important task in the modern business environment, as it allows to increase competitiveness. The following are the areas of digitalization for enterprises:

1. e-commerce and online sales, which includes the expansion or implementation of an e-commerce mechanism, as well as the use of analytics to continuously improve the sales process and increase customer loyalty;
2. optimization of business processes through the implementation of CRM systems to improve customer interaction and the use of ERP systems to integrate and automate key management stages;
3. artificial intelligence and analytics. Analytical tools are used to process large amounts of data, providing valuable information for making informed decisions;
4. implementation of cybersecurity tools to ensure the security of corporate information resources.

These areas allow enterprises to optimize internal processes, ensure more efficient information exchange, improve the quality of services and goods, and adapt to the changing business environment, which contributes to their competitiveness.

The following measures can be taken to improve the competitiveness of an enterprise: concluding contracts with new suppliers; increasing the range of products; reducing production costs through the use of innovative technologies; improving the skills of employees; investing in the development of new products; automating business processes; studying the experience of foreign enterprises; expanding markets for products; implementing software; quality management; improving personnel policy; expanding the number of employees; and so on.

Among the tools to increase the competitiveness of enterprises are the following: implementation of an effective advertising strategy to enter the Polish market, using unique aspects of products that are attractive to the Ukrainian community; entering into partnerships with supermarket chains in Poland to ensure wide distribution of products; ensuring flexibility of production processes; development of creative advertising campaigns on various media platforms, participation in exhibitions, fairs and industry events to present products and establish a network of contacts; implementation of Lean principles to eliminate unnecessary costs and improve product quality; holding regular trainings for personnel on the latest technologies, quality standards and production management.

Conclusions

Based on the results of the study, it is determined that competitiveness is one of the factors influencing the state of economic security of an enterprise and contributes to its effective functioning. The problems of competitiveness and economic security of enterprises are identified and the directions of digitalization are proposed. The author provides tools for increasing competitiveness, the implementation of which will allow to form competitive advantages and increase the level of economic security.

In the context of digital transformation, based on the experience of the European Union, several key areas have been identified: the development of digital infrastructure that creates a favorable environment for the effective operation of enterprises; support for research and development in the field of innovation, the introduction of incentives such as tax breaks and grants for innovative projects will help attract investment; and the attraction of qualified personnel. Finally, creating a favorable legal environment for the development of digital technologies, including intellectual property protection and cybersecurity, is a necessary element of successful transformation.

All of this will contribute to the competitiveness of Ukrainian enterprises, the country's economic development, and strengthening its position in the global economic space. Adapting the European experience will be a step towards building Ukraine's sustainable integration into the global economy and enhancing its economic security.

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UDC 330.341.1:[338.467:656.8]

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-04>**FORMATION AND REALIZATION
OF THE INNOVATIVE POTENTIAL OF LLC “NOVA POSHTA”****Cherep A.V., Karmazina V.S.***Zaporizhzhia National University**Ukraine, 69600, Zaporizhzhia, Zhukovsky str., 66**viktorija240401@gmail.com*

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Key words:investment, innovation,
innovation terminal, scientific and
technological progress, enterprise.

The article considers the essence of innovation activity and analyzes the need for entrepreneurship to focus on intensifying development within the framework of scientific and technological progress and digitalization of services. The main aspects of management that can lead to the successful implementation of innovations in companies are identified. The current state of development of LLC «Nova Poshta» as a leader in the field of logistics and freight transportation in the domestic market is analyzed. The innovative terminals of the company, which are already operating or under construction, as well as the latest solutions, such as the Kyiv Innovation Terminal, are studied. The author assesses the dynamics of current and non-current assets of LLC «Nova Poshta», the sufficiency of retained earnings to cover its own needs and allocate funds for development in the context of a full-scale Russian-Ukrainian war, and describes the property status of the company. The open innovation platform «NovaTech», which began operating in the current year 2023, is studied, including the companies that are partners (trademarks) in the innovation industry. The author's own calculations of liquidity and solvency provided an assessment of the financial stability of LLC «Nova Poshta», and the assessment of the probability of bankruptcy using the models of E. Alman, O. Tereshchenko, and R. Lis recorded a low level of risk for the period of 2019-2022. The author proposes a novel solution for forming a new type of communication with technology parks of Ukraine, which nowadays have state financial support and are a magnet for investment, able to quickly generate innovations that will increase the competitiveness of an enterprise involved in potential cooperation with a technology park.

ФОРМУВАННЯ ТА РЕАЛІЗАЦІЯ ІННОВАЦІЙНОГО ПОТЕНЦІАЛУ ТОВ «НОВА ПОШТА»**Череп А.В., Кармазіна В.С.***Запорізький національний університет**Україна, 69600, м. Запоріжжя, вул. Жуковського, 66***Ключові слова:** інвестиції,
інновації, інноваційний
термінал, науково-технічний
прогрес, підприємство.

У статті розглянуто сутність інноваційної діяльності та проаналізовано необхідність акцентованості підприємництва на активізації розвитку в межах науково-технічного прогресу та цифровізації послуг. Виявлено основні аспекти управління, здатні призвести до успішної реалізації інновацій в компаніях. Проаналізовано актуальний стан розвитку ТОВ «Нова Пошта» як лідера сфери логістики та вантажних перевезень на вітчизняному ринку. Досліджено інноваційні термінали компанії, котрі вже функціонують або перебувають на стадії будівництва, а також новітні рішення, наприклад Київського інноваційного терміналу. Проведено оцінку динаміки оборотних і необоротних коштів ТОВ «Нова Пошта», достатності нерозподіленого прибутку для покриття власних потреб та направлення коштів на розвиток в умовах повномасштабної російсько-української війни, а також описано майновий стан компанії. Досліджено платформу відкритих інновацій «NovaTech», яка почала функціонування у поточному 2023 році, в тому числі описано компанії, які є партнерами (торгові марки) з інноваційної галузі. Власні розрахунки ліквідності та платоспроможності надали оцінку

фінансової стійкості ТОВ «Нова Пошта», а оцінка імовірності банкрутства за допомогою моделей Е. Альмана, О. Терещенка, Р. Ліса зафіксувала низький рівень ризику та періоду 2019-2022 рр. Наостанок, сформульовано антикризові заходи, які суб'єкт господарювання може взяти до уваги у першу чергу. Запропоновано новітнє рішення формування нового виду комунікації із технологічними парками України, які у наш час мають державну фінансову підтримку та є магнітом для інвестицій, здатні швидко згенерувати інновації, які підвищують конкурентоспроможність підприємства, включеного у потенційну співпрацю із технопарком.

Statement of the problem

In today's world, innovation has become a key factor in the development and competitiveness of enterprises in various industries. This is especially true for companies operating in the logistics and postal services sector. This industry is developing dynamically, changing traditional approaches to the organization and provision of services, and one of the leading companies in this segment is LLC «Nova Poshta». The analysis of investment support for innovative development is a particularly important task that will determine how effective the company's strategic decisions are and will help to formulate prospects for further active implementation of the latest solutions at the studied business entity.

Analysis of recent studies and publications

The essence of the concept of innovation is interpreted differently by scientists and researchers, and is important in the context of analyzing the realization of the innovative potential of enterprises. The term «innovation» as an economic category was introduced by the world-famous Austrian scientist J. Schumpeter in 1911 in his work «The Theory of Economic Development». The term began to be used more actively in society in the 1930's and explained change with the main purpose of introducing and actively using new types of consumer goods, production or transport vehicles, markets, and forms of organization in the industrial sector. According to this definition, it was innovation that was considered the main source of profit, which allowed enterprises to develop further and further increase their financial base [1]. Ignatova E.M. [4], Lavrova Y.V. [2], Lapko O.O. [3], Lepykhin O.V. [5], Lyschenko O.G. [5], Oleynikova L.G. [5], Sumets O.M. [4], Cherep O.G. [5, 6], Khutorna K. [7] also actively studied the importance of innovation development and its financial support. These works substantiate the expediency of intensifying innovation and development. Therefore, scientific research, especially during the Russian-Ukrainian war, is relevant and timely.

Objectives of the article

The article is aimed at analyzing the current innovative development of LLC «Nova Poshta»; studying the financial security of the company within the framework of innovative development through the prism of the study of innovative terminals and the «NovaTech» innovation platform; assessing the possibility of bankruptcy and developing anti-crisis measures; analyzing the prospects for realization of the innovative potential in the coming years.

The main material of the research

The development and implementation of innovations and cutting-edge solutions at business entities in all industries demonstrates their ability to move into a progressive future, while improving the quality of life of the country's citizens.

Firstly, it is worth noting that according to the Law of Ukraine «On Innovative Activities» No. 40-IV of 04.07.2002 (as amended on 31.03.2023), innovations are newly created (i.e., applied) and (or) improved competitive technologies, products, services, as well as organizational and technical solutions of a production, administrative, commercial nature that significantly improve the structure and quality of production or the social sphere [8].

Innovation should be the foundation for the modernization and post-war development of Ukraine's business sector. According to the latest surveys conducted in 2023 by the Institute for Economic Research and Policy Consulting at the request of the Ukrainian Cluster Alliance, 18% of the surveyed enterprises did not have any innovative activities before the full-scale war, which began with the military invasion of the Russian Federation into the independent borders of Ukraine on February 24, 2022, and still do not conduct them. According to the survey, the largest numbers of innovation-oriented businesses were international companies and large Ukrainian companies, including of LLC «Nova Poshta».

Moreover, according to the study, crisis situations have always reduced attention to innovation (77% of respondents reduced the pace of innovation development, 23% supported it (large companies and exporters); only 19% increased investment in innovation to achieve their goals). Among the measures that the surveyed Ukrainian enterprises consider stimulating are long-term sectoral development programs, fiscal incentives, and improved formats of communication with innovators [9].

It is worth noting that for the successful implementation of innovations, we can distinguish a number of management aspects such as:

- a) a preliminary assessment of the real potential demand for innovations provided by a particular innovation and the advantages it will provide compared to its current analogues or competitors, or the enterprise itself;
- b) analysis of all the necessary resources for the implementation of innovations and the possibility of their application in the company's activities;
- c) identification of all possible obstacles that may arise in the process of implementing innovations and the possibility of preventing them;

d) assessment of own financial capabilities necessary for the implementation of the innovation, if necessary, search for reliable investors;

e) development of a business plan before the start of innovation [2].

Evaluating the current state of development of LLC «Nova Poshta» in accordance with the key points of scientific and technological progress in the domestic cargo transportation and logistics industry, we can confirm that the company regularly improves its processes, including e-commerce, automated systems and mobile applications. For example, in order to provide customers with fast and high-quality service in the face of constant growth in shipment volumes, LLC «Nova Poshta» is actively developing its own logistics infrastructure. It already has 110 sorting terminals and depots in every regional center of the country, where it continues to automate sorting processes. First of all, the 6 largest innovative terminals are located in Khmelnytskyi (HIT), Kyiv (KIT), Kharkiv (HAI), Lviv (LEO), Dnipro (DAO), and Zaporizhzhia (ZIT) (to be built in 2022). These terminals are capable of handling 20 thousand to 50 thousand parcels per hour. Construction of innovative terminals in Odesa and Boryspil is currently underway in 2023 [10].

We can see how the development of terminals and their modernization affected the company’s leadership position from the statistics. The volume of shipments in 2022, despite the full-scale war, amounted to 315 million parcels and cargo. And on December 30, 2022, LLC «Nova Poshta» sent 1.9 million parcels, which is considered a company record among all postal enterprises in the country.

Thus, there is indeed a demand for innovation, as improving the quality of the company’s services focuses customer confidence. To further support it, it is necessary to implement and finance existing innovative solutions.

The dynamics of the company’s current and non-current assets indicates its ability to meet current financial needs. Current assets have recorded a gradual increase from 22287962 thousand UAH to 3448838 thousand UAH over four years, showing a 50.74% increase. In

the last year (2022), compared to 2021, current assets increased by 33.58%. A similar situation was with non-current assets, they increased to UAH 12306082 thousand in 2022, which indicates an increase of 48.17% compared to the preceding year 2021. At the same time, for the period 2019-2022, the company increased its non-current assets by +327.28%, which indicates an increase in the volume and value of real estate, equipment, vehicles (for example, a car fleet) and other assets used for the production activities of the company for a long time. The growth of non-current assets indicates an increase in investment in the expansion of production capacity, modernization of technologies and the purchase of new equipment by 2023 (Fig. 1).

It is also important to ensure the efficient use of non-current and current assets to ensure the optimal level of production processes and reduce unnecessary asset maintenance costs. The saved financial resources can then be used for innovative activities.

Retained earnings (which the management of LLC «Nova Poshta» subsequently invests in the development of its activities, and especially in recent years, funds have been allocated for the construction of innovative terminals) have been growing, and demonstrated approximately 421.38% growth in 2019-2022 [10].

The property status of the subject of the study indicates the sufficiency of the invested funds, as the project of the open innovation platform «NovaTech» has been actively operating since 2023, with the mission to create solutions that will change logistics and improve customer experience; develop startups in Ukraine and promote their scaling, as well as unite and support innovators throughout the country. Examples of partner companies, namely brands that actively cooperate with this platform are: «SB Robotics» (robotic warehouse processes); «Konsort» (warehouse modernization systems, equipment for production automation); «URRAS» (Association of Robotics and Automated Systems Market Participants); «UIS» (Ukrainian Intelligent Systems), etc. [10; 11].

The latest solutions that were invented in communication between LLC «Nova Poshta» and the organizations

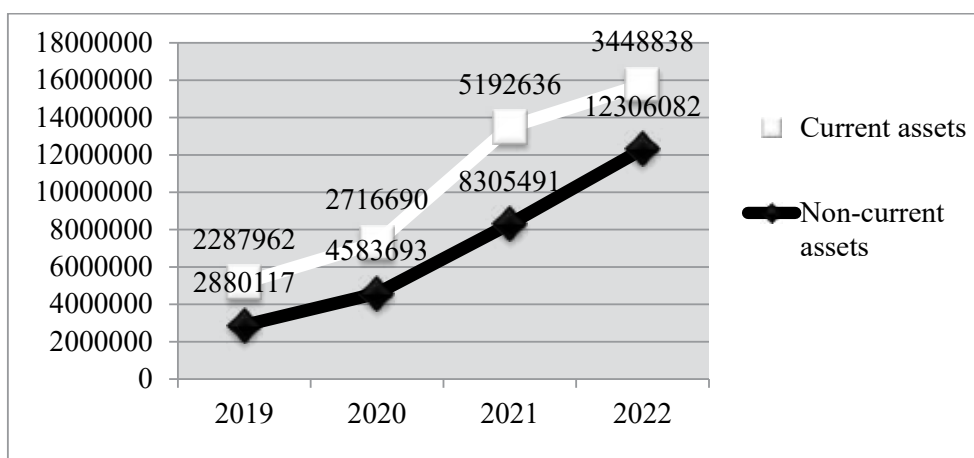


Figure 1 – Dynamics of current and non-current assets of LLC «Nova Poshta» for the period 2019-2022, UAH thousand
Source: compiled on the basis of [10].

described above were included in the company's tangible or intellectual property and are especially used in innovative terminals. An example of an innovative solution aimed at attracting the attention and trust of customers to the reality of the company's development is the development of a 3D tour of the Kyiv Innovation Terminal, which is one of the largest [12].

Today, the company has a type of absolute liquidity and is fully solvent, despite some deviations from the normative values related to the impact of the Russian-Ukrainian war. The analyzed solvency ratio of the company complied with the standard during 2019-2022, namely, it exceeded 0.1, amounting to 0.12 according to the latest data of 2022, which was slightly lower than in 2021 by 0.04 units. This indicates the ability of LLC «Nova Poshta» to continue to develop with a financial cushion.

However, there may be certain obstacles to the realization of innovative potential. Analysis of bankruptcy according to the models of E. Altman, O. Tereshchenko, and R. Lis will help to clearly neutralize existing risks or focus on the need to make urgent decisions on anti-crisis measures.

According to the calculations of E. Altman's model, as of 2019-2020, the probability of bankruptcy of the object of study was the least likely. The integral threat level indicator was more than 3.0 units, which is higher than the established optimal values. In 2021, the situation worsened due to the side effects of the coronavirus pandemic, and therefore the probability of bankruptcy of LLC «Nova Poshta» remained low (2.8 units, which is close to a very low integral indicator). According to the results of 2022,

the degree of risk of insufficient financial resources to cover its needs and ensure stable innovative development in line with the company's strategic goals increased by about 12%, amounting to an integral indicator value of 2.48 units according to the chosen model (Table 1). Thus, 2022 was the most crisis year with a high probability of bankruptcy, which was influenced primarily by external factors of the economic and political situation in the country.

In order to refute or confirm the increased riskiness of the efficiency of LLC «Nova Poshta» in Ukraine, we will analyze O. Tereshchenko's model, which is more attuned to the domestic realities of the business climate. Thus, for the period of 2019-2022, the company is not at risk of bankruptcy, as the integral indicator is sufficiently higher than the optimal value and is more than 2 units. For example, according to the latest reported data at the end of 2022, the calculated value exceeds the norm by more than 4 times or 6.7 units (Table 2).

According to R. Lis's model, LLC «Nova Poshta» also has a low probability of bankruptcy, as all calculated values exceed the norm of 0.037 units. Of the analyzed period, the most risky was 2022 (0.053 units), compared to the stability of 2019-2020, when the integral indicator recorded 0.060 units (Table 3).

Thus, the proposal of anti-crisis measures is necessary for a company in the logistics and cargo transportation sector. To realize the full innovative potential, it is worth paying attention to key management aspects, such as:

a) rationalization of costs (introduction of regular audits and optimization of excessive costs, limitation of non-strategic expenses);

Table 1 – Estimation of the bankruptcy of LLC «Nova Poshta» according to the Altman model, 2019-2022

Indicators	2019	2020	2021	2022
X1	-0,10	-0,10	0,01	-0,13
X2	0,15	0,14	0,19	0,14
X3	0,17	0,15	0,21	0,15
X4	0,33	0,43	0,50	0,71
X5	2,60	2,32	1,54	1,50
Z (integral indicator of the level of bankruptcy threat)	3,44	3,13	2,80	2,46
Probability of bankruptcy	very low	very low	low	low
Level of financial potential	high	high	average	average
Financial sustainability	The business is profitable, the financial position is stable, and the company is financially sound.		The business is profitable, but financial stability largely depends on changes in the internal and external environment.	

Source: compiled on the basis of [10]

Table 2 – Estimation of the bankruptcy of LLC «Nova Poshta» according to O. Tereshchenko's model, 2019-2022

Indicators	2019	2020	2021	2022
X1	4,75	4,86	4,08	4,34
X2	1,83	2,10	2,64	2,89
X3	0,15	0,14	0,19	0,14
X4	0,06	0,06	0,12	0,09
X5	0,01	0,01	0,01	0,02
X6	2,60	2,32	1,54	1,50
Z (integral indicator of the level of bankruptcy threat)	9,35	9,35	9,04	8,70
Probability of bankruptcy	low probability of bankruptcy			

Source: compiled on the basis of [10]

Table 3 – Estimation of the bankruptcy of LLC «Nova Poshta» according to the R. Lis model, 2019-2022

Indicators	2019	2020	2021	2022
X1	0,443	0,372	0,385	0,219
X2	0,198	0,211	0,119	0,160
X3	0,241	0,295	0,330	0,412
X4	0,326	0,428	0,499	0,705
Z (integral indicator of the level of bankruptcy threat)	0,060	0,060	0,055	0,053
Probability of bankruptcy	low probability of bankruptcy			

Source: compiled on the basis of [10]

b) diversification of services (expanding the range of services for customers with the introduction of new digital capabilities in the «Nova Poshta» app, which will help to depend on more sources of income, and this reduces the risks of losing stability and competitiveness in the market);

c) customer support (improving the quality and speed of customer service and communication with customers, introducing updated loyalty programs and promotional offers for regular customers of the company's services);

d) achievement of financial stability by searching for promising additional sources of financing in the event of a further increase in the probability of bankruptcy or its approach to a critical level;

f) developing its own risk management plan and adding an anti-crisis department to the organizational structure of LLC «Nova Poshta»;

g) financing staff retraining projects. Despite the fact that LLC «Nova Poshta» is one of the largest employers in Ukraine and the Group employs more than 32 thousand employees and more than 10 thousand partner employees, at the beginning of 2023 due to a sharp decline in cargo turnover as a result of the impact of the full-scale war and damage to the offices, some of the staff who did not have work had to be sent on simple leave according to the official procedure of the Law of Ukraine No. 2136-IX of 15.03.2022 «On the organization of labor relations under martial law». This led to a decrease in the number of expenses for improving working conditions in 2022-2023 (no estimates of the effectiveness of retraining are made), although UAH 64 million was invested in 2021 with a positive impact on encouraging staff to undergo training aimed at digital transformation of the enterprise [7;13;14];

h) marketing and advertising (development and implementation of effective marketing campaigns to increase sales; study of customer needs and demand in the new environment);

i) cooperation with the Government and other stakeholders (engaging in a dialogue with government agencies

through business support programs in times of crisis; searching for new opportunities for cooperation with business entities. For example, it would be an innovative decision to communicate between the technological and industrial parks of Ukraine and LLC «Nova Poshta», which can become a driver of innovative development of the entire business base in the future).

The project-based collaboration between LLC «Nova Poshta» and the technology parks can be a success for the company's technological development, as it will speed up access to advanced technologies that are not yet available to the public. Effective automation can also be an achievement, as the latest solutions within the technology park can automate many processes, which will reduce the risk of errors and facilitate fast delivery of goods to customers. Finally, technology parks are usually centers of scientific and technological progress and support for startups, and therefore communication with them can provide LLC «Nova Poshta» with access to innovative and promising ideas for developing its business. State support for technology parks has been boosted in recent years, and therefore it may be a very good step to consider the feasibility of this type of innovation potential for the company described in this article.

Conclusions

In summary, LLC «Nova Poshta» has proven to be an important player in the logistics and delivery market in Ukraine. Its interest in innovation is emphasized by its cooperation with a large number of domestic and foreign partners and its focus on regular technological development even in times of full-scale war. The prospect of integrating new technologies into more business processes will help improve logistics efficiency, customer service and market competitiveness. Cooperation with technology parks will create an opportunity to access the innovation ecosystem, which, in turn, will provide some financial stability for the company's development.

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ECONOMIC AND MATHEMATICAL MODELING AND INFORMATION TECHNOLOGIES IN ECONOMICS

UDC 339.138.02:[519.866:004.9]

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-05>

THE CONCEPT OF MARKETING PLANNING IN THE BUSINESS MARKET IN THE DIGITAL ECONOMY

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Key words:

marketing, conceptual model,
modelling, information system,
marketing planning.

The analytical review of the marketing planning tools in the business market shows a problem associated with the insufficient level of adaptability of management systems to changes in the sources and nature of external data. This leads to difficulties in working with up-to-date analytics from various sources and types of data, and the need to take into account quantitative and qualitative economic information. This problem requires the development of new conceptual approaches, mathematical methods and models for the formation of effective management decisions, as well as justification of the need to use information technology at two levels: technological (Big Data, OLAP technologies, fuzzy sets, neural networks) and functional (digital marketing, human resource management, etc.), which will allow combining the use of tools of the fourth industrial revolution with promising areas of marketing planning in the business market. The article develops a concept of modelling marketing planning in the business market with the use of intelligent information systems, which contains four levels (conceptual, methodological, model, instrumental), combines the developed methods, models and tools for solving marketing planning tasks and, through the implementation of a developed system of economic and mathematical models (in particular, models and methods of intellectual analysis, use of neural network technologies for forecasting multidimensional data and neuro-fuzzy management), provides a substantiation of the system interaction of the levels. The concept provides a justification for the systemic interaction of levels, which opens up ways to modernise the existing information systems of marketing planning in the business market with the developed set of tools to improve the economic efficiency of enterprise management by means of intelligent information systems.

КОНЦЕПЦІЯ МАРКЕТИНГОВОГО ПЛАНУВАННЯ НА ДІЛОВОМУ РИНКУ В УМОВАХ ЦИФРОВОЇ ЕКОНОМІКИ

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Ключові слова:

маркетинг, концептуальна
модель, моделювання,
інформаційна система,
маркетингове планування.

Проведений аналітичний огляд інструментарію маркетингового планування на діловому ринку свідчить про проблему, яка пов'язана з недостатнім рівнем адаптивності систем управління до змін джерел та характеру зовнішніх даних. Це зумовлює складнощі в роботі з актуальною аналітикою з різних джерел і типів даних, необхідність врахування кількісної та якісної економічної інформації. Зазначена проблема потребує розробки нових концептуальних підходів, математичних методів і моделей для формування ефективних управлінських рішень, а також обґрунтування необхідності застосування інформаційних технологій на двох рівнях: технологічному

(Великі Дані, OLAP-технології, нечіткі множини, нейронні мережі) та функціональному (цифровий маркетинг, управління людськими ресурсами та інші), що дасть змогу поєднати використання інструментарію четвертої промислової революції з перспективними напрямками маркетингового планування на діловому ринку у режимі реального часу. Розроблено концепцію моделювання маркетингового планування на діловому ринку із застосуванням інтелектуальних інформаційних систем, яка містить чотири рівня (концептуальний, методичний, модельний, інструментальний), об'єднує розроблені методи, моделі та інструменти для вирішення задач маркетингового планування та за рахунок реалізації розбудованої системи економіко-математичних моделей (зокрема, моделей і методів інтелектуального аналізу, використання нейромережових технологій для прогнозування багатовимірних даних та нейро-нечіткого управління в режимі реального часу) дає змогу підвищити ефективність маркетингового планування. Концепція забезпечує обґрунтування системної взаємодії рівнів, яке відкриває шляхи модернізації існуючих інформаційних систем маркетингового планування на діловому ринку розробленим комплексом інструментів для підвищення економічної ефективності управління підприємством засобами інтелектуальних інформаційних систем.

Problem Statement

The modern economy is focused on the use of information technology in solving marketing planning tasks in the business market aimed at organizing efficient operations, supporting sales and increasing profits. Information technologies are becoming a tool for increasing the competitiveness of enterprises, and their development is a priority area and strategic goal both in the world and in Ukraine. That is why scientists and practitioners in developed countries are now trying to integrate the use of digital technologies into all business management processes. For example, according to the Digital Spillover report [1], for every dollar invested in digital technologies, an increase in revenue of \$20 was obtained.

Today, the necessary requirements for information technology are to take into account the conditions of the Fourth Industrial Revolution. According to Academician of the National Academy of Sciences of Ukraine Prof. A. Chukhna [2], «big data, cloud technologies and computing, neural systems, industrial Internet of things, real and virtual components of the market of goods and services, fuzzy modeling – new technologies are now entering our lives and forming the image of the future society». The rapid growth of data volumes, their heterogeneity and variability necessitate the use of intelligent information systems by enterprises, which ensure the implementation of intelligent technologies (big data, cloud technologies, artificial neural networks, fuzzy logic, robot programs, etc.) for business, predictive analytics, information exchange, and support of management processes. These intelligent information systems are based on self-learning and self-adjustment processes, which enable the development and use of intelligent technologies to open up new opportunities and directions for the effective organization and support of marketing planning in the business market.

Analysis of recent research

One of the key areas of development of intelligent information systems is marketing. With the development of information network technologies, marketing has acquired

new mechanisms for its functioning. Thus, in the work of Berko A. Y., Vysotska V. A. and Pasichnyk V. V. [3] the results of a study on solving the problem of modeling and designing electronic content commerce systems are presented. The authors propose a classification of e-commerce systems and e-content commerce systems, develop formal models of e-content commerce systems, their individual components, websites, methods and algorithms for designing e-content commerce systems.

To build information tools to support management in marketing, a prerequisite is to maintain the competitiveness of the enterprise. Thus, the authors Orlov O. O., Gavenko M. S., in [4] studied the role of marketing research in retail and the main source of reliable information about the market. Based on the research, the authors developed a process for forming a system for assessing the competitive position of a retailer.

The creation of information systems based on these processes and models requires prompt processing of data, which is a key issue in the synthesis of marketing and information systems and the development of an effective monitoring system.

Thus, in the works of Nizhnyk V. M., Sharko V. V., Gromova O. E. [5, 6], the solution of applied marketing problems is considered. They studied the tasks of marketing and logistics of an industrial enterprise, on the basis of which an algorithm for the formation of a marketing and logistics service of an industrial enterprise was developed. The authors also paid considerable attention to the process of monitoring the performance of the enterprise to obtain operational information on changes in the indicators characterizing the components of innovation and investment, production, marketing and sales, and economic and operational activities of the enterprise. The author establishes that the system of monitoring indicators is a prerequisite for stability and competitiveness of an enterprise.

For adaptive planning in marketing, information systems also need to have modules that will be aimed at managing the development potential of the enterprise. Thus, in the works of Gonchar O., Polishchuk I. [7, 8], the modern conditions and problems of development of marketing

activities were studied. The authors formulated the principles of building a mechanism for managing the marketing potential of industrial enterprises, as well as built a scheme of functional components of the introduction of a mechanism for managing the marketing potential.

The presented developments in marketing management need to be integrated into a holistic concept with a combination of digital technologies and applied mechanisms to support enterprise management. The works of Balabanova L. V., Zaremba V. P. [9] and Holodniuk O. S. [10] are devoted to this task. They substantiate the concept of organizing marketing management of enterprises and applied marketing (branding, benchmarking and competitive intelligence), taking into account their importance for market participants. The authors propose scientific and methodological approaches to diagnosing, analyzing the organization of interaction, and evaluating the effectiveness of strategic changes. The authors pay considerable attention to the scientific and methodological recommendations for improving the organization of marketing management of enterprises based on the use of information systems for monitoring marketing innovations.

However, a holistic concept of marketing planning in the business market in the new conditions of the digital economy has not been proposed.

Goal setting

The purpose of the article is to develop the concept of marketing planning in the business market in the digital economy, which involves the use of intelligent information systems.

Presentation of the main material

The main areas of development of marketing planning technologies are digital marketing management, human resource management and proactive management. Development in these areas will be ensured by the introduction of technologies inherent in the fourth industrial revolution, namely: cloud technologies, Big Data, OLAP technologies, fuzzy logic, neural networks. The introduction of new technologies in marketing planning requires the construction of a concept that will reflect the interaction of models, methods and tools to achieve the goals of enterprise management in the current conditions of society development.

Therefore, on the basis of research [11], the concept of marketing planning in the business market in the digital economy with the use of intelligent information systems has been developed (Fig. 1).

The presented concept shows the relationship between the four levels of application of an intelligent information system for marketing planning.

The first level is conceptual. This level includes three conceptual models (conceptual model of human resource management, conceptual model of digital marketing management system, conceptual model of adaptive planning and management) in the key areas of using intelligent information systems in marketing planning.

In order to increase the level of automation of marketing planning, the methods described in the concept use the principles and technologies of the fourth industrial

revolution, which allows modifying a standard information system to an intelligent one.

The presented intelligent information system highlights the application of the principles of the Industrial Revolution 4.0 through the structure of database management, knowledge base management, and model base management systems. The structures that transform an information system into an intelligent one are highlighted in Fig. 1 are highlighted in color (Big Data, OLAP technologies, heuristic models, knowledge acquisition system).

The third level is modeling. This level contains models (cognitive model of enterprise sales activities, model of sales forecasting based on a neural network, model of marketing activities of an enterprise, model of operational processing of Internet data, structural model of a marketing analytical system, model of a neuro-fuzzy system of automated enterprise management, structural model of data exchange in human resources management, neuro-fuzzy model of adaptive enterprise management, adaptive model of human resources management, structural model of human resources management).

For the qualitative application of the set of models of enterprise management processes presented at the model level, it is important to determine the relationship between them, which characterizes the achievement of marketing planning goals. That is, combining models based on modern technologies into a set is not enough to improve management processes. It is necessary to present this set as a system of economic and mathematical models of marketing planning in the business market, which determines the use of models for strategic and operational marketing planning.

Therefore, we will present the set of models of marketing planning in the business market in the digital economy in the form of a system – S . The elements of the system are three subsystems ($S_i, i = 1, 3$): marketing (S_1), adaptive management (S_2), human resource management (S_3). Each of the subsystems consists of models (M_{ik_i}) that access information about resource capabilities (human resources), product market, assortment, competitors, and other commercial information through the enterprise information system:

$$S_i = \{M_{i1}, \dots, M_{ik_i}\}, k_i = \overline{1, K_i}, i = \overline{1, 3}, \quad (1)$$

where i – number of subsystems of enterprise management models,

K_i – total number of models in the subsystem i ($K_1 = 3, K_2 = 5, K_3 = 2$).

The marketing subsystem (S_1) is represented by a set of models: a cognitive model of the enterprise's sales activities (M_{11}), a model of the enterprise's marketing activities (M_{12}), a model of sales forecasting based on a neural network (M_{13}).

The adaptive management subsystem (S_2) includes a set of models: a model of operational processing of Internet data (M_{21}), a structural model of a marketing analytical system (M_{22}), a model of a neuro-fuzzy system of automated enterprise management (M_{23}), an adaptive model of human resource management (M_{24}), a structural model of human resource management (M_{25}). The models of subsystem S_2 are aimed at implementing enterprise

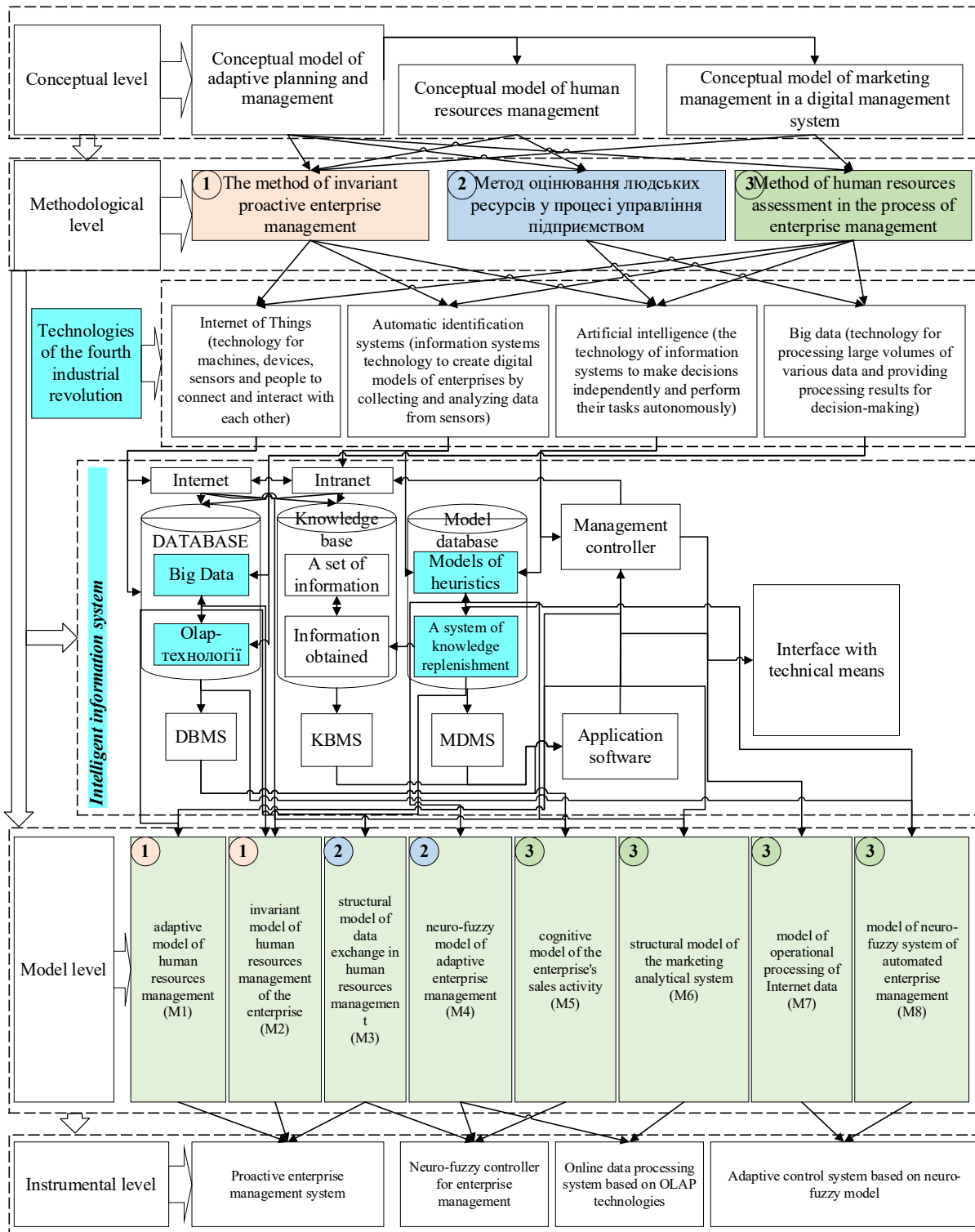


Figure 1 – The concept of marketing planning in the business market in the digital economy

management processes, so the results of their application are used to determine the set of marketing and human resource management decisions.

