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ЗАПОРІЗЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ

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THE RELATIONSHIP BETWEEN INNOVATIVE TECHNOLOGIES AND COMPETITIVENESS OF THE ENTERPRISE PJSC «ZAPORIZHABRASIVE»

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innovation, competitiveness, analysis, profit

In this paper, we have studied different approaches of scientists to the concepts of "innovation" and "competitiveness", and formed our own definition of these concepts. The article describes the enterprise Zaporizhabraziv PJSC and its reaction to the hostilities. The indicators of the enterprise's financial results, profitability threshold and financial stability margin are analysed, conclusions about its status are drawn.
An analysis of external and internal factors that determine the competitiveness of metallurgical enterprises is carried out. The methods of «qualitative» diagnostics of competitiveness of an enterprise, which are often used in practice, such as SWOT-analysis and PEST-analysis, are studied, after which a conclusion on the competitiveness of the enterprise is made. The development plans of Zaporizhabrasive PJSC for 2023–2024 are considered. The methods that should be implemented, given the importance of innovation, including expanding the market range, introducing environmentally friendly technologies and production processes, using information technology and analytics to optimise production, investing in training and development of personnel, entering into strategic partnerships with other companies or research institutions, are formed.

ЗВ'ЯЗОК МІЖ ІННОВАЦІЙНИМИ ТЕХНОЛОГІЯМИ ТА КОНКУРЕНТОСПРОМОЖНІСТЮ ПІДПРИЄМСТВА ПРАТ «ЗАПОРІЖАБРАЗИВ»

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Ключові слова:
інновації, конкурентоспроможність, аналіз, прибуток

У цій роботі ми дослідили різні підходи вчених до поняття «інновації» та «конкурентоспроможність», а також сформували власне визначення цих понять. Надано характеристику підприємства ПрАТ «Запоріжабразив» та його реакцію на бойові дії. Проаналізовано показники фінансових результатів підприємства, порогу рентабельності та запасу фінансової стійкості, зроблено висновки, щодо його стану.
Виконано аналіз зовнішніх та внутрішніх факторів, що визначають конкурентоспроможність металургійних підприємства. Досліджено методи «якісної» діагностики конкурентоспроможності підприємства, які часто застосовуються на практиці відносяться SWOT-аналіз та PEST-аналіз, після цього було зроблено висновок щодо конкурентоспроможності підприємства. Розглянуто плани розвитку підприємства ПрАТ «Запоріжабразив» на 2023–2024 рр. Сформовано методи, що варто запровадити, враховуючи важливість інновацій, серед яких розширення асортименту ринку, впровадження екологічно дружніх технологій та виробничих процесів, використання інформаційних технологій та аналітики для оптимізації виробництва, інвестування у навчання та розвиток персоналу, укладання стратегічних партнерств з іншими компаніями або дослідницькими установами.

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Problem statement

The unstable political and economic situation in Ukraine affects the competitiveness of Ukrainian businesses. Many international companies prefer to locate their business in countries where there is no hostilities. Therefore, it is important for Ukrainian businesses to maintain their competitiveness using various measures, including the use of innovations, which can open up new prospects for the development of the enterprise.

Analysis of the latest research

The role of innovations in the economy and society has been studied: S.A. Zvaryshchuk [1], V.Y. Lysak [2], O.I. Yankovska [3], The concept of competitiveness was formed by the following scientists: T.L. Zubko [4], A.O. Levytska [5], P.Y. Lizenkova [6], L. Minko [7], O.V. Moroz [8], N. Novikova [9]. A significant contribution to the study of the role of innovations in economic development and increasing the competitiveness of the national economy was made by the scientific works of domestic scientists: D.I. Babmindra [12], A. Galchuk [10], O. Reznikova [11], Y. Khomenko [11], O. Cherep [12, 13]. Thus, innovations ensure a high level of competitiveness and viability of enterprises in the context of the Russian-Ukrainian war and the post-war period. We believe that this research is timely and relevant.

Goal setting

The article is aimed at determining the relationship between innovations and competitiveness on the example of PJSC "Zaporizhzhia Abrasive Plant".

Presentation of the main material

In today's environment, businesses need to engage in innovative activities to improve their competitiveness. Implementing innovations in the company's operations can reduce costs, speed up the company's operations and increase its competitiveness. In 2022, Ukrainian enterprises lost their competitive position compared to European ones due to the hostilities in the country and economic instability. Therefore, it is advisable to introduce innovative technologies in their work.

Scientists have different approaches to defining the concept of "innovation", which should be analysed.

According to Table 1, it can be concluded that innovation is the process of introducing new ideas, technologies, products or services, or improving existing ones, which lead to an improvement in the structure, quality of production and competitiveness of the manufacturer, contribute to the efficiency of the production process and economic development of the enterprise.

Currently, Ukraine is ranked 55th in the Global Innovation Index, which means that it has risen 2 positions in the ranking and despite the hostilities, enterprises continue to develop.

Innovations at a company can include production automation, new product development, the introduction of energy-efficient technologies, the development of new marketing and sales methods, and the introduction of environmental initiatives. All these actions can lead to an increase in the competitiveness of the enterprise (Table 2).

According to Table 2, competitiveness is a complex characteristic that reflects the ability of an enterprise to achieve and maintain competitive advantages in the market, including the efficiency of resource use, the ability to adapt to changes in the external environment and the achievement of strategic goals.

During the war, Zaporizhabrasive faced the problem of a decline in competitiveness, although there are no analogues to ZAK in Ukraine for the production of normal aluminium oxide, silicon carbide and boron carbide. There is a lot of competition from Chinese, Russian and German companies: normal aluminium oxide – manufacturers in China; black silicon carbide – Volzhsky Abrasive Plant, Russia; boron carbide – manufacturers in China; cutting wheels – KLINGSPOR LLC, Germany, manufacturers in China [15].