The human resource management subsystem (S_3) consists of models: a structural model of data exchange in human resource management (M_{31}), a neuro-fuzzy model of adaptive enterprise management (M_{32}).

The system of models will be considered as a platform on the basis of which the results of the models are created, interpreted, and interacted to find common marketing planning for the effective functioning of the enterprise. Also, the system of models will determine the organization and functioning of the intellectual information system of enterprise management.

Thus, the system of models developed by [11] allows to form the result of interaction of models, which is laid down in the developed concept of modeling the processes of enterprise management using intelligent information systems.

The fourth level is instrumental. It contains practical solutions for the implementation of marketing planning in the business market in the digital economy as mechanisms for automating enterprise activities based on intelligent technologies.

The interaction of intelligent information systems in the economy, created on the basis of the synthesis of information systems with the developed tools, with the external environment is carried out at the level of systems: synchronization of work, discrete control system, data exchange model in human resources management, fuzzy modeling of human resources, marketing analytics, forecasting based on neural networks, showcase of order and sales distribution data, evaluation of the marketing activities of the enterprise and the controller in the management of the enterprise. This approach allows to combine the levels of the concept of marketing planning in the business market in the digital economy (conceptual, methodological, modeling, instrumental) based on the principles of the fourth industrial revolution.

Conclusions

Thus, the application of new approaches and the use of new economic and mathematical models and methods is a prerequisite for the development of marketing planning in the business market with the use of intelligent information systems.

A concept of marketing planning in the business market in the digital economy has been developed, which includes four levels: conceptual, methodological, model, and instrumental, and allows taking into account the interaction of the information system with the external environment. The proposed concept allows to formulate further development of marketing planning technologies in the business market with the use of intelligent information systems.

The article considers a system of economic and mathematical models of marketing planning in the business market in the digital economy, which defines the links between the models of three management subsystems (marketing, human resources, adaptive management), which allows to coordinate the use of these models in one intelligent information system to find a common management solution.

On the basis of the proposed conceptual, methodological, model and instrumental levels and the developed system of models, a fundamentally new concept of modeling enterprise management processes using intelligent information systems has been built.

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UDC 339.13:629.33:621.313:005.52:005.33

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-06>

ANALYSIS OF THE DEVELOPMENT PROBLEMS OF THE WORLD MARKET OF ELECTRIC VEHICLES IN THE CONTEXT OF THE CONCEPT OF SUSTAINABLE DEVELOPMENT

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Key words:

electric car, world market,
sustainable development, SWOT
analysis, factors.

The article examines the problems of the development of the global market of electric vehicles using a SWOT analysis, reveals the main strengths and weaknesses of the development of the electric vehicle industry, and opportunities and threats faced by manufacturers, consumers and states.

The work analyzes the main factors affecting the development of the global market of electric vehicles taking into account the concept of sustainable development, considers the main trends in the electric vehicle industry, including technological, economic and environmental aspects. Special attention is paid to such challenges as the infrastructure of charging stations, the cost and availability of electric vehicles, and the issue of liquidity of this type of transport, as the main factors delaying their spread in the markets.

The issue of the distribution of electric vehicles and their role in the modern automotive industry is the subject of extensive discussion and research. In the context of a rapidly changing economic, technological and ecological environment, it is important to understand the current situation and prospects for the development of this market segment. The problem is that despite significant interest in electric vehicles from industry, governments and consumers, there are a number of unresolved issues and challenges that could affect their future development.

АНАЛІЗ ПРОБЛЕМ РОЗВИТКУ СВІТОВОГО РИНКУ ЕЛЕКТРОМОБІЛІВ В КОНТЕКСТІ КОНЦЕПЦІЇ СТАЛОГО РОЗВИТКУ

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Ключові слова:

електромобіль, світовий ринок,
сталий розвиток, SWOT-аналіз,
фактори.

У статті проведено дослідження проблем розвитку світового ринку електромобілів із застосуванням SWOT-аналізу, виявлено основні сильні та слабкі сторони розвитку індустрії електромобілів, а також можливості та загрози, з якими стикаються виробники, споживачі та держави.

У роботі аналізуються основні фактори, що впливають розвиток світового ринку електромобілів з урахуванням концепції сталого розвитку, розглядаються основні тенденції в електромобільній індустрії, включаючи технологічні, економічні та екологічні аспекти. Особлива увага приділяється таким викликам, як інфраструктура зарядних станцій, вартість та доступність електромобілів, а також питання ліквідності даного виду транспорту, як основних чинників, що затримують їх поширення на ринках.

Питання розповсюдження електромобілів та їх роль у сучасній автомобільній промисловості є предметом широкого обговорення та досліджень. У контексті економічного, технологічного та екологічного середовища, що швидко змінюється, важливо зрозуміти поточне положення та перспективи розвитку цього сегменту ринку. Проблема полягає в тому, що незважаючи на значний інтерес до електромобілів з боку індустрії, урядів та споживачів, існує низка невіршених питань та викликів, які можуть вплинути на їх майбутній розвиток.

Statement of the problem

Every year, electric cars are becoming more and more popular, the increased interest of consumers and the desire of car manufacturers to develop new models of electric cars leads to the growth of the market. According to EV volumes [1], in 2022, cars with electric motors accounted for 13% of passenger car sales worldwide. In fig. 1 shows the global dynamics of sales of electric cars from 2013 to 2022. In the graph, the EV Market Share line shows the share of electric cars in the total volume of cars sold, the bars of the histogram show the sales of electric cars in thousands of units.

In the conditions of growing awareness of environmental problems and the desire for sustainable development, many countries around the world set ambitious goals for increasing the share of electric vehicles on the roads. However, despite significant efforts, the problems and challenges of introducing electric vehicles to global markets remain significant and diverse.

Therefore, there is an urgent need to analyze the factors affecting the development of the global market of electric vehicles in the context of the concept of sustainable development. The study of the global electric vehicle industry is important and relevant for the following reasons:

- the need to identify the strengths of the electric vehicle industry, such as advanced technology, environmental friendliness and the demand for environmentally friendly transport.

- analysis and identification of industry weaknesses, identification of problems that are the main obstacles for consumers to give their choice in favor of an electric car.

- identifying opportunities for developing the electric vehicle market.

- the need to identify threats and risks for the effective existence and development of the global electric vehicle industry.

Research in this industry is important to many stakeholders such as:

- Car manufacturers. Research helps them understand current market trends, consumer needs, technological innovations, and the competitive landscape. It helps them to develop more competitive products and strategies.

- Consumers. It is important for consumers to understand the electric vehicles available on the market, their features, advantages and disadvantages, and industry trends to make informed purchasing decisions.

- Investors. Research helps investors assess the prospects and risks of investing in companies related to the production of electric vehicles, technological innovations, infrastructure, etc.

- Government. Understanding the state and trends in the electric vehicle industry helps government agencies develop policies and legislation that support the development of clean and energy-efficient vehicles and infrastructure for them.

Statement of the problem

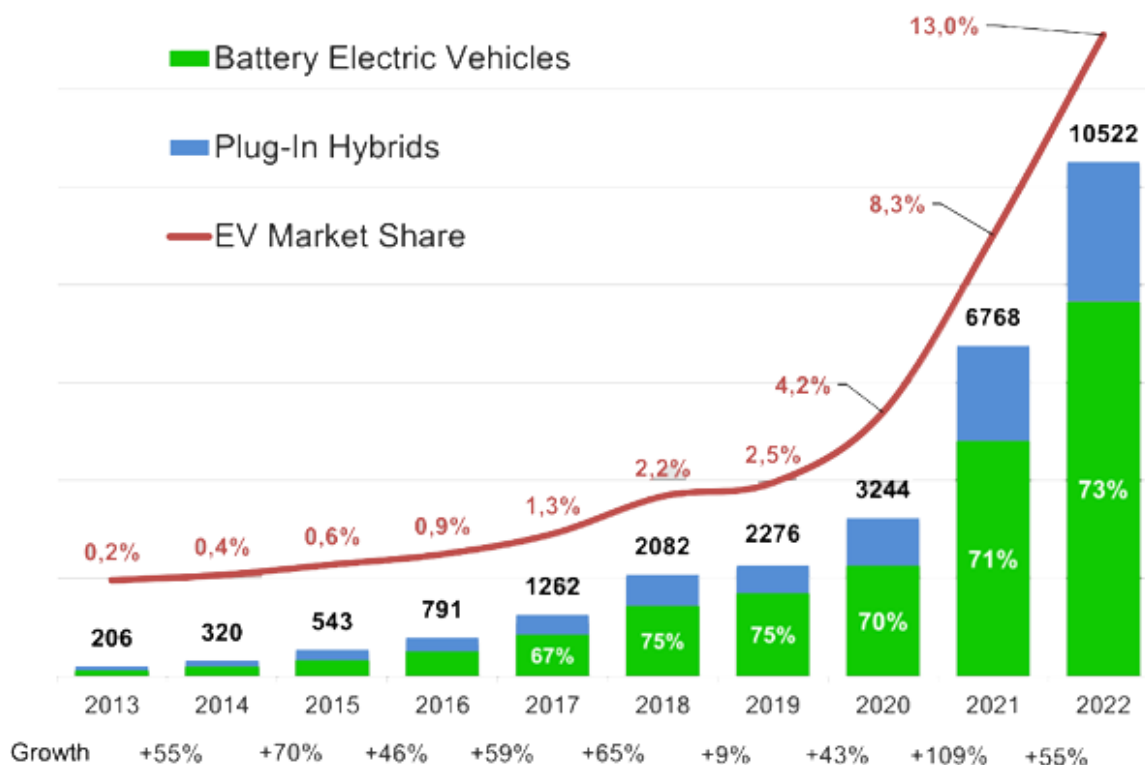


Figure 1 – Dynamics of sales of electric cars in the world for the period from 2013 to 2022 [1]

– Environmental organizations. For environmental organizations, it is important to understand the impact of electric vehicles on air pollution and climate change.

Considering the goals of the sustainable development of Ukraine [2], one of the identified directions is the Sustainable Development of Cities and Communities, in this section there is a task to reduce the negative impact of pollutants, including on the environment of cities, in particular through the use of innovative technologies. Motor transport produces 70-90% of pollution in cities. Carbon monoxide, nitrogen dioxide, lead, and toxic hydrocarbons predominate in the exhaust gases of automobiles. The spread of electric vehicles can greatly help solve this problem, because during operation, electric vehicles do not produce any harmful things, and the energy produced to charge them is usually produced at power plants located outside cities, which minimizes the negative impact on the environmental condition of cities and communities.

To solve these problems, it is natural to use SWOT analysis [3] as one of the analytical methods of conducting such research, which consists in dividing factors into four categories: strengths and weaknesses of the research object, opportunities and threats associated with its functioning. The results of the analysis will make it possible to determine the quantitative and qualitative factors affecting the object of the study, which will help, in particular, to build relevant models for predicting the behavior of the dynamics of the global electric car market in future studies.

Analysis of recent studies and publications

The study of the development of the market and the electric vehicle industry has received enough attention, but their rapid development requires constantly updating the results due to the fact that the electric transport industry is developing quite quickly, and the market is constantly exposed to external and internal factors.

Article [4] combines a systematic review of recent research with an emphasis on research focused on the social aspects of electric vehicles and their relationship with specific UN goals in the field of sustainable development.

The paper [5] examines the role of the electric car in the concept of sustainable development, and assesses the feasibility of the development of electric cars in general. This research expands the traditional definition of sustainable development by including and prioritizing the most important areas of technology, environment and policy effectiveness.

The paper [6] analyzed the prospects for the development of electric transport and its integration into the energy system of Ukraine. During the research in work [6], a qualitative methodology of strategic planning using SWOT analysis is used to take into account as much as possible various measures and initiatives related to the development of electric transport and its infrastructure at the same time as their integration into the energy system. In the reviewed work, the study identifies problems associated with the impact of the EV charging process on the power grid, namely the inability to accommodate increased

energy demands and limiting the electrical load on the infrastructure from charging EVs. At the same time, a high percentage of renewable energy sources, increased social awareness about climate change and lower prices for electric vehicles can provide the necessary opportunities for the development of electric transport in Ukraine.

Electric vehicles are also considered in the context of political and technical aspects, taking into account, in particular, the peculiarities of the national economy of Lithuania in relation to global development and the development of the European Union in this field. The study [7] presents best practices for the deployment of electric vehicles, including potential market niches, as well as challenges and opportunities for supporting charging infrastructure systems. In this work, the authors pay sufficient attention to the assessment of strengths and weaknesses, opportunities and threats using SWOT analysis. This material provides insight into the challenges and opportunities of electric vehicles, particularly in the Baltic region.

Researching and demonstrating industry strengths and weaknesses is particularly important for countries whose markets are outsiders in the region. Thus, in [8], a portfolio of actions aimed at ensuring the sustainable development of transportation in the segment of passenger vehicles is formulated and the implementation of the Minimax strategy is proposed, which would minimize current shortcomings by maximizing potential market opportunities.

The authors of [9] identified relevant factors related to the introduction of electric vehicles in Thailand using a SWOT analysis. A strategy for the introduction of electric vehicles into the competitive environment of the country's car market with the involvement of local and international investors has also been developed in this research. It is proposed to implement a policy of introducing potential consumers and investors in order to spread information about the experience of countries that have introduced the use of electric vehicles into everyday life.

It is quite important to observe the markets of developing countries and how electric vehicles penetrate into their environment, because on their example you can follow how manufacturers and investors penetrate a new market and what strategies they use there.

For example, Bangladesh has a large market potential, but there are also some problems related to the implementation of new business models, [10] analyzed the potential market opportunities and business strategies for Bangladesh using SWOT-AHP analysis.

Examining the example of Brazil in [11] shows the uncertainty regarding the transition to a new technological path, using electric transport. The competitiveness and main strategies related to the introduction of electric vehicles in Brazil are analyzed using a SWOT analysis, which contributes to the acquisition of relevant knowledge and helps decision-makers to make consistent and coherent choices within the various sectors affected by the characteristics of the Brazilian transportation matrices. The results of the work show that the use of hybrid technologies for powering motor vehicles fully corresponds to the Brazilian scenario, and purely electric vehicles can remain in limited parts of the market until the huge technological

and market obstacles that exist in the way of popularizing the use of electric vehicles are overcome.

Objectives of the article

The purpose of the article is to identify and summarize the problems of development of the global electric vehicle market in the context of the concept of sustainable development by conducting a SWOT analysis. The identification of factors, namely environmental, social and economic sustainability factors, is aimed in particular at developing a basis for further modeling the development of the global electric vehicle market.

The main material of the research

SWOT analysis is a method of strategic analysis, the essence of which is to determine 4 blocks of factors (strengths, weaknesses, opportunities and threats) of the object being studied [3].

Having analyzed the factors influencing the expansion of electric vehicles on the global market, we present the results in the form of a matrix shown in Fig. 2. and consider its components in more detail.

Strengths:

Care for the environment. The biggest positive factors of this issue are the reduction of the level of emissions of harmful substances and the reduction of the level of noise pollution in cities, because cars are the

biggest polluter of the environment in large or densely populated cities. Regarding the environmental indicator of the use of electric cars in general, according to various estimates, the carbon footprint of an electric car becomes smaller than a car with an internal combustion engine (ICE) after 33 thousand kilometers of mileage [12] or after four years of its operation [13]. Of course, the most important influence on this indicator is the method of energy production used.

Development of new technologies: The most important group of technologies affecting the operation of an electric car are technologies related to energy storage and accumulation. Growing demand for electric vehicles is driving research and development in lithium-ion and other types of batteries aimed at increasing capacity, reducing costs and improving durability.

Expanding the network of charging stations becomes a necessity to support the growing number of electric vehicles. This is driving the development of faster and more efficient charging technologies, including fast charging stations and innovative wireless charging methods.

Electric vehicles require high-tech electronics to manage energy consumption and efficiently control the engine. The proliferation of electric vehicles is driving the development of advanced engine management systems, regenerative braking, and battery monitoring and management systems.

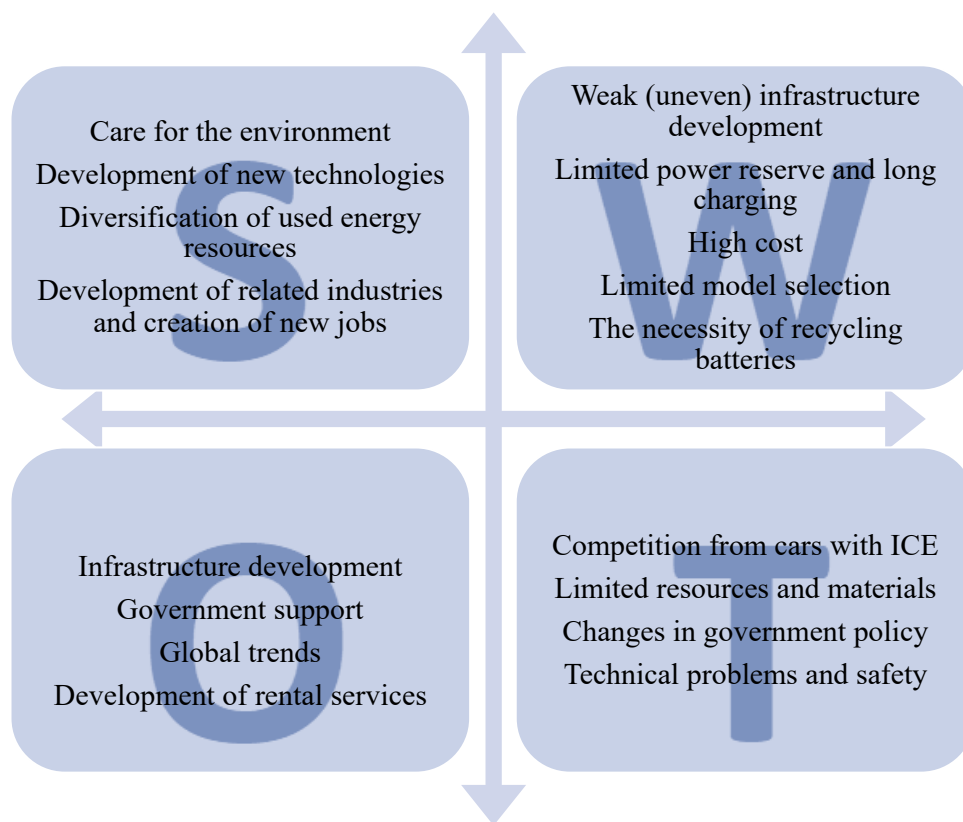


Figure 2 – Matrix of the results of the SWOT analysis of the market development of the global market of electric vehicles in the context of the concept of sustainable development

Source: constructed by the author

No less important is the development in the field of technologies of autonomous (unmanned) movement. Because EVs are typically equipped with advanced motion sensor systems, and electric motors are much simpler to control than an internal combustion engine, they are an ideal platform for developing and testing autonomous features such as driver assistance systems and fully autonomous driving.

Diversification of used energy resources. Electric vehicles play an important role in reducing the dependence of the world economy on fossil fuels. Transportation based on traditional fuels is highly dependent on the volatility of oil prices and can be subject to geopolitical tensions. The introduction of electric vehicles helps to diversify energy sources and reduce dependence on limited natural resources [14].

Importantly, the process of charging electric vehicles can be carried out by using energy produced from renewable sources, such as solar, wind or hydropower. It helps to further diversify energy consumption, reducing dependence on traditional energy sources such as coal or natural gas.

Development of related industries and creation of new jobs. The demand for electric vehicles is driving the development of their production and related components, such as batteries, electronics, control systems and electric drive components. The appearance of electric cars also leads to an increase in demand for their maintenance and repair services and training of specialists in working with electric cars.

Along with electric cars, new business models and services are developing, such as rental services [15], delivery services and various services supporting a mobile lifestyle. So, electric vehicles are driving growth and innovation in many related industries, helping to create new jobs and driving economic growth.

Weaknesses:

Weak (uneven) infrastructure development. According to a recent study [16], the lack of public charging infrastructure is the main obstacle to the introduction of electric vehicles around the world, as the results of this study show, more than a third of respondents cited insufficient access to urban charging stations as the main reason for refusing to switch to an electric vehicle. This factor is ahead of concerns about the high price of an electric car, which used to be the main obstacle for potential buyers of this type of transport. People who do not have access to a charging station at a permanent car park have to rely on urban infrastructure, which is often unevenly distributed and can be expensive to use.

Limited power reserve and long charging. This factor is another weakness in the introduction of electric vehicles. According to [16], about a third of drivers around the world are concerned about long-distance trips on electric vehicles. An electric vehicle's range depends largely on its battery capacity and engine efficiency, but it can also be affected by factors such as weather, speed and whether the vehicle is driven on city roads or the open highway. Compared to the distance that ICE car can travel on a full tank, electric cars are closing the gap, because the range of electric cars is gradually increasing.

In addition, it turns out that charging an electric car is a more complicated process than users imagine. This is due to the fact that its duration can take from several hours at a fast charging station to more than a day from a 220-volt home power grid [17].

High cost. The purchase price of an electric car is usually higher than the average car with ICE. In addition to the car itself, the cost can include the installation of a charging station at home or additional accessories, making owning an electric car a more expensive endeavor.

Unlike the market for cars with ICE, the choice of electric cars in the secondary market is still limited. This means that even as prices for new EVs drop, buyers may face limited choice and high prices for used models.

Limited model selection. Despite the fact that the number of electric vehicle models is gradually increasing, it is still significantly less than the number of models with ICE. Currently, most EVs are in the premium or mid-market segment, limiting the choices for those looking for affordable options. However, with the appearance of new models and the development of technologies, an expansion of the offer in various price categories is expected. Also, some EV models may only be available in certain regions or countries due to differences in government regulation or market demand.

The necessity of recycling batteries. The problem of disposal of electric vehicle batteries is one of the key aspects that must be considered in the context of the environmental responsibility of this technology. Batteries used in electric vehicles typically contain materials such as lithium, cobalt, nickel, and other metals. These materials are toxic or harmful to the environment, and batteries must be disposed of properly to prevent soil and water contamination. As the number of electric vehicles on the road increases, the volume of recycled batteries will increase. It is predicted that in the coming decades, the number of used batteries will increase significantly, which will require the development of efficient disposal and recycling systems [18].

At the same time, the presence of valuable materials in batteries opens up opportunities for their recycling and reuse. However, the extraction of these materials requires specialized technologies and processes, which can be expensive and costly in terms of economic efficiency of such processing [19].

Solving the problem of recycling electric vehicle batteries requires a comprehensive approach that includes the development of effective recycling technologies, the creation of infrastructure for recycling, the promotion of secondary use and recycling of materials, as well as the implementation of standards and regulations to ensure the safety and environmental sustainability of the process.

Opportunities (Opportunities):

Infrastructure development. The development of infrastructure with the spread of electric vehicles has a huge potential to change the urban environment and the transport system in general. With the increase in the number of electric cars, there is a need to expand the network of charging stations. This includes not only upgrading existing gas stations, but also creating new ones, especially in cities and on highways. Fast charging stations can be a key

factor in removing barriers to the use of electric vehicles. The development of intelligent networks will allow to optimize the process of charging and energy management. This could include demand-side management systems that anticipate EV usage patterns and dynamically manage charging station capacity to reduce grid congestion.

The development of the infrastructure of electric buses and other forms of public electric transport is also becoming an important factor affecting the spread of electric mobility technologies, the integration of electric transport into public infrastructure can help reduce emissions and improve the accessibility of public transport.

Government support. The state has a number of tools and policies that can be used to support and stimulate the spread of electric vehicles. Government subsidies, tax breaks and grants can be provided to both private individuals and companies for the purchase, lease or production of electric vehicles. This could include subsidies to reduce the cost of electric cars, tax breaks or bonuses for scrapping old combustion engine cars.

Public investment in the development of infrastructure for charging electric vehicles can include financing the installation of charging stations and the development of smart networks for energy management.

Standardizing charging ports for electric vehicles can make their use much more convenient by ensuring compatibility between different charging stations.

Public awareness campaigns about electric vehicles, their benefits and available subsidies can help increase awareness and confidence among potential buyers.

Global trends. Growing public awareness of environmental issues and the desire for sustainable development may increase demand for electric vehicles from private, corporate and government consumers. International agreements and initiatives to reduce greenhouse gas emissions also contribute to the mutually beneficial use of electric vehicles [20].

Social popularization of electric cars plays a key role in their spread and acceptance by society. Conducting information campaigns about the environmental, health and fuel-saving benefits of electric vehicles can increase public awareness.

Bringing in famous personalities and star power figures to promote electric cars can make them more attractive and fashionable to the mass consumer.

The involvement of businesses such as car rental companies, taxis and courier services can help increase the visibility and accessibility of electric cars to a wider audience. A combination of these methods can help create a positive image of electric cars in society and increase their popularity among consumers.

Development of rental services. The development of electric car rental is a promising opportunity in the conditions of the spread of electric cars. The creation of a network of automated rental points where users can easily rent electric cars through a mobile application or self-service terminals can significantly increase the availability of electric cars to a wide audience.

The development of renting electric cars for tourists can be a promising direction. Offering tourist routes and

packages that include electric car rental will help attract tourists and create an additional source of income.

Offering special rental programs for corporate customers can be an effective solution for companies that want to implement sustainable practices in their business processes. This may include renting on a long-term basis or providing special rates and conditions. Partnering with public transport operators to provide integrated services that include electric car rental for the last kilometer can make renting more convenient and attractive for public transport users.

Threats:

Competition from cars with internal combustion engines. Although electric cars have many advantages, cars with ICE are still in demand and have their strengths. Cars with internal combustion engines usually have a longer range and can be refueled in minutes, making them more convenient for long trips and long-distance trips.

The infrastructure of gas stations for internal combustion engines is more developed and widespread compared to charging stations for electric vehicles. This makes ICE cars more convenient for use outside the urban environment and in areas where access to charging stations is limited.

Currently, such cars usually have a lower initial cost compared to electric cars, making them more affordable for a wide range of consumers. The internal combustion engine market offers a wider selection of models, including different body types, engine capacities and other features, allowing buyers to choose the car that best suits their needs and preferences.

Many drivers are used to traditional cars and feel more confident driving such cars because they are familiar with their device and operational features.

Limited resources and materials. The limited resources and materials used in the production of electric vehicles can present challenges to scale up their mass production and distribution. Most electric cars use batteries, the main material of which is lithium. However, global lithium reserves are limited, and increased demand for it due to the growth of electric vehicle production could cause problems with its supply and price.

Some electric vehicle components, such as magnets in electric motors and other electronic components, require rare earth metals. Limited stocks of these materials can create supply risks and increase production costs.

Electric motors used in electric vehicles contain large amounts of copper, and many electric vehicles use aluminum and other lightweight materials to reduce weight. An increase in demand for these metals may cause their prices to rise and cause an imbalance in the global metal market.

Government Policy Changes. Changes in government policies regarding subsidies, taxes, and other support measures may adversely affect the EV market. Many states provide subsidies, tax breaks and other incentives for the purchase of electric vehicles [21]. Their abolition or reduction could make electric cars less affordable and attractive to consumers, especially if they have a higher initial cost compared to diesel cars.

An increase in electricity tariffs or the introduction of additional fees for electric vehicle owners may increase the cost of operating electric vehicles and make them less attractive to consumers.

A change in tariffs or duties on the import of components for electric vehicles or electric vehicles themselves can increase their cost and make it difficult to be available in the market, especially for import-dependent countries.

Technical problems and safety. The use of electric vehicles is associated with a number of technical and safety issues that may affect their spread. Problems with batteries can lead to reduced range, longer charging times, and even fires or explosions. This can cause danger to both drivers and others.

Electrical systems of electric vehicles can experience various malfunctions and failures, which can lead to loss of control of the car, as well as to the occurrence of dangerous situations on the road. In the event of an electric vehicle accident, specific problems may arise, such as current leakage, or the battery catching fire when it is damaged, which can cause additional danger to rescuers and bystanders.

Thus, the conducted SWOT analysis allows you to systematize problems and identify key influencing factors that create an environment for the development of this market.

Conclusions

The analysis of the factors affecting the development of the global market of electric vehicles made it possible to identify the strengths and weaknesses of the industry, as well as the opportunities and threats faced by the market of electric vehicles. This allows to identify strategies for solving problems and taking advantage of opportunities for sustainable development.

Using the results of the analysis in the construction of a factor model in further research will allow to obtain more accurate forecasts of the development of this market, which, in turn, can help in making strategic decisions and planning actions for the sustainable development of the electric vehicle industry in the future.

Also, the results of the study can be used by all interested parties, including manufacturers, importers, consumers and government organizations in order to promote the development of the electric vehicle industry.

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NATIONAL ECONOMY'S MARKET MECHANISMS OF ACCOUNTING, ANALYSIS AND AUDIT

UDC 657.421:005.52]:330.131.5

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-07>

FEATURES OF THE ANALYSIS OF FIXED ASSETS IN THE CONTEXT OF MANAGING THE EFFICIENCY OF THEIR USE

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Key words:

fixed assets, strategic management, tactical management, analysis, efficiency, capital return, profitability, evaluation.

The article reveals the peculiarities of the method of analysis of fixed assets as an important component of the enterprise's production potential. Fixed assets are the main component of the production potential of any enterprise. Accordingly, an important point is the analysis of fixed assets at the enterprise, the quality of work, product competitiveness and the results of the enterprise's financial and economic activity depend on the efficiency and intensity of their use. With the change in the information needs of investors and analysts, the improvement of methods of economic activity analysis in accordance with the requests of the management system, the issue of forming a system of key indicators for the analysis and objective assessment of the performance of enterprises is urgent. According to the meaning and role of the analysis, the main tasks and stages of the process of analysis of fixed assets are defined. The scientific approaches of various scientists regarding the allocation of groups of indicators regarding the analysis of fixed assets are summarized. A system of indicators has been formed for the analytical study of the assessment of the use of fixed assets, which provides for three groups of indicators: a group of indicators for assessing the technical condition (reproduction) of fixed assets, a group of generalizing indicators and a group of partial indicators. Features of the factor analysis of the efficiency of the use of fixed assets are determined. The directions for increasing the efficiency of the use of fixed assets at the enterprise are substantiated.

ОСОБЛИВОСТІ АНАЛІЗУ ОСНОВНИХ ЗАСОБІВ В КОНТЕКСТІ УПРАВЛІННЯ ЕФЕКТИВНІСТЮ ЇХ ВИКОРИСТАННЯ

Пушкарь І.В., Зачепило Д.А.*Запорізький національний університет**Україна, 69600, м. Запоріжжя, вул. Жуковського, 66***Ключові слова:**

основні засоби, стратегічне управління, тактичне управління, аналіз, ефективність, фондовіддача, рентабельність, оцінка.

У статті розкриваються особливості методики аналізу основних засобів як важливої складової виробничого потенціалу підприємства. Основні засоби виступають основною складовою виробничого потенціалу будь-якого підприємства. Відповідно, важливим моментом є здійснення аналізу основних засобів на підприємстві, від ефективності та інтенсивності використання яких залежить якість роботи, конкурентоспроможність продукції та результати фінансово-господарської діяльності підприємства. Із зміною інформаційних потреб інвесторів, аналітиків, удосконаленням методів аналізу господарської діяльності у відповідності до запитів системи управління, актуальним є питання формування системи ключових показників для аналізу та об'єктивної оцінки ефективності діяльності підприємств. Відповідно до значення та ролі аналізу, визначено основні завдання та етапи процесу аналізу основних засобів. Узагальнено наукові підходи різних науковців щодо виділення груп показників щодо проведення аналізу основних засобів. Сформовано систему

показників для аналітичного дослідження оцінки використання основних засобів, що передбачає три групи показників: група показників оцінки технічного стану (відтворення) основних засобів, група узагальнюючих показників та група часткових показників. Визначено особливості факторного аналізу ефективності використання основних засобів. Обґрунтовано напрями підвищення ефективності використання основних засобів на підприємстві.

Statement of the problem

The economic activity and financial condition of the enterprise largely depend on the provision of fixed assets and their use, as the obsolescence and significant wear and tear of the main means of production leads to a decrease in production volumes, deterioration of the quality of manufactured products and, as a result, is one of the reasons for the decrease in the profitability of the enterprise.

Conducting a study of the economic efficiency of the use of fixed assets and ways to increase it is extremely relevant, because in the conditions of a market economy and competition, those manufacturers who effectively use their resources, in particular, the main means of production, function successfully. Improving the quality of enterprise management is associated with the application of modern methods of assessing the state of fixed assets, analysis and planning their development, with the formation of a comprehensive approach to assessing the mutual influence of indicators of the financial and economic activity of the enterprise and indicators of effective use of assets. The search for ways to increase the efficiency of the use of fixed assets is one of the most urgent issues in the management policy of the enterprise as a whole. Also, in modern conditions, the formation of complete information about economic processes is impossible without information about the main assets, analysis and evaluation of their rational use, because the vital activity of the enterprise and the ability to produce competitive products depend on this.

Analysis of recent studies and publications

Organizational and methodological approaches to the analysis of the effectiveness of the use of fixed assets in accordance with the requests of the management system were studied by many scientists, among whom it is worth highlighting such as O.M. Haydayenko [1], E.P. Hnatenko [2], N.Yu. Yershova [3], I.P. Malikova [6], V.V. Pokynchereda [8], A.M. Tkachenko [10], T.S. Zadnipyranina [10], A.I. Tanchyn [11], S.V. Shubina [12], V.A. V.A. Malakhov [12]. Strategic aspects of the method of analysis of fixed assets were studied by N.Yu. Yershova [4], I.V. Pushkar [9]. Sectoral features of the analysis of fixed assets, taking into account the specifics of their use in agriculture, are devoted to the work of O.V. Yehorova, L.O. Dorohan-Pysarenko, A.E. Rudych [5] and T.O. Mulyk. However, there are debatable issues that require further research regarding: distinguishing the stages of analysis; the question of choosing from a large number of analytical indicators those that are really capable of providing a comprehensive analytical assessment; improvement of the analysis methodology taking into account the peculiarities of economic activity and the use of fixed assets at the tactical and strategic levels.

Objectives of the article

The purpose of the article is to research and generalize methodological approaches, as well as to highlight the features of the analysis of the use of fixed assets to substantiate the key indicators of the analytical assessment, which will contribute to the effective management of fixed assets in the context of ensuring the long-term functioning and development of enterprises.

The main material of the research

Fixed assets are the main element of the production process, as a result of which products are created, services are provided and work is performed. And with the modern technical level of production, the main means and their technical condition determine the potential possibilities of production, its capacity.

Timely and comprehensive analysis of the state of use of fixed assets is of particular importance in order to ensure an effective capital asset management policy. And it is based on the results of the analysis that the amount of financial resources necessary to ensure the optimal structure of fixed assets and efficient functioning of the enterprise is determined.

Therefore, among the priority tasks of the analysis of the use of fixed assets of the enterprise, it is possible to single out: determination of the peculiarities of production conditions, the specifics of conducting economic activity and the use of fixed assets for the financial and economic indicators of the enterprise's activity; study of the composition, structure and dynamics of fixed assets; determination of technical condition assessment indicators (reproduction) of fixed assets; assessment of the effectiveness of the use of fixed assets based on general indicators; substantiation of directions for improving the use of fixed assets at the enterprise [6, p. 174].

Accordingly, a system of indicators is used to analyze and evaluate the state and efficiency of the use of fixed assets, which characterize the volume of fixed assets, their growth rates for the corresponding periods, the ratio of individual groups in the total value of fixed assets, the share of the active part, reasons for changes in their volumes and structure.

Indicators characterizing the enterprise's provision of fixed assets include: capital intensity, capital adequacy, the coefficient of the real value of the main means of production in the enterprise's property. Summarizing indicators of the efficiency of the use of fixed assets are return on capital, the inverse indicator of return on capital – capital intensity of products and profitability [1]. Let's analyze the indicators of the efficiency of the use of fixed assets at the enterprise (Table 1).

Analyzing the obtained indicators, it can be concluded that the efficiency of the use of fixed assets increases. The

Table 1 – Evaluation of indicators of the efficiency of the use of fixed assets

Indexes	2021	2022	Dynamics	
			D	rel, %
Sales volume, thsd UAH	38784	60526	21742	156,06
Average annual cost of health insurance, thsd UAH	53464	53124,5	-339,5	99,36
Profit from operating activities, thsd UAH	2574	-2407	-4981	-93,51
Fund return, UAH/UAH	0,73	1,14	0,41	157,06
Capital capacity, UAH/UAH	1,38	0,88	-0,50	63,67
FA profitability, %	4,81	-4,53	-9,34	-94,18

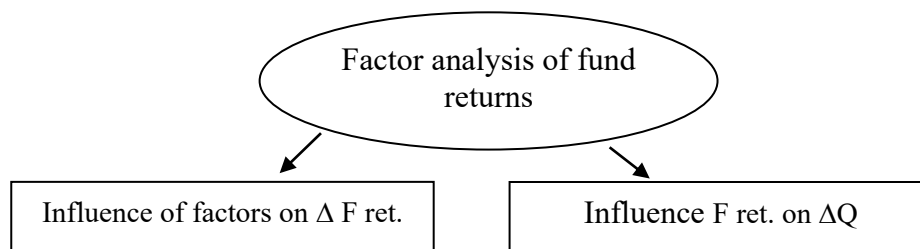


Figure 1 – Directions of factor analysis of fund returns

Table 2 – Models of factor analysis of fund returns

Influence of factors on D	Influence F _{ret} on D
$F_{ret} = Q / \overline{S_{FA}}$	$\Delta Q = \overline{S_{FA}} \times F_{ret}$
Taking into account the influence of the active part: $F_{ret} = P_{act.p.} \times F_{ret.act.p.}$	Detailing on the active part: $\Delta Q = \overline{S_{FA}} \times P_{act.p.} \times F_{ret.act.p.}$
Use of machines and equipment in the active part of fixed assets: $F_{ret} = P_{act.p.} \times P_{m.act.p.} \times F_{ret.m.}$	Use of machines and equipment in the active part of fixed assets: $\Delta Q = \overline{S_{FA}} \times P_{act.p.} \times P_{m.act.p.} \times F_{ret.m.}$
Fund return of technical equipment $F_{ret}^{TE} = \frac{N \times FWT_i \times HP_i}{\overline{S_{FA}}}$	Use of equipment time spent: $\Delta Q = N_{w/hour} \times Y_{1w/hour}$
Extension of the model due to the detailing of the working time fund: $FWT = D \times C_{var} \times T$ $F_{ret}^{TE} = \frac{N \times D \times C \times T \times HP_i}{\overline{S_{FA}}}$	$\Delta P_{FA} = F_{ret} \times P_{s.p.} \times Pr_{s.p.}$

Source: summarized by the author based on [2, 3, 10, 11]

capital return on fixed assets increased by 57.06%. This means that in 2022 from UAH 1. of the cost of fixed assets, the company received products worth UAH 1.14, which is UAH 0.41. more than in the past. Accordingly, in order to obtain products for UAH 1, it is necessary to use fixed assets worth UAH 0.88, which by UAH 0.50. less than in 2021. As for the profitability of fixed assets, in 2021 the company received from UAH 1. fixed assets 4.81 kopecks. profit, and in 2022 there will be a significant decrease in the indicator, i.e. unprofitable activity (for 1 UAH of fixed assets, 4.53 kopecks of loss).

We will conduct a factor analysis of the resulting performance indicators, namely: fund returns in two directions,

which are presented in fig. 1, volume of production and profitability of fixed assets.

Factor models of fund returns are shown in Table 2.

At the next stage, using some of the models listed in the table. 2, we will conduct a factor analysis of the fund return indicator.

$$F_{ret0} = \frac{Q_0}{S_{FA0}} = \frac{38784}{53464} = 0,73 \text{ UAH}$$

$$F_{ret\ subj1} = \frac{Q_1}{S_{FA0}} = \frac{60526}{53464} = 1,13 \text{ UAH}$$

$$\Delta F_{ret Q} = F_{ret}^{subj 1} - F_{ret0} = 1,13 - 0,73 = +0,4 \text{ UAH}$$

$$F_{ret}^{subj 2} = \frac{Q_1}{S_{FA1}} = \frac{60526}{53124,5} = 1,14 \text{ UAH}$$

$$\Delta F_{ret \frac{S_{FA}}{}} = F_{ret}^{subj 2} - F_{ret}^{subj 1} = 1,14 - 0,73 = +0,01 \text{ UAH}$$

$$BC: 1,14 - 0,73 = +0,4 + 0,01 + 0,41 = +0,41$$

Increase in fund return by UAH 0.41. occurred as a result of the influence of 2 factors. Due to the increase in the volume of sales by 21,742 thsd.UAH return on investment increased by UAH 0.4, and due to the decrease in the cost of fixed assets by 339.5 thsd.UAH fund return increased by UAH 0.01.

Let's determine the impact of the fund return on Q realization:

$$\Delta Q = \overline{S_{FA}} \times F_{ret}$$

$$Q_0 = \overline{S_{FA0}} \times F_{ret0} = 53464 \times 0,73 = 38784 \text{ thsd.UAH}$$

$$Q^{subj1} = \overline{S_{FA1}} \times F_{ret0} = 53124,5 \times 0,73 = 38538 \text{ thsd.UAH}$$

$$\Delta Q_{\frac{S_{FA}}{}} = Q^{subj1} - Q_0 = 38538 - 38784 = -246 \text{ thsd.UAH}$$

$$Q^{subj2} = \overline{S_{FA1}} \times F_{ret1} = 53124,5 \times 1,14 = 60526 \text{ thsd.UAH}$$

$$\Delta Q_{Fret} = Q^{subj2} - Q^{subj1} = 60526 - 38538 = +21988 \text{ thsd.UAH}$$

$$BC: 60526 - 38784 = -246 + 21988 \text{ thsd.UAH} + 21742 = +21742$$

The total change in the volume of sales was 21,742,000 UAH caused by 2 factors: a decrease in the average annual cost of fixed assets by 339.5 thsd.UAH led to a decrease in the volume of production by 246,000 UAH. Increase in fund yield by 0.41 UAH led to an increase in the volume by 21,988,000 UAH.

We will conduct a factor analysis of the profitability of fixed assets by the method of chain substitutions:

$$P = \frac{Pr}{S_{FA}}$$

$$P_0 = \frac{Pr_0}{S_{FA0}} = \frac{2574}{53464} \times 100 = 4,81\%$$

$$P^{subj1} = \frac{Pr_1}{S_{FA0}} = \frac{-2407}{53464} \times 100 = -4,50\%$$

$$\Delta P_{Pr} = P^{subj1} - P_0 = -4,5 - 4,81 = -9,31\%$$

$$P^{subj2} = \frac{Pr_1}{S_{FA1}} = \frac{-2407}{53124,5} \times 100 = -4,53\%$$

$$\Delta P_{\frac{S_{FA}}{}} = P^{subj2} - P^{subj1} = -4,53 + 4,5 = -0,03\%$$

$$BC: -4,53 - 4,81 = -9,31 - 0,03 - 9,34 = -9,34$$

In general, the profitability of fixed assets decreased by 9.34%. The decrease in profitability by 9.31% is caused by a decrease in profit by 4,981 thsd. UAH, and due to a decrease in the cost of fixed assets by 339.5 thsd. UAH profitability decreased by 0.03%.

For an in-depth analysis of fund return, we take into account the influence of the active part of fixed assets and its efficiency of use (Table 3).

For analysis, we will use the following factor model:

$$F_{ret} = P_{act.p.} \times F_{ret.act.p.}$$

$$F_{ret0} = P_{act.p.0} \times F_{ret.act.p.0} = 0,4603 \times 1,58 = 0,73 \text{ UAH}$$

$$F_{ret}^{subj1} = P_{act.p.1} \times F_{ret.act.p.0} = 0,4588 \times 1,58 = 0,72 \text{ UAH}$$

$$\Delta F_{ret \text{ Pact.p.}} = F_{ret}^{subj1} - F_{ret0} = 0,72 - 0,73 = -0,01 \text{ UAH}$$

$$F_{ret}^{subj2} = P_{act.p.1} \times F_{ret.act.p.1} = 0,4588 \times 2,48 = 1,14 \text{ UAH}$$

$$\Delta F_{ret \text{ Fret act.p.}} = F_{ret}^{subj2} - F_{ret}^{subj1} = 1,14 - 0,72 = 0,42 \text{ UAH}$$

$$BC: 1,14 - 0,73 = -0,01 + 0,42 + 0,41 = +0,41$$

Fund return increased by 0.41 UAH, at the same time, due to a decrease in the share of the active part by 0.15%, the fund return decreased by 0.01 UAH, and due to an increase in the fund return of the active part by 0.9 UAH total fund return increased by 0.42 UAH.

We will determine the impact on the change in the volume of production due to detailing on the active part, we will conduct factor analysis using the method of absolute differences:

$$\Delta Q = \overline{S_{FA}} \times P_{act.p.} \times F_{ret.act.p.}$$

Table 3 – Calculation of indicators for factor analysis

Indexes	2021	2022	Dynamics	
			Δabs,+/-	rel, %
Scope of implementation, thsd UAH	38784	60526	21742	156,06
Average annual cost FA, thsd UAH	53464	53124,5	-339,5	99,36
including machines and equipment, thsd UAH	24611	24377,5	-233,5	99,05
Calculated indicators:				
Specific gravity of the active part FA	0,4603	0,4588	-0,0015	-
General fund return, UAH/UAH	0,73	1,14	0,41	-
Fund return of the active part, UAH.	1,58	2,48	0,9	-

$$Q_0 = \overline{S_{FA0}} \times P_{act.p.0} \times F_{ret.act.p.0} = 53464 \times 0,4603 \times 1,58 = 38784 \text{ thsd.UAH}$$

$$\Delta Q_{FA} = \Delta_{abs} \overline{S_{FA1}} \times P_{act.p.0} \times F_{ret.act.p.0} = -339,5 \times 0,4603 \times 1,58 = -246,3 \text{ thsd.UAH}$$

$$\Delta Q_{Pact.p.} = \overline{S_{FA1}} \times \Delta_{abs} P_{act.p.} \times F_{ret.act.p.0} = 53124,5 \times (-0,0015) \times 1,58 = -121,7 \text{ thsd.UAH}$$

$$\Delta Q_{Fret.act.p.} = \overline{S_{FA1}} \times P_{act.p.1} \times \Delta_{abs} F_{ret.act.p.} = 53124,5 \times 0,4588 \times (+0,9) = +22110 \text{ thsd.UAH}$$

$$BC: 60526 - 38784 = -246,3 - 121,7 + 22110 + 21742 = +21742$$

The volume of sales increased by 21,742 thsd.UAH. Reduction of the average annual cost of fixed assets by 339.5 thsd.UAH led to a decrease in the volume of production by 246.3 thsd.UAH, a decrease in the share of the active part by 0.15% led to a decrease by 121.7 thsd.UAH. At the same time, the increase in the fund return of the active part by 0.9 UAH led to an increase in the volume by 22,110,000 UAH. In general, the return on investment has increased, but the negative impact has a decrease in the share of the active part of fixed assets, which is a reserve for increasing the return on investment.

Therefore, in the process of analyzing the condition and efficiency of the use of fixed assets, the entire arsenal of methodological techniques is used, but the most common and information-rich is the coefficient analysis, which, based on the calculation of the ratio of absolute values, characterizes various aspects of the formation, use and reproduction of the fixed assets of the enterprise [8]. The results of the factor analysis make it possible to identify reserves for increasing the efficiency of the use of fixed assets, the implementation of which will contribute to: increasing the volume of production without additional capital investments for products that are in demand; reduction of costs per unit of production to increase profitability; reduction of costs from wear and tear of equipment and machines [5]. A set of measures to improve the use of fixed assets at the enterprise are identified, namely: increasing extensive loading – a type of reproduction that finds its expression primarily in increasing the working time of fixed production assets (extensive loading has certain limits); increasing the intensive load is a type of reproduction, due to which the return of labor resources per unit of time increases (this direction has much wider opportunities for improving the use of fixed assets and production capacities, which involves increasing the degree of loading of equipment per unit of time) [7].

It should also be noted that analytical information on the movement and efficiency of the use of fixed assets at the enterprise can influence the adoption of a number of management decisions of a strategic and tactical nature.

Strategic management of the company's main assets is a management activity that ensures the achievement of

long-term goals and the solution of long-term tasks based on the activation of the existing development potential and taking into account the influence of the changing external environment. Tactical management of fixed assets involves the achievement of current goals and objectives related to their effective use, based on the realization of the internal capabilities of the enterprise [4]. Accordingly, in order to substantiate a rational methodology of analysis, it is necessary to take into account the features inherent in the management of fixed assets, namely: shifting the focus of analysis from the internal to the external business environment; improving the system of indicators that characterize the effectiveness of the use of capital assets for the purposes of analysis, as well as their compliance with tactical and strategic goals.

Therefore, for the management system in the context of ensuring the effective implementation of the company's development strategy, it is advisable to apply a comprehensive analysis with a combination of elements of both traditional management analysis and financial and strategic analysis. Based on the results of such an analysis, not only information is formed about the availability, structure, movement and efficiency of use, but also additional information: about the impact of fixed assets on indicators of the financial condition and financial results of the enterprise; about factors of the external and internal business environment, the degree of their influence on fixed assets within the framework of strategic management analysis [9].

Such a comprehensive approach will provide an in-depth analysis of the state of use of fixed assets and will allow obtaining comprehensive analytical information for the enterprise's resource management system.

Conclusions

It was determined that the efficiency of fixed assets is a result in the form of the obtained effect, which is correlated with the spent resources. The efficiency of the use of fixed assets plays an important role in the activity of the enterprise, while the economic potential and production capabilities increase, the technical level of production increases, there are ample opportunities for the reorientation of enterprises to the production of new products that are in high demand among consumers, the growth rates of labor productivity increase, and quality improvement products and other indicators.

The profitability of the invested capital, the cost of finished products and the financial results of the business entity depend on the efficiency and intensity of operation of fixed assets. Therefore, for the formation of analytical information on the use of fixed assets, it is advisable to apply methodological aspects of managerial, financial and strategic analysis. When applying such a complex analysis, the action of all factors, information flows, their relationship and interdependence is taken into account. This will contribute to the formation of analytical data in accordance with the requests of the management system for making management decisions regarding the effective use of fixed assets and strategic development of the enterprise.

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UDC 336.225.673 (100)

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-08>**ASSESSMENT OF TAX CONTROL PRACTICES IN FOREIGN COUNTRIES****Saienko O.R., Somchenko V.V., Klots A.K.***Zaporizhzhia National University
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Key words:

tax control, tax systems of foreign countries, tax audits, penalties, taxpayer liability, control and inspection work, elements of the tax control system.

The article analyses the basic principles of organisation of tax control in foreign countries. The author substantiates the role of tax control in the activities of fiscal authorities of foreign countries to achieve a high level of fiscal efficiency of the tax system, which should be studied and taken into account in the process of optimising tax control in Ukraine. The author studies the institutional support of procedural actions in the field of violation of tax legislation. The main powers of foreign controlling authorities are analysed. The legislative and legal support of the process of controlling tax payments to the budget is considered. The author analyses the forms and methods of tax control and the use of forms of organisation of control inspections in the world practice. The elements of tax control systems in developed foreign countries are identified and the results of their application in terms of compliance with tax legislation are formed. Attention is paid to informative and analytical methods of tax control. The article shows positive examples of organisation of tax authorities' activities in the field of tax control, which can be adapted and implemented in domestic practice. The author offers recommendations on organisation of the tax control process in Ukraine with due regard to the world experience and identifies the directions of their implementation.

**ОЦІНКА ПРАКТИКИ ОРГАНІЗАЦІЇ ПОДАТКОВОГО КОНТРОЛЮ
В ЗАРУБІЖНИХ КРАЇНАХ****Сасенко О.Р., Сьомченко В.В., Кльоц А.К.***Запорізький національний університет
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податковий контроль, податкові системи зарубіжних країн, податкові перевірки, штрафні санкції, відповідальність платників, контрольна-перевірочна робота, елементи системи податкового контролю.

Стаття присвячена аналізу основних засад організації податкового контролю в зарубіжних країнах. Обґрунтовано роль податкового контролю у діяльності фіскальних органів зарубіжних країн щодо досягнення високого рівня фіскальної ефективності податкової системи, який доцільно вивчити та врахувати у процесі оптимізації податкового контролю в Україні. Досліджено інституційне забезпечення процесуальних дій у сфері порушення податкового законодавства. Проаналізовано основні повноваження зарубіжних контролюючих органів. Розглянуто законодавчо-правове забезпечення процесу контролю розрахунків з бюджетом за податками. Проаналізовано форми та методи податкового контролю та використання форм організації контрольних перевірок у світовій практиці. Визначено елементи систем податкового контролю в розвинутих зарубіжних країнах та сформовано результат їх застосування щодо дотримання податкового законодавства. Приділено увагу інформативним та аналітичним методам податкового контролю. Показано позитивні приклади організації діяльності податкових органів щодо організації контролю за сплатою податків, що можуть бути адаптовані й реалізовані у вітчизняній практиці. Запропоновано рекомендації щодо організації процесу податкового контролю в Україні з урахуванням світового досвіду та визначені напрями їх реалізації.

Formulation of the problem

The main goal of tax control is to de-shadow the national economy and increase the economic welfare of the state by reducing taxpayers' tax arrears to the budget. In this regard, the tasks of tax control organisation include the following: identifying the cause and effect of violations of tax legislation; developing measures to improve the efficiency of the tax system.

One of the ways to solve these problems is to study foreign experience of tax control in order to find the best ideas and methods of its implementation and determine the possibility of their application in the domestic taxation system.

Analysis of recent research and publications

The theoretical and practical issues of tax control are reflected in the works of many domestic scholars, such as V. Andrushchenko, P. Buriak, N. Vytvitska, B. Karpinskyi, A. Kizyma, A. Krysovaty, M. Melnyk, P. Melnyk, N. Maryniv, O. Naidenko, Y. Solovyova, D. Reva and others.

However, measures to improve the efficiency of tax control are considered by researchers ambiguously and require systematisation and adaptation to the current economic climate.

Thus, the problem of improving the efficiency of tax control in Ukraine is relevant, and one of the ways to solve this problem is to study the global trends in its organisation.

Formulation of the goals of the article

The purpose of the article is to study the peculiarities of organisation of tax control in foreign countries and to systematise the results obtained with regard to the possibility of their adaptation to domestic needs.

Presenting main material

Tax control is a necessary lever of influence on the tax system of each country. Its necessity is determined by both objective (instability of tax legislation) and subjective reasons (low tax discipline of taxpayers).

Tax systems of different countries were formed under the influence of different political and socio-economic conditions [1].

For example, the French Tax Code regulates the organisation of tax control, which defines the methods and mechanisms necessary to combat tax evasion.

A special feature of tax control is the taxation of individuals with high incomes (journalists, artists, athletes, heads of large enterprises) carried out by the Office of Tax Audits. The selection of taxpayers for audits is based on the analysis of submitted tax returns or on the basis of external information. Qualitative indicators of tax audits are: the amount of additional taxes charged; measures taken to pay taxes in full; the ratio of resources expended to the amount of additional taxes charged [2].

As for Japan, the tax collection system in this country is quite efficient and well organised. Special bodies are used to collect taxes – local and central tax authorities. They monitor compliance with tax legislation, conduct audits of taxpayers and collect taxes.

Japan has a system of tax refunds. For example, if a company invests in the development of new technologies, it can receive a refund of part of the taxes paid. This contributes to the development of business and research in the country [3].

HM Revenue and Customs (HMRC) is responsible for the following within its competence: control over the correctness of tax payments to the budget; accounting for tax surcharges; investigation of tax crimes and offences; control of relations between tax authorities and taxpayers.

Control over the correct administration of taxes and duties is exercised by tax inspectors, whose duties include: sending reminders to taxpayers about the deadlines for payment of taxes and tax return forms; auditing tax returns and other tax reporting; and assessing tax liabilities (in cases of failure to submit a proper tax return or inaccurate data).

To improve relations between large taxpayers and tax authorities, the UK has established a Large Business Service Centre. In addition, the country uses the method of horizontal tax monitoring. A condition for the implementation of this method at an enterprise is the signing of an application for control over the payment of taxes [4].

The Swedish tax control system is considered to be one of the most effective. When considering the collection of declarations, management of funds, enforcement and control of large enterprises, the country has a strict centralisation of tax control, while tax control planning remains decentralised. Swedish law regulates the use of desk and documentary tax control without any time limits for on-site tax audits.

The high level of voluntary tax payment in Sweden is achieved by establishing explanatory work with taxpayers, including the provision of advisory services on the calculation and timing of tax payments and gaining trust from taxpayers in the work of tax authorities [1].

In Italy, tax audits are divided into random audits, audits by lot and audits for other reasons (e.g., special types of work). In the system of tax control authorities in Italy, an important role is played by the Financial Guard, which was established in 1881. Legislation on liability for tax crimes in Italy remains unsystematic at present, and its provisions may be contained in laws, decrees-laws and decrees of the President of the Republic.

In France and Italy, penalties are set as a percentage of the amount of underpaid or unpaid tax. At the same time, the amount of penalties also depends on the intent of the tax offence. The maximum fine in France is 80%, and in Italy – 240%. Italy also imposes a penalty for ignoring tax inquiries – 500-600 euros for each inquiry [2].

The Internal Revenue Service oversees compliance with US tax laws and the collection of federal taxes. At the same time, at the state level, there are tax authorities that control the payment of taxes imposed in these states, and local tax authorities control the payment of taxes imposed by local authorities. There is a close relationship between the tax authorities at all levels.

The Internal Revenue Service has a special unit that directly controls the taxation of large and medium-sized businesses. In addition, the Internal Revenue Service has a specialised unit whose main task is to select taxpayers for tax audits.

Tax audits are divided into: absentee (submission of documents to the tax authorities by mail), in-house (audit of declarations at the location of the tax authorities), and on-site (comprehensive audit at the location of the taxpayer). For each type of audit, the US has developed detailed instructions to regulate audits.

One of the grounds for conducting an audit may be that the inspector-controller receives information from a paid informant.

Late payment of taxes in the United States is subject to a penalty of 5% of the unpaid amount and 50% of the amount the taxpayer would have received if the money had been deposited in a bank. Failure to submit tax returns is punishable by a fine of up to USD 100 thousand USD with imprisonment for up to one year. A fine of up to USD 100,000 is imposed for the submission of incorrect tax information by individuals and a fine of up to USD 500,000 is imposed for the submission of incorrect tax information by legal entities.

In order to prevent tax offences, the US tax service annually holds a tax workshop, which is broadcast on public and cable television across the country. In addition, the United States has established the institution of tax courts that deal exclusively with tax claims [5].

Tax audits in Canada are divided into absentee, in-house and on-site audits. Large corporations may sign special agreements with the tax authorities that stipulate certain issues related to scheduled audits. Such audits usually last from 3 to 8 months, and the subject of control can only be the activities of the last 4 years.

Tax audits of large companies and their branches are conducted simultaneously throughout Canada and are coordinated by the central tax authority.

The risk categories for committing an offence are divided into four groups. If a taxpayer is held liable, it may be subject to a long prison term or a significant fine, including confiscation of the taxpayer's property.

As in the United States, Canada has a tax court, which plays an important role in ensuring that tax control is carried out at the proper level [6].

A feature of the current German tax control system is that tax consultants who are not employees of state bodies are vested with controlling powers. To perform this work, the Ministry of Finance issues them a licence to carry out such activities.

The main form of control activity of German tax inspectors is a tax audit, which is conducted on the basis of an order to appoint an audit with a defined range of tasks.

In Germany, the tax authorities have the right to conduct on-site inspections without notifying the taxpayer. There are no time limits for such audits.

To simplify tax control, Germany widely uses an electronic tax administration system. To conduct tax control of large taxpayers, Germany has a special department for servicing this category of business entities. It is subordinated to the Supreme Financial Directorate. In this case, a documentary audit is carried out at least once a year, but not more often than once every six months. In addition, indirect methods are used to conduct tax control (the most

Table 1 – Elements of tax control systems in developed countries

Elements of tax control systems	Country	Result of applying a specified tax control
The Code of Tax Procedures as a separate legislative act (procedures for conducting tax audits of legal entities and individuals differ significantly)	France	Approximately 90% of tax audits are effective in detecting tax offences and making decisions on additional tax payments
Private consulting on tax accounting and tax reporting	France	High level of voluntary tax compliance
Increased attention is paid to taxpayers who provide the largest budget revenues. Other taxpayers are subject to control if there is a high risk of committing a tax offence	United Kingdom	Reducing the cost of controlling and monitoring the activities of all taxpayers
Keeping the financial authorities and the tax inspectorate under a single authority (German Ministry of Finance)	Germany	Free exchange of information on financial transactions of legal entities and individuals between different financial authorities and tax inspectorates
Tax forecasting: – Expected costs of the audit, – the amount of possible additional tax payments, – the degree of compliance with the principle of minimal interference with the payer's activities	Germany	Reducing tax administration costs by eliminating ineffective audits
Tax consulting for taxpayers, training of specialists for the public and private sectors on taxation issues Partnership	Sweden, USA	High level of voluntary tax payment, close cooperation between tax authorities and taxpayers
Use of information and communication technologies	USA	Free access of tax authorities to information databases of other authorities that have information on income, expenses, financial liabilities and financial position of taxpayers
Tax courts	USA, Canada	Quick, professional and effective resolution of conflicts between taxpayers and tax authorities; strengthening of tax discipline; increased responsibility of all participants in tax relations for decisions made

Source: compiled by the authors for [2, 5]

common is the method based on the analysis of production stocks) [7].

A special feature of the control over the work of German tax inspectors is the system of point-based assessment of their work, according to which a tax inspector is awarded a certain number of points (from 1 to 8) and each inspector must score at least 34 points in the reporting year.

The scoring system is used to assess the decisions of tax authorities. The scoring standard also serves as a basis for drawing up inspection plans for the future period in terms of the most optimal distribution of the workload between individual inspectors.

The effectiveness of tax control is significantly enhanced by the presence of the tax police in the country – the “shtoyfy”, whose employees have the rights of law enforcement agencies. At the same time, the country has the institution of tax judges, who, acting within the general framework of the justice system, are exclusively engaged in consideration of claims on tax issues [5].

Based on the results of studying the experience of developed countries in terms of building tax control systems, we can identify the following elements that, with proper adaptation, can be implemented in domestic practice (Table 1).

The foreign experience of organising the activities of tax control bodies cannot be fully transferred to Ukrainian legislation, but knowledge of the way tax control is developing in developed foreign countries and study of their achievements helps to create an effective system of controlling entities in the field of taxation in Ukraine.

Conclusions and suggestions

As a result of the study of foreign experience of tax control authorities, the following possible areas for improving the tax control mechanism in Ukraine can be identified:

- Adoption of departmental instructions that would define in detail the procedure for conducting each type of tax audit;
- Creation of the institute of authorised tax consultants;
- Introduction of a scoring system for the certification of tax control officers in order to improve the quality of their duties;
- Use of indirect and computerised methods to identify the risk of possible tax offences;
- Use of information and communication technologies to obtain information on income, expenses, financial liabilities and financial position of taxpayers.

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UDC 005.21:[502.171:620.9]:330.341.1

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-09>

ANALYSIS OF APPROACHES TO THE FORMATION OF ENERGY EFFICIENCY MANAGEMENT STRATEGY AND INNOVATIVE ENERGY TECHNOLOGIES WITH THE PURPOSE OF ENVIRONMENTAL PROTECTION ACTIVITIES

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Key words:

energy efficiency management, energy resources, strategy, energy saving, environment, energy efficiency indicator, innovations, method of targeted energy monitoring, war, agricultural enterprise, cogeneration.

The article examines the impact of irrational use of energy resources and the possibility of reducing energy consumption. The main consumers of energy resources in Ukraine and the percentage of their consumption have been established. The total number of processing industry enterprises is almost 35.2 thousand. At the same time, the main consumers of energy resources in Ukraine are industry (30.2% of total energy consumption), household (32.8%) and transport sectors (19.5%). The level of energy intensity of Ukrainian industry is given and it is determined that over the last 5 years, the total energy intensity level of Ukrainian industry has decreased by only 4%, with a decrease in total added value by 37% and a decrease in energy consumption by 39%. The weak dynamics of the decrease in energy intensity indicates a low level of modernization of production as a whole. The author's definition of the essence of «energy efficiency management» is given, which is proposed to be considered as a component of the general system of enterprise management and energy management, especially that which is aimed at realizing the energy potential of the company for the purpose of significantly improving the energy processes of this company, with the aim of its transition to energy independence, sustainability, energy security and implementation of innovative approaches, energy-saving technologies, and optimal use of energy resources at its disposal. Functions of energy efficiency management of an industrial enterprise according to M. Meskon are given. The concept of the energy efficiency indicator and the method of targeted energy monitoring are characterized. The international experience of the implementation of innovative energy technologies by companies is indicated. The energy strategy of Ukraine for the period until 2035 was studied and its key tasks in the field of energy efficiency were established. The growing importance of the issue of energy efficiency for a country in a state of war and measures that contribute to increasing the level of economic efficiency are demonstrated on the example of an agro-industrial enterprise.

АНАЛІЗ ПІДХОДІВ ДО ФОРМУВАННЯ СТРАТЕГІЇ УПРАВЛІННЯ ЕНЕРГОЕФЕКТИВНІСТЮ ТА ІННОВАЦІЙНИХ ЕНЕРГОТЕХНОЛОГІЙ З МЕТОЮ ПРИРОДООХОРОННОЇ ДІЯЛЬНОСТІ

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Ключові слова:

управління енергоефективністю, енергоресурси, стратегія, енергозбереження, навколишнє середовище, показник енергетичної ефективності, інновації, метод цільового енергетичного моніторингу, війна, агропідприємство, когенерація.

У статті досліджено вплив нераціонального користування енергоресурсами та можливість скорочення споживання енергії. Встановлено основних споживачів енергоресурсів в Україні та відсоток їх споживання. Загальна кількість підприємств переробної промисловості становить майже 35,2 тисячі. При цьому основними споживачами енергоресурсів в Україні є промисловість (30,2% від сукупного енергоспоживання), побутовий (32,8%) та транспортний сектори (19,5%). Наведено рівень енергоємності промисловості України та визначено, що за останні 5 років сукупний рівень енергоємності промисловості України скоротився лише на 4%, при скороченні сукупної доданої вартості на 37 % та скороченні обсягів споживання енергії на 39 %. Слабка динаміка

зниження обсягів енергоємності свідчить про низький рівень модернізації виробництва в цілому. Надано авторське визначення сутності «управління енергоефективністю», яку запропоновано розглядати як складову загальної системи управління підприємством та енергетичного менеджменту, особливо ту, яка спрямована на реалізацію енергетичного потенціалу компанії заради суттєвого покращення енергопроцесів цієї компанії, з метою її переходу до енергонезалежності, стійкості, енергобезпеки та впровадження інноваційних підходів, енергозберігаючих технологій, та оптимального використання наявних у її розпорядженні енергоресурсів. Наведено функції управління енергоефективністю промислового підприємства за М. Месконом. Охарактеризовано поняття показника енергетичної ефективності та методу цільового енергетичного моніторингу. Зазначено міжнародний досвід імплементації інноваційних енерготехнологій компаніями. Досліджено енергетичну стратегію України на період до 2035 року та встановлено її ключові завдання у сфері енергоефективності. Продемонстровано зростання вагомості питання енергоефективності для країни у стані війни та заходи, що сприяють підвищенню рівня економічної ефективності на прикладі агропромислового підприємства.

Statement of the problem

Today, an urgent issue for society is the preservation of natural resources that are extracted for energy. One of the problems is the discrepancy between the volumes of these sources and the needs of humanity. An urgent task for scientists, not only of an energy nature, but also of an economic nature, because energy is the basis, is the development and effective use of both traditional and the involvement of non-traditional and renewable energy sources in public production. Despite this, the level of energy efficiency is quite low, due to its improper use, which in turn leads to aggravation of environmental problems. Also, the lack of modernization of industrial enterprises and the presence of weak dynamics of reducing energy intensity slows down positive changes, which negatively affects the trend of balanced environmental management throughout the world. The importance of the energy monitoring system for evaluating and reducing the use of energy resources is significant. In addition to the above, the dependence on the supply of energy resources, especially from countries with unstable political relations, and the lack of a sufficient number of renewable energy sources threaten the stability of the economy. The need to implement the key tasks defined in the Energy Strategy of Ukraine for the period up to 2035 in the field of energy efficiency. Also, the war became another reason for accelerating the process of introducing advanced energy-saving technologies.

Analysis of recent studies and publications

Many scientists were engaged in research in the field of energy efficiency management, in particular with the purpose of environmental protection, which undoubtedly influenced its development. Important factors of this process are not only innovations, but also the systematization of various approaches, which will allow to build an individual approach for enterprises with different specialization from others.