In times of instability in Ukraine, foreign enterprises prefer Chinese and Russian manufacturers, so in order to change this situation, it is advisable to introduce innovations

Table 1 – Approaches to the definition of "innovation"

Author	Definition
The Law on Innovative Activities (Article 1)	Innovations are newly created (applied) and (or) improved competitive technologies, products or services, as well as organisational and technical solutions of a production, administrative, commercial or other nature that significantly improve the structure and quality of production and (or) the social sphere.
Yankovska O.I.	An innovation (at the micro level) is the end result of an innovation process that has led to qualitative changes in any area of the enterprise's activity.
Galchuk A.A.	An innovation is an innovation that has brought positive changes to production in the form of cost reduction and profit maximisation. The effectiveness of an innovation is expressed in the additional benefit received by the innovator.
Zvaryshchuk S.A.	Innovation is an innovation, any positive change that has an independent value, is introduced into activities to improve the efficiency of any production process, competitiveness and economic efficiency of production.
Lysak V.Y.	Innovation as an innovation related to scientific and technological progress, which involves the renewal of fixed assets and technologies, and improvement of enterprise management. Innovation is a prerequisite for the development of production, improvement of the quality and quantity of products, and the emergence of new goods and services.

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Table 2 – Approaches to the definition of competitiveness

Author	Definition
Lizenkova P.Yu.	Competitiveness of an enterprise is its advantage in selected market segments over competitors at a given time, as assessed by external environment, determined by the competitiveness of its specific products and the level of competitive potential, which characterises the ability to develop, produce, sell and service goods (services) that are superior to the relevant analogues in terms of price and quality.
Levytska A.O.	Enterprise competitiveness is the ability of an enterprise to realise competitive advantages that allow it to develop effectively in comparison with other enterprises in the domestic and foreign markets.
Moroz O.V., Kuznetsov V.S.	This is a complex characteristic that describes the ability of an enterprise to ensure its competitive advantages and profitability at any given time, as well as to adapt to constantly changing environmental conditions.
Novikova N., Zubko T.	Competitiveness is a comparative characteristic of an enterprise that reflects the difference between the level of efficiency of using all types of resources compared to similar indicators of other enterprises in a certain homogeneous group.
Minko L.	The competitiveness of an enterprise is the ability of an enterprise to timely and effectively adjust the parameters of its activities depending on changes in the external environment in order to maintain existing and create new competitive advantages in order to achieve its own strategic goals", which makes it possible to consider this concept not only as a result of activity, but also as a systemic category that reflects the process of an enterprise's activity from the standpoint of its strategic goals

Compiled by the author on the basis of: [5–9]

that could increase the level of competitiveness in the enterprise and improve its financial performance.

Zaporozhabrasive PrJSC is the only manufacturer of abrasives in Ukraine and one of the largest producers of abrasives in Eastern Europe. It was founded in 1939. Currently, the company produces products in two areas: abrasives and tools. The company's abrasives include normal aluminium oxide, silicon carbide, boron carbide and boron nitride. The company produces the following tools: ceramic-bonded grinding tools, bakelite-bonded cutting and grinding tools, bakelite-bonded cutting and grinding tools [15].

The company is located in a frontline city, so every day there is a risk of destruction or damage. However, even in the most difficult times for the country, during the large-scale invasion of the Russian Federation, it continues to develop, increasing its share of global sales and production, creating new jobs and paying taxes to the Ukrainian budget.

Analysing Table 3, the net revenue from sales decreased significantly by 12.75 %, which is due to low sales volumes. The cost of sales decreased by 19.31 %, which negatively affects the company's gross profit, although according to the table it increased by 16.17 %, which indicates an improvement in production efficiency.

Table 3 – Analysis of the income statement of Zaporizhabrasive PrJSC for 2021–2022, UAH thousand

	2021	2022	Deviation	
	UAH thousand	UAH thousand	absolute, UAH thousand	relative, %
Net income from sales of products (goods, works, services)	1732021	1511138	-220883	-12,75
Cost of sales (goods, works, services)	-1411819	-1139168	272651	-19,31
Gross: profit	320202	371970	51768	16,17
Other operating income	30880	62676	31796	102,97
Administrative expenses	-101180	-95526	5654	-5,59
Selling expenses	-138493	-172317	-33824	24,42
Other operating expenses	-54802	-155756	-100954	184,22
Financial result from operating activities: profit	56607	11047	-45560	-80,48
Financial result from operating activities: loss	0	0	0	0,00
Other financial income	3960	2178	-1782	-45,00
Other income	0	0	0	0,00
Financial expenses	-3740	-2199	1541	-41,20
Losses from equity participation	-793	-180	613	-77,30
Other expenses	-18	-5941	-5923	32905,56
Financial result before tax: profit	56016	4905	-51111	-91,24
Financial result before taxation: loss	0	0	0	0,00
Income tax expense (income)	-11847	-969	10878	-91,82
Net financial result: profit	44169	3936	-40233	-91,09

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There was also an increase in other operating income by 102.97 %, which indicates additional income that is not related to the company's core business.

Costs were mainly on the rise, with sales expenses increasing by 24.42 % and other operating expenses increasing by 184.22 %, and it should also be noted that the company's profitability decreased by 5.59 % due to an increase in administrative expenses.

The overall financial result before tax reflected a decrease in profit by 91.24 %. The company's net financial result decreased by 91.09 %, which indicates a significant decrease in profit in 2022 compared to 2021.

According to the analysis of the table of indicators of the profitability threshold and financial stability margin of Zaporizhabrasive PrJSC for 2020–2022, the financial stability zone and the financial stability margin of the enterprise have increased, which indicates an improvement in the enterprise's performance, but attention should be paid to the increase in operating costs.

Also, as we noted above, it is worth investigating the competitiveness of the enterprise, which depends on a number of external and internal factors (Table 5).