For example, L. M. Ganushchak-Efimenko and O. O. Yershova [4], who are experts in the field of scientific and innovative economic activity, investigated the

main modern innovative directions for energy efficiency management in three sectors of energy management: optimization, distribution and storage of energy, demonstrated successful examples of their practical implementation.

M. Meskon [7] identified four main functions of management, namely planning, organization, motivation, control, and two compatible processes: the communication process and the decision-making process, which allow us to better understand its mechanism and successfully use the advantages.

The method of increasing the energy efficiency of the enterprise by implementing the international standard ISO 50001, which was presented in the work of E. V. Myronenko, V. O. Shashko, I. O. Trembach [6], is one of the examples of attracting foreign experience that will contribute to the development of the state and the preservation of ecology.

Thanks to such research, the Energy Strategy of Ukraine for the period until 2035 «Security, energy efficiency, competitiveness» was created, which is the country's course on the way to preserving the environment through balanced use of nature.

Objectives of the article

The main tasks of the article are the analysis of energy efficiency measures, an overview of the energy strategy of Ukraine for the period until 2035, one of the scientific approaches to the formation of an energy efficiency management strategy, innovative energy technologies, an analysis of the concepts of an energy efficiency indicator and a method of targeted energy monitoring, consideration of war as a factor affecting the acceleration the rate of growth of the relevance of combining business and energy efficiency into one balanced system.

The main material of the research

Irrational use of energy resources and a gradual increase in their extraction, as well as generally insignificant energy efficiency and a small share of alternative energy sources negatively affect the state of the environment.

Sometimes energy efficiency is called the «fifth fuel» («invisible fuel»), implying that one of the most effective ways to solve the climate problem is to use less energy, that is, not to increase the energy supply, but to reduce the demand for it. Researchers claim that developed countries can reduce energy consumption by 25% with virtually no loss to their residents. Therefore, only the abandonment of fossil fuels and the transition to renewable energy will not save the situation. We should fight against our wastefulness and ignorance. Each country, community and individual can determine the limits of their real needs and consume energy to a sufficient extent, but not more [1].

Energy efficiency and the use of alternative energy sources are the two main strategies of many countries to reduce gas emissions into the atmosphere. According to the UN, energy efficiency can affect this process faster and without costs, such as the introduction of «green» technologies, so it plays an important role in correcting the current environmental situation. There is a close relationship between energy efficiency and CO2 reduction. According to representatives of the International Energy Agency (IEA), CO2 emissions can be reduced by 65% over the next 20 years simply through the active use of energy-efficient technologies. Energy efficiency issues in Ukraine are dealt with by the State Agency for Energy Efficiency and Energy Saving [2]. According to international agreements signed by Ukraine, Ukraine is obliged to reduce the energy intensity of its economy and the negative impact on the climate, as well as to stimulate energy consumers, including industrial enterprises, to increase energy efficiency. At the same time, the Association Agreement between Ukraine, on the one hand, and the European Union, the European Atomic Energy Community and their member states, on the other hand (Association Agreement), contains requirements for the introduction at the legislative level of a number of mechanisms to stimulate enterprises to energy efficiency and climate protection.

Today in Ukraine there are about 44,000 industrial enterprises of various forms of ownership, including large – 239 (0.5%), medium – 4,854 (10.8%), small – 39,779 (88.7%) (Fig. 1).

At the same time, the total number of processing industry enterprises is almost 35.2 thousand.

The main consumers of energy resources in Ukraine are industry (30.2% of total energy consumption), household (32.8%) and transport sectors (19.5%) (Fig. 2).

The basic funds and technologies of many enterprises were created back in Soviet times and require significant energy modernization. At the same time, appropriate capital investments increase the competitiveness of products. Energy efficiency has an impact on competitiveness at the level of enterprises and individual sectors of the economy. This, in turn, has a positive effect on the economic situation of the country as a whole.

At the same time, over the past 5 years, the total level of energy intensity of Ukrainian industry has decreased by only 4%, with a decrease in total added value by 37% and a decrease in energy consumption by 39%.

The weak dynamics of the decrease in energy intensity indicates a low level of production modernization as a whole [3].

Uninterrupted supply and efficient use of fuel and energy resources, the possibility of their extraction in the country and accessibility for the population, enterprises and organizations currently determine the speed, pace and sustainability of the development of a particular state [4].

Before the start of the full-scale invasion, Ukraine’s energy sector was very dependent on other countries. Even at the end of 2021, half of the nuclear reactors were operating using Russian nuclear fuel. Gas was obtained from Europe, coal was mined and purchased, for example, from South Africa, and oil and diesel were supplied from Russia and Belarus.

Currently, the situation has changed somewhat and the same oil products are obtained from more friendly

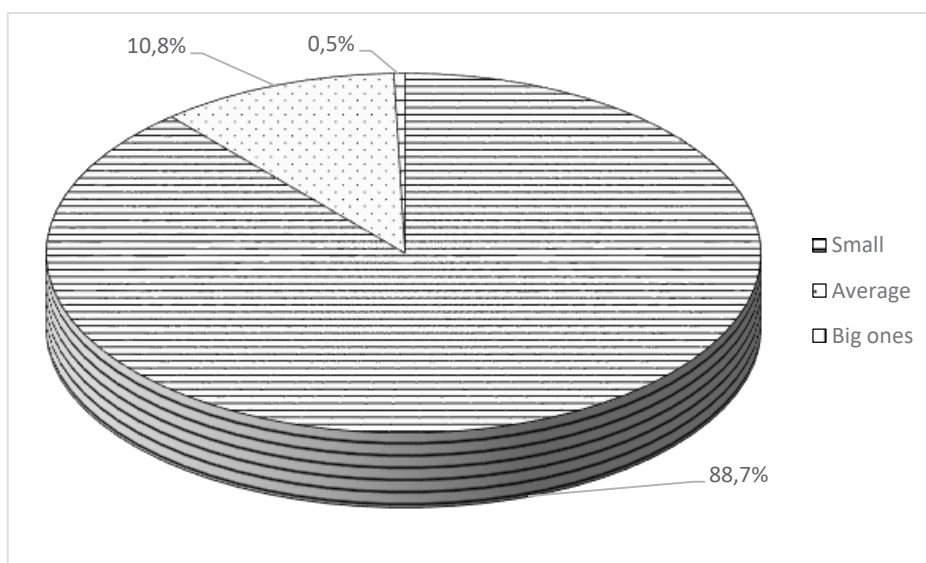


Figure 1 – Industrial enterprises of Ukraine

Source: created by the authors based on [3]

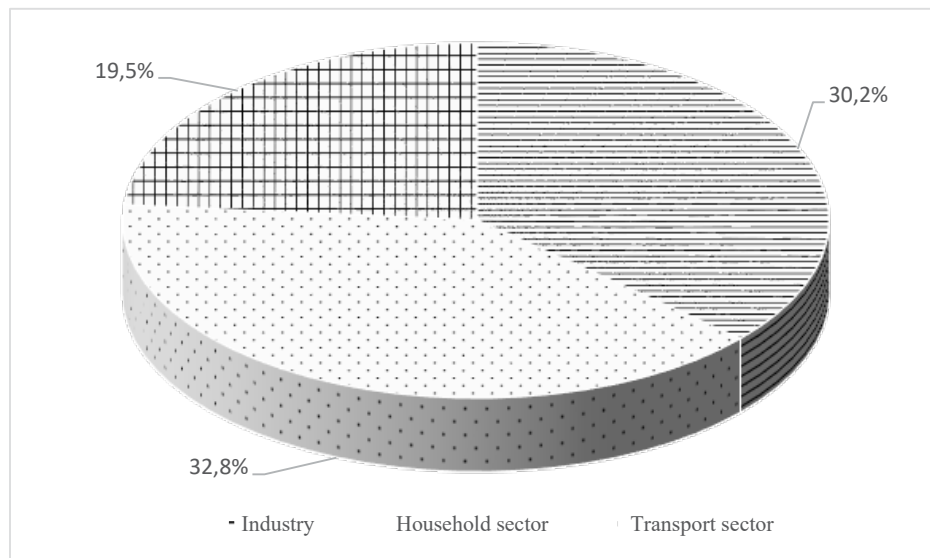


Figure 2 – Main consumers of energy resources in Ukraine

Source: created by the authors based on [3]

countries – Lithuania, Poland. Coal is still mined, some mines operate even in Donetsk region.

Many energy enterprises were not modernized, energy-efficient measures were not implemented to reduce energy consumption, and renewable energy developed very slowly and unsystematically [5].

Therefore, the issues and problems of energy efficiency management of enterprises, organizations, institutions of any form of ownership (state or private) are becoming increasingly urgent and one of the main ones, on the solution of which depends the economic security of our state.

Energy efficiency management can be defined as a component of the general system of enterprise management and energy management, especially that which is aimed at realizing the energy potential of the company for the purpose of significantly improving the energy

processes of this company, with the aim of its transition to energy independence, sustainability, energy security and the introduction of innovative approaches, energy-saving technologies, and optimal use of energy resources at its disposal.

According to the Law of Ukraine «On Energy Saving», there should be specialists responsible for energy efficiency at each level of management, from state to local (business object). That is, energy efficiency can be represented in the form of a hierarchical pyramid (Fig. 3) [6].

Energy efficiency management of an industrial enterprise is a separate case of management, which, according to the definition of M. Meskon, involves 4 main management functions: planning, organization, motivation, control, as well as two compatible processes: the communication process and the decision-making process (Fig. 4) [7].

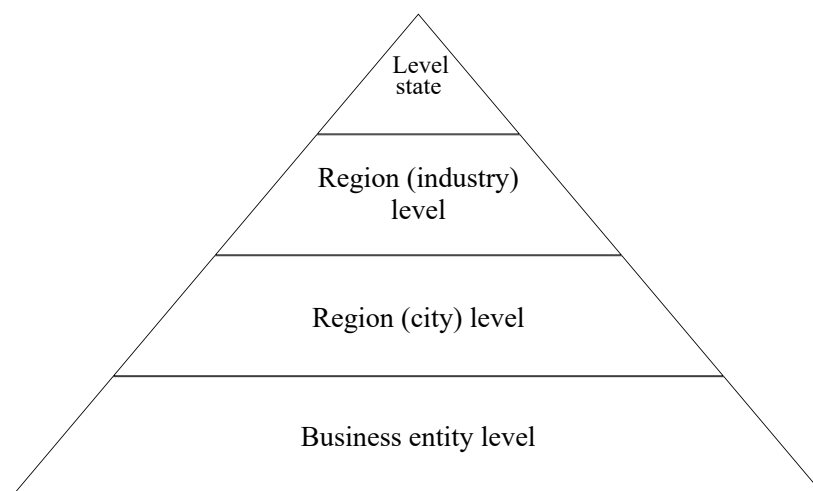


Figure 3 – Hierarchical structure of energy efficiency management

Source: created by the authors based on [6]

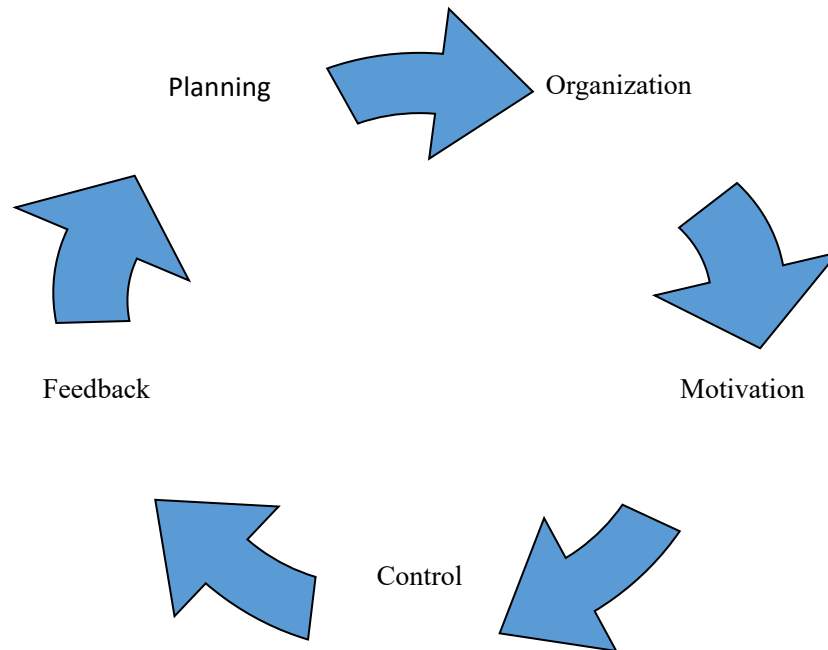


Figure 4 – The main functions of enterprise management

Source: created by the authors based on [7]

To assess energy efficiency: production or technological process, the «energy efficiency indicator» is used, which evaluates the consumption or loss of energy reserves.

Energy performance indicator – a numerical value of the energy performance of a facility, which is used for energy efficiency ranking, energy efficiency requirements and/or for a certificate. Energy efficiency indicators must be updated and constantly compared with the baseline energy consumption. They are determined by the calculation method [8].

The method of target energy monitoring (TEM) can be used as the basis of the energy management system. The method of targeted energy monitoring was developed and is widely used in large industrial enterprises of Western Europe and the USA as one of the parts of the general structure of enterprise management. According to the estimates of the British Agency for Energy Efficiency, the implementation of CEM reduces the current costs of energy resources in monetary terms by 10-20% without additional costs for technology modernization. Most often, the implementation of CEM is recommended as a priority measure in a comprehensive program to improve energy efficiency.

The CEM method requires a clear organizational structure responsible for its functioning. The core of such a structure is the energy management service, and the peripheral links are energy accounting centers [6].

O. Kirylenko considers the energy saving strategy as a process of determining the main direction (perspective) of the business entity's functioning in order to ensure energy-saving effects, taking into account the established new target guidelines, the possibilities of the internal environment, external conditions and establishing a system

of energy-saving measures that will make it possible to achieve the formulated forecast parameters [9].

Modern innovative approaches to energy efficiency management are currently characterized by relevant trends in three sectors of energy management: energy distribution, energy optimization and energy storage (energy conservation).

According to Grand View Research, the global market for distributed energy generation will reach \$573.7 billion by 2025, exhibiting a CAGR of 15% between 2014 and 2025.

Blockchain has established itself as a potential new technology in the decentralized energy sector, providing increased control over energy sources, transparent trading and secure data for energy regulation. According to Markets and Markets, the global blockchain in energy market is forecast to reach US\$7.1 billion by 2023, growing at a CAGR of 78.32% from an estimated US\$394.3 million in 2018.

Innovative trends in the energy distribution sector include:

- transition to equal energy trade;
- distributed energy production;
- technologies of remote or island microgrids.

Such technological trends are observed in energy optimization as:

- predictive analytics;
- automated response to the request;
- energy management systems of smart buildings.

Innovative trends in the energy saving sector are characterized by close attention to the creation of energy storage systems and equipment, namely:

- thermal energy accumulators;

- rechargeable lithium-ion batteries;
- vanadium batteries (v-flow batteries) (serve more than 20 years).

Many world-renowned foreign companies currently have successful experience in implementing such innovative energy technologies, including: Green Mountain Energy (Houston, USA) – provides fully renewable energy services from solar, wind, geothermal, hydro and biomass sources, in accordance with the developed by a company with a portfolio of services in terms of commercial clients and households; supports the policy of carbon compensation, invests in projects to reduce the impact of greenhouse gas emissions, etc.; Cisco (California, USA) is one of the leaders in the energy industry among the suppliers of computer network systems with a wide range of products and services designed for utility needs. Over the past 5 years, Cisco has implemented more than 440 energy efficiency projects and currently provides its activities with the lion's share of renewable energy sources (83%). Schneider Electric (France), WePower (Lithuania), BluWave-ai (Canada), Brenmiller Energy (Israel) are also among the companies actively implementing innovative technologies for energy efficiency and energy efficiency management. Among the domestic energy-efficient companies are startup PassivDom (created a house without connection to power grids and water supply systems, but in it you can enjoy the benefits of developed civilization), Kyiv company Solar-Gaps (created blinds-generators with solar panels), Lviv company PRANA (created recuperators – mechanical ventilation systems that can return 93% of heat) [4].

18 серпня 2017 Уряд схвалив Енергетичну стратегію України на період до 2035 року «Безпека, енергоефективність, конкурентоспроможність», яка визначає напрям розвитку енергетичної системи та має забезпечити її модернізацію разом з зменшенням залежності від імпорту енергоресурсів.

The key tasks of the strategy in the field of energy efficiency are (Fig. 5):

- reduction of the energy intensity of the Ukrainian economy from the current 0.28 t/th. dollars USA up to 0.13 (per PCS) by 2035;

- implementation of the energy management system in state and municipal buildings, as well as in enterprises;
- stimulation of energy saving at the level of consumers, formation of energy-efficient consciousness among citizens;
- stimulating the improvement of energy efficiency by implementing the monetization of end-user subsidies, minimizing the amount of subsidies in the future;
- ensuring accounting of generation and use of all forms of energy and energy resources (electricity and thermal energy, natural gas, etc.);
- increasing the energy efficiency of the residential sector by creating instruments of state technical and financial support;
- introduction of mechanisms for stimulating energy efficiency in the housing sector (energy audit, financial instruments, etc.);
- support for initiatives to improve the energy efficiency of buildings; implementation of demonstration and pilot projects [10].

The strategy envisages making investments in infrastructure development mainly at the expense of attracted investments – the share of investments from the state budget should not exceed 5-10%. The key body in the implementation of the strategy should be the Ministry of Energy and Coal, while the Ministry of Regions is primarily responsible for the field of heat energy and improving the energy efficiency of buildings [11].

Returning to the events after the start of the full-scale invasion, it is worth noting that all the statistics presented in the article illustrate the state of energy efficiency management until September 24, 2022. Speaking about today's realities, enterprises demonstrate the ability to adapt to new conditions by maintaining the country's course in the field of balanced environmental management. According to Viktor Bilko, Deputy Head of the State Energy Efficiency Agency, in difficult times of war and energy challenges, energy-efficient projects enable businesses to function stably, reduce energy costs, and remain competitive.

The agricultural enterprise visited by the civil servant, which focuses its activities on growing vegetables




	2015	2034
 energy intensity of the economy	0,28 t/th. dollars USA	0,13 t/th. dollars USA
 heat energy losses in networks	> 20%	< 10%
 electricity losses in networks	> 20%	< 10%

Figure 5 – Key planned indicators of the energy efficiency strategy [11]

in greenhouses, is one of the examples of those who in the past implemented an energy-efficient energy complex, which is currently saving them in a crisis period for the state. The company implemented the innovative technology of trigeneration, i.e. production of thermal and electrical energy according to the principle of cogeneration and rational use of natural gas combustion by-products for plant nutrition.

Measures that increased the level of economic efficiency:

- generation of electricity for lighting greenhouses, thermal energy for their heating and carbon dioxide for feeding plants using a 6 MW cogeneration plant based on gas piston engines;

- replacement of thermal energy from natural gas thanks to an electrode boiler, a wood chip and straw boiler with automated bale feeding;

- reduction of the company's costs for logistics, using equipment for the production of biomass;

- reduction of the specific consumption of electricity for the cultivation of products and increase of the volume of light by 2 times thanks to LED lighting systems and as a result – a significant increase in productivity.

Companies that believe that such modernization of the production process is expensive should remember that the profitability of each of these measures was from 2 to 5 years, which is a rather small period of time in the scale of the company's existence [12].

Conclusions

Efficient use of energy helps to prevent abuse of resources and protect the environment. Energy efficiency management is impossible without the development of innovative approaches and the introduction of innovative technologies. In order to build an energy-independent and sustainable economy, it is absolutely necessary to develop energy-saving technologies, create and implement in enterprises and organizations systems for the accumulation and further use of energy from alternative sources, form and improve energy management both at the level of business entities and at the level of the state. In order to assess energy efficiency and the degree of achievement of the established goals of the enterprise, it is necessary to determine energy efficiency indicators. The method of targeted energy monitoring (TEM) can be used as the basis of the energy management system, which will help create an individual approach to each enterprise. Ukraine is one of the most energy-intensive economies in the world and has a huge potential for energy saving and energy efficiency. In addition to technology, the country needs an energy efficiency development plan. Such a plan is the Energy Strategy of Ukraine for the period until 2035 "Security, energy efficiency, competitiveness". Turning to current events, we see that business is accepting the challenges of war regardless of economic concerns. This becomes possible thanks to the reduction of energy dependence.

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UDC 657.375

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-10>

ADAPTATION OF ACCOUNTING AND REPORTING IN FOREIGN COUNTRIES IN ACCORDANCE WITH IFRS AND IMPLEMENTATION OF THEIR EXPERIENCE IN UKRAINE

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Key words:

IFRS, implementation of IFRS, accounting system, Anglo-Saxon accounting system, continental accounting system, South American accounting system, Islamic accounting system.

The vast majority of foreign countries, in connection with the globalization of the world economy, have chosen a path focused on bringing the national accounting and reporting system to the requirements of International Financial Reporting Standards (hereinafter IFRS). The practical experience of introducing IFRS into the accounting of foreign countries shows that there are significant difficulties that companies will face when implementing IFRS in Ukraine. Implementation of IFRS requires companies to adapt to new accounting standards and procedures, which is not an easy and costly process. At the same time, companies are faced with a number of problematic issues that require immediate resolution on the path to IFRS implementation, namely: insufficient level of theoretical knowledge and lack of relevant staff competencies, staff awareness of existing discrepancies between National Standards of Accounting and IFRS, limitation of financial resources for implementation (transition to new accounting policy and software), lack of proper infrastructure for effective implementation of new accounting standards. These problems complicate and worsen the process of adaptation of companies to IFRS and can lead to delays, errors and other negative consequences for the business as a whole. Directions for solving these problematic issues are necessary for the successful implementation of IFRS and ensuring compliance with high standards of financial reporting.

АДАПТАЦІЯ ОБЛІКУ І ЗВІТНОСТІ В ЗАРУБІЖНИХ КРАЇНАХ ВІДПОВІДНО ДО МСФЗ ТА ІМПЛЕМЕНТАЦІЯ ЇХ ДОСВІДУ В УКРАЇНІ

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Ключові слова:

МСФЗ, впровадження МСФЗ, система бухгалтерського обліку, англосаксонська система обліку, континентальна система обліку, південноамериканська система обліку, ісламська система обліку.

Переважає більшість зарубіжних країн, у зв'язку із глобалізацією світової економіки, обрали шлях, орієнтований на приведення національної системи бухгалтерського обліку і звітності до вимог Міжнародних стандартів фінансової звітності (надалі МСФЗ). Практичний досвід запровадження в бухгалтерський облік зарубіжних країн МСФЗ свідчить про наявність значні труднощі, з якими будуть стикатися компанії при впровадженні МСФЗ в Україні. Впровадження МСФЗ вимагає від компаній адаптації до нових стандартів та процедур обліку, що є не легким і витратним процесом. При цьому компанії зіштовхуються з низкою проблемних питань, які потребують негайного вирішення на шляху впровадження МСФЗ, а саме: недостатній рівень теоретичних знань та відсутність відповідних компетенцій персоналу, обізнаність персоналу в наявних розбіжностях між НП(С)БО та МСФЗ, обмеження фінансових ресурсів на впровадження (перехід на нову облікову політику та програмне забезпечення), відсутність належної інфраструктури для ефективного впровадження нових облікових стандартів. Ці проблеми призводять до затримок, помилок та інших негативних наслідків для бізнесу в цілому. Напрями вирішення цих проблемних питань є необхідним для успішного впровадження МСФЗ і забезпечення відповідності високим стандартам фінансової звітності.

Analysis of recent research and publications

Issues related to the development, transition and implementation of IFRS in the accounting process of companies in various countries of the world are widely covered in the works of famous foreign economists – J. Weygant, J. Williams, H. Gernon, H. Grüning, J. Dishar, B. Needles, T. Warfield.

The process of accounting transition from NP(S)BO to IFRS has always been among the scientific interests of the leading scientists of our country. The works of luminaries of national accounting such as F.F. Butynets, S.F. Golov, and V.M. Zhuk deserve special attention [3], A. G. Zagorodny, H. G. Kireytssev, Y. D. Krupka, V. V. Sopko.

Such scientists as: V. S. Korchak [3], B. M. Ambush [2], O. V. Pasko [5], K. S. Piddubna and L. I. Tymchyna [6], N. E. Tsitska [9], S. B. Shipina [10].

Setting objectives

The purpose of the article is to summarize the experience of implementing IFRS in the accounting of foreign countries and to determine the advantages and difficulties in using IFRS in the accounting and reporting of enterprises in Ukraine.

Presentation of the main research material

In modern conditions in the world, depending on the economic, political, regional features of the development of each country, several accounting systems have been formed and are operating. The general approach divides accounting systems into Anglo-Saxon, Continental, South American and Islamic.

In the Anglo-Saxon model of accounting, financial statements are considered as a source of information for creditors and investors. Almost all companies in the USA, Great Britain, Canada, Israel, Australia, Central America, and India are interested in providing information about their financial situation because they are present on the securities market.

In the continental model of accounting, the main users are state bodies, tax authorities therefore pay considerable attention to the legislative regulation of accounting. This model is used by such countries as Germany, France, Austria, Spain, Portugal, Denmark, Greece, and Norway.

The South American accounting model is implemented in Brazil, Chile, Uruguay, and Peru. A feature of this model is the adjustment of financial reporting indicators taking into account changes in the price level due to high inflation and an unstable economic situation. Such requirements are aimed at the implementation of the state's annual budgets, and not for the interest of investors.

One of the forms of organization of accounting and financial reporting is the Islamic model, which is characteristic of Muslim countries and was formed under the influence of their national characteristics. This model has a number of features, in particular, it is prohibited to receive financial dividends for the sake of increasing income, and only market prices are used in the assessment of assets and liabilities [2].

The experience of countries with transition economies, which have switched to international accounting and

financial reporting requirements in accordance with IFRS, is of the greatest practical interest for the effective introduction of IFRS in Ukraine.

The transition to IFRS in Ukraine is of great importance for the country's development and its integration into the global economic space. The implementation of these accounting standards will allow Ukrainian companies to reliably reflect information about financial and economic activity in financial reporting, and will ensure a high level of its transparency, comprehensibility and content. In turn, this will contribute to increasing the confidence of both local and foreign investors in Ukrainian business, which, of course, will increase the level of the economy in the country and its further integration into the world economic system.

The transition to IFRS will also open opportunities for Ukrainian companies to conduct business more effectively on the international market. Compliance of accounting and reporting with the requirements of IFRS will contribute to the attraction of foreign investments and the expansion of opportunities for the use of external financial resources for the development of national companies. In addition, the transition to IFRS is an important element of improving the financial culture and management standards of companies in Ukraine. It stimulates the development of the professional environment and increases the qualifications of specialists in the field of finance and accounting.

Alignment of National Standards of Accounting with IFRS will also help to avoid financial scandals and contribute to the stability of the financial sector. This is important for maintaining public trust in the country's financial system and creating a favorable climate for the development of business and the economy as a whole.

Thus, the transition to IFRS in Ukraine is an important step on the way to modernizing the financial system, increasing its competitiveness and attracting foreign investments.

The transition to IFRS can be a complex process for several key reasons:

1. The Ukrainian system of financial accounting and reporting may differ from IFRS in terms of methodology and approaches, which complicates their implementation.

2. The transition to IFRS requires adaptation of the financial system, accounting and reporting processes, which can be time-consuming and resource-consuming.

3. The country's companies may face a shortage of qualified personnel who have at least an understanding of IFRS and theoretical knowledge of their application.

4. Insufficient technical infrastructure or outdated software can complicate the implementation of IFRS and the processing of financial information [4].

5. The implementation of IFRS may require significant changes in financial reporting and accounting policies of companies, which may challenge their business processes and resources. IFRS implementation can also be a costly process, especially for smaller companies or those with limited financial resources.

6. The need to amend the legislation governing financial reporting can also complicate the process of implementing IFRS.

All these reasons can lead to various challenges and difficulties during the implementation of IFRS in Ukraine.

The application of IFRS in Ukraine may encounter some problematic aspects due to a number of factors:

1. Insufficient readiness of users for changes:

- a significant number of Ukrainian companies, especially small and medium-sized ones, may not be sufficiently prepared for the transition to IFRS due to the lack of proper knowledge and qualifications in the field of international accounting;

- implementation of IFRS requires rethinking of accounting methods and training of personnel for new requirements and standards.

2. Tax system and legal environment:

- the current taxation system and legal environment in Ukraine do not fully meet the requirements of IFRS;

- the ambiguous interpretation of accounting terms in the current legislation, even at the level of our state, distorts the ambiguity of the terminology in both NP(S)BO and IFRS.

3. Financial constraints and cost of implementation:

- implementation of IFRS may increase costs for accounting services and staff training;

4. Preparation of the relevant infrastructure:

- implementation of IFRS may require software updates and implementation of new accounting and financial reporting systems;

- companies may face difficulties in completing these tasks due to lack of necessary resources or technical knowledge.

Taking into account these problematic aspects, the management staff of companies should constantly monitor the process of changes in the legislation of our state on the implementation of IFRS and save financial resources for the training of relevant personnel and the modernization of the accounting infrastructure in the company [1].

In order to reduce the problematic aspects related to the implementation of IFRS in Ukraine, based on the experience of foreign countries, company management needs to take several strategies and measures.

First, it is important to provide adequate training and training to staff to ensure they are ready for the new requirements and standards. This may include conducting trainings, seminars, round tables and courses on IFRS issues, improving the qualifications of employees.

Secondly, companies should analyze the difference between Ukrainian and international standards and develop strategies for their adaptation and problem solving. It is also important to carefully plan financial resources and take into account the costs of IFRS implementation in budget planning. To increase staff awareness and prepare for the implementation of new standards, companies can conduct educational events and inform their staff about the importance and necessity of IFRS.

In addition, investing in the necessary infrastructure for IFRS implementation, such as software and accounting systems, can greatly facilitate the process. The involvement of external experts and consultants can also be useful for companies facing difficulties in the implementation of IFRS, providing them with professional

support and advice on the implementation of the standards. The overall goal of these measures is to reduce the risks and problems associated with the implementation of IFRS and to ensure a successful transition to new financial reporting standards.

Modern technologies can play an important role in solving problems related to the implementation of IFRS in Ukraine. Accounting, auditing and analysis software can simplify the implementation of IFRS by automating the processes of gathering, processing and summarizing financial information.

The use of cloud storage for storing and processing financial information can ensure data availability and collaboration on it for all company personnel, helping to reduce the risk of errors and improve the efficiency of financial information processing.

The use of analytical tools will help companies understand the requirements of IFRS and identify areas where changes or improvements are needed, allowing to respond more effectively to the requirements of the standards.

The creation of interactive online resources and courses on IFRS will contribute to increasing the level of staff knowledge and preparation for the implementation of standards, allowing company employees to independently study and develop in this area and apply the acquired knowledge in practice [7]. The use of modern technologies can greatly facilitate the process of IFRS implementation and help companies effectively solve problems related to this process.

To solve the problems related to the implementation of IFRS in Ukraine, companies should first conduct an assessment of the current state, including checking the existing accounting systems, personnel qualifications and the level of awareness of the new standards. In the future, there is a need to invest in training your staff on IFRS, update internal policies and procedures in accordance with the requirements of the standards, as well as consider your financial capabilities and take into account the costs of implementing IFRS in budget planning. In addition, it is important to invest in the necessary infrastructure for the implementation of IFRS, such as software and accounting systems, and to engage external consultants and experts for professional support and advice on the implementation of the standards. These steps will help companies successfully adapt to new IFRS requirements and ensure compliance with financial reporting standards.

Considering the experience of foreign countries, additional issues that are important to solve when implementing IFRS in Ukraine are:

- Strategic planning. Companies should develop an IFRS implementation strategy, taking into account the specifics of their business model and market conditions, which will help determine the priorities and resources needed for successful implementation.

- Communication with stakeholders. It is important to establish an open and effective exchange of information with all stakeholders, including directors, shareholders, customers and regulators, precisely because clear communication will help ensure support and understanding for IFRS implementation.

– Risk management. Companies should implement a process of identification and assessment of potential risks associated with the implementation of IFRS, and develop strategies to manage them and reduce the impact on business.

– Monitoring and updating. After the introduction of IFRS, it is important to constantly monitor the effectiveness of work on the new accounting and reporting standards, with the aim of timely making the necessary adjustments. Implementation of IFRS may require significant investment and resources, but at the same time may lead to increased attractiveness for investors and development of the financial market.

– Need to change management culture. In addition to technical and personnel aspects, the transition to IFRS may require changes in corporate culture and management practices to meet the requirements of international standards.

– Impact on financial analysis. The introduction of IFRS changes approaches to the organization and conduct of financial analysis, which requires a rethinking of its methodology and tools.

Thus, based on the experience of foreign countries regarding the organizational and methodological algorithm of accounting transition from national requirements to IFRS requirements, we came to the conclusion that this process for many domestic companies requires a comprehensive approach taking into account various aspects, from technical to strategic. The transition to IFRS will undoubtedly increase the international competitiveness of Ukrainian companies due to greater transparency and standardization of financial reporting, which, in turn, will become accessible and understandable to international investors, which will contribute to the attraction of investments and the development of the economy.

Conclusions and prospects for further scientific research

In the process of analyzing the problems of IFRS implementation in Ukraine, it became obvious that the transition to these standards is an important step for the Ukrainian economy.

Recognition of the need to adapt the Ukrainian system of financial accounting and reporting to international standards by introducing the latest technologies in the process of collecting, processing and summarizing information, improving the qualifications of employees, adapting a modern management and accounting system in the company. This will contribute to the improvement of transparency and credibility of financial reporting, which, in turn, will increase the confidence of both internal and external investors.

In the modern conditions of IFRS implementation, the training of qualified personnel and the development of the relevant infrastructure are an urgent issue. Without a proper understanding of the standards and adequate technical support, implementation can become an unattainable task.

The issue of ensuring the proper financial and legal environment of companies for the introduction of IFRS into the accounting process deserves special attention. This includes both the development of relevant legislative acts and ensuring compliance of these acts with international norms and standards.

Thus, the implementation of IFRS in Ukraine is a difficult but necessary task that requires a comprehensive approach and joint efforts on the part of the state, business and specialists in the field of finance and accounting. Only in conditions of cooperation and responsibility can success be achieved in this direction and the economy be brought to a new level.

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THEORETICAL AND APPLIED ASPECTS OF ECONOMIC PROCESSES IN UKRAINE AND IN THE WORLD ECONOMY

UDC 339.13

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-11>

ANALYSIS OF THE INTERNET OF THINGS MARKET: INTERNATIONAL AND NATIONAL CONTEXT

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Key words:

Internet of things (IoT), digital economy, communications, innovations, Internet, information and communication technologies (ICT).

In the conditions of forming a digital society, ensuring sustainable development and overcoming the consequences of the COVID-19 pandemic, enterprises in various sectors of the economy face the question of reformatting their activities taking into account the impact of the latest technologies. The need to completely change the approach to life and work provided an opportunity to rebuild the economy, balance differences and make significant changes in various areas. During this period, the expansion and development of information and communication technologies became important. Digital connections, services, and tools have brought about significant changes in everyday life, allowing people to work, study, stay in touch with friends and family, receive medical care from afar, and more. At the same time, enterprises were given the opportunity to optimize production, update equipment and reduce costs.