Table 5 shows that the competitiveness of steel companies is a complex issue that requires attention to both external and internal factors. Optimisation of technological processes, cost control, high product quality and investment in development are important components of success in this industry.

The methods of "qualitative" diagnostics of the company's competitiveness, which are often used in practice, include SWOT analysis and PEST analysis, which allow to identify external and internal factors that affect the company's competitiveness.

According to the results of Table 6, the SWOT analysis of Zaporizhabrasive PrJSC indicates that the company has significant potential and strengths, production in Ukraine is unique, but also faces significant internal and external challenges and threats. In order to maintain competitiveness, it is important to actively use opportunities, improve internal processes and effectively counter threats, such as developing actions that can avoid the consequences of military operations.

The analysis of Table 7 shows that there are significant political and economic risks associated with the geopolitical situation and economic factors in Ukraine. However, there are opportunities for improvement and adaptation, such as the introduction of new technologies and product quality improvements, which can help the company remain competitive in the market. Therefore, it is important for the company to introduce innovations in production.

Currently, Zaporizhabrasive PrJSC has development plans for 2023–2024, including:

1. Maintaining positions in the international market during the period of stagnation of the abrasives market.
2. Capital and current repairs of fixed assets.
3. Implementation of new technologies.
4. Improving the efficiency of quality management systems, ecology, labour protection and health of personnel on the basis of international standards [15].

Table 4 – Indicators of the profitability threshold and financial stability margin of PJSC "Zaporizhabraziv", 2020–2021

Indicators.	**2020**	**2021**	**2022**
operating income, UAH thousand	1092220,00	1762901,00	1573814,00
operating expenses, UAH thousand	1084986,00	1706294,00	1562767,00
variable costs, UAH thousand	652353,37	1171309,17	848155,75
fixed costs, thousand UAH	353921,63	480182,83	558855,25
marginal income, UAH thousand	439866,63	591591,83	725658,25
financial result from operating activities, UAH thousand	7234,00	56607,00	11047,00
Share of margin income in operating income	0,40	0,34	0,46
Profitability threshold, UAH thousand	878812,48	1430910,22	1212050,19
Share of the profitability threshold in the OD, %.	80,46	81,17	77,01
Financial stability zone, UAH thousand	206173,52	275383,78	350716,81
Financial stability margin, %.	18,88	15,62	22,28

Compiled by the author on the basis of [16]

Table 5 – External and internal factors that determine the competitiveness of steel companies

External factors	**Internal factors**
Changes in prices for metallurgical raw materials	Improving technological processes and optimising production can improve a company's competitiveness
Level of demand for steel products	High-quality steel products can help to gain a competitive advantage in the market
Imposition of duties and other trade restrictions	Effective financial management and cost control allow us to maintain competitive prices
Development of new technologies in the production of steel products	Skills and qualifications of employees, as well as their motivation and job satisfaction
	Investments in research and development

Compiled by the author on the basis of: [17]

Table 6 – SWOT analysis of Zaporizhabrasive PJSC

Strengths	Weaknesses
1. The company has several production facilities, which are different in terms of their importance and technology. 2. The company exports approximately 90% of its products to European countries. 3. The scope of use of the products manufactured at the enterprise is quite wide, ranging from nuclear power, mechanical and aircraft engineering to dentistry and cosmetology. Refractory compounds such as boron carbide are also used in armour (body armour). 4. The company carries out a full production cycle (from raw materials to materials and products made of them) 5. Wide range of products	1. Large share of borrowed funds. 2. Low level of introduction of new technologies and new products 3. Strong competition from foreign enterprises.
Opportunities	**Threats**
1. Stable and efficient production, maintaining its position in the international market during the period of stagnation in the abrasives market. 2. Capital and current repairs of fixed assets 3. Implementation of energy-saving technologies. 4. Improvement of efficiency of quality, environmental, labour protection and health management systems based on international standards.	1. Unpredictability of hostilities on the territory of the state. 2. Consequences of the introduction of martial law. 3. Instability and inconsistency of legislation. 4. Unforeseen actions of state authorities. 5. Instability of economic (financial, tax, foreign economic, etc.) Policy. 6. Unforeseen changes in the domestic and foreign market conditions. 7. Unforeseen actions of competitors.

Compiled by the author on the basis of: [15]

Table 7 – PEST-analysis of Zaporizhabrasive PJSC

Political	Economic
1. The invasion of Ukraine by Russian troops 2. Changes in the rules for exporting goods abroad 3. Changes in the European Union's rules on the sale of goods from Ukraine on its territory.	1. High inflation rate 2. High external debt of Ukraine 3. Fluctuations in exchange rates 4. Decreased purchasing power
Socio-cultural trends	**Technological innovations**
1. Increased awareness of environmental issues requires the adoption of environmental standards and increased spending on environmental protection. 2. Changing consumer demand. 3. Decrease in the number of customers due to the destruction or closure of enterprises	1. The introduction of new technologies and automation can improve productivity and quality of production. 2. The use of digital technologies to manage production and logistics can improve the efficiency of the enterprise.

Compiled by the author on the basis of: [15]

But these measures are not enough to improve competitiveness, and other methods should be considered, given the importance of innovation:

1. Expanding the market range. Before expanding the range of products, it is advisable to research the international market and identify consumer needs.
2. Introducing environmentally friendly technologies and production processes, this initiative can improve the company's reputation and open access to markets where sustainability and environmental protection are important, such as the European Union market.
3. Use of information technology and analytics to optimise production, logistics and customer management, which will increase the efficiency of operations and reduce time and financial resources.
4. Investing in staff training and development, which will improve the team's skills and ensure the company's ability to adapt to change.
5. Consider entering into strategic partnerships with other companies or research institutions to share knowledge and resources.