Digitization is a recognized mechanism for achieving economic growth through the positive impact of technology on the efficiency, effectiveness, cost and quality of economic, social and personal activities. In particular, Internet of Things technologies are increasingly used at the local level and are an important component of the development of smart cities. The Internet of Things combines the physical and virtual worlds, contributing to the creation of intelligent environments.

The article establishes that the Internet of Things is a concept of communication of objects that use technologies to interact with each other and with the environment. The foreign and national experience of market development and the spread of the Internet of Things is analyzed, as well as statistical data on the prospects for the use of the technology are provided. A number of main advantages created by IoT and examples of successful world practice of its application are identified.

АНАЛІЗ РИНКУ ІНТЕРНЕТ РЕЧЕЙ: МІЖНАРОДНИЙ ТА НАЦІОНАЛЬНИЙ КОНТЕКСТ

Венгерська Н.С., Ворона Р.А.*Запорізький національний університет**Україна, 69600, м. Запоріжжя, вул. Жуковського, 66***Ключові слова:**

Інтернет речей (ІР), цифрова економіка, комунікації, інновації, Інтернет, інформаційно-комунікаційні технології (ІКТ).

В умовах формування цифрового суспільства, забезпечення сталого розвитку та подолання наслідків пандемії COVID-19 перед підприємствами різних галузей економіки постає питання переформатування їх діяльності з урахуванням впливу новітніх технологій. Необхідність повністю змінити підхід до життя та роботи надала можливість перебудувати економіку, врівноважити розбіжності та зробити суттєві зміни у різних сферах. У цей період важливим стало розширення та розвиток інформаційно-комунікаційних технологій. Цифрові зв'язки, послуги та інструменти викликали значні зміни у повсякденному житті, дозволивши людям працювати, навчатися, підтримувати зв'язок з друзями та родиною, отримувати медичну допомогу здалеку тощо. Водночас підприємства отримали можливість оптимізувати виробництво, оновити обладнання та зменшити витрати.

Цифровізація являє собою визнаний механізм для досягнення економічного зростання шляхом позитивного впливу технологій на ефективність, результативність, вартість та якість економічної, громадської та особистої діяльності. Зокрема, технології Інтернету речей (IP) все більше використовуються на місцевому рівні і є важливою складовою розвитку розумних міст. Інтернет речей поєднує фізичний та віртуальний світи, сприяючи створенню інтелектуальних середовищ.

У статті встановлено, що Інтернет речей є концепцією комунікації об'єктів, які використовують технології для взаємодії між собою та з навколишнім середовищем. Проаналізовано зарубіжний та національний досвід розвитку ринку та поширення Інтернету речей, а також наведено статистичні дані щодо перспектив використання технології. Визначено низку основних переваг, створюваних IoT, та приклади успішної світової практики її застосування.

Statement of the problem

Given the rapid development of information technologies, the use of intelligent devices and the Internet of Things is becoming especially important. In a world where information systems are increasingly globalized, it is clear that without Internet-connected devices it is simply impossible to imagine the future of life. In general, one of the main trends in the development of information systems and technologies is the spread of access to computing resources of networks for individual users.

It is worth noting that the Internet of Things is a digital revolution, to some extent even greater than the industrial revolution. This concept is one of the most visible manifestations of the Fourth Industrial Revolution that we are currently experiencing. As in past periods, early adopters and professionals who can solve problems and adapt to new technologies will be able to ensure their competitiveness for decades to come.

Internet of Things devices are necessary not only for everyday use, but also in the modern business environment, where they are actively spreading in various industries and fields, thanks to which they have become an integral part of our lives.

Analysis of recent studies and publications

The development of the digital economy, modern trends and prospects of smart industry and problems on the way to the development of Internet services are considered in the works of such scientists as: E. Tofler, K. Schwab, P. Fries, M. Harrison, O. Gudz, V. Lyashenko [1], A. Sagalovych, V. Tyshchenko, V. Vishnevskiy. Research into the implementation and development of the Internet of Things was carried out by such scientists as B. Zhurakovskiy [2], I. Zeniv, A. Parkhomenko, A. Kruts [3], V. Glushkov, I. Shevchuk. Coverage of the prospects for the development of the Internet of Things market was revealed in the works of S. Gringard, C. Benson, J. Lee, R. Phal, H. Paramonov, A. Nakonechny, and Z. Veres [4]. However, the issues of comparative analysis of the international and national market of the Internet of Things have not yet been considered sufficiently, therefore the topic of the article is relevant.

Objectives of the article

The purpose of the article is to conduct a comparative analysis of the development of the Internet of Things

market and its impact on economic processes in international and national contexts.

The main material of the research

Modern global and national companies face the need to adapt to new technological innovations. New technologies are emerging that affect both intelligent products and services available to society, as well as the production of goods and the provision of services. This involves changing production and management systems. The world is in the era of the Fourth Industrial Revolution [5].

Nowadays, there is a combination of digital, physical and biological technologies. Humanity is at the beginning of a new revolution, and therefore significant transformations are expected that will fundamentally change life, work, and communication. Radical changes are taking place in all fields, the destruction of established norms and connections, while evolutionary procedures for their renewal are not offered.

Recently, the term “digitalization” has been widely used, which means the saturation of the physical world with electronic-digital devices, means, systems and the establishment of electronic-communication exchange between them, which actually enables the integral interaction of the virtual and the physical, that is, creates a cyber-physical space [6]. The main goal of digitization is to achieve the digital transformation of existing and create new sectors of the economy, as well as the transformation of spheres of life into new, more efficient and modern ones.

In 1999, Kevin Ashton coined the term “Internet of Things” (IR) to reflect the capabilities of radio frequency identification used in corporate supply systems to count and track goods without the need for human intervention [7]. The IoT ecosystem consists of a variety of Internet-enabled devices. They are equipped with built-in processors, sensors and communication equipment to collect, transmit and process data received in their environment.

“Internet of things” is a network that allows the devices we use every day to interact with each other [8]. Things “communicate” with each other, exchanging data. Also, this concept involves devices performing certain actions without human intervention. Thus, the Internet of Things (IR) (English – IoT) is a system of interconnected computing devices, mechanical and digital machines, objects, animals or people, which are provided with unique identifiers and the ability to transmit data over the network without

requiring of a person to the interaction of a person or a person with a computer [9].

According to the American investment bank Goldman Sachs, in 2016 the number of connected devices in the world in IR reached 12 billion. Analysts of IoT Analytics predict that this figure will grow to 27 billion by 2025 [10]. At the beginning of 2021, the IoT market was estimated to be around \$300 billion.

In the early days of IoT adoption, the solutions were most interesting for business and industry, in particular for machine communication. But now “smart” devices are increasingly penetrating households and offices to be available to all users. So where is the Internet of Things being used? Let’s consider several examples.

Smart homes provide automatic control of home technologies such as temperature control, lighting, entertainment systems, home appliances and alarms. In the West, “smart” music speakers, thermostats, refrigerators, televisions, sockets and even light bulbs have become commonplace and can be programmed and controlled using special software.

Medical IoT (MIoT) helps monitor health. With its help, doctors can monitor patients, or people themselves can monitor their physical condition. Components of MIoT are fitness bracelets, cuffs for measuring blood pressure and heart rate, as well as glucometers.

In “smart” cities, data collected by a complex of sensors is used to improve infrastructure, utilities and other services. Cameras, lights, electricity meters, air quality monitoring systems and other devices are connected to the Internet.

Modern cars and other vehicles can be connected to the Internet in order to provide access to control and receive data.

The use of Internet of Things (IoT) technologies in “smart” warehouses helps to improve production and business efficiency by using robots, drones, scanners, RFID (Radio Frequency Identification) tags and artificial intelligence programs for management.

According to Gartner’s forecasts, the introduction of high-tech meters will contribute to the active use of the Internet by utilities. In second place will be protection technologies, in particular surveillance cameras. Further development of the Internet of Things will contribute to the automation of buildings, transport and healthcare systems [11].

Research firm Juniper Research predicts that the global market for IoT technologies based on mobile networks will grow from US\$31 billion in 2022 to US\$61 billion in 2026, nearly doubling in size. This growth will be driven by the introduction of 5G and cellular Low Power Wide Area Network (LPWA), which will allow devices to work virtually everywhere [12].

The countries that occupy the first places in the development and implementation of IR are the USA, China and South Korea, which have a developed industry of micro-processors and embedded computers. In addition, significant progress in this field is observed in European countries and Japan [8].

Let’s consider the ranking of the cities leading in the application of Internet of Things technology in the world. If we take the local level, then one of the most famous projects is “EasyPark”. At the moment, the “EasyPark” program has already been implemented in the cities of 14

countries: Sweden, Denmark, Norway, Germany, France, Finland, Italy, Spain, Austria, the Netherlands, Australia, Serbia, Belgium and Slovenia.

In addition, the McKinsey Center conducted a study of 15 leading cities in the world in various categories and obtained the following results: in terms of smart parking development, Montreal (Canada) is in first place, in terms of car sharing development – Vancouver (Canada), in terms of traffic development – Kuhar (Denmark) and for the development of public transport – Taipei (Taiwan). The USA is the leader in economic development. Stavanger (Norway), Singapore (Singapore), New York (USA) and Vienna (Austria) are leading in the level of digital development [13].

In Asia Pacific, the manufacturing sector is expected to have the highest growth rate in the Internet of Things (IoT) market due to major government projects such as “Made in China 2025”, “Making Indonesia 4.0” and “Make in India”. In this region, the manufacturing sector has undergone technological evolution and automation, and the population has grown significantly, forcing industrialists to increase production. To meet the needs, they are actively implementing Internet of Things (IoT) technologies in various processes.

It is predicted that spending on the Internet of Things in the US healthcare sector will increase to almost \$188.2 billion by 2025, while in 2020 the figure reached \$72.5 billion [14].

Ukraine implements many innovative projects that use advanced technologies and have the potential to create a sustainable and smart city. However, Ukrainian cities face significant problems, such as insufficient organization of transport connections, lack of an effective household waste management system, danger for residents, low quality and unreliability of services in the field of water supply, heating, and medical care. Solving these problems is a key task in the construction of smart cities in Ukraine. Although Ukrainian cities are just beginning to implement smart technologies, the Internet of Things accelerator laboratory – IoT Hub in Kyiv opened in the summer of 2015. She specializes in supporting hardware startups and is involved in product development and improvement. Mobile operators in Ukraine also actively contribute to the implementation of the Internet of Things. In 2018, the “lifecell” company, together with IoT Ukraine, included the “Smart City” program in Kyiv and Lviv, based on Internet of Things research. Later, Vodafone also started research in this area.

Calculating the total number of companies in the IT sector is currently difficult because many IT companies, including technology services, startups and product companies, have their headquarters abroad. According to the latest report of the Ukrainian IT Association, there are approximately 4,000 companies operating on the market, of which 2,300 are actively engaged in labor market activities [15]. A report on software development, created by AVentures together with other partners, states that there are 245 companies with 50 or more employees and 750 companies providing IT development services in general [16].

Over the past 10 years, there has been a significant increase in the volume of exports of the Ukrainian ICT industry. According to the results of 2022, the IT industry brought 6 billion US dollars in export revenue to

the country's economy [17]. Judging by the data of the National Bank of Ukraine, over the past 6 years, the volume of exports of computer services grew by an average of 26.8% every year and reached \$6.9 billion in 2021. USA [18]. The goal of the IT industry is to increase the volume of exports of IT services and support the growth of the share of products.

The main countries to which Ukraine exports ICT services are: the European Union (Great Britain, Cyprus, Germany, the Netherlands, Ireland, Sweden), the United States of America, Switzerland, Norway, Israel, Canada and South Korea.

The successes of Ukrainian developments and the application of the Internet of Things (IoT) technology were discussed at the 20th industrial forum "The Best Ukrainian Cases of Industry 4.0", which took place on November 16, 2022 [19]. One of the vivid examples is the IT-Enterprise company, which presented at this event the innovative product KOEEBOX, which is related to remote monitoring and control of production equipment for maintenance tasks. Installation of the device and obtaining data on the performance of the equipment can be done within 15 minutes. A significant number of users in the country have already rated KOEEBOX.

In Ukraine, certain technologies of the Internet of Things, for example, such as autonomous transport, robotic warehouses and others, are not yet used. However, in the

future, in the medium term, the introduction of these technologies will be inevitable.

Conclusions

Therefore, the application of Internet of Things technologies will lead to the transformation of various industries and spheres of life, taking into account their economic significance and impact on the consumer experience.

It is worth noting that Europe takes the first place in the field of Internet of Things. The COVID-19 pandemic further stimulated consumers and businesses to actively use digital services and technologies and, as a result, accelerated the digital transformation of certain business sectors by several years. Statistics show the important role of IoT technology in the European context.

In general, Ukraine does not have a sufficiently high position in the world in the field of the Internet of Things. The main reason for this is the limited access to high-speed Internet and its key services in the country.

However, we have all the necessary conditions for making a "digital breakthrough" and moving to a higher level of technological development thanks to investments. This transition will help accelerate economic and social development. The use of digital technologies will also bring the country's economy out of the shadows. And, most importantly, the digital economy is a profitable business on which the country will be built in a few years.

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UDC 330.341.1:338.467(477) «366»

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-12>**CREATIVE INDUSTRIES AND THEIR IMPROVEMENT IN POST-WAR UKRAINE****Hamova O.V., Valchuk A.S.***Zaporizhzhia National University
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creative industries, post-war Ukraine, sector, types of cultural industries.

The article examines the theoretical and practical aspects of the creative industry in Ukraine. The main characteristics and trends of creative industries in Ukraine are analyzed. It was analyzed that there are a number of groups in the sector of cultural industries, such as: advertising, architecture, art and antique market, crafts, design, fashion, film and video production, programming, including the creation of entertainment and interactive programs and computer toys, music, performing arts, publishing, TV, radio and Internet broadcasts. The types of activities of cultural industries have been clarified. It has been investigated that the national bureau of the EU program «Creative Europe» in Ukraine announced a series of webinars dedicated to the competitions of the new EU program «Creative Europe» 2021-2027, which highlights 12 sectors of cultural and creative industries. Methods of development of creative industries in post-war Ukraine are predicted.

**КРЕАТИВНІ ІНДУСТРІЇ ТА ЇХ УДОСКОНАЛЕННЯ
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Україна, 69000, м. Запоріжжя, вул. Жуковського, 66***Ключові слова:**

креативні індустрії, післявоєнна Україна, сектор, види культурних індустрій.

У статті розглянуто теоретичні та практичні аспекти креативні індустрії в Україні. Проаналізовано основні характеристики і тренди креативних індустрій в Україні. Проаналізовано, що існують у секторі культурних індустрій ряд груп, такі як: реклама, архітектура, художній та антикварний ринок, ремесла, дизайн, мода, виробництво кіно- та відеопродукції, програмування, в том числі створення розважальних та інтерактивних програм і комп'ютерних іграшок, музика, виконавчі мистецтва, видавнича справа, теле-, радіо- та Інтернет- трансляції. З'ясовано види діяльності культурних індустрій. Досліджено, що національне бюро програми ЄС «Креативна Європа» в Україні в анонсі серії вебінарів, присвячених конкурсам нової програми ЄС «Креативна Європа» 2021-2027, яка виділяє 12 секторів культурних та креативних індустрій. Проаналізовано сучасний стан креативних індустрій в період воєнного стану. Прогнозовано методи розвитку креативних індустрій в післявоєнній Україні.

Formulation of the problem

During the last decade, creative (cultural) industries have been the driver of economic growth. The formation and development of this sector has been successfully integrated into the economic strategies of post-industrial countries as a key issue, and its great economic potential has been recognized by the Council of Europe, UNCTAD, the World Bank, the OECD, etc.

Ukraine has powerful creative and intellectual resources, which are the main condition for the development of the creative sector of the economy. However,

the development of creative industries in our country is very slow due to the lack of strategic vision and systemic transformations in the social and humanitarian spheres. As a result, the cross-border movement of cultural and creative products slows down and unused opportunities are created for the socio-economic growth of the national economy.

Analysis of recent research and publications

Various aspects of the theoretical and practical characteristics of the creative industries and the creative economy have been radically analyzed by various scholars over the

past few years. R. Florida, J. Hawkins, H. Antti, G. Kharlamova, O. Humenna. The creative economy of Ukraine consists of researchers from various fields of economy, entrepreneurship, marketing, tourism, architecture, design, art and cities. The prospects for the development of the creative economy in Ukraine are determined as follows. I. Skavronska, Yu.A. Ushkarenka, V. Chmut, A. Sinyakova, L. Fedulova, I. Parkhomenko, and others. K. Lopukh and K. Mkuha paid attention to the issue of the impact of the pandemic on creative industries.

Objectives of the article

The purpose of the article is to study the theoretical and practical aspects of the concept of “creative industries”. To analyze the types and functions of creative industries in Ukraine. To investigate the peculiarities of creative industries during the war period. Identify the features of the development of creative industries in the post-war period.

Presenting main material

The commercial and industrial production sectors are involved in the creation of new cultural contributions through creativity, skills and talent. Various definitions include: art, music, film, performing arts and games; architecture, design, designer fashion and crafts; books, publishing and software; television and radio; advertising and public relations. It is often synonymous with cultural industries [1,2].

Creative industries are a list of types of economic activity that have the potential to create added value and employment through cultural (artistic) and creative expression, and their products and services are the result of creativity, skills and talents of individuals [4].

Cultural and creative industries, on the other hand, involve a focus on the later stages of the value chain, including the production and distribution stages of industrial and manufacturing operations. Creative industries are seen as increasingly important to economic well-being, with proponents suggesting that “human creativity is a major economic resource” and that “twenty-first century industries will increasingly depend on the generation of knowledge through creativity and innovation”, (fig.1) shows the types of cultural industries [6].

The cultural and creative sectors are important for ensuring the continuous development of societies and are at the heart of the creative economy. Science-intensive and based on individual creativity and talent, they create significant economic wealth. More importantly, they are crucial to a shared sense of European identity, culture and values. Economically, they show above-average growth and create jobs – especially for young people – while strengthening social cohesion.

The main characteristics and trends of the development of creative industries:

1. Indicators of the transition from the information age to the conceptual age, where the main value is ideas (concepts) [5].
2. Creative industries are most vividly and effectively manifested in a specific urban environment. In other words, they are an urban phenomenon.
3. It blurs the boundaries between science and art, creativity and innovation, and countries.
4. Cities that actively use creative industries today have sought to capitalize on their uniqueness for at least a generation.
5. Culture and creativity, kindness and intelligence, atmosphere and human warmth are the resources that feed creative industries.

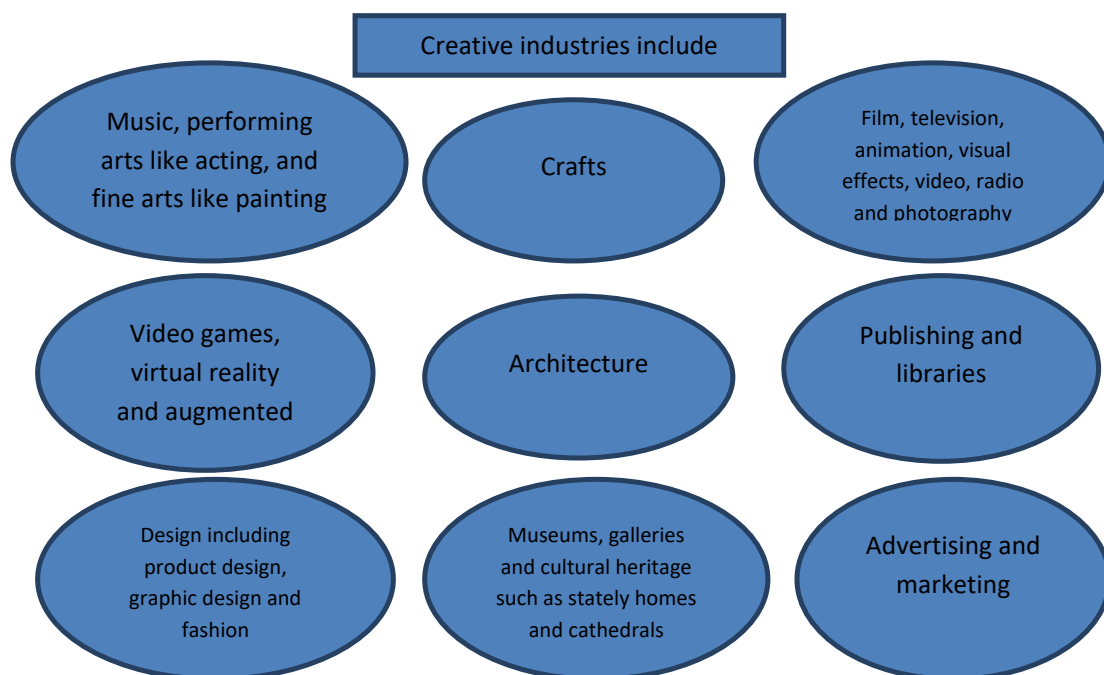


Figure 1 – Types of cultural industries

Source: compiled by the author based on [3]

6. Fast and free access to the Internet guarantees access to huge amounts of information and its exchange.

7. Design and architecture full of creativity, convenience and innovation.

8. Dependence on small and medium-sized enterprises, and not on large corporations.

9. Openness and warmth of public space.

10. Organic cultural and ethnic diversity, which enables the creation of new and unique ideas and worldviews.

There are many groups in the cultural industries sector: advertising, architecture, art and antique markets, crafts, design, fashion, film and video production, entertainment and software production, including interactive software and computer toy production, music, performing arts, publishing, television, radio and Internet broadcasting [5].

Cultural industries include the following activities: Audiovisual creativity (film, television, radio, new media, music), tourism, sports, books and publishing, heritage (museums, libraries, archives, historic environments), performing arts (theatre, performance, dances), visual arts (galleries, architecture, design, crafts) [6].

Wartime makes special demands on creative industries, which sharply limit their potential. It is important that creative businesses are not tied to a specific location, as there is always a need to relocate in wartime. During the war, creative industries suffered such negative consequences as the departure of talented personnel, reduced funding, reduced demand for cultural goods and services, and disruption of supply chains. The state budget allocated for culture in peacetime is now used to support the Armed Forces of Ukraine. However, it is worth noting that creative industries could become a key mechanism for the post-war recovery of Ukraine.

Many entrepreneurs continue to work and export creative products, supporting the national economy. Creative professionals organized a number of volunteer activities to support the army, citizens in liberated territories and internally displaced persons. In this extremely difficult situation, effective interaction with cultural actors requires a deep understanding of their internal situation and the specifics of their response to challenges [7].

Russia's large-scale invasion of Ukraine led to an outflow of human resources, economic decline and a decrease in the solvency of citizens. Such a situation, of course, intensified the exit of creative people to the markets of the USA, Europe, Asia and the Middle East due to the geographical dispersion of Ukrainians.

According to a survey conducted by the Ukrainian Cultural Foundation (UCF), about 20% of representatives of the cultural and creative industry are currently abroad [8].

The Ukrainian creative industry itself has also shrunk by 40% during the conflict on its territory. Thus, 37% of workers in the creative industries lost their jobs or did not receive wages during the war. 39% of creative businesses experienced a drop in orders and sales, and a quarter of creative businesses experienced a drop in sales of more than 90%. And, unfortunately, given the ongoing war on the territory of Ukraine, these numbers are expected to be even higher. Creative industries face interruptions in the supply and demand chain, a decrease in internal and external

orders due to the security situation, job losses, damage to production facilities, migration of human resources abroad, and a decrease in the quality of education in this sector [11].

In pre-war Ukraine, this sector was estimated at 4% of GDP (the overall indicator of the creative economy was 7.5% of GDP). The number of employed was estimated at 0.35 million. This is one of the few sectors where the number of employees has increased in recent years. Foreign partners and journalists have repeatedly turned to culture and creative people in order to get an idea and a clear narrative about what is happening in Ukraine at a particular moment in time. In the first half of this year, the attention of the foreign audience was focused on projects produced by Ukrainians. The question now is how to turn the excitement caused by the war into organized cooperation.

The mission of creative industries is to show foreigners not only war, but also that we are a talented and progressive country. Moreover, creative industries that are currently working with foreign partners can have a positive impact on the country's overall business climate and the attractiveness of doing business. Many professionals who have lost their jobs due to the war are looking for opportunities to work remotely and often associate their future careers with creative industries (digital design, IT, digital marketing, SMM, etc.).

Today, new ones appear at the intersection of old fields, for example, rehabilitation art and digital technologies in choreography. More and more investors support such projects, but there are still few examples of successful cross-sectoral cooperation. During full-scale hostilities, online communication has grown significantly and supplanted offline networks. However, Internet users, tired of the constant flow of information, often ignore messages from strangers. Therefore, in order to establish new contacts, it is necessary to attend contextual or permanent online events in which people from various creative sectors participate [12]. Despite the general economic crisis, the need for competent workers still exists.

However, companies are often unable to fill vacancies due to a large gap between required and available specialists. Therefore, it is important to understand what skills are currently lacking in the creative industries market, where to find them and invest in training. Multidisciplinary is highly valued in creative industries. The labor market is increasingly in need of professionals who can successfully combine different skills. This allows them to work at the intersection of different disciplines and respond to changes more quickly. Therefore, today you need to develop several areas at once and use this knowledge in your work. Today, creative people in Ukraine actively support the fight against Russia financially and participate in volunteer work. However, volunteering and philanthropy require long-term commitment and, therefore, the right allocation of time and resources [6].

Giving part of your time to charity should be sustainable and should not harm the people they support. The same applies to volunteering: it is better to do it regularly, even if it takes a third of your time, than to quickly exhaust energy during busy periods of work: the ability to teach and learn

from colleagues and share your experience with others; the ability to draw conclusions from one's work and solve complex tasks; the ability to use new technologies in one's work; empathy and emotional intelligence; leadership and initiative; stress resistance and vitality; shooting skills. How to stop volunteering [6].

Conclusions

Creative sector, creative industries – a part of the market, created by entities that carry out business activities related to culture and technologies, combining artistic activity with entrepreneurship.

There are thirteen industries that make up the creative sector: advertising, architecture, art and antiques, crafts, design, fashion, film, video games, music, performing arts, publishing, software, radio and television.

Russia's large-scale invasion of Ukraine led to an outflow of human resources, economic decline and a decrease in the solvency of citizens. Such a situation, of course, intensified the exit of creative people to the markets of the USA, Europe, Asia and the Middle East due to the geographical dispersion of Ukrainians. Giving part of your time to charity should be sustainable and should not harm the people they support.

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UDC 338.48:339.92+327

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-13>**INTERNATIONAL TOURISM AND GLOBALISATION:
INTERCONNECTION AND INTERDEPENDENCE****Kusakova Yu.O., Kryshtal T.Yu.***Zaporizhzhia National University**Ukraine, 69600, Zaporizhzhia, Zhukovsky str., 66*

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Key words:International tourism,
Globalization, Interconnection,
Interdependence, Prospects,
COVID-2019, International
Economy, Development, Ukraine.

Globalization processes penetrate absolutely all spheres and branches of the economy. The tourism industry is no exception. Thanks to globalization, tourism received a significant impetus for development and diversification. However, the impact of globalization on this branch of the economy is not unambiguous. In this article, a lot of attention is paid to the identification of positive and negative manifestations of globalization for the development of the tourism industry.

Thus, among the factors of the positive impact of globalization on tourism, the following are highlighted: information revolution, unlimited access to information; development of international transportation; international competition; changes in the social structure. It has been established that the following manifestations have a negative impact on tourism: terrorism, pandemics, wars; loss of cultural identity; growing inequality between the poor and the rich; bankruptcy of local businesses. In addition, the parallel influence of tourism on globalization processes is determined. It was found that tourism can contribute to the spread of ideas for universal reconciliation, the perception of human diversity; tourism creates new jobs and gives the poorest countries the opportunity to develop; promotes the spread of ideas of deindustrialization. However, in places where tourists gather, environmental problems are becoming more acute, there is a certain monetization of cultural values and revenues from tourism are not always directed to the development of local communities.

The directions in which tourism can develop in Ukraine after the end of hostilities are presented, taking into account globalization challenges and prospects.

**МІЖНАРОДНИЙ ТУРИЗМ ТА ГЛОБАЛІЗАЦІЯ:
ВЗАЄМОЗВ'ЯЗОК ТА ВЗАЄМОЗАЛЕЖНОСТІ****Кусакова Ю.О., Кришталь Т.Ю.***Запорізький національний університет**Україна, 696000, м. Запоріжжя, вул. Жуковського, 66***Ключові слова:**Міжнародний туризм,
Глобалізація, Взаємозв'язок,
Взаємозалежність,
Перспективи, COVID-2019,
Міжнародна економіка,
Розвиток, Україна.

Глобалізаційні процеси пронизують абсолютно всі сфери та галузі економіки. Туристична індустрія не є виключенням. Саме завдяки глобалізації туризм отримав суттєвий поштовх для розвитку та диверсифікації. Проте вплив глобалізації на цю галузь економіки не є однозначним. У даній статті багато уваги приділено виявленню позитивних та негативних проявів глобалізації для розвитку туристичної індустрії.

Так, серед чинників позитивного впливу глобалізації на туризм виділені: інформаційна революція, швидкість та відсутність обмежень в отриманні інформації; розвиток та доступність швидкісного громадського транспорту; міжнародна конкуренція; зміни у соціальній структурі населення. Встановлено, що негативний вплив на туризм мають такі глобалізаційні прояви: тероризм, пандемії, війни та інші аспекти, що перешкоджають безпечному пересуванню туристів між країнами; втрата культурної ідентичності через надмірну вестирналізацію; зростання нерівності між бідними та багатими прошарками населення; банкрутування представників місцевого підприємництва.

Крім того, визначено паралельний вплив туризму на глобалізаційні процеси. Виявлено, що саме туризм може сприяти поширенню ідей до всезагального примирення, сприйняття людського різноманіття; як галузь економіки туризм створює нові робочі місця та дає можливість розвиватися найбіднішим країнам; сприяє поширенню ідей деіндустріалізації. Однак, у місцях скупчення туристів загострюються екологічні проблеми, відбувається певна деградація та монетизація культурних цінностей; а доходи від туризму не завжди спрямовуються на розвиток місцевих громад.

Представлено напрями, в яких може розвиватися туризм в Україні по завершенню військових дій з урахуванням глобалізаційних викликів та перспектив.

Statement of the problem

On the one hand, international tourism and globalisation are closely related and interdependent phenomena. Today, international tourism is growing rapidly under the influence of globalisation and is becoming one of the most important factors that determine economic growth, increase the country's competitiveness in the global market, and improve the welfare of the population. Tourism is a service industry, and the development of the international services market is one of the manifestations of globalisation.

On the other hand, in the conditions of pandemic and post-pandemic world, the study of threats to tourism development, the analysis of the current state and prospects of globalization challenges especially in the context of the global confrontation becomes more important.

Analysis of recent studies and publications

The issues of the impact of globalization on various aspects of the economic development of countries and the world, have always attracted the interest of scientists.

The essence of globalization as a special process and phenomenon that has covered the whole world is considered in detail in scientific journals [1-2], encyclopaedias and scientific works [3].

Researchers such as Pavlovic N., Westcott M., Anderson W., Brelik A., Dwyer L. and others studied interconnections and interdependences between globalization and tourism development highlighting positive and negative manifestations in their scientific works [4-7]. However, their developments need further systematization and generalization.

In addition, today it is necessary to highlight the key directions of the tourism industry development in Ukraine, which could take globalization challenges and prospects into account as much as possible. Also, the issue of determining the consequences of Russian military aggression for the national tourism industry remains unexplored.

Objectives of the article

The purpose of the article is to highlight the interdependence and interconnection between the development of international tourism and globalization, to outline the key directions in which tourism can develop in Ukraine after the end of hostilities, taking into account globalization challenges and prospects.

The main material of research

The term globalization appeared in the 1980s and immediately became one of the most popular and used in the world. Consider the term "globalisation" in more detail. According to the IMF team, the term globalisation is a historical process resulting from human innovation and technological progress. It is the result of the growing integration of economies around the world, especially through the cross-border movement of goods, services, and capital. The term is often used to refer to the cross-border movement of human resources (labour) and knowledge (technology). There are also broader cultural, political and environmental dimensions of globalisation [1, p. 2]. The Economic Encyclopaedia states that globalisation is a category that reflects the process of exchange of goods, services, capital and labour that transcends state borders and, since the 60s of the twentieth century, has taken the form of a constant and steady growth of the international intertwining of national economies.

Investigating the essence of globalization in previous works [3, p. 135], we believed that globalization can lead to the creation of a homogeneous economic world order. Taking into account the current trends and peculiarities of the world economy development, we believe that the previously proposed definition needs adaptation. Therefore, we will define globalization as a comprehensive objective process of blurring and erasing borders in all spheres of social life, as a result of searching the most effective use of the productive forces, which leads to the transformation of the world community into an integrated system of information-technological, financial-economic, socio-political and socio-cultural interrelationships and interdependencies, the result of which is the permanent modification of the world order.

The international services market is one of the manifestations of globalisation. At the present stage of development, the world economy is characterised by the predominance of the service sector both in the structure of national production in most countries and in the system of international economic relations.

Travel services or international tourism are among the most popular services in international trade. Tourist services include: tourist accommodation services; services for the movement of tourists to the destination country and within the country by various means of transport; services for providing tourists with food; services aimed at meeting the cultural needs of tourists; services aimed at meeting the

business interests of tourists (participation in congresses, scientific conferences, exhibitions and fairs); services of trade enterprises (sale of souvenirs, gifts, etc.); services for processing documentation (passports, visas, etc.) [8].

The last quarter of the XX century and the beginning of the XXI century were marked by the accelerated development of tourism, which turned it into a global phenomenon in terms of mass, forms and technologies of recreation. Despite its global scope, tourism has remained regional and national in its content. The global tourism industry, offering unified recreation and service systems, exploits regional natural differences and the national and cultural identity of ethnic groups and local communities, which in many cases becomes the main motive for travel. In the world economic practice, it is difficult to find another type of productive activity that simultaneously contributes to the globalisation of the economy and regional development [9].

Over the past decade, the global tourism market has been showing steady growth of 3 to 7% annually. It should be noted that during 2020-2023, the COVID-2019 pandemic was a major factor influencing the international travel market, which led to a drop in demand for travel products around the world.

Although the pandemic has had a significant impact on the tourism industry, and the issues of restoring and reforming tourism services are still relevant, the industry is looking for innovative approaches to adapt to new realities.

If we consider the “presence” of globalisation in the tourism market, it is characterised by a permanent change of technologies, internationalisation of business activity, modernisation of transport infrastructure, etc.

Due to globalisation, tourism companies can save on the production of tourism products by standardising goods and services, as well as take advantage of global marketing.

In addition, globalisation is also reflected in the internationalisation of business, which is an important characteristic. One of the reasons for the internationalisation of the tourism sector is the peculiarity of the tourism product, which includes a range of services provided to tourists and often consumed abroad.

Global tourism associations are formed through the merging, purchasing and takeover of tourism organisations. In many countries, there is a global division of the market through the acquisition of companies. The tourism industry, as well as other industries, is characterised by the expansion of the process of concentration of enterprises beyond national borders through the creation of transnational corporations.