Taking into account these innovations, PJSC "Zaporozhabraziv" can strengthen its market position and increase its competitiveness in the face of industry stagnation. The key requirement is to constantly monitor and analyse the results of these initiatives and be ready to adapt the strategy in line with changes in the market and internal conditions.

Conclusions

Thus, according to our study, innovation is the process of introducing new ideas, technologies, products or services, or improving existing ones, which lead to an improvement in the structure, quality of production and competitiveness of the manufacturer, contribute to the efficiency of the production process and economic development of the enterprise. The concept of innovation is very closely related to the concept of competitiveness, competitiveness is a complex characteristic that reflects the ability of an enterprise to achieve and maintain competitive advantages in the market, including the efficiency of resource use, the ability to adapt to changes

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in the external environment and the achievement of strategic goals.

In this paper, we have considered the impact of innovations on the competitiveness of Zaporizhabrasive PrJSC. The company does not face internal competition, as it is the only producer of abrasive materials in Ukraine, but in the international market, the company faces a lot of competition.

Examining the financial condition of the enterprise in 2023, there was a decrease in profit by 91.24 %, but in 2020–2022, the financial stability zone and the financial stability margin of the enterprise increased, which indicates an improvement in the enterprise's performance.

Analysing the SWOT and PEST analyses, we identified the weaknesses of the enterprise and the threats it faces, including competition from foreign enterprises, the instability of the political and economic situation. However, there are opportunities for improvement and adaptation, such as the introduction of new technologies and product quality improvement, which can help the company remain competitive in the market.

The article proposes measures to increase the competitiveness of Zaporizhabrasive LLC and determines that it is difficult to ensure the competitiveness of an enterprise without the use of innovative technologies, since they allow responding to changes in the industry and consumer requirements quickly and efficiently, as well as reducing the costs of the enterprise.

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FORECASTING THE EFFICIENCY OF LABOR RESOURCES OF UKRAINE

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Key words:
forecasting, dynamics, labor resources, efficiency, labor productivity, employment

The article is devoted to the study of issues related to forecasting the efficiency of labor resources in Ukraine. The relevance of the work is explained by the constant change in the conditions of the national and global economic situation, which determines the need to adapt human resource management strategies to ensure the country's sustainability and competitiveness. It is especially important to consider the impact of factors such as technological changes, demographic and educational transformations, which can significantly affect the quality and quantity of labor resources. The article analyzes the dynamics of macroeconomic indicators of labor resources use over the past eleven years, in particular: gross domestic product, labor productivity, unemployment, employment, and wages. It is established that during this period the country faced various challenges that significantly affected the dynamics of labor resources. In particular, the analysis shows that in 2014 and 2015 there was a significant decline in gross domestic product and labor productivity. This was due to economic difficulties caused by political instability and military operations in the east of the country. From 2016 to 2021, the consequences of the pandemic were gradually overcome, and economic stability was restored. To analyze the dynamics and forecast labor productivity as an indicator of the efficiency of the country's labor resources, the authors have built several trend models. It has been established that the models are of high quality and consider the main regularities.

ПРОГНОЗУВАННЯ ЕФЕКТИВНОСТІ ТРУДОВИХ РЕСУРСІВ УКРАЇНИ

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Ключові слова:
прогнозування, динаміка, трудові ресурси, ефективність, продуктивність праці, зайнятість

Стаття присвячена дослідженню питань щодо прогнозування ефективності трудових ресурсів України. Актуальність роботи пояснюється постійною зміною умов національної та світової економічної ситуації, що визначає необхідність адаптації стратегій управління трудовими ресурсами для забезпечення стійкості та конкурентоспроможності країни. Особливо важливим є врахування впливу факторів, таких як технологічні зміни, демографічні та освітні трансформації, які можуть значно вплинути на якість та кількість трудових ресурсів. Проаналізовано динаміку макроекономічних показників використання трудових ресурсів за останні одинадцять років, зокрема: валовий внутрішній продукт, продуктивність праці, рівень безробіття, зайнятість та заробітна плата. Встановлено, що за цей період країна стикалася з різноманітними викликами, які суттєво вплинули на динаміку трудових ресурсів. Зокрема, аналіз свідчить про те, що в 2014 та 2015 роках спостерігалося значне скорочення валового внутрішнього продукту та продуктивності праці. Це обумовлено економічними труднощами, які виникли внаслідок політичної нестабільності та військовими діями на сході країни. З 2016 року по 2021 рік відбувалося поступове подолання наслідків пандемії та відновлення економічної стабільності. З метою аналізу динаміки та прогнозування

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продуктивності праці, як показника ефективності трудових ресурсів країни, авторами побудовано ряд трендових моделей. Встановлено, що побудовані моделі є якісними і враховують основні закономірності та тенденції в динаміці продуктивності праці. На основі трендових моделей розроблено прогноз на наступний період та визначимо помилку та точність прогнозів. Помилки прогнозів менші або дорівнюють 10 %, що свідчить про високу точність побудованих прогнозів.

Statement of the problem

Human resources are one of the most valuable assets of any country. Their efficient and rational use not only enhances the competitiveness of the national economy, but also ensures social stability, decent living standards and equal opportunities for all citizens. The problem of efficient use of labor resources is an important challenge for the development of any country. Even though labor resources are one of the most valuable assets, their effective use requires attention to various aspects, such as labor market development, labor productivity, and others. This problem becomes particularly relevant in the context of ensuring not only economic growth but also social stability and high living standards.

Analysis of recent studies and publications

The study of issues related to the assessment and forecasting of the efficiency of labor resources use is covered in many scientific works of both domestic and foreign scientists. N. Mazur [1] systematized the basic principles and approaches to assessing labor potential and diagnosed the effectiveness of its use. However, the system of criterion indicators of efficiency of labor potential use is not sufficiently substantiated.

S.P. Koval and D.V. Bida in their work [2] investigated the key aspects of the problem of efficient use of labor resources in Ukraine. The authors analyzed the concepts related to labor resources, such as working capacity, economic activity, and employment rate, and put forward proposals for optimizing their use in the labor market.

I.O. Irtishcheva and I.I. Dubinska in their work [3] considered regional labor markets and analyzed changes in the structure of employment. They formed a system of factors that characterize the development of labor resources and built a factor model. However, they did not consider the issue of assessing the efficiency of labor resources use.

Paper [4] considers a methodological approach to assessing the efficiency of the enterprise's labor resources. However, this approach does not consider the impact of macroeconomic indicators that also affect the efficiency of labor resources. Whereas O.O. Mnyshenko [5] studied the factors that affect the economic result due to increased labor productivity. She found that the economic result of productivity growth is directly correlated with two factors: a change in the volume of products manufactured or work performed and a change in the number of employees. Study [6] assessed the state of labor resources in Ukraine, analyzed labor market trends, and estimated the impact on the efficiency of economic activity of the state and society as a whole. Scientists A.V. Zhavoronok and N.I. Kolesnikova [7] studied labor resources and evaluated their effective use. The authors also defined the theoretical foundations of the concept of labor resources and analyzed the dynamics of their composition. However, issues related to the estimation of labor resources efficiency require a more thorough study.

Therefore, because of the analysis of literature sources, it was found that many problematic issues related to the assessment of the efficiency of labor resources remain unresolved.

Objectives of the article

The article is aimed at analyzing the dynamics of a few macroeconomic indicators of labor resources use in Ukraine. Also, to forecast labor productivity as an indicator resulting from the economic activity of labor resources.

The main material of the research

Labor resources not only ensure the production of goods and services, but also affect the dynamics of the country's socio-economic development, determining the growth potential. A country's availability of the necessary labor resources determines its ability to innovate, compete and develop sustainably, as a high-quality and skilled workforce can contribute to productivity and the development of new technologies, which is the basis for the prosperity of any national economy. The efficiency of the labor force depends on several key factors, such as the education and skills of the workforce, access to infrastructure, technological level, labor market conditions, regulatory policy, and social conditions. If these aspects are optimally considered and supported in a country, labor resources can become a powerful source of economic growth and development.

In this study, labor resources are defined as the economically active, able-bodied part of the population that has the physical and intellectual abilities to participate in labor activity and produce material goods and services. Various macroeconomic indicators are used to assess the efficiency of the country's labor force, including gross domestic product (GDP), labor productivity, unemployment, employment, wages, etc. Analyzing the dynamics of these indicators allows us to determine how efficiently a country uses its labor resources and helps to improve its employment and labor force development policies. These indicators, according to the State Statistics Service of Ukraine [8] for the period from 2012 to 2022, are presented in Table 1.

An analysis of GDP dynamics over the period under study suggests that over the past eleven years, GDP has declined by 8.7 %. In addition, in 2014 and 2015, there was a significant decline in GDP by 28.1 % and 31.3 %,

Table 1 – Dynamics of macroeconomic indicators of labor resources utilization in Ukraine, 2012–2022

Year	GDP, mln. U.S. DOLLARS	Employed population, million people	Unemployed population, million people	Average monthly salary, UAH.	Labor productivity
2012	175781	19,26	1,59	3041,00	9126,08
2013	183310	19,31	1,51	3282,00	9490,94
2014	131805	18,07	1,85	3480,00	7292,80
2015	90615	16,44	1,65	4195,00	5510,79
2016	93270	16,28	1,68	5183,00	5730,21
2017	112154	16,16	1,70	7104,00	6941,77
2018	130832	16,36	1,58	8865,00	7996,63
2019	153781	16,58	1,49	10496,82	9276,04
2020	155582	15,92	1,67	11591,00	9775,62
2021	199770	15,61	1,57	12153,38	12797,57
2022	160500	15,39	1,55	13312,10	10430,75

Source: compiled by the authors based on [8]

respectively. This was due to economic difficulties caused by a combination of factors, including political instability, the annexation of Crimea and military operations in the east of the country. This, in turn, has led to a significant reduction in investment, lower exports and increased overall business risk. As a result of the hostilities, the country experienced a significant decline in production, particularly in the metallurgical and mining industries. This led to a 22.3 % increase in unemployment in 2014, which affected consumer activity and the overall level of economic activity in the country. From 2016 to 2021, there was a gradual increase in GDP, with the growth rate of 1.2 % in 2020 alone, which was caused by the significant impact of the COVID-19 pandemic on the economy. In 2020, the domestic economy faced significant challenges related to quarantine measures, lockdowns, and restrictions, which led to a decline in economic activity, disruption of global supply chains, and a decrease in the production of goods and services in various sectors of economic activity, which affected GDP growth in many countries, including Ukraine. Since 2021, there has been a gradual economic recovery, with GDP growing by 28.4 % compared to 2020, which is 13.6 % more than in 2012, indicating a gradual overcoming of the pandemic and restoration of economic stability. The outbreak of active hostilities on the territory of our country had a negative impact on the economy and, as a result, GDP decreased by 19.7 % in 2022.

The employed population decreased by an average of 2.2 % annually during the analyzed period. In 2022, the employed population decreased by 1.4 % compared to 2021. The growth of the employed can be traced only in 2018 and 2019 at the level of 1.3 %. The decline in the employed population in Ukraine is due to various factors, such as economic difficulties, structural changes in the employment sector, and the impact of external factors.

The dynamics of the unemployed population is fluctuating. The maximum number of unemployed people in the study period was observed in 2014 and 2020. This is primarily due to the hostilities in the east of the country and the COVID-19 pandemic, which resulted in the closure of businesses, a decrease in the number of jobs in the conflict zone, and general economic instability.