Global integrated hotel chains are a vivid example of the creation of transnational corporations (MNC) in the tourism business. When joining international chains, hotels take measures to increase their competitiveness. These well-known corporations have developed rules and standards that ensure a unique style and scenario of customer service in all hotels belonging to these chains. Travel corporations have largely monopolised the market and have developed into powerful inter-sectoral production complexes that include enterprises from various sectors of the economy that serve the travel business, such as transport, banking, insurance companies, and others. They also sell

tours through a wide network of tour operators and travel agencies in different countries. The largest international travel companies are based in the UK, USA, Germany and Japan.

Global alliances are a very common practice in the tourism sector. One example of such alliances is global computer systems for booking a wide range of travel goods and services – from air travel, rail travel or package tours, to car rental, hotel reservations or tickets to a football match or concert. The most well-known of these systems are Amadeus and Galileo, which are also present in the Ukrainian transport and travel services market.

Globalisation has also affected civil aviation. The world’s leading airlines now prefer to form strategic alliances with peer competitors in order to limit the market opportunities of smaller carriers.

The manifestation of globalisation processes in tourism is the implementation of joint projects that involve the use of natural, cultural, historical, material and technical resources of several countries. For example, the implementation of the ecotourism project “Mayan World” involves almost all Central American countries [10].

Other indicators of the impact of globalisation on the tourism industry include greater awareness of the destinations and range of leisure activities, places and cultures to visit around the world, and a reduction in poverty as globalisation has contributed to increased demand for goods and services and overall economic growth, but at the same time, there is a widening gap between the richest and poorest, which is a negative sign. Other negative consequences are environmental problems, disease outbreaks and epidemics in different parts of the world, and the threat of terrorist attacks.

This issue can also be viewed from the opposite perspective, i.e., the impact of tourism itself on globalisation. Tourism helps people learn about other cultures, as globalisation has a homogenising effect on cultures, as Western values are spread through music, fashion, cinema and food, making one culture indistinguishable from another. Tourism also has an impact on the local, regional and global economy, helping to create jobs among the population.

Many scientists have studied the relationship and mutual influence of tourism and globalization. Taking into account the work of scientists, as well as our own improvements, we will summarize and present them in the form of Figure 1.

Taking into account the highlighted interrelationships and interdependencies between globalization and tourism, we can present directions for the development of the national tourism industry that would make it possible to obtain the maximum positive effects from Ukraine’s participation in globalization processes:

- development of tourist facilities, destinations that would emphasize the uniqueness of Ukraine as a new tourist brand, a country that defends its national interests in the international political arena and opposes powerful states. New tourist targets should demonstrate national traditions, hospitality and Ukrainian flavour;
- considering the global trends of deindustrialization, the closure of outdated industrial plants with non-ecological

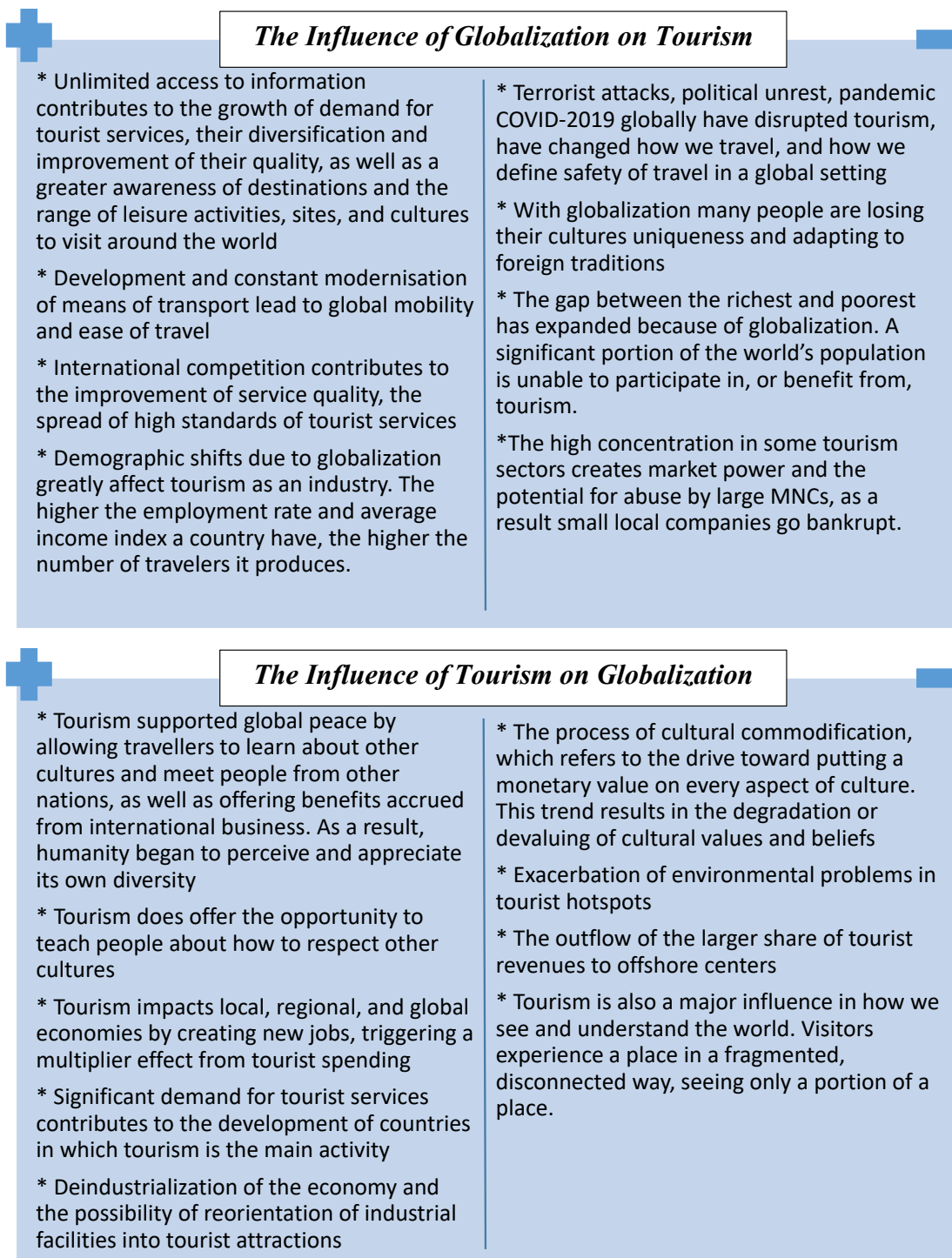


Figure 1 – Relationship between globalization and tourism

Source: compiled by the authors based on [4-7]

production technologies (including Marteniv furnaces) and their reorientation into new centres of tourism;

– in order to spread the awareness of humanity about the terrible consequences of the military aggression of the Russian Federation on the territory of Ukraine, it is expedient to create black tourism objects in the destroyed places in order to accumulate funds for the restoration of Ukrainian territories.

Conclusions

Therefore, the impact of globalisation on international tourism is constantly growing, which is associated with the increasing contribution of international tourism to the country’s economy, employment, and the rational use of recreational resources. Globalisation and tourism are inextricably linked and have a mutual influence on each other, both positive and negative. Globalisation provides tourism

businesses with new opportunities to develop and expand their operations internationally. They can attract more customers from different countries and establish partnerships

with other businesses for joint development. Of course, it should be noted that the international tourism business will continue to change, expand and transform.

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UDC 339.9:[338.1(4/9):339.137]

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-14>**ANALYSIS OF ASYMMETRY OF GLOBAL DEVELOPMENT:
THEORETICAL AND PRACTICAL ASPECTS****Selishcheva A.V., Kovalenko A.V.***Zaporizhzhia National University
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global economy, asymmetry, development, factors, competitiveness, indicators, polarization.

The asymmetry of the development of the global economy, which is determined by the change of key players in the world market and their influence on the development of the world economy, is studied. To assess the degree of asymmetric development, certain factors are singled out: economic structure – a larger country or a country that enjoys a monopoly on certain resources can use them for its market power in order to obtain better trade conditions; political system – the global political system gives disproportionate power to several players; global institutions – the global rules of international organizations are equal in their desire to guarantee equality of rights among all countries; geopolitics – geopolitical rivalries can also lead to the formation of alternative economic and financial networks of ties that undermine multilateralism and ultimately lead to fragmentation. To assess and compare competitiveness at the global level, a rating system is used, which allows to distinguish advantages and disadvantages, to identify the weaknesses and strengths of players in the world market, as well as to determine ways to improve individual structural elements. It has been proven that the rating of global competitiveness to a certain extent demonstrates the internal imbalance of the country from the point of view of external evaluation compared to other participants of the world economy. The conducted analysis made it possible to ascertain the existence of a relationship between global competitiveness and asymmetry of development at the world level. After all, if a country has a level of competitiveness, it determines the features of polarization at the global level. In connection with the above, it is quite difficult for many developing countries to reach the level of development of leading countries, to increase their position and influence in the international economic system. In recent decades, this has been evidenced by signs of an increasing gap between the standard of living and the profitability of the economic activity of the leading countries of the world from all other economic systems.

**АНАЛІЗ АСИМЕТРІЇ ГЛОБАЛЬНОГО РОЗВИТКУ:
ТЕОРЕТИЧНИЙ ТА ПРАКТИЧНИЙ АСПЕКТИ****Селіщева А.В., Коваленко А.В.***Запорізький національний університет
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глобальна економіка, асиметрія, розвиток, чинники, конкурентоспроможність, індикатори, поляризація.

Досліджено асиметрію розвитку глобальної економіки, що визначається зміною ключових гравців на світовому ринку та їх впливом на розвиток світової економіки. Для оцінки ступеня асиметричності розвитку виокремлено певні чинники: структура господарювання – більша країна або країна, яка користується монополією на певні ресурси, може використовувати їх для своєї ринкової влади, щоб отримати кращі умови торгівлі; політична система – глобальна політична система надає непропорційну владу кільком гравцям; глобальні інституції – глобальні правила міжнародних організацій є рівноправними щодо прагнення гарантувати рівність прав між усіма країнами; геополітика – геополітичне суперництво також може призвести до формування альтернативних економічних і фінансових мереж зв'язків, які порушують багатосторонність і в кінцевому підсумку призводять до

роздробленості. Для оцінки та порівняння конкурентоспроможності на глобальному рівні використано систему рейтингів, яка дозволяє виокремити переваги та недоліки, визначити слабкі та сильні сторони гравців на світовому ринку, а також визначити шляхи вдосконалення окремих структурних елементів. Доведено, що рейтинг глобальної конкурентоспроможності в певній мірі демонструє внутрішню розбалансованість в країні з точки зовнішньої оцінки порівняно з іншими учасниками світової економіки. На основі проведеного аналізу визначено, що на сучасному етапі розвитку економіки інтегрованість національних економік у глобальне середовище загострює проблеми асиметричності взаємозв'язків та взаємозалежності між елементами світової економіки. Проведений аналіз дозволив констатувати існування взаємозв'язку між глобальною конкурентоспроможністю та асиметрією розвитку на світовому рівні. Адже, якщо країна має рівень конкурентоспроможності визначає особливості поляризації на світовому рівні. У зв'язку з зазначеним для багатьох країн, які розвиваються, можливість досягнути рівня розвитку провідних країн, підвищити свої позиції та вплив у міжнародній економічній системі досить важко. В останні десятиріччя про це свідчать ознаки збільшення відриву життєвого рівня та прибутковості економічної діяльності провідних країн світу від усіх інших економічних систем.

Problem statement

At the current stage of economic development, the integration of national economies into world trends of global economic development exacerbates the problems of uneven development of different countries, asymmetric relationships and interdependence between elements of the world economy. The «big seven» countries control a significant part of the production and consumption of goods, services, the latest technologies and innovations, and even without the use of political and economic pressure, they have a decisive influence on the structure and volume of international trade in goods, services and technologies and the movement of capital.

And in our time, when the nature and structure of the trade balance, the country's involvement in international technological exchange determine its level of development and place in the global economic space, such states have unconditional advantages over another, more numerous, but less developed group of countries.

In connection with the strengthening of world economic trends, for many countries of the «second world», the opportunity to reach the level of development of leading countries, to qualitatively improve their place in the international economic system, is decreasing. In recent decades, this has been evidenced by signs of an increasing gap between the standard of living and the profitability of the economic activity of the leading countries of the world from all other economic systems.

Analysis of recent studies and publications

A significant number of works devoted to the asymmetry and imbalance of global development are presented in the scientific literature. Among foreign scientists, D. Geld and E. McGrew paid considerable attention to the issue of the relationship between globalization and asymmetric development of the world economy [1]. Global asymmetries of economic development were studied by Ukrainian scientists, including: Stolyarchuk Y.M. [2], Z. Lutsyshin, N. Kravchuk [3-4], V. Z. Zapukhlyak, L. T. Herman [5],

A. M. Kolot [6], O. G. Belorus, Lukyanenko D. G. [7] and others.

Highlighting previously unsolved parts of the overall problem

Today's realities demonstrate a significant polarization of the world economy and asymmetric development, which is confirmed by a significant number of theoretical and practical research by scientists. However, the mentioned issue requires in-depth research from the point of view of asymmetric changes in the world economy.

Objectives of the article

The main goal of this work is to study the theoretical and practical foundations of the asymmetry of global development and to highlight the consequences for the development of world economies.

The main material of the research

The national economy within the framework of the world economy and international economic relations at the end of the 20th century. – at the beginning of the XXI century. was characterized by the asymmetry of its condition and development. This was primarily reflected in the increase of inequality between them. Market reforms in the transition economies of the post-Soviet countries contributed to the strengthening of asymmetry in states and the development of national economies around the world. The systemic transformational crisis of the 90s of the 20th century, both quantitatively and qualitatively changed the place of the post-Soviet countries in the world, pushing them far back. The successful development of the Chinese economy against the background of the transformational crisis of the economies of the post-Soviet countries also increases the asymmetry of the world economy. Even within individual, especially large multinational countries (India and others), the homogeneity of the economy is practically absent and there is an asymmetry in its development. This also applies to a sustainable regional community such as the European Union.

In recent decades, structural changes in the world economy have significantly changed the role of innovations in the economic development of countries. The successful development of any company or government, as well as their prosperity in competition, are inextricably linked to new inventions – innovations and their constant implementation. Despite notable progress in developing countries in recent decades, they currently lag far behind developed countries. At the same time, developed countries are losing their advantages under the influence of endogenous and exogenous factors.

The United States maintains its pretensions to be the world’s leading power, as first among equals. Therefore, the dialogue on equality between the US and the EU, which the Europeans so desire, will be based exclusively on interdependence, that is, interdependence, and involves an asymmetric distribution of forces. Despite a unified internal market and an existing legal framework, member states have problems in coordinated action and tend to adopt protectionist measures. These remedies operate against the interests of other countries outside the EU. In terms of soft power and economics, Europe has a lot to offer, but it is not enough to create a symmetrical relationship or a partnership between equals. Various studies show that the political and economic importance of Europe will be reduced. This fact leads to demographic changes and the shift of the economic center of gravity to Asia.

In support of the above argument, the predetermination theorem can be cited. According to the terms of this theorem, competition between two countries is considered in two directions: economic and social efficiency. One country leads in the first direction, another in the second. This situation determines the following mechanism of competition between two countries that follow a symmetrical strategy: one of them seeks to preserve its advantages in terms of economic efficiency, while at the same time trying to catch up with its competitors in terms of social achievements; the other is an attempt to fix its social model of leadership in the economic sphere. Thus, each country carries out large-scale borrowing from its opponent.

The realities of economic existence testify to the deepening asymmetry of the development of the global economy, which is determined by the change of key players in the world market and their influence on the development of the world economy.

Asymmetry includes certain factors (Fig. 1).

Note that the factors indicated in fig. 1 can be used to identify and assess the degree of asymmetry of development

and evaluate. Let us consider in more detail the influence of asymmetry factors:

- economic structures. A larger country or a country that enjoys a monopoly on certain resources can use them for its market power to obtain better terms of trade from its partners. This is the logic of optimal trade – a large country can obtain benefits of trade protection that are not available to a small country. Increasing profits and the resulting effects of agglomeration are other motives for the emergence of asymmetry;

- political system. Leadership matters because some roles, such as the role of issuer of international currency, cannot be distributed in proportion to the economic weight of each country, and the global system gives disproportionate power to a few players. There may be competition for key roles – there may be, for example, more than one international currency, or there may be two or three regulators competing to define the global standard;

- global institutions. Global rules based on agreements of international organizations are egalitarian in that they seek to guarantee equality of rights between all countries. The WTO’s global dispute settlement mechanism, for example, helps to reduce the natural asymmetry between Tunisia and the US, although it obviously does not eliminate the imbalance of market power between them. But power can be distributed in different ways within international organizations;

- geopolitics. Leadership positions in the global system are achieved through structures, political roles, or influence on institutions and take on a different meaning when they are aimed at serving geopolitical goals. Instead of primarily bringing economic benefits, they become tools of the struggle for power. Geopolitical rivalries can also lead to the formation of alternative economic and financial networks of connections that undermine multilateralism and ultimately lead to a fragmented world.

Based on the identified factors, it is possible to trace the evolution observed from the 1970s to the 2020s (Table 1).

However, the contradictions and asymmetries of global economic development have one very important aspect – it is a source of constant progress of the world economic system. From this point of view, the significant functions of the asymmetry of economic development are:

- distributive – determining the parameters of the distribution of the social product);
- differentiating – separating producers and consumers;

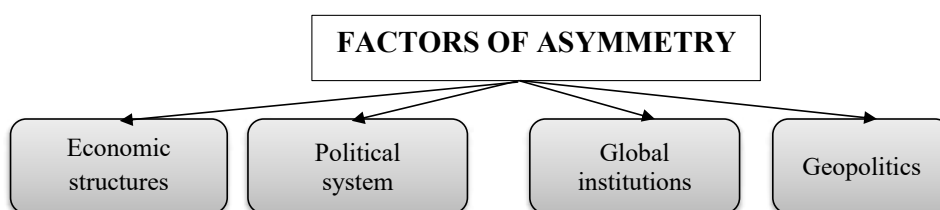


Figure 1 – Factors of asymmetry

Source: built by the authors based on [8]

Table 1 – Asymmetries and symmetries over five decades

Indexes	1970s Core-periphery	2000 year Globalization	2020s Polarization
Economic structure	Asymmetric core-periphery pattern	The second disaggregation: a flat world	The return of asymmetry (GVC, finance, data)
Political system	Dollar-oriented fixed exchange rate system	Greater national autonomy through a floating (but dominant currency paradigm)	Drift towards monetary and financial multipolarity
Global institutions	Multilaterality the rich	More often including institutions	Further inclusivity, but weakening multilateralism
Geopolitics	Opponent, weak interconnected economic spheres	Unipolar moment	Growing rivalry, tendency to armament economic power

Source: grouped by authors based on [8]

Table 2 – Ukraine's place in the world competitiveness rating

Indicator	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Place in the rating	56	54	50	59	59	60	59	54	59	54

Source: compiled by the authors based on: [9-11]

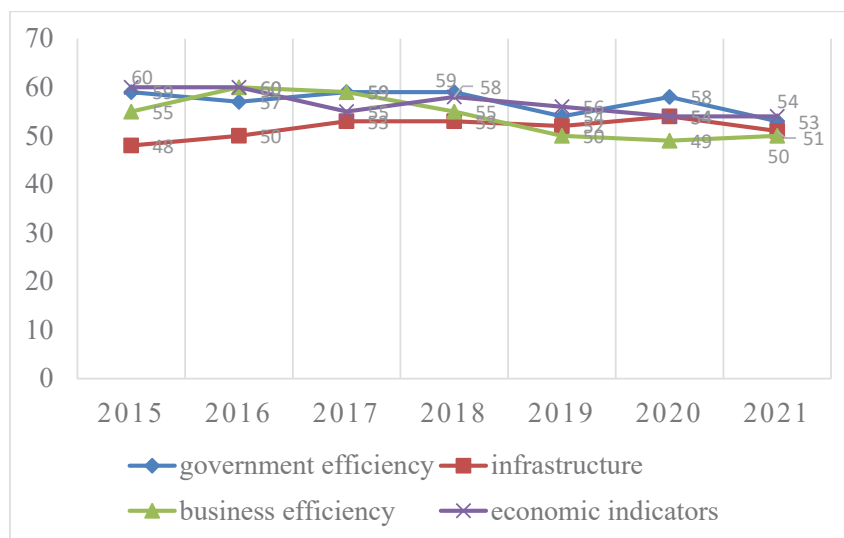


Figure 2 – Components of the competitiveness rating for Ukraine

Source: built by the authors based on [9-11]

– integrative-disintegrative – integration of isolated systems into a single economic system and destruction of old ones;

– stimulating-destimulating – simultaneous stimulation and limitation of economic growth) functions.

Note that the concept of «asymmetry» in the global economy is applied to the analysis of countries that differ in terms of territory size, level of socio-economic development, geopolitical position, etc. Based on the analysis of the asymmetry of global development, groups of countries are singled out and classified as center, periphery, semi-periphery, that is, the degree of polarization is determined as a tendency to build a multipolar system.

An important consequence of asymmetric development is the global competitiveness index, which allows one to assess the level of internal balance of the country and compare it with other participants in the external environment.

To assess and compare competitiveness at the global level, a rating system is used, which makes it possible to single out advantages and disadvantages, identify the weaknesses and strengths of players on the world market, and also determine ways to improve individual structural elements.

It should be emphasized that the rating of global competitiveness to a certain extent demonstrates the internal imbalance in the country from the point of view of external evaluation compared to other participants of the world economy.

In order to improve the directions of state policy and objectively assess the country’s opportunities on the world market, it is necessary to ensure systematic monitoring of the competitiveness of the national economy

Let us consider the changes in Ukraine’s position in the global competitiveness rating for the period 2012-2021 (Table 2). In 2022-2023, the specified indicator was not calculated due to military operations and the impossibility of providing an objective assessment. Note that in

2021, Ukraine took 54th position among 64 countries in the global competitiveness rating and reached the level of 2013. In the previous year, Ukraine was 5 positions higher.

In our opinion, in order to determine the directions of development to improve positions in the competitiveness rating, it is advisable to consider the elemental structure of the specified indicator (Fig. 2).

The analysis of the elements of the global competitiveness index of Ukraine for 2012-2021 indicates an insufficient level of development of the economic component (54th position in the «economic indicators» component). At the same time, «business efficiency» shows the best result – 50th position in the rating.

Conclusions and suggestions

Based on the research, it can be concluded that at the current stage of economic development, the integration

of national economies into the global environment exacerbates the problems of asymmetric relationships and interdependence between elements of the world economy.

The conducted analysis allows us to state the existence of a relationship between global competitiveness and asymmetry of development at the world level. After all, if a country has a level of competitiveness, it determines the features of polarization at the global level. In connection with the above, it is quite difficult for many developing countries to reach the level of development of leading countries, to increase their position and influence in the international economic system. In recent decades, this has been evidenced by signs of an increasing gap between the standard of living and the profitability of the economic activity of the leading countries of the world from all other economic systems.

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FINANCE AND MONEY TURNOVER

UDC 368.024

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-15>

PROBLEMS OF FORMATION OF A CAPTIVE INSURANCE COMPANY AT THE PRESENT STAGE

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Key words:captive insurance company,
synergistic effect, advantages of
captive insurance.

The article discusses the modern problems of introduction of captive insurance organizations. It is noted that the issue of the activities of captive insurance organizations is not reflected in the legislation, that is, there is no legislative framework, although the activities of captive companies differ significantly from the activities of commercial insurers. Another problem that hinders the development of captive insurance is the lack of qualified personnel. There is also a problem with the information and technical support of captive insurance. It is shown that the parent company can consider a captive insurer as a tool for insuring only its own risks (the most common option now), or as a tool for obtaining a synergy effect. The main synergistic effects of captive insurance have been determined.

The main problems that arise during the organization of a captive insurance company are defined: limited insurance field; additional costs for the establishment and operation of a captive insurance company; the need to use the services of the insurance market; deterioration of the financial stability of a captive insurance company; time spent by management structures during the period of organization of a captive company for its creation and formation.

The advantages of creating a captive insurance company for the parent organization are determined: saving the company's funds and shorter terms of compensation for losses than with insurance; making a profit from the activities of a captive insurance organization; risk minimization; diversification of risks; supplement to insurance in professional insurance companies; entering the reinsurance market, etc. It is determined that the introduction of captive insurance can have a positive impact on the economic security of the parent organization and revive the development of the insurance market.

The ways of introduction of captive insurance in Ukraine are proposed.

ПРОБЛЕМИ ОРГАНІЗАЦІЇ КЕПТИВНОЇ СТРАХОВОЇ КОМПАНІЇ НА СУЧАСНОМУ ЕТАПІ

Кисільова І.Ю., Горбунова А.В.*Запорізький національний університет**Україна, 69600, м. Запоріжжя, вул. Жуковського, 66***Ключові слова:**кептивна страхова компанія,
синергійний ефект, переваги
кептивного страхування.

В статті розглянуто сучасні проблеми впровадження кептивних страхових організацій. Зазначається, що питання діяльності кептивних страхових організацій в законодавстві не відображено, тобто відсутня законодавча база, хоча діяльність кептивних компаній суттєво відрізняється від діяльності комерційних страховиків. Іншою проблемою, яка перешкоджає розвитку кептивного страхування є відсутність кваліфікованого персонала. Також існує проблема із інформаційно-технічним забезпеченням кептивного страхування. Показано, що материнська компанія може розглядати кептивного страховика як інструмент для страхування виключно власних ризиків (найпоширеніший зараз варіант), або як інструмент отримання ефекту синергії. Визначено основні синергійні ефекти кептивного страхування.

Визначено основні проблеми, які виникають під час організації кептивної страхової компанії: обмеженість страхового поля; додаткові витрати на створення і функціонування кептивної страхової компанії; необхідність використання послуг страхового ринку; погіршення фінансової стійкості кептивної страхової компанії; витрати часу управлінських структур в період організації кептивної компанії для її створення і становлення.

Визначено переваги створення кептивної страхової компанії для материнської організації: економія грошових коштів підприємства і коротші, ніж при страхуванні, терміни відшкодування виниклих збитків; отримання прибутку від діяльності кептивної страхової організації; мінімізація ризиків; диверсифікація ризиків; доповнення до страхування у професійних страхових компаніях; вихід на ринок перестраховання тощо. Визначено, що впровадження кептивного страхування здатне позитивно вплинути на економічну безпеку материнської організації і поживати розвиток страхового ринку. Запропоновано шляхи впровадження кептивного страхування в Україні.

Problem statement

A captive company is an insurance company that is associated with a large structure, business group, or holding. Captive insurance companies provide risk mitigation services for the business of the dominant or parent structure and are united with them by common business processes.

Thus, captive insurance companies are an effective risk management tool. In Ukrainian realities, with high economic and political risks inherent in the country, and a rather low management culture, the work of captive insurers could be a serious help to business in maintaining safe and stable development. The introduction of captive insurance is fraught with certain problems, in addition, there is no definition of a captive company in the legislation.

Analysis of recent researches and publications

A captive company is an insurance company that is associated with a large structure, business group, or holding. Captive insurance companies provide risk mitigation services for the business of the dominant or parent structure and are united with them by common business processes. However, the creation of a captive can both increase the efficiency of the company and reduce the results of current economic activity, worsen the management process of the company. Under certain circumstances (for example, without taking into account the costs of creating captives), it is possible not only not to achieve a synergistic effect, but also to reduce the competitiveness of the company.

In the foreign scientific literature, a sufficient number of works are devoted to the issue of captive insurance, in particular [1, 2].

It should be noted that captive companies are a common form of insurance business, but the issue of captive insurance is not sufficiently disclosed in the domestic scientific literature. Bidnyk N.B., Dzoba V.B. [3] analyze the peculiarities of the formation of captive insurance companies in Ukraine. Kravets A.V., Danylovyh T.B., Tymchyshyn I.E. [4] consider the issue of creating captive insurance companies as a method of self-insurance of industrial enterprises. However, recently there has been an increased attention to captive insurance from insurers. Thus, Chernyakhovsky V. [5], General Director of AIB,

analyzes the advantages of creating captive insurance organizations.

However, the literature does not sufficiently systematize the advantages and disadvantages of captive insurance companies, as well as the problems of their implementation.

Formulating of objectives

The aim of the article is to analyze the possibilities and problems of the use of captive insurance organizations in Ukraine, to consider the measures necessary for the active introduction of captive insurance.

Presentation of the main research material

The main purpose of a captive insurance company is not to make a profit, but to meet the needs of the owner. The owner may decide to liquidate the insurance company only if the use of the captive insurance company becomes unprofitable, i.e. the costs of maintaining the insurance company exceed (or in the near future will exceed) the total income from its use. Total income means the amount of money saved on insuring the risks of the holding's enterprises, the profit generated by the insurance company from the sale of insurance products through market channels, tax savings, income from the investment activities of the insurance company and income from the reinvestment of insurance reserves in its own investment projects. Thus, if the satisfaction from the benefits received by the holding company when using its own insurance company becomes less than expected, the financial and industrial group is forced to consider options for getting rid of the non-core asset.

Despite the fact that the institution of captive insurance companies is widely represented in the structure of the insurance market of Ukraine, it can be stated that the issues of captive insurance companies are not reflected in the legislation. In fact, there is no regulatory framework for them, although their activities differ significantly from those of commercial insurance companies. The requirements of the Central Bank of Ukraine in relation to insurance companies for captive insurance companies are unreasonably high. Since most of the insurance portfolio of a captive insurance company consists of contracts concluded within a financial and industrial group, when calculating the regulatory ratio

of own funds and assumed liabilities, it is necessary to take into account liabilities to affiliates, this is the group's obligation to itself, so the amount of these liabilities should not be applied to the calculation.

The interest of financial and industrial groups in the development of their own insurance companies has decreased against the backdrop of an unspoken ban on the use of funds accumulated by an insurance company in the interests of the owner. The NBU has established requirements for the placement of insurance reserves, in which it has excluded the possibility of using financial instruments of affiliates, and even more so lending to them. Thus, the funds accumulated by the insurance company actually fall out of the economic activities of the holding, but replenish the stock market, which, as a rule, the owners of the group have nothing to do.

The main problem in the development of captive insurance companies in Ukraine is the negative attitude of the regulator towards captive companies. Taking into account that a number of advantages that captive insurance companies give to the owner have a negative connotation for the state, the position taken by the Central Bank becomes clear. If the regulator follows the path of liberalization of the regulatory framework and makes the work of captive insurance companies effective, then we can expect a dynamic development of this cluster of the insurance market.

However, according to experts, an overabundance of captive insurance companies in the market can lead to the following consequences [3]:

- declining the volume of the open insurance market, and the weakening of a number of major players;
- a decrease in the dynamics of the increase in funds placed in the capital market;
- an increase in the number and amount of insurance contracts and a decrease in tax collection from financial and industrial groups.

As a result, there may be a positive dynamics of development and stabilization of the financial condition of large financial and industrial groups. The multiplier effect of large FIGs can lead to the growth of a number of related industries, which will undoubtedly have a positive impact on the overall economic condition of the state.

The unipolar approach to captive insurance companies used by the financial regulator cannot lead to the maximum economic effect. The institution of captive insurance companies, like other financial and economic institutions, requires a balanced approach that would help to use the best aspects of captive insurance companies and apply the best world practices.

Another problem that hinders the effective functioning of the captive insurance company is staff shortages or lack of qualified personnel.

The desire to win more customers and new markets has focused the attention of corporate training programs in the direction of sales. But the crisis has led to cost reductions, including the use of technologies to optimize the structure and personnel. As a result, there are significantly more candidates with experience and sales skills in the personnel market, but there are practically no candidates with experience in risk assessment, financial and accounting in

insurance companies. In addition to this, it can be said that the specifics of captive insurance companies, risk management in self-insurance, and management of the insurance portfolio of a financial and industrial group are not taught, it can only be acquired with experience.

It is impossible to ignore the problem of captive companies related to information and technical support. Since it is officially believed that there are no captive insurance companies in Ukraine, all of them are commercial, universal, software manufacturers are not interested in developing a specific software product that would meet the needs of captive insurance companies. There are no domestic developments in this area, and foreign analogues are not applicable due to the difference in legislation. Therefore, the activities of captive insurance companies are based on the use of standard information systems of insurance companies [5].

Thus, the lack of a systematic approach to the development of software for captive insurance companies will not allow the creation of a special structured software product.

Therefore, it can be stated that all this makes the efficiency of the captive insurance company extremely low, their work ceases to meet the needs of the owner. The saddest thing is that there are no positive changes in this direction either on the part of the legislator or on the part of the regulator.

As noted in the work of Bidnyk N.B., Dzyoba V.B. [4], the main condition for the existence of a captive insurer is the policy of the parent company, which depends on how the parent company considers the insurance company: to insure only its own risks (the most common option now), or as a tool for obtaining a synergy effect. The main types of synergistic effects are shown in Tab. 1.

However, the creation of a captive can both increase the efficiency of the company and reduce the results of current economic activity, worsen the management process of the company. Under certain circumstances (for example, without taking into account the costs of creating a captives), it is possible not only not to achieve a synergistic effect, but also to reduce the competitiveness of the company. The value of many insurance companies directly depends on such specific assets as human resources: on the professionalism of managers, the qualifications of employees. In addition, achieving a synergistic effect, as a rule, takes several years.

In Ukraine, insurers claim that many of the captive companies are striving to restructure their work in order to become full-fledged market participants capable of independently fighting for customers and increasing the volume of insurance premiums collected. Traditionally, the services of captive insurance companies in Ukraine were used by large business structures to serve their clients and implement tax optimization and capital redistribution schemes within financial and industrial groups. Banks also actively developed controlled insurance companies, thus receiving additional profits, and prevented the outflow of their customers' money to competitors' structures.

At the same time, insurers note that the creation of a captive company, despite everything, remains the most effective way to launch your own insurance business, since

Table 1 – Main types of synergistic effects

See the effects of synergy	The main possibilities of the company are within reach of synergy
Marketing	Development of new markets and distribution channels
	Introduction of complementary products to the market
	Reaping economic benefits from economies of scale
	Gaining Competitive Advantage
Management	Reducing the level of risk of doing business
	Obtaining the technological integrity of the association
	Optimal use of human resources
Financial	Increase in the market value of the integrated merger
	Opportunity to reduce costs and increase the amount of net profit
	Opportunity to save on tax payments
	Additional accumulation of monetary resources
	Financial diversification

Table 2 – Problems of creating a captive insurance organization

Problem	Detailed description of the problem
Limited insurance field	First of all, it means that the activities of a captive insurance organization are limited to the framework of the parent company at the first stage of its development, this increases the risk of occurrence and accumulation of losses. This situation requires a significant volume of reinsurance operations to ensure the financial stability of a captive insurance organization, as a result of which reinsurance costs may be too high.
Additional costs for the establishment and operation of a captive insurance organization	Obtaining an insurance license requires the availability of an authorized capital in the amount determined by law. In addition, the company must have sufficient own funds to ensure its solvency. In the course of the activities of a captive insurance organization, current expenses such as taxes, management costs, etc., also arise.
The need to use the services of the insurance market	The problem with the creation of a captive insurance organization is manifested in such services as inviting experts and specialists of insurance companies to perform work on risk analysis, loss assessment, etc. These services can prove to be expensive for a captive insurance company.
Deterioration of the financial stability of a captive insurance organization	Due to the desire of the parent company's management to reduce insurance costs. Since a captive insurance organization is actually a subdivision of the parent organization, its administration can influence the management structures of the captive insurance organization, forcing them to make certain decisions, which is impossible if the organization deals with an independent insurer.
Time spent by management structures during the period of organization of a captive company for its creation and formation	A large investment of time and money on the part of the parent company is required, which may not be adequate to the expected benefit from the creation of a captive insurance company.

it allows you to build a really working company with good potential in a short time, which, on the one hand, will be able to provide professional insurance risk management of the interests of financial and industrial groups, and on the other hand, gradually begin to increase income from work in a competitive market.