The average monthly salary in Ukraine increased 4.3 times during the analyzed period and grew by an average of 14.37 % annually. However, this growth does not indicate an improvement in the living standards of the population due to significant inflationary pressures and rising prices for consumer goods and services. Although the average monthly salary is increasing, inflation and economic factors affect its purchasing power, reducing the real income of the population.

The above-analyzed indicators of labor resources efficiency characterize them from different angles, in particular: employment and unemployment allow assessing the movement of labor resources in the economic system; average wages and incomes determine the consumption capabilities of labor resources. However, according to the authors, these indicators indirectly affect the efficiency of labor resources. In general terms, efficiency is the ratio of the result of activity to the costs. The result of the economic activity of labor resources is labor productivity, so the efficiency of the country's labor resources can be assessed as the achievement of the best result (output, i.e. GDP) using the least labor costs. Given this statement, let us analyze the dynamics of labor productivity in Ukraine in more detail.

The time series of labor productivity and its growth rate for the period from 2012 to 2022 in Ukraine is shown in Fig 1. The dynamics of labor productivity is fluctuating, which is a consequence of such economic factors as: structural changes in the country's economic system (e.g., changes in the structure of industry, the impact of technological innovations, external economic conditions, and other factors.

As can be seen from Fig. 1, labor productivity in 2022 decreased by 18.5 % compared to 2021. In general, over the study period, productivity grew by an average of 3.1 % annually. Thus, in 2022, compared to 2012, the analyzed indicator increased by 1.14 times. The maximum growth in labor productivity occurred in 2017 and 2021 by 21.1 % and 30.9 %, respectively.

It is worth noting that in 2014, the negative trends in macroeconomic indicators are also due to the fact that the State Statistics Service of Ukraine provides statistical information excluding the temporarily occupied territory

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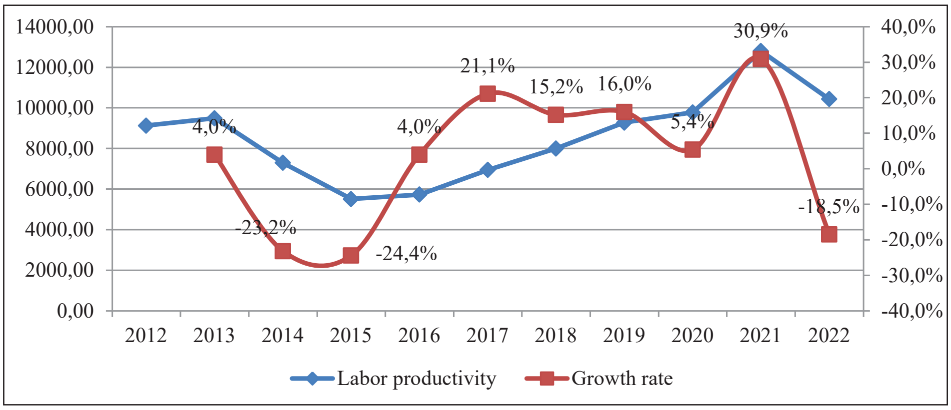

Figure 1 – Labor productivity dynamics and growth rates in Ukraine, 2012–2022

Source: built by the authors based on [8]

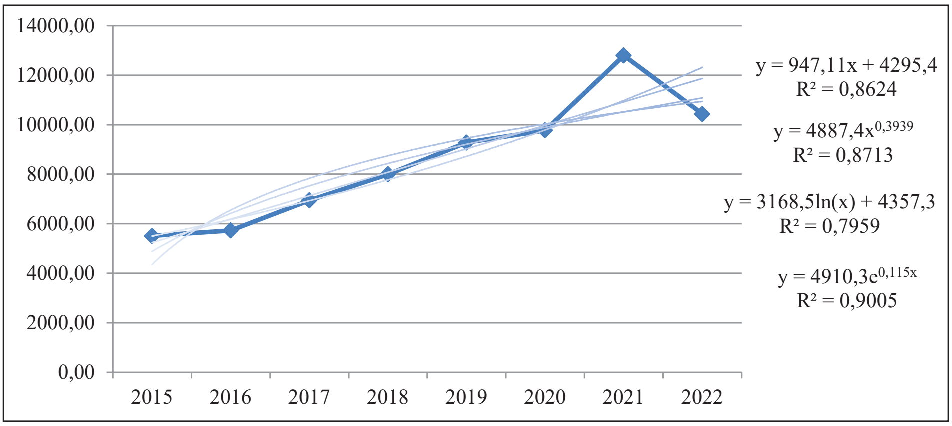

Figure 2 – Trend models of labor productivity dynamics in Ukraine

Source: calculated by the authors

of the Autonomous Republic of Crimea, the city of Sevastopol and parts of Donetsk and Luhansk regions, so the authors chose the time interval from 2015 to 2022 to analyze the dynamics of labor productivity.

In order to analyze the dynamics and forecast labor productivity in Ukraine, the authors have built trend models, namely linear, power, logarithmic, and exponential (Fig. 2). All the models are of high quality and describe more than 79 % of the original data. Therefore, it can be stated that they effectively take into account the main patterns and trends in the dynamics of labor productivity.

The overall adequacy of these models to the data, which is more than 79 %, confirms their ability to accurately describe and predict the dynamics of labor productivity. This level of explained variability indicates that the built models are well adapted to the peculiarities of the source data and reflect the main regularities of the economic process. Therefore, on the basis of the built models, we will develop a forecast for the next period and determine the error and accuracy of the forecast, the results are shown in Table 2.