During the organization of a captive insurance company, various problems arise, which are presented and described in Tab. 2 [4].

From the creation of a captive insurance organization, enterprises can also receive many benefits, the implementation of which can have a positive impact on the financial and economic security of enterprises.

Setting up a captive insurance organization can help reduce the insurance rate by reducing certain cost items that are predominantly included in the cost of insurance (e.g., administrative costs). Insurance costs are also reduced because the parent company can gain access to a cheaper reinsurance market with the help of a captive insurance organization.

The successful operation of a captive insurance organization increases the profits of the parent company, as it makes it possible to reduce insurance costs by reducing the amount of insurance premiums and expand insurance coverage. In addition, a captive insurance organization can start working in the open insurance market. At the beginning of the development of the insurance market in Ukraine, almost all the largest insurance companies were sectoral or departmental to one degree or another, serving primarily the corporate insurance interests of their founders, as well as independent business entities that were part of the structure of multidisciplinary concerns or large financial and industrial groups. The transformation of a captive insurance organization into universal insurance companies is a common phenomenon of a natural process for the Ukrainian market. There are many former captive insurance companies in Ukraine, which then entered the all-Ukrainian insurance market and are successfully operating.

The creation of a captive insurance organization makes it possible to avoid many other potential risks that may

arise for the enterprise when interacting with an insurance company, primarily the risk of bankruptcy of the insurer. Depending on the class and type of possible losses, the risks can be transferred either to the captive insurance organization or to the external insurance market. Obviously, it is more profitable to keep more foreseeable and stable risks on your own maintenance.

One of the advantages for the development of a captive insurance organization is the lack of insurance coverage offers for some risks in the usual insurance market. A captive insurance organization is able to create insurance funds to cover any type of loss, including those for which the usual insurance market cannot offer insurance protection. The reinsurance market is essentially a wholesale insurance market in which reinsurance companies act as wholesalers (or buyers). The costs of establishing and managing a reinsurance company are much lower, and the average amount of insurance during reinsurance is much higher. The benefit for the insured is lower insurance rates. In addition, unlike insurance, the reinsurance market allows you to keep more predictable risks on the insured's care.

A captive insurance organization can serve as a lever to centralize the risk management of large corporations, taking over the implementation of insurance programs for regional branches, subsidiaries and affiliated companies, as well as the interests of corporations abroad. Insurance of branches and divisions can be carried out within the framework of the global policy of risk management by establishing a higher level of deductible, as well as providing higher limits of insurance coverage and coverage of wider classes of risks than could be achieved for individual enterprises. A captive insurance organization can also provide additional flexibility when insuring the interests of the parent company in other countries, since the primary insurance contract can now be concluded with a local insurance company and then reinsured with a captive insurance organization. This method allows you to circumvent possible legislative and tax restrictions and promises a considerable benefit.

Insurance premiums shall be recovered by the insurance organization up to the insurance reserve and for the period of the contract shall be covered on a qualifying basis. In addition, insurance or reinsurance of risks in the offshore captive insurance organization will ensure the payment of taxes at the rates of the region of the city, as well as the lower rates for existing tax rates. The activity of the captive insurance organization is more active of the mother's organization, the ability to change the cost of saving or transferring a wide range of insurance premiums to the insurance company. In addition, it is possible to

regulate the development of the system and the accumulation of financial reserves.

According to V. Chernyakhovsky [5], an important task is to choose the right model for the transformation of the Ukrainian insurance market for its development in the coming decades. This applies both to the transformation of the legislative framework and regulatory policy, and to changes in business models and the work of insurers. Possible transformation options include closing or selling a business, turning an insurance company into an intermediary, expanding, and turning into a captive insurance company.

Therefore, experts see the introduction of captive insurance companies promising for the development of the insurance market. It should be noted that this can be implemented in the following ways:

1. Definition of the concept of a captive insurance company in the new version of the Law «On Insurance».
2. Determination of the range of counterparties (insureds) with whom the captive insurer has the right to work.
3. Reduction/restriction of prudential supervision requirements, similar to what is currently happening in Europe.
4. Regulation of the activities of captive companies should be carried out according to the requirements of Solvency I, implemented in the current version of the Law «On Insurance», and not according to the extremely complex mechanism of Solvency II.
5. Introduction of softer requirements for capital, reserves, and solvency margin of a captive insurer.
6. Simplification of the requirements for corporate governance of a captive insurance company, since all complex mechanisms are required for structures without a controlling owner and in the presence of a large number of third-party individual clients.

Conclusions

The purpose of creating a captive insurance company can be expressed in the achievement of specific indicators for the insurance of enterprises of the parent financial and industrial group. The objectives of the development strategy of a captive insurance company are defined as areas that contribute to the achievement of the set goal. Currently, there are certain obstacles to the widespread introduction of captive insurance, which are primarily related to the lack of a legislative framework, the absence. However, the introduction of captive insurance can have a positive impact on the economic security of the parent organization and revive the development of the insurance market.

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LABOUR ECONOMICS, PERSONNEL MANAGEMENT AND MARKETING

UDC 658.3:316.472-052]:005.336.3

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-16>

RESEARCH OF CUSTOMER RELATIONSHIP MANAGEMENT (CRM) SYSTEMS AND INDICATORS FOR TRACKING CUSTOMER LOYALTY

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Key words:

CRM, marketing, creative, digital marketing, advertising, proposal, offer.

The study is dedicated to finding ways to improve marketing business processes through the implementation and use of modern marketing approaches and tools, managing consumer attention, informing and motivating potential customers to interact. The article offers an author's approach to the formation of effective creativity. The customer relationship management (CRM) system was studied, a comprehensive approach to determining customer loyalty tracking indicators was proposed, the role and advantages of CRM in the development of modern business were determined.

ДОСЛІДЖЕННЯ CUSTOMER RELATIONSHIP MANAGEMENT (CRM) СИСТЕМИ ТА ПОКАЗНИКІВ ВІДСТЕЖЕННЯ ЛОЯЛЬНОСТІ КЛІЄНТІВ

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Ключові слова:

CRM, маркетинг, креатив, цифровий маркетинг, реклама, пропозиція.

Дослідження присвячено пошуку шляхів удосконалення маркетингових бізнес-процесів за рахунок впровадження і використання сучасних підходів і інструментів маркетингу, управління увагою споживача, інформування та мотивування потенційних клієнтів до взаємодії. В статті запропонований авторський підхід до формування ефективного креативу. Досліджено customer relationship management (CRM) систему, запропоновано комплексний підхід до визначення показники відстеження лояльності клієнтів, визначено роль та переваги CRM в розвитку сучасного бізнесу.

Problem statement

Studies prove that today digital competition is reaching its peak, because the Internet space is expanding the geography of purchasing goods and even services (which are also moving to a digital format). The client has become demanding, and winning over the client, managing his attention and building retention are becoming extremely relevant. This is especially relevant in the conditions of significant changes in the behavior of consumers, increased demands for products, weakening of loyalty to companies as a result of the discrepancy between the stated benefits and the real offer. Thus, the problem of keeping the consumer's attention is relevant for modern business.

Analysis of recent research and publications

The study of modern approaches to managing customer loyalty does not have time to take into account the relevance of events, because at the moment there is a very rapid digitalization, the customer has become demanding, and winning over the customer, managing his attention and building retention are becoming very relevant, this is especially relevant in the conditions of significant changes in consumer behavior, increasing demands for products, weakening of loyalty to companies as a result of inconsistency of the stated benefits with the real offer. Features of CRM and the above problems were investigated in their works: Karpenko, L., Zincio, Y., Stasiuk, S., Polishchuk, I., Hanushchak-Efimenko, L., Daut, T., Yakob,

Y., Miroshnikova, E., Oklander, M., Vikarchuk, O., Kalinichenko, O., Nikolenko, S., Poita Penn I., Marcinkovska S., Mozgova G., Ryabova T., Prymak T., Reinartz W. But taking into account the changing environment and changes in consumer behavior, the topic does not lose its relevance and requires systematic research.

Formulation of the goals of the article

The purpose of the article is to research approaches to the promotion of goods and services, features of consumer behavior and perception of advertising. Based on the research, create a comprehensive advertising creative. Research of the CRM system and customer loyalty tracking indicators.

Presentation of the main research material

The general flow of outdoor advertising is so large-scale that the client is capable of impulsive purchases or, on the contrary, systematically ignores advertisements, so the effectiveness of advertising is significantly reduced, and marketers, in order to obtain the necessary effect, need to find non-traditional approaches to studying the opinion and behavioral reactions of consumers, one of which is neuromarketing and the management system of attention, trust and customer loyalty to the perception of advertising and communications. Accordingly, the topic is gaining relevance, because currently there is no comprehensive approach to the formation of effective creatives and communications in order to retain the attention of customers.

Today, the Internet is characterized by a constant increase in the audience, which can be managed and motivated to buy with modern marketing tools, one of such tools is advertising creatives. In modern conditions of digital promotion, the formation of advertising creative is not a simple process, which should be based on three components. Marketers-practitioners emphasize the fact that in the absence of at least one component of the stage – advertising will not be effective and will not perform the main function – promotion and sale of goods and services (Form.1).

$$\begin{aligned} \text{Comprehensive marketing creative} = \\ = \text{Offer} + \text{Deadline} + \text{Call to action}, \end{aligned} \quad (1)$$

**created by the author*

where, Offer is a strong offer:

- advantage (total sale, promotion, free delivery, «pay for one product and get two», etc.);
- an appeal to the target audience;
- addressing a problem (need).

Deadline – a time limit (size, quantity) that creates a sense of missed opportunity, not receiving a benefit, and motivates an urgent decision to purchase goods or order a service;

Call to action – a call to action, a mandatory component of an advertising message that indicates the customer's path to purchase a product (register, pay via a link, call, write to the direct, etc.).

The presented integrated marketing creative is a list of components of successful advertising that are of practical importance, as a number of marketing studies on consumer

behaviour and neuromarketing prove that a strong offer (creative) influences the consumer's psychology, motivates them to respond to the advert, a limitation creates a sense of lost profit in a potential client, and a call to action stimulates interaction directly with the company.

Therefore, in order to gain leading positions in the period of rapid development of information technologies, enterprises need to perfectly know and study behavioral reactions to various types of their products. Neuromarketing today revolutionized the world of marketing and began to call for the use of various stimuli to influence the human brain to perform a certain action. Based on studies of brain activity, it has been proven that a person makes decisions not only on the basis of rational judgments, but also on the basis of emotional reactions that he cannot control, companies use this fact to maintain the competitiveness of their products in the modern market by inventing the right system of influence on the conscious and subconscious, therefore, the creation of advertising creatives taking into account certain rules is a guarantee of successful communication and promotion of goods and services as a whole. So, let's note that today the usual assessment of product properties has been replaced by the art of creating and selling impressions, emotions, and pleasure. Both the design of the product and its other properties, in order to appeal to people, must affect all senses and all levels of information perception: intuitive, sensory, behavioral, mental, emotional. At the same time, the chosen marketing mix should not only sell the product, but also reflect the values of the company (brand), and at the same time, cause a positive emotional experience in customers and the desire to use the product or service again [3].

Effective creative, affects the attention of the client, most often prompts to buy, but customer retention is also important in marketing, for this today leading specialists use CRM systems.

CRM systems are successfully used all over the world for the further development of relations with the client. Research has proven that today CRM systems (Customer Relationship Management) are an integral tool for the activities of many global enterprises, which allows them to establish and develop relationships with customers much more effectively. However, the implementation of CRM systems in Ukraine was slower than in the rest of the world. Currently, the backlog of Ukrainian companies – both suppliers and customers of solutions, in understanding and mastering technologies for managing interaction with customers is rapidly decreasing. But the achievement of global standards by representatives of the Ukrainian market of CRM technologies requires further study of aspects of the implementation of customer relationship management systems.

Transforming businesses to become customer-centric while continuing to increase revenue and profits is one of the most popular strategies in business today. This strategy is known as customer relationship management (CRM). To achieve CRM success, business and IT leaders must implement CRM processes and technologies and foster employee behaviours that support coordinated and more effective customer interactions across all customer

channels. We have grouped a system of indicators for tracking customer loyalty (Table 1).

Therefore, it should be noted that among modern marketing tools, to improve business processes and increase sales, it is important to implement and use a CRM system in business, such a management tool is aimed at building a sustainable business, the concept of which is a customer-oriented approach and allows

1. Store all the necessary information in one system. Contact details, orders, payments, documents, files, calls, notes and task history for each client are stored in a structured manner in the programme;

2. Orders from all sources. Automatic or manual order creation, quick generation of waybills and documents, sending notifications, process automation.

3. Full control of work. The system allows you to set up a sales funnel, payment, delivery, overdue orders, task completion, customer service, employee activity, etc. in real time.

4. Automation. The system makes it possible to program automatic actions, which allows you to optimise the work of employees (teams) and increase labour productivity.

5. Efficiency. Automation of processes, setting up the transition to payment, speeding up order processing, which

allows increasing customer loyalty and generating additional sales and improving the quality of service.

6. Data analysis. Demonstration of clear and understandable data on the performance of departments or employees. It allows you to evaluate the results and understand what needs to be adjusted and improved to improve the service, product or sales.

Conclusions

Thus, we can conclude that one of the most important CRM processes is extracting valid, previously unknown and understandable information from a large database and using it for profit. To work effectively, CRM deploys many decision-making technologies and applications, such as data mining and data warehousing. When researching CRM strategies, businesses realize that the costs and benefits of CRM initiatives are significant, and they seek to understand the financial implications and economic factors that contribute to their success. For businesses to achieve ROI (return on investment) from CRM, investments in CRM applications and technology must deliver tangible business benefits to the enterprise as well as intangible benefits. CRM effectiveness can be measured as the level of satisfaction achieved by CRM

Table 1 – System of indicators for tracking customer loyalty

Indicator	Formula	Short description of the indicators
Customer Churn Rate	<i>(Number of customers who stopped using your services during the period / Number of customers at the beginning of the period) x100 = Customer churn rate (%).</i>	A coefficient that shows the number of users who have stopped using the service. To determine this indicator, it is necessary to compare the number of customers at the beginning of the selected time period with the number of customers at the end of the same period.
Customer Retention Rate	<i>(Total number of customers at the end of the time period – Number of new customers during the time period)/Number of existing customers at the beginning of the time period]x100 = CRR</i>	Customer retention rate. If the previous indicator can determine how many customers stop using the services, then this metric shows the percentage of retention of new customers.
Active users per day, week and month (DAU, WAU, MAU)	$\frac{DAU}{MAU} \times 100\%$	These indicators will make it clear how many active customers interact with the company over a certain period of time, namely per day, week or month (Daily Active Users, Weekly Active Users, Monthly Active Users). Using the results of the calculations, you can compare the indicators and determine how important a product or service is to the customer. Also, this indicator makes it possible to forecast income.
Product Return Rate	<i>(Number of product units that were later returned/ Total number of product units sold) x100 = Product return rate (%).</i>	This ratio determines what percentage of sold goods are returned after purchase. This indicator is important for companies that sell goods. If the percentage of PRR is higher than the percentage of income, it is necessary to make decisions regarding changes in terms of sales, marketing activities or product quality, packaging, etc.
Time Between Purchase	<i>Number of orders (during the year) ÷ Number of unique customers (during the year) = PF Number of days in a period of time/(Number of orders in a period of time/Number of unique customers in a period of time) = TBP.</i>	Time Between Purchases (TBP) shows how much time usually passes between a customer's first and second purchase. First, let's calculate the frequency of purchase in your company (PF). Using the first formula as a basis, you can determine the time between purchases.
Repeat Purchase Rate	<i>(Number of regular customers / Total number of customers) x100 = Repeat purchase rate (%).</i>	This formula allows you to determine the percentage of customers who make repeat purchases of your product or service. To measure this indicator, you need to divide the number of repeat customers by the total number of customers.

Source: grouped by the authors

activities. Since CRM has become a core business strategy for e-commerce, evaluating its effectiveness is very important. However, few studies have been conducted to evaluate the effectiveness of CRM. In the world of CRM,

there is a growing focus on developing measures that are customer-centric and give managers a better understanding of how their CRM policies and programs are performing.

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PROJECT MANAGEMENT AND FINANCIAL AND ECONOMIC SECURITY IN THE CONDITIONS OF GLOBALIZATION

UDC 338. 246. 88: [332.122:338.124.4]

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-17>

POST-WAR RECONSTRUCTION DIRECTIONS FOR THE ZAPORIZHZHIA REGION

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Key words:

industrial potential, war, economic crisis, production, “depressed region”, human potential.

Zaporizhzhia region, as a constituent part of Ukraine, is located in the southeastern part, almost in the very center, at the intersection of important routes from Europe to Asia. The region has developed all types of transportation; its territory is crossed from north to south by railway and highway routes of transit significance. The region has rich and diverse natural resources (significant reserves of iron and manganese ores, granite), predominantly black soil. The geographical location of the region is favorable for economic and cultural development. Prior to the full-scale invasion, Zaporizhzhia region had every chance of becoming one of the largest industrial centers in Eastern Europe. However, such a geographical location has always had another side for Zaporizhzhia region, and it has always been at the epicenter of significant historical events, as it is now during the full-scale invasion by the Russian Federation – the region is under constant shelling from the Russian army, and part of it is in occupation.

It is very important to develop a post-war reconstruction strategy for Zaporizhzhia region today to prevent the loss of industrial potential and its transformation into a depressed region.

НАПРЯМИ ПОВОЄННОЇ РОЗБУДОВИ ЗАПОРІЗЬКОГО РЕГІОНУ

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промисловий потенціал, війна, економічна криза, виробництво, «депресивний регіон», людський потенціал.

Запорізька область, як складова України, розташована в південно-східній частині, майже в самому центрі, на перехресті важливих шляхів з Європи в Азію. В області розвинені всі види транспорту, її територію з півночі на південь перетинають залізничний та автомобільний шляхи транзитного значення. Область має багаті і різноманітні природні ресурси (значні запаси залізної й марганцевих руд, гранітів), переважно чорноземні ґрунти. Географічне положення області сприятливе для господарського і культурного розвитку. До повномасштабного вторгнення Запорізька область мала всі шанси стати одним з найбільших промислових центрів Східної Європи. Однак, таке географічне розташування завжди мало для Запорізького краю іншу сторону медалі, Запорізький край завжди знаходився в епіцентрі масштабних історичних подій, як і зараз під час повномасштабного вторгнення р.ф. – область знаходиться під постійними обстрілами з боку російської армії, а частина її в окупації.

Дуже важливо, уже сьогодні розробити стратегію повоєнної перебудови Запорізького краю, для недопущення втрати промислового потенціалу, та перетворення в депресивний регіон.

Problem statement

Preserving the country’s industrial center during war-time and its effective post-war reconstruction are crucial components of Ukraine’s overall economic security. Currently, Ukraine’s economic security is under threat; Russia’s military actions against Ukraine could lead to a global economic crisis and deal a devastating blow to the entire world. Therefore, it is important to familiarize and study the experience of other countries in rebuilding depressed regions and restoring their potential in post-war times.

Analysis of research and publications

The issue of «depressed regions» in the country has become the subject of research by both foreign and domestic scholars and economists. Many of them believe that a territory qualifies as depressed when there is stagnation in the key sectors of the economy. According to the definition by A.M. Novikova, «depressed areas» should be understood as industrially developed territories, the crisis state of which is a manifestation of the structural crisis of the economy and disparities in the development of industrial production by sectors and regions of Ukraine.

The question of «depressed regions» has been investigated in their scientific works by such domestic and foreign scholars and economists as Y.Z. Drachuk and L.O. Sav’yuk. They studied the urgent need for the preparation for the reconstruction of the machinery complex and its transformation into a high-tech and innovative industry in the conditions of partial occupation of the old industrial regions.

Forming the goals of the article

The main goal of this work is to study the most modern model of reconstruction of «depressed areas» and find ways to their possible use in Zaporizhzhia using the example of the English city of Sunderland, which has experience in restructuring the economy on modern lines.

Outline of the main material of the research

Ukraine is one of the largest countries in Europe. Ukraine has great potential for the development of the economy, especially if you focus on including agriculture, industry, energy and services. Exports of raw materials, especially iron ore and agricultural products, are important parts of the economy. But, unfortunately, from the full-scale invasion, some regions of the country suffered great losses and destruction. A large number of people left the country, especially the eastern part. This is why recovery is so important.

One of these regions is Zaporizhzhia. In the pre-war period, the Zaporizhzhia region was one of the most important industrial regions of Ukraine. It is famous for its metallurgical, energy and chemical industries. The region has natural wealth, including rivers, lakes and steppe landscapes. National nature parks and reserves are located on its territory. It is also important for agriculture, with the cultivation of grains, oil crops, vegetables and fruits. According to Forbes, we have one of the expensive territories, where the value of minerals reaches 605 billion dollars (Fig. 1). That is why it is important to rebuild us after the war.

Zaporizhzhia is a city of regional importance, the administrative center of the Zaporizhzhia region. It is located on the main waterway – the Dnipro River. It is one of the largest administrative, industrial and cultural centers of southern Ukraine. The fourth largest industrial center of Ukraine with developed mechanical engineering, ferrous and non-ferrous metallurgy, chemical and construction industries. The city has a river port, an international airport and is an important transit railway hub [1].

The peculiarity of the city of Zaporizhzhia is that it is home to about 65% of the region’s productive capacity and about 43% of the region’s population [2].

Zaporizhzhia is the main city of the region, the regional center. Before the full-scale invasion, the city lived an

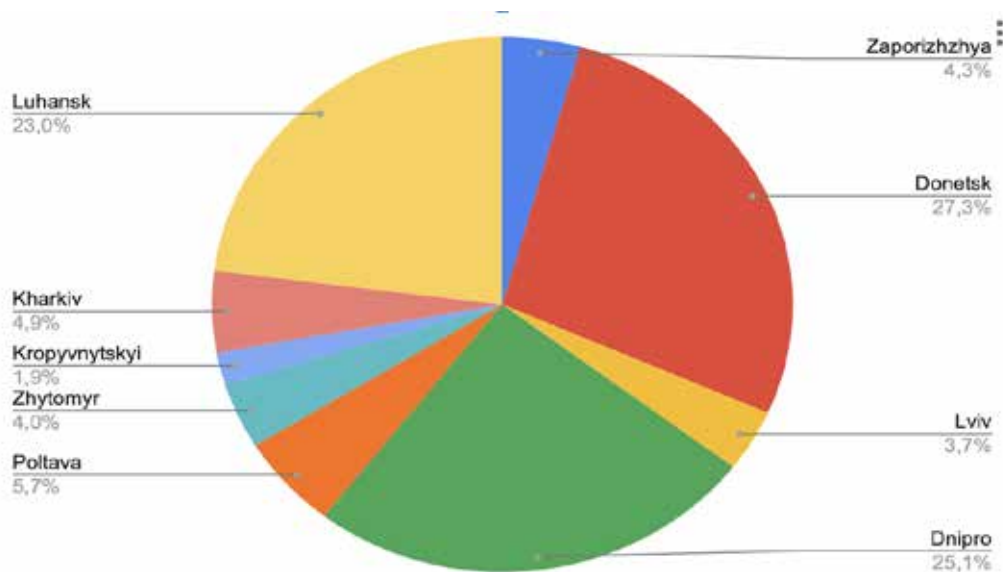


Figure 1 – The cost of minerals in the regions of Ukraine – the 9 most expensive regions

active economic, social, and cultural life. The city was the industrial center of Eastern Ukraine. About 60 industrial enterprises operated on its territory – this is the largest concentration in Europe. But already in pre-war times, it was clear that some of the industrial giants were gradually turning into scrap metal, and the chances of resuming production depended on effective privatization. Even in the pre-war period, Zaporizhzhia lost jobs, people gradually left, starting from 2017, the city's population decreased by almost 1% every year (0.82% on January 1, 2017, -0.7% on January 1, 2018, -0.7% on January 1, 2019, 9%, as of January 1, 2020 -0.92%, as of January 1, 2021 -1.26%) [1], even before the war, Zaporizhzhia as gradually turning into a depressed city. Over five years, from 2017 to 2022, the population in the region and city of Zaporizhzhia decreased by 4.1% and 1.7%, respectively. During the full-scale war, about 26 Zaporizhzhia enterprises moved to the west of Ukraine, two large enterprises were relocated, which is an additional loss of jobs and a demotivation for the return of displaced persons. Almost a quarter of the entire population left Zaporizhzhia region, that is approximately 24% – 280-290 thousand people. Approximately 200,000 currently live in other regions of Ukraine. Almost 87% of those who left the occupied territories are primarily women with children, 65% of these women are of working age – from 18 to 55 years old. This is an economically important figure. About 70% of immigrants have a higher education, and this should also be taken into account when we understand what share of the population we may lose as a whole in the future [3].

Before the full-scale invasion, Zaporizhzhia was considered a platform for the development of heavy industry. The city developed alongside cities with a similar structure of economy and society – Kharkiv and Dnipro, which have always been competitors in the pursuit of investments and human capital (table 2).

Dnipro and Kharkiv are cities with a larger population and larger territory compared to Zaporizhzhia, but the average salary in Zaporizhzhia in 2022 was the highest, unfortunately, the number of registered unemployed was higher compared to competitors.

Analyzing the data in the tables, one can see how the population of Zaporizhzhia is gradually decreasing, despite the higher average salary compared to other cities. There is a reduction in jobs that began before the war, and after the full-scale invasion the statistics increased. According to the Zaporizhzhia Regional Employment Center: the number of employers has decreased by 40%, the number of jobs has decreased accordingly, and 8 unemployed people apply for 1 vacancy. The region ceases to be attractive for the population aged 18-40[5].

In general, the eastern part of the country, according to general statistics, lost more than 90% of the profit for 2022 in 2022, in the Zaporizhzhia region, the business lost more than 83% of the profit, while in Kyiv, Chernivtsi and Lviv regions, which are far from military operations, regions, the profit of enterprises increased due to the influx of internally displaced persons and the relocation of enterprises to this part of the state[6]. The problems of the front-line territory, associated with constant shelling, occupation of part of the territory, loss of jobs, falling wages, deterioration of the environment are the main factors contributing to the departure of young labor from the city, region and country.

If we consider the dynamics of business registration in some regions during the pandemic and full-scale invasion, we can see that the highest rate is in Lviv region, and the lowest is in Zaporizhzhia (Figure 2).

The presented dynamics of business registration in different regions during the war speaks eloquently about the rather difficult economic situation of the Zaporizhzhia region. But sooner or later the war will end, and already today it is necessary to understand how to prevent the transformation of the Zaporizhzhia region into a depressed region, for post-war reconstruction it is necessary to study foreign experience on the revival of depressed regions. An example can be the modern development of the English city of Sunderland, located in the United Kingdom, in the county of Tyneside, which has its own «depressed» history.

This is a city that used to give income to miners, metallurgists, glassblowers, but the world is changing, most of the mines in the region were closed in the 1980s and 1990s

Table 1 – Comparison of indicators of the city, region and country

Regions	Area, km2	Area in % of the total area of the country	Available population, people		In % to the available population of the country	
			2017	2022	2017	2022
Zaporizhzhia city	331	0,0	750 685	710 052	1,8	1,7
Zaporizhzhia region	27180	4,5	1 739 488	1 636 300	4,1	3,8
Ukraine	603549	x	4 258 450	4 113 400	x	

Source: created by the author based on [2, 4]

Table 2 – Comparison of the main indicators of Zaporizhzhia and the cities of "competitors" as of 2022

Indexes	Zaporizhzhia	Dnipro	Kharkiv
Territory	331	405	350
Population	710 052	968 502	1 421 125
Registered unemployed	39 127	32 200	23 600
Average salary	14 510,00	14 479,00	12 510,00

Source: created by the author based on [2, 4]

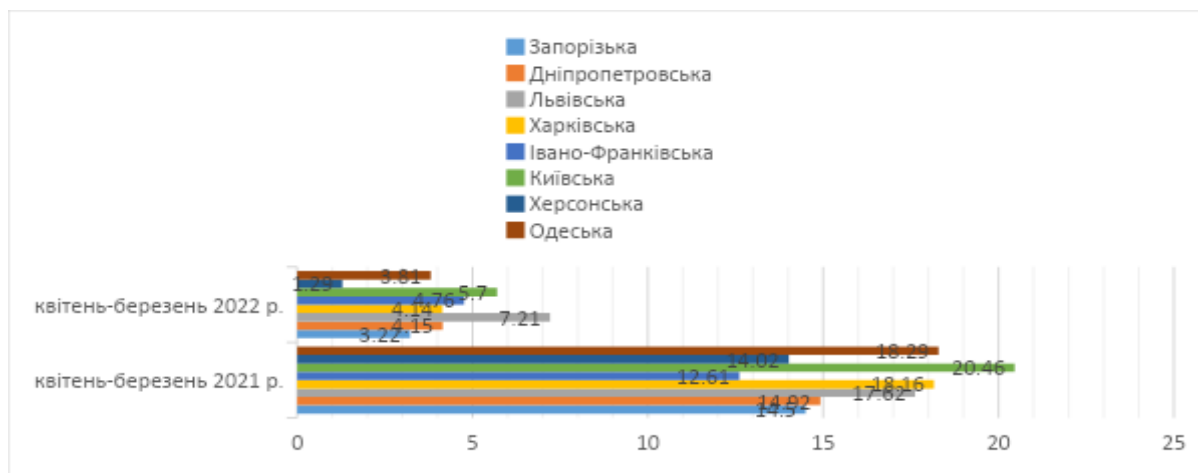


Figure 2 – Dynamics of business registration in the regions during the pandemic (2021) and full-scale invasion (2022)
Source: created by the author based on [4]

during the crisis of the coal industry in Great Britain. Also, the city has a football club Sunderland AFC, which plays in the English Football League. In some ways, our cities are similar, they have closed mines – we have factories, we also have our own football club – Metalurg.

Sunderland is still called a «depressed» town because of its mining history. At that time, there was no development of education and other services that the population needed. Residents periodically left the city, not seeing prospects and development for themselves. The authorities were concerned about such developments, and that is why they came up with a strategic plan for the development of Sunderland's smart city until 2035, which is aimed at the age group of 18-55 years.

Smart cities are cities that use innovative technologies and data to improve the lives of citizens, increase the efficiency of city management and reduce the impact on the environment. Sunderland, like other cities in the world, is developing in the direction of a smart city:

- construction of new houses according to modern standards and more affordable prices, it is more attractive for young people than old high-rise buildings. Affordable, modern housing will make it possible to bring back the youth;

- implementation of intelligent transport management systems, including real-time public transport schedules and electronic ticket systems. In our city, the EasyWay system is partially implemented, but it is imperfect, it only displays city buses, and it is not possible to buy a ticket in the same application;

- creation of information platforms for recording and analysis of traffic data in order to improve traffic flows [7]. In our place, it would be a good control of private carriers, namely minibuses;

- creation of a territory for learning – educational environment. These are more computer classes, more modern libraries where different generations could spend time, from children from kindergarten to older people – and everyone would be interested there, where young people can engage in self-development and study calmly;

- introduction of digital education, namely: introduction of programs to improve digital literacy among the population of different age categories;

- civil safety – installation of video surveillance and other technologies that can ensure safety for all. Also, implementation of instant response systems;

- loyal conditions for startups. The city is interested in a new business that will have the opportunity to develop, thanks to which new jobs will appear and people will stay for permanent residence;

- maximum digitization of all processes – registration, queues, payment. Creating applications to simplify life [3].

So, Sunderland is trying to get out of the 'depressed' state through digital development and job creation. This is what interests people aged 16 to 50. We consider this practice effective for the post-war development of Zaporizhzhia and the Zaporizhzhia region as a whole. It is clear that the reconstruction of the frontline region requires a comprehensive approach to prevent its transformation into a depressed region. Smart city policy can play an important role in this process, but it is not the only success factor. The development of infrastructure, including high-speed Internet, modern transport links and other technological initiatives, can attract investments and provide convenient conditions for business and life, but it is important to create a favorable business environment, support innovative technologies and new industries that can stimulate the economic development of the region and create new jobs, which will help retain young people in the city and return to Zaporizhzhia those who left during the military operations.

Conclusions from the study

Reconstruction of the country after the war is a complex and long process that requires a lot of time and resources. Before the full-scale invasion, 1,200,000 people lived in the Zaporizhzhia region. About 500,000 left, in particular, to other regions of Ukraine and abroad. According to experts' forecasts, 40 to 70% of people will return to Ukraine after the war. That is, 30% of those who left will ultimately remain abroad. But the number of Ukrainians

who will not return may reach 50%, i.e. approximately 3-3.5 million people. It will be a great loss [2]. And that is why we need foreign practices and strategies to restore and modernize the country. Smart city building policies can be a useful tool for ensuring sustainable development and improving the quality of life in the region, but it is important that these policies are integrated, taking into account the needs of local communities, economic realities and socio-cultural characteristics. Such an approach can

contribute not only to technological development, but also to ensuring sustainable and harmonious development of the Zaporizhzhia region and will help it become one of the most modern and attractive regions of Ukraine for young people. It should be noted that a large number of educational institutions operate in the region, which provides an opportunity to train and develop the skills of the local population, which is a key factor in ensuring the competitiveness of the region and attracting new investments.

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UDC 332.145.65

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-18>

DEVELOPMENT OF A MECHANISM FOR COUNTERING THREATS TO THE ORGANIZATION'S ECONOMIC SECURITY

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Key words:

project approach, economic security, determinants, measures to counteract threats to economic security.

The article considers the content of the main elements of the mechanism of management of the project «Economic security of the organization». Each project corresponds to certain mandatory procedures aimed at achieving certain intermediate goals. The main stages of management of the project «Ensuring the economic security of enterprise» are defined: Stage 1. Determination of the level of economic security of the organization. Stage 2. Analysis of threats to the economic security of the organization. Stage 3. Project planning. Stage 4. Implementation of countermeasures. Stage 5. Stage control. Stage 6. Mechanism monitoring. The proposed mechanism for managing the project «Economic security of the organization» allows to cover all its components and implement them on the basis of the project approach.

Taking into account the allocated threats to the level of ensuring economic security, a plan of measures necessary to counteract threats to the economic security of enterprise at the macro, meso-level and micro-level has been proposed. A matrix of measures to counter threats to the economic security of enterprise has been compiled. It is noted that when assessing the threat to economic security, the main emphasis should be placed on the amount of possible damage and the expected time of implementation of the threat, the ratio of which characterizes the level of threat, which takes one of five values: «very high», «high», «medium», «low», «very low». The proposed mechanism for counteracting threats to the economic security of the organization allows the most efficient use of the financial and time resources of the organization on the basis of the scenario method, based on the current level of economic security.