Analyzing the results (Table 2), we can conclude that all models are of high quality. The values of the absolute forecast errors are less than or equal to 10 %, which indicates the high accuracy of the forecasts. The absolute forecast error of the exponential model is minimal and amounts to 4.84 %, so this model is chosen to develop the forecast for the next period. Thus, in 2023, labor

Table 2 – Results of labor productivity forecasting

Type of model	**Coefficient of determination**	**Forecast error (MAPE)**	**Labor productivity forecast for 2023**
$y = 947{,}11x + 4295{,}4$	86,2 %	5,34 %	11304,01
$y = 4887{,}4x^{0{,}3939}$	87,1 %	7,39 %	10751,48
$y = 3168{,}5\ln(x) + 4357{,}3$	79,6 %	10,22 %	10698,99
$y = 4910{,}3e^{0{,}115x}$	90,0	4,84	11499,86

Source: calculated by the authors

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productivity is projected to grow by 10 % compared to 2022. This growth is possible due to the improvement of technological processes, innovative solutions to production and prioritization of the most efficient labor methods.

Conclusions

Thus, the analysis of the dynamics of macroeconomic indicators of labor force utilization in Ukraine for the period from 2012 to 2022 led to the conclusion that in 2014, 2020 and 2022 there were negative trends in the country's economic development. Since 2021, there has been a gradual economic recovery, with GDP growing by 28.4 % compared to 2020, which is 13.6 % more than in 2012.

Labor productivity was chosen as an indicator of the efficiency of labor resources use. The constructed trend models of labor productivity dynamics (linear, power, logarithmic, and exponential) allowed us to determine the forecast of this indicator for 2023, and the absolute error of the forecast was determined to be of high quality.

Hence, the prospect of further research is to determine the impact of changes in labor turnover on labor productivity. In order to draw economically reasonable conclusions about the efficiency of labor resources utilization in Ukraine, it is necessary to compare labor productivity with the same indicator of economically developed countries. Therefore, the next task of our study will be to assess and analyze the efficiency of labor resources in Germany as a country with a high level of economic development. This will allow us to determine the prospects for increasing the level of competitiveness and productivity of Ukraine's labor potential. This will allow us to identify the key factors that contribute to its successful use of labor potential and to take these aspects into account in the context of our further recommendations for Ukraine.

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

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SOFTWARE AS A COMPONENT OF ACCOUNTING AND ANALYTICAL SUPPORT OF ELECTRONIC COMMERCE IN COMMERCIAL ENTERPRISES OF UKRAINE

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Key words:
forecasting, dynamics, labor resources, efficiency, labor productivity, employment

The article defines directions for the development and improvement of the efficiency of electronic trade in Ukraine due to the construction of a high-quality and orderly system of accounting and analytical support, which will allow all users to receive timely and truthful information about the activities of the business entity. According to the results of the conducted theoretical research, it was determined that the quality and functionality of the company's software significantly affects the timeliness and truthfulness of the received accounting and analytical information about the economic activity of the enterprise. Therefore, a study of the current state of the domestic market of software for automating accounting processes at enterprises of different forms of ownership and areas of activity was conducted. It was determined that there is no single comprehensive software product to take into account the specifics of the activities of enterprises from various branches of the country's economy. The conducted analysis proved that a large amount of the Ukrainian software market is represented by developments for the automation of accounting at commercial enterprises. Taking into account the peculiarities of e-commerce, attention was focused on the relationship between Internet trade and the company's accounting system. Since it was determined that from the point of view of accounting, the software of the online store should be combined with the computer accounting system of the enterprise for the automatic formation of correspondence of accounts during the implementation of economic activities via the Internet. Among the most famous software products: "Debit Plus", "M.E.Doc", "BAS Accounting PROF", "Dilovod», "MASTER: Accounting", "BOOKKEEPER", "Accounting SaaS" and "SMARTFIN.UA". The main functional capabilities, features and scope of application, advantages and disadvantages of the above-mentioned software products for automation of e-commerce accounting at trading enterprises of Ukraine are defined and systematized.

ПРОГРАМНЕ ЗАБЕЗПЕЧЕННЯ ЯК СКЛАДОВА ОБЛІКОВО-АНАЛІТИЧНОГО ЗАБЕЗПЕЧЕННЯ ЕЛЕКТРОННОЇ КОМЕРЦІЇ НА ТОРГОВЕЛЬНИХ ПІДПРИЄМСТВАХ УКРАЇНИ

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Ключові слова:
прогнозування, динаміка, трудові ресурси, ефективність, продуктивність праці, зайнятість

У статті визначено напрями розвитку та підвищення ефективності діяльності електронної торгівлі в Україні за рахунок побудови якісної та впорядкованої системи обліково-аналітичного забезпечення, що дозволить усім користувачам отримувати своєчасну та правдиву інформацію про діяльність суб'єкту господарювання. За результатами проведеного теоретичного дослідження було визначено, що на своєчасність та правдивість отриманої обліково-аналітичної інформації про господарську діяльність підприємства значною мірою впливає якість та функціональність програмного забезпечення компанії. Тому було проведено дослідження сучасного стану вітчизняного ринку програмного забезпечення для автоматизації облікових процесів на підприємствах, різних за формою власності та напрямам діяльності. Визначено, що не існує єдиного комплексного програмного продукту для врахування специфіки діяльності підприємств з різних галузей економіки країни. Проведений аналіз довів, що велика кількість українського ринку програмного забезпечення представлена розробками для автоматизації бухгалтерського обліку на торгових підприємствах. З урахуванням особливостей здійснення електронної комерції було акцентовано увагу на взаємозв'язок Інтернет торгівлі та системи бухгалтерського обліку підприємства. Оскільки було визначено, що з точки зору ведення бухгалтерського обліку програмне забезпечення Інтернет-магазину має поєднуватися з комп'ютерною системою бухгалтерського обліку підприємства для автоматичного формування кореспонденції рахунків під час здійснення господарської діяльності через мережу Інтернет. Серед найбільш відомих програмних продуктів було виділено: «Дебет Плюс», «M.E.Doc», «BAS Бухгалтерія ПРОФ», «Dilovod», «MASTER: Бухгалтерія», «BOOKKEEPER», «Облік SaaS» та «SMARTFIN.UA». Визначено та систематизовано головні функціональні можливості, особливості та сфера застосування, переваги та недоліки вище зазначених програмних продуктів з автоматизації обліку електронної комерції на торговельних підприємствах України.

Statement of the problem

The current stage of the development of e-commerce in Ukraine is characterized by a number of problematic aspects and shortcomings, which reduce the pace of development of the specified branch of trade. In our opinion, it is possible to significantly develop and increase the efficiency of electronic trade due to the construction of a high-quality and orderly system of accounting and analytical support, which will allow all users to receive timely and truthful information about the company's activities.

Analysis of recent research and publications

The accounting and analytical support of e-commerce in Ukraine was studied by such scientists as G.V. Matskiv, N.E. Tsitska, and Z.P. Myronchuk. The scientific works of such domestic scientists as N.I. Gilorme, T.V. Dotsenko are also equally significant, who paid special attention to the accounting and analytical provision of the electronic form of trade of economic entities in Ukraine. And Podakov Y.S., Prystemskyi O.S. In their scientific research, they highlight the current problems of using software for accounting and reporting.

Formulation of the goals of the article

To investigate the peculiarities of providing electronic trade subjects with accounting and analytical information, to determine the role and capabilities of domestic software in the specified process.

The main material of the research

The first step in building an electronic business is to create a virtual platform for the sale of goods, works or services. From the point of view of accounting, it is advisable to consider the Internet store as an intangible asset of the enterprise, and the costs associated with its development as capital costs.

The virtual platform for sales is the result of creative activity, and, therefore, it is considered the object of copyright of the enterprise. Yes, in accounting, all expenses related to the development of an Internet store should be reflected on subaccount 154 "Purchase (creation) of intangible assets", but at the time of putting the site into operation, it is advisable to write them off on subaccount 125 "Copyright and related rights". You should also not forget about the expenses that the company will incur during the operation of the site: the fee for the domain; fee for renting disk space and server from the provider; payment for the use of other trading platforms/marketplaces and other related costs. The above expenses should be recorded on account 93 "Sales expenses" [1].

Since a significant number of business entities sell their goods, works (services) both through stationary and virtual platforms for sale, there is a need to separate income and expenses related to the type of trade, which will lead to an increase in the accuracy and meaningfulness of accounting and analytical information about the company's activities.

No less significant are the results of the research by Gilorme N.I. and Dotsenko T.V., which emphasize the fact that, from the point of view of accounting, the software of an online store must be combined with the computer accounting system of the enterprise in such a way that correspondence of invoices is formed automatically during the payment of the order or the shipment of the goods to the buyer. In the specified cases, the consumer forms the order forms independently with the help of a computer, and the software, in turn, reflects the sale of goods and the write-off of their cost price. It is worth noting that the functions of the accountant are assigned to the buyer, who interacts with the online store and, indirectly, with the company's computer accounting system[2].

Domestic scientists E.S. Podakov and O.S. Prystemskiy define the automation of accounting as one of the urgent tasks of today, because the timely receipt of information about the financial state of the enterprise largely determines the success of its activities. In addition, according to the norms of the current legislation, taxpayers must report to the fiscal authorities in electronic form [3].

In our opinion, the works of such Ukrainian scientists as N.M. Brazily and Y.M. Krot are also of great importance. These scientists focus on the fact that the introduction of information systems and the technological work of accounting makes it possible to save time and effort due to the automation of routine operations, to find arithmetic errors in accounting and reporting, as well as to assess the current financial situation of the enterprise and its prospects. In addition to the advantages of automated accounting outlined above, there is another good reason for the need to use software at enterprises – the integration of the world economy. This continuous process makes accounting automation a requirement of today and a basis for a successful transition to International Financial Reporting Standards. Without it, entering the international market and attracting foreign investors to cooperation is impossible. If the subject of economic activity intends to carry out international activities, then the question of the need to organize the business in accordance with international standards is acute. This problem can be solved only through the introduction of automation of the accounting system [4].

Thus, given the relevance of the research topic, modern software products for keeping and automating accounting at commercial enterprises require a special and more detailed study.

During the research, we concluded that a large amount of the Ukrainian software market is represented by developments for the automation of accounting at trading enterprises. Among the most famous, we highlight the following: "Debit Plus", "M.E.Doc", "BAS Accounting PROF", "Dilovod", "MASTER: Accounting", "BOOKKEEPER", "Accounting SaaS" and "SMARTFIN. UA" (Fig. 1).

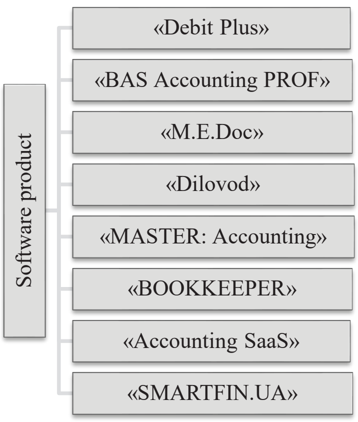

Figure 1 – Ukrainian market of software for automation of accounting at trading enterprises

The "Debit Plus" software complex was developed by Ukrainian specialists to automate accounting, operational and financial accounting at Ukrainian enterprises, institutions and organizations. In the specified software complex, it is possible to work: budgetary institutions (local self-government bodies, administrations and departments under them, including education and culture departments), communal enterprises (health care institutions and communal non-commercial enterprises), agricultural enterprises, manufacturing enterprises and trade [5].

The Ukrainian accounting program "M.E.Doc" facilitates document flow with counterparties and the procedure for submitting reports to regulatory bodies. The specified software is used by entrepreneurs of different types of economic activity and taxation system, but at the same time it remains individual due to its modular construction [6].

"BAS Accounting PROF" is an accounting program of Ukrainian production for the automation