РОЗРОБКА МЕХАНІЗМУ ПРОТИДІЇ ЗАГРОЗАМ ЕКОНОМІЧНІЙ БЕЗПЕЦІ ОРГАНІЗАЦІЇ

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Ключові слова:

проектний підхід, економічна безпека, детермінанти, заходи протидії загрозам економічної безпеки.

В статті розглянуто зміст основних елементів механізму управління проектом «Економічна безпека організації». Кожному проекту відповідають певні обов'язкові процедури, спрямовані на досягнення певних проміжних цілей. Визначено основні етапи управління проектом «Забезпечення економічної безпеки підприємства»: 1 етап. Визначення рівня економічної безпеки організації. 2 етап. Аналіз загроз економічної безпеки організації. 3 етап. Планування проекту. 4 етап. Реалізація заходів протидії. 5 етап. Контроль стадій. 6 етап. Моніторинг механізму.

Запропонований механізм управління проектом «Економічна безпека організації» дозволяє охопити усі її складові та здійснити їх реалізацію на засадах проектного підходу.

З урахуванням виділених загроз за рівнем забезпечення економічної безпеки запропоновано план заходів, необхідних для протидії загрозам економічній безпеці підприємства на макrorівні, мезорівні та мікрорівні.

Складено матрицю заходів щодо протидії загрозам економічній безпеці підприємства. Зазначено, що при оцінці загрози економічної безпеки основний акцент має бути зроблено на величину можливої шкоди та очікуваний час реалізації загрози, співвідношення яких характеризує рівень загрози, який приймає одне з п'яти значень: «дуже високий», «високий», «середній», «низький», «дуже низький».

Запропонований механізм протидії загрозам економічній безпеці організації дозволяє максимально ефективно використовувати фінансові та тимчасові ресурси організації на основі сценарного методу, виходячи з поточного рівня економічної безпеки.

Problem statement

The key elements of financial management are well-developed long-term financial policy, investment portfolio management, effective control over the own and borrowed capital ratio, which assess the financial stability and independence of the organization. An important element is the formation of an effective mechanism for ensuring the financial security of the enterprise.

Analysis of recent researches and publications

The problem of an enterprise economic security management in today's conditions is more relevant than ever. A significant number of works of both domestic and foreign scientists are devoted to the issues of ensuring economic security. The issue of financial and economic security of the enterprise and the mechanism for ensuring financial security were handled by such scientists as: Vasylytsiv T. G. [1], Ivashchenko O.V. [2] and others. The issue of ensuring economic security is also considered in the works Kolevatova, A.V. [3], Staverska, T.O. & Shevchuk, I.L. [4]. However, only a small number of works are devoted to the application of the project approach to ensure the economic security of the enterprise, in particular, the work of [5].

Formulating of objectives

The article is aimed at further development and refinement of formation of an effective mechanism for ensuring the financial and economic security of enterprise.

Presentation of the main research material

Countering threats to the economic security of the organization on the basis of the project approach requires the purposeful distribution of available resources to improve economic security in the context of its key determinants over time. In the process of ensuring economic security, the management of the organization needs to maintain and control a large number of continuous processes, provide them with the necessary resources, taking into account the economic interests of all business entities.

The key element that connects the various elements of the organization's economic security system is a single mechanism for countering threats to the organization's economic security. The Economic Security Strategy of the enterprise should analyze the main challenges and threats to economic security and determine the importance of uninterrupted operation of the mechanism for managing economic security:

1. Determination of the deviation of the actual level of economic security from the target.

2. Identification of threats to economic security.

3. Calculation of scenario variants of the ratio (P/T) – high budget, short period; average budget; middle period; low budget, long period. To determine the required amount of resources and the possibility of optimizing their distribution, it is necessary to determine: what risks the organization bears for failure to achieve the target level of economic security. Based on this assessment, it is possible to plan a budget for measures to ensure economic security. Temporal indicators are calculated taking into account the probability of the threat occurring.

Let's assume that the actual level of economic security of the organization is X_0 , the optimal level is X_2 . Then the target level X_1 can be represented as the following inequality:

$$X_0 < X_1 \leq X_2.$$

$$U_{\text{initial}} < U_{\text{target}} \leq U_{\text{optimal}}$$

$$U_{\text{initial}} = \sum (Yn_{\text{initial}})$$

$$U_{\text{target}} = \sum (Yn_{\text{target}})$$

Yn – determinant indicators; T – period (long, medium, short-term); U – resources (maximum, average, minimum)

4. Drawing up an action plan – Gantt chart three times (short, medium, long)

5. Solving the optimization problem.

6. Identification of threats to economic security in accordance with the main determinants.

The main elements of the mechanism management of the project «Economic Security of Organization» are considered. The object of management is an economic system of organization, as it is called by the name of the internal and external threats of economic safety. Obviously, if the economic system is possible, it will become the most important thing for the economic system, so that the optimal level of economic safety of the organization will be achieved. This is the name and zoom of the project management mechanism. As a sub'ekt of the project management mechanism, the system of economic safety of the organization is considered. In case of stagnation of the project progress to the provision of economic security, the system will be implemented under the project «Economic Safety of Organization».

In fact, the subject of the project management mechanism is the project team, which includes specialists,

experts and employees of the organization who have the appropriate competence to make management decisions in the field of ensuring the economic security of the organization. Considering the structure of the mechanism: it should be noted that each project corresponds to certain mandatory procedures aimed at achieving certain intermediate goals. The target function of our project – ensuring economic security – can also be decomposed into certain components. The work of the project team includes six main stages [3]:

Stage 1. Determination of the level of economic security of the organization. For this purpose, at the beginning of the project, on the basis of international and domestic research experience of leading economists, taking into account global trends and average values of indicators in the industry, the limit values of determinants in the system of economic security of the organization at the micro-, meso- and macro-levels are developed.

Next, it is necessary to calculate the actual values of threat indicators in accordance with the key determinants (Y_n) and compare them with the optimal ones. With significant deviations of the actual indicators from the optimum, some intermediate target values can be set. Achievement of intermediate results is necessary to bring specific indicators out of the critical level and maintain the stable functioning of the organization.

Stage 2. Analysis of threats to the economic security of the organization. At this stage, the team analyzes the full range of potential threats to the organization and ranks them based on the probability of their implementation, potential damage, and the moment of attack.

In accordance with the proposed approach to identifying and ranking threats, it becomes possible to respond, first of all, to the most dangerous threats within the resources available in the organization.

Stage 3. Project planning. At this stage, in accordance with the key principles of the project approach, the team calculates scenario options for the allocation of resources and time to counter threats and increase the level of economic security of the organization. Taking into account the versatile nature of the emerging threats to the economic security of the organization and the development of an appropriate action plan to achieve target and optimal values of indicators in conditions of limited budget and time, we will apply the methods of set-theoretic analysis.

Stage 4. Implementation of countermeasures. The team forms an action plan based on the allocated budget and project plan. To do this, all activities are distributed on the Gantt chart. The formation of an action plan is carried out on the basis of an analysis of potential threats and the development of management decisions aimed at countering this threat and improving key indicators that characterize the state of security of the organization in the context of key determinants of economic security.

Stage 5. Stage control. The team solves the problem of optimizing financial and time resources based on the method of critical chains. All activities through appropriate appointments are provided with the necessary resources

and implemented optimally, apart from delay and downtime.

It should be noted that measures to counter threats are implemented not one by one, but in parallel, in the context of key determinants in the presence of free resources, which ensures the maximum efficiency of the resources used. At this stage, it is extremely important to have a clear control of the stages and their boundaries, since the assignment of resources (performers, equipment and material stocks) depends on them, both in subsequent measures to counter the same threat, and in parallel measures against other threats.

Stage 6. Mechanism monitoring. At this final stage of the project management mechanism, the team sums up the implementation of all activities, assesses the achievement of targets in the context of key determinants of the organization's economic security, and determines the list of potential threats for the next period.

Upon successful achievement of all targets, the project is considered to be successfully completed and closed, and the system of ensuring the economic security of the organization goes into a state of process activity and is implemented in the traditional form. If, in the process of monitoring the project, it is proved that the organization failed to achieve the required level of economic security, for example, due to insufficient budget for the previous period, the project continues its activities in accordance with the scenario distribution of budget and time. In this case, the activities that were financed from the budget of the previous period of the project operation are implemented. Thus, the proposed mechanism for managing the project «Economic security of the organization» allows to cover all its components and implement them on the basis of the project approach.

When identifying threats to the economic security of the organization, the emphasis is on the timing of the offensive, potential damage and probability; planning is carried out on the basis of scenario ratios of budget and time allocated for activities; The procedure for implementing measures is based on the critical path method. The use of the advantages of the project approach is aimed at increasing the economic security of the organization. Taking into account the identified threats in terms of the level of ensuring economic security, we will form a plan of measures necessary for counteraction (Tab. 1-3).

Studies show that in order to neutralize threats to the economic security of an enterprise, it is necessary to implement the following main measures: diversification of sales channels (M1); capital investments, fixed assets (M2); capital investments in infrastructure (M3); monitoring of legislation (M4); ensuring the required level of solvency (M5); increase in wage costs (M6); increasing the cost of information protection (M7); increase in spending on education (M8); increase in advertising costs (M9); increase in R&D costs (M10); attraction of investments (M11); sales growth through existing distribution channels (M12); reduction of production costs (M13); increase in production volumes (M14).

Table 1 – Measures to counteract threats to the economic security of the enterprise at the micro level

Indicator	Threats	Measures
– Current liquidity ratio – Total solvency ratio – Return on sales, %	– Untimely fulfillment of financial obligations; – Reduced return on sales.	– Ensuring the required level of solvency; – Reducing the cost of production
– Depreciation coefficient of fixed assets – decrease in production efficiency; – Return on assets, UAH / UAH Growth rate of the average annual cost of fixed assets, %	– Decrease in Product quality	– Capital investments in fixed assets
– Growth rate of required expenditures for information protection, % – Coefficient of information armament, – % Coefficient of information protection, %	– Incurring losses as a result of information leakage; – Decrease in competitiveness	– Increased costs for information protection
– Growth rate of the average wage, % – Staff turnover, % – Share of employees with higher education, %	– Decrease in production efficiency; – Decrease in product quality; – Untimely fulfillment of obligations; – Decrease in competitiveness	– Increase in wage costs; Increased spending on education
– Level of provision of the organization's resources, % – Growth rate of material efficiency, % – Growth rate of personnel profitability, %	– Decrease in production efficiency; – Decrease in product quality; – Untimely fulfillment of obligations; – Decrease in competitiveness	– Increase in the cost of resource provision; – Increased spending on education
– Capital investment growth rate, % – Investment ratio; – Investment Activity Ratio	– Decrease in production growth rates	– Capital investments in fixed assets
– Growth rate of environmental protection costs, %; – Growth rate of industrial safety costs, %; – Growth rate of labor protection costs, %.	– Penalties for violation of the law and expenses for the elimination of damages	– Capital investments in infrastructure (ecology, labor protection)
– Growth rate of employee education costs, %; – Share of employees with more than 5 years of experience, %; – Share of employees with specialized higher education, %	– Decrease in production efficiency; – Decrease in product quality; – Decrease in competitiveness	– Increased spending on education; – Increased advertising costs; – Diversification of sales channels
– Growth rate of advertising costs, % – Dependence on a specific sales channel, %; – Sales growth rate for existing sales channels, %	– Decrease in competitiveness; – Loss of sales markets; – Decreased return on sales	– Increase in production volumes

Table 2 – Measures to counteract threats to the economic security of the enterprise at the meso level

Indicator	Threats	Measures
– The ratio of return on sales to the average profitability in the industry, %; – The growth rate of the organization's share in the industry, %.	– Decrease in competitiveness; Slowdown in production growth	– Attracting investments
– Growth rate of local market coverage, % – Decrease in competitiveness; – Sales growth rate to regional customers, % – Sales growth rate to foreign customers, %	– Decrease in production growth rates	– Sales growth through existing distribution channels

We will combine threats and measures into general blocks for further detailing the action plan and highlighting the work. The results are presented in Table 4.

When assessing the threat to economic security, the main emphasis should be placed on the amount of possible damage (P) and the expected time of implementation of the threat (T), the ratio of which characterizes the level of threat. Depending on the numerical values of the points of the P and T parameters, the threat level takes one of five values: «very high» (VH), «high»(H). «medium»(M), «low»(L), «very low»(VL). (Table 5).

Conclusions

The proposed mechanism for counteracting threats to the economic security of the organization allows the most efficient use of the organization's financial and time resources on the basis of the scenario method, based on the current level of economic security, as well as to increase the efficiency of personnel management through the use of the critical path method, the use of buffer zones and the elimination of negative aspects of traditional management.

Table 3 – Measures to counteract threats to the economic security of the enterprise at the macro level

Indicator	Threats	Measures
<ul style="list-style-type: none"> – Growth rate of oil and gas exports, % – Growth rate of investments in production, % – Growth rate of product prices, % 	<ul style="list-style-type: none"> – Decrease in competitiveness, – decrease in production growth rates 	<ul style="list-style-type: none"> – Increasing the scale of production; – Attraction of investments; – Reducing the cost of production
<ul style="list-style-type: none"> – Annual inflation rate, % (INF); – Growth rate of the average hryvnia exchange rate to the dollar, %; – Index of prices, % 	<ul style="list-style-type: none"> – Decrease in sales revenue; Decrease in return on sales 	<ul style="list-style-type: none"> – Sales growth with existing channels; – Reducing the cost of production
<ul style="list-style-type: none"> – The ratio of the average salary in the organization to the average salary in the industry, times; – Employment rate, %; – Staff turnover in the industry, % 	<ul style="list-style-type: none"> – Decrease in the provision of the organization with human resources 	<ul style="list-style-type: none"> – Increase in payroll costs
<ul style="list-style-type: none"> – Share of R&D expenditures in GDP, %; – Growth rate of expenditures on technological innovations, % 	<ul style="list-style-type: none"> – Decrease in competitiveness 	<ul style="list-style-type: none"> – Capital investments in fixed assets; – Increased R&D costs
<ul style="list-style-type: none"> – Growth rate of the tax burden, % – Refinancing rate, % 	<ul style="list-style-type: none"> – Decrease in sales revenue Decrease in return on sales; – Decrease in the availability of credit resources – Reduction in the cost of production 	<ul style="list-style-type: none"> – Attracting investments

Table 4 – Measures to counteract threats to the economic security of the enterprise

Threats	Measures
1. Incurring losses as a result of information leakage	Increased costs for information protection
2. Decreased competitiveness	Increased costs for information protection
	Increased spending on education
	Increase in advertising costs
	Sales growth through existing distribution channels
	Increase in production volumes
	Reducing the cost of production
3. Decrease in sales revenue	Sales growth through existing distribution channels
	Reducing the cost of production
4. Зниження рентабельності продажів	Reducing the cost of production
	Increase in advertising costs
	Diversification of sales channels
	Increase in production volumes
	Sales growth through existing distribution channels
5. Slowdown in production growth	Capital investments in fixed assets
	Sales growth through existing distribution channels
	Reducing the cost of production
	Scaling up production
6. Failure to meet financial obligations on time	Ensuring the necessary level of solvency
7. Failure to fulfill obligations in a timely manner	Increased spending on education
	Increase in wage costs;
8. Decrease in production efficiency a	
	Increase in wage costs;
	Increased spending on education
9. Decrease in the provision of the organization with human resources	Capital Investments Fixed Assets
	Increase in wage costs
10. Втрата ринків збуту	Diversification of sales markets,
	Increased R&D costs
11. Decrease in the availability of credit resources	Capital Investments Fixed Assets
	Monitoring of legislation,
12. Penalties for violation of the law and expenses for the elimination of damages	Capital investment in infrastructure
	Capital investments in fixed assets
	Increase in wage costs;

Table 5 – PRT – matrix of threats to the economic security of the enterprise

№	Threats	Damage (P)	Time (T)	Threat Level	Opportunity (R)
U1	Damage due to information leakage	1	1	VH	1
U2	Decrease in competitiveness	1	1	VH	1
U3	Decrease in sales revenue	1	1	VH	2
U4	Decreased return on sales	1	2	H	2
U5	Decrease in production growth rates	1	2	H	2
U6	Late fulfillment of financial obligations	3	1	M	2
U7	Late fulfillment of financial obligations	3	1	M	2
U8	Зниження ефективності виробництва	2	2	M	2
U9	Decrease in the provision of human resources to the organization	2	2	M	2
U10	Loss of markets	1	3	M	3
U11	Decrease in the availability of credit resources	3	3	L	2
U12	Penalties for violation of the law and expenses for the elimination of damages	3	3	VL	3

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UDC 338.24:005.932.2

DOI <https://doi.org/10.26661/2414-0287-2024-2-62-19>

THE IMPACT OF DIGITALIZATION ON THE FINANCIAL AND ECONOMIC SECURITY OF ENTERPRISES AND NATIONAL SECURITY OF THE STATE

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Key words:

digitalization, technology, society, enterprise economy, financial and economic security, national security, innovative changes, cybersecurity, social impact.

The article substantiates the expediency of the economy's transition to modern innovative digital technologies, since their implementation has a positive impact on the efficiency of business entities, business development, financial, economic and national security of Ukraine. It is noted that digitalization significantly transforms the functioning of enterprises, and its impact is felt at the level of financial, economic and national security of the State. It is proved that digital technologies not only accelerate and optimize economic processes, but also create new opportunities and challenges. It is noted that an important aspect is to understand the positive impact on enterprises and national security, which makes the study of digitalization an urgent task. Various aspects of the impact of digitalization on the financial, economic and national security of Ukraine are considered in detail. In particular, the educational aspect, cybersecurity, improved cooperation with the government, cost and risk analysis, increased competitiveness and innovation, and social impact. It is noted that digitalization brings important benefits, but also brings risks. In particular, the author considers the issues of cybersecurity and the disadvantages that may arise from untimely or inadequate implementation of digital technologies. The theoretical and methodological approaches to establishing relationships between the processes of digitization of the economy, cyber security, financial and economic and national security through the prism of reforming the educational component and introducing innovations into this process have been expanded. It is determined that such a combination allows not only to identify the risks of reducing the efficiency of business entities, but also to increase labor productivity, profitability, competitiveness, products, enterprises and the economy on the basis of the introduction of digital innovations. It is the use of digital technologies that provides access to new financial instruments, which will ensure business transparency and the possibility of obtaining investments in the innovative development of all spheres of activity and the economy as a whole, which will have a positive impact on the financial and economic security of business entities and the national security of Ukraine. It is proved that in the context of globalization and internationalization of business, the introduction of digital technologies allows not only business entities to gain competitive advantages, but also employees in the field of information technology and innovation. The introduction of digital technologies contributes to the development of national education, and also provides access to additional competencies domestic students and scientists in higher education institutions of other countries, which will have a positive impact on socio-economic security in the country. It is substantiated that digitalization provides advantages in the field of cybersecurity and ensures the availability of cooperation between citizens and society with the government in order to formulate an investment strategy, a strategy for cyber security of digital assets, and to reduce cyber espionage, which will have a positive impact on international cooperation.

ВПЛИВ ЦИФРОВІЗАЦІЇ НА ФІНАНСОВО-ЕКОНОМІЧНУ БЕЗПЕКУ ПІДПРИЄМСТВ ТА НАЦІОНАЛЬНУ БЕЗПЕКУ ДЕРЖАВИ

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Ключові слова:

цифровізація, технології, суспільство, економіка підприємства, фінансово-економічна безпека, національна безпека, інноваційні зміни, кібербезпека, соціальний вплив.

Обґрунтовано доцільність переходу економіки на сучасні інноваційні цифрові технології, оскільки їх впровадження позитивно впливає на ефективність діяльності суб'єктів господарювання, розвиток бізнесу, фінансово-економічну та національну безпеку України. Зазначено, що цифровізація суттєво трансформує функціонування підприємств, а її вплив відчутний на рівні фінансово-економічної та національної безпеки держави. Доведено, що саме цифрові технології не лише прискорюють та оптимізують економічні процеси, але й створюють нові можливості та виклики. Зазначено, що важливим аспектом є розуміння позитивного впливу на підприємства та національну безпеку, що робить дослідження цифровізації актуальним завданням. Детально розглянуто різні аспекти впливу цифровізації на фінансово-економічну та національну безпеку України. Зокрема, освітній аспект, кібербезпека, покращення співпраці з урядом, аналіз витрат та ризиків, підвищення конкурентоспроможності та інноваційності, а також соціальний вплив. Зазначено, що цифровізація вносить важливі переваги, але також приносить і ризики. Зокрема, розглядаються питання кібербезпеки та недоліки, які можуть виникнути при несвоєчасному або неадекватному впровадженні цифрових технологій. Розширено теоретико-методичні підходи до встановлення взаємозв'язків між процесами цифровізації економіки, кібербезпеки, фінансово-економічної та національної безпеки через призму реформування освітньої складової та впровадження новачій в даний процес. Визначено, що саме таке поєднання дозволяє не лише виявити ризики зниження ефективності діяльності суб'єктів господарювання, а й підвищити показники продуктивності праці, рентабельності виробництва, конкурентоспроможності, продукції, підприємств та економіки на засадах впровадження цифрових інновацій. Саме використання цифрових технологій дає доступ до нових фінансових інструментів, що забезпечить прозорість бізнесу та можливість отримання інвестицій в інноваційний розвиток всіх сфер діяльності та економіки в цілому, що позитивно буде впливати на фінансово-економічну безпеку суб'єктів господарювання та національну безпеку України. Доведено, що в умовах глобалізації, інтернаціоналізації бізнесу впровадження цифрових технологій дозволяє отримувати конкурентні переваги не лише суб'єктам господарювання економіки, але і працівникам у сфері інформаційних технологій і інновацій. Впровадження цифрових технологій сприяє розвитку національної освіти, а також надає доступ до отримання додаткових компетентностей вітчизняними студентами та науковцями в закладах вищої освіти інших країн, що позитивно буде впливати на соціально-економічну безпеку в державі. Обґрунтовано, що цифровізація забезпечує переваги в сфері кібербезпеки та забезпечує доступність співпраці громадян і суспільства з урядом з метою формування інвестиційної стратегії, стратегії кіберзахисту цифрових активів, зниження кібершпигунства, що позитивно впливатиме на міжнародне співробітництво.

Problem Statement

In contemporary society, the transition to digital technologies, known as digitization, has become a necessity in all spheres of life and the economy. The changes it brings significantly impact the functioning of businesses and have a considerable influence on the financial, economic, and national security of Ukraine. Digital technologies create new opportunities but also bring new challenges and risks to modern life. The problem lies in effectively addressing

these challenges and maximizing the benefits of digital transformation while ensuring the financial and national security of the country.

Analysis of latest research and publications

The analysis of the impact of digitization on the financial-economic security of enterprises and national security of the state is determined by studying various aspects of digital transformation conducted by scholars such as Andrukiv I., Arapova O., Areshonkov V., Horytska K.,

Kotelevets D., Nyeizvestna O., Polishchuk S., Psuy M., Rospopchuk T., Rudyuk Y., Rykun S. [1-10], and others. Their studies examine important aspects of digital transformation, such as changes in enterprise business models, financial stability, digitization of the banking sector, and its impact on workforce competitiveness and innovation.

Purpose statement

The objective of the article is to investigate and systematize the impact of digitization on the financial-economic security of enterprises and the national security of the state, identify key aspects of this impact, and uncover the advantages and risks associated with this process.

Presentation of the basic material of the research

Digitization, or the transition to digital technologies in all spheres of life, has become an integral part of modern society and the economy. This process significantly alters the paradigm of enterprise functioning and has a profound impact on the financial-economic security as well as the national security of Ukraine. By transforming economic processes and increasing access to information, digital technologies simultaneously create new opportunities and challenges, demanding careful analysis and effective strategies for adaptation. In this context, investigating the impact of digitization on the financial-economic security of enterprises and national security becomes a pertinent task as it contributes to understanding the innovative changes shaping Ukraine's current economic reality and future.

Digitization accelerates and simplifies many processes while also creating space for new opportunities to enhance competitiveness and efficiency. However, it also introduces risks alongside benefits. Among the key aspects of digitization's impact on the financial-economic and national security of Ukraine are: increasing business efficiency, ensuring financial stability, reducing costs and risks, enhancing competitiveness, fostering innovation, improving government collaboration, cybersecurity, education and training, social impact, independence, and national security.

One of the main aspects of digitization's impact on the financial-economic security of enterprises and national security is the enhancement of business efficiency. The incorporation of digital technologies facilitates process automation within enterprises, increasing employee productivity and optimizing production. Consequently, this contributes to cost reduction and profitability growth. The adoption of digital innovations enables enterprises to enhance market competitiveness by swiftly responding to changes in demand and supply, refining products and services, and implementing new business models.

Through the implementation of digital transformation, enterprises can collect and analyze large volumes of data, aiding them in making well-informed decisions based on precise data, thereby enhancing management efficiency. Digital technologies help identify risks, thereby increasing a company's resilience to financial and economic challenges.

Digitization enables enterprises to enter new markets more easily and attract investments. Enterprises can utilize e-commerce and online platforms to interact with clients and partners worldwide. Implementing digitization in tax

and financial processes simplifies reporting and tax payment, reducing fiscal risks and enhancing investor trust. Additionally, the application of digital financial technologies allows enterprises to access new financial instruments and services, facilitating investment and financing.

Thus, digitization creates opportunities for enhancing business efficiency and ensures economic and financial security for enterprises, contributing to the development of the national economy.

Financial-economic security of enterprises and the national security of a country undergoing digitization aim to ensure financial stability. An important factor in ensuring financial stability is the effectiveness of financial management. The implementation of digital transformation enables enterprises to manage their financial situation more effectively using digital tools and analytics. They can analyze financial data more quickly, predict trends, and forecast risks, facilitating effective decision-making regarding budgeting, investment, and financial planning.

Digital tools, such as electronic financial management systems, can be utilized by enterprises to control finances, including expense control, monitoring of debt obligations, and cash flow management. Digital technologies facilitate easier access to funding through online crowdfunding, issuance of digital securities, cryptocurrencies, and other innovative financial instruments. By utilizing digital tools, enterprises can identify and assess financial risks, such as credit risk, operational risk, and market risk, enabling them to take timely actions to mitigate these risks.

Therefore, digitization contributes to ensuring financial stability for enterprises and national security in Ukraine through improved financial management, funding attraction, risk reduction, and increased efficiency of financial operations.

Digitization impacts the financial-economic security of enterprises and national security in Ukraine by reducing costs. This is because digital tools enable enterprises to automate a layer of routine operations and business processes. Streamlining internal management, production, logistics, and many other aspects of operations leads to reduced labor costs and optimized expenses on materials and resources. Utilizing digital technologies in inventory management and analytics systems allows for controlling inventory levels and reducing costs on unnecessary stockpiles.

The use of digital tools helps to mitigate risks more effectively by identifying, assessing, and managing risks. For instance, data analytics can assist in timely detecting financial anomalies or fraud, thus reducing financial risks and fraud.

A positive impact is the enhanced efficiency in financial planning, accounting, and reporting. Data analysis and forecasting digital tools aid enterprises in creating accurate and realistic financial plans, preventing excessive spending, and accurately calculating revenues. Digital accounting and reporting systems enable precise and rapid financial record-keeping, facilitating timely tax calculation and other financial obligations reporting, streamlining reporting processes.

The implementation of digital transformation reduces costs and risks for enterprises and ensures financial stability through effective risk management and increased financial management efficiency.

Digitization significantly enhances competitiveness. Enterprises actively adopting digital solutions can respond more swiftly to changes in market conditions and compete with other market players.

Enterprises can optimize their operational processes through digital technologies, leading to increased efficiency and reduced costs. Implementing automated management systems in production, logistics, and other areas allows enterprises to produce more for less, which is a significant competitive advantage.

The use of digital technologies enables enterprises to interact with customers and partners internationally, promote their goods and services on the global market through e-commerce, social media, and other digital channels. Digitization helps to control and improve the quality of products and services. The application of digital technologies facilitates consumers' access to products and services, stimulating demand for innovations. Enterprises can analyze data and receive feedback from customers promptly to tailor their offerings to market needs.

Digitization serves as a stimulus for the development of new technologies and business models. Enterprises can innovate faster and respond to changes in market conditions, creating new products and services, which increases their competitiveness. Enterprises that are early adopters of innovative digital solutions gain a competitive edge in the market and can increase their market share and ensure sustainable revenue growth.

Moreover, the application of digitization creates a demand for the development of digital skills among employees and the attraction of highly skilled workers who possess skills in information technology and innovation, which fosters the development of innovative projects and helps attract talented workforce.

Thus, digitization enhances competitiveness through improved efficiency, creating opportunities for easy market access, developing innovative potential, and improving the quality of products and services.

Digitization significantly improves cooperation between enterprises and the government, contributing to the financial-economic security of enterprises and national security. A key aspect of this impact is enhancing the accessibility and transparency of information, particularly through the implementation of digital tools that facilitate real-time data and information exchange between the government and enterprises. This greatly facilitates monitoring of enterprises' financial-economic activities and promotes open and transparent reporting.

Key aspects of influence also include e-governance. The implementation of digital tools helps governments improve the efficiency of their work, particularly in the areas of tax and regulatory control. Enterprises have the opportunity to submit reports, make tax payments, and fulfill other obligations in electronic format, simplifying cooperation with government agencies.

The implementation of digitization reduces the risk of fraud and enhances data exchange security. Digital technologies enable enterprises and government bodies to utilize electronic identification and digital signature systems. Digitization facilitates interaction and prompt issue resolution

through online services and platforms. For example, governments or enterprises can utilize specialized online platforms for information exchange, collaboration, and issue resolution.

Digitization contributes to increased regulatory efficiency. With the adoption of digital technologies, government bodies can better analyze market situations, identify risks, and regulate industries more effectively, creating a favorable environment for business and investment.

Thus, the implementation of digitization improves collaboration between enterprises and government, streamlines information exchange, and enhances regulatory efficiency, helping enterprises improve their financial-economic security and contributing to national security by ensuring more effective control and supervision of economic activities.

Digital transformation affects the process of education and learning. Digital technologies promote the development of online learning and distance programs, allowing learning from anywhere in the world, thereby expanding educational opportunities nationwide. Digital tools create conditions for using innovative teaching methods, such as virtual reality, artificial intelligence, and others, making learning easier and potentially more effective.

Digital learning methods contribute to cost savings in training and staff development. Enterprise managers can create their own online courses and materials to enhance employee qualifications. With digital tools, enterprises can analyze the productivity and success of employee training, helping to improve training programs and enhance learning effectiveness. Additionally, enterprises can collaborate with universities and educational institutions, attracting talented graduates and preparing future workforce to meet enterprise needs.

Therefore, digitization has a positive impact on education and learning, ensuring accessibility, efficiency, and cost savings. This helps enterprises improve the skills and knowledge of their personnel, positively impacting their financial-economic security and competitiveness, while also promoting the development of national education and readiness to address national security challenges.

One of the aspects of the impact of digitization on the financial-economic security of enterprises and national security is its social impact.

Digitization affects the creation of new jobs, particularly in the field of information technology and digital services. However, at the same time, digital transformation may lead to automation and reduced demand for certain types of manual labor, affecting employment levels and requiring worker retraining. Digitization requires workers to acquire new technological skills. Enterprises and governments must invest in education and retraining of workers to ensure their competitiveness in the labor market.

A positive impact of digitization is the simplification of access to services. Digital tools make financial and banking services more accessible and convenient for the population. This enables people to obtain credits, invest money, make payments, and manage their finances using smartphones and computers.

The implementation of digitization promotes financial inclusion for those who previously lacked access to

traditional banking services. This helps reduce economic inequality and provide greater access to financial resources. Digital transformation can impact the structure of the economy and wealth distribution in society. Therefore, it is important to improve and transform policies and regulations to ensure fair distribution of digital economy benefits.

In conclusion, digitization has a significant social impact on society, including employment levels, education, access to financial services, and many other aspects. Effective management of these challenges helps ensure the financial-economic security of enterprises and national security of Ukraine, maintaining a balance between innovation and social stability.

Digitization significantly impacts the independence and national security of Ukraine, which includes economic and financial security, as well as cybersecurity. As a large portion of financial and economic activities and information exchange has transitioned to the online environment, digitization creates new challenges and opportunities for cybersecurity.

With increased use of digital technologies comes a rise in cyber threats. Digitization influences the development of electronic financial services, which can play a crucial role in the country's financial system. However, it can also create new risks to financial stability and national security. Digitization has a significant impact on the country's financial infrastructure, including the banking system, payment systems, and stock market. The expanded use of digital technologies may increase the vulnerability of these systems to cyberattacks, posing a threat to financial-economic security.

Hackers, cybercriminals, and cyber spies may target enterprises and national infrastructure to steal confidential information, inflict financial losses, or disrupt normal operations. Therefore, considering that digital transformation contributes to the increase in the volume of financial information stored and processed electronically, governments and enterprises must pay special attention to protecting this financial data from unauthorized access and theft.

Digitization renders critical infrastructure, such as energy, transportation, banking, and others, more susceptible to cyberattacks. Especially in the post-war period, adversaries may attempt attacks to harm the national economy and security. Governments and enterprises must develop and implement cyber strategies and policies to safeguard critical information and infrastructure. To enhance cybersecurity, the state should create conditions and invest in training and engaging cybersecurity specialists to protect digital assets. Cyber threats have no borders, so it is crucial to establish international partnerships and collaborate with other countries to exchange information and jointly respond to cyberattacks.

Digitization fosters increased cyber espionage, which can be used to leak confidential information and gain market advantage. This can affect the competitiveness of Ukrainian enterprises and threaten the country's economic security. Ukraine should develop and implement a cyber strategy and policy to protect its national security in the digital space. It is essential to develop effective means of protection against cyber threats and promote international cooperation in cybersecurity.

In conclusion, digitization presents both opportunities and challenges for Ukraine's independence and national security. By addressing cybersecurity risks effectively and fostering international collaboration, Ukraine can safeguard its financial-economic security and protect its national interests in the digital age.

Conclusions

Thus, digital transformation holds the potential for improvement and development, yet it also presents new challenges and risks to the financial, economic, and national security of Ukraine. It is crucial to focus on cybersecurity, workforce development, and ensuring national sovereignty in the digital sphere to ensure the country's sustainable and successful development in the era of digital transformation.

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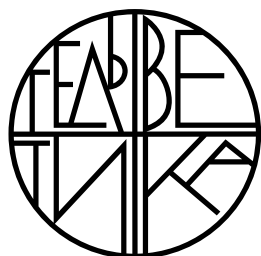
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Збірник наукових праць

**ФІНАНСОВІ СТРАТЕГІЇ
ІННОВАЦІЙНОГО РОЗВИТКУ ЕКОНОМІКИ**

Випуск 2 (62), 2024

Комп'ютерна верстка – Н.М. Ковальчук
Коректура – В.В. Ізак



Г Е Л Ь В Е Т И К А
ВИДАВНИЧИЙ ДІМ

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Підписано до друку 27.03.2024 р.
Формат 60x84/8. Гарнітура Times New Roman.
Папір офсет. Цифровий друк. Ум. друк. арк. 13,25.
Замов. № 0624/454. Наклад 100 прим.

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Свідоцтво суб'єкта видавничої справи
ДК № 7623 від 22.06.2022 р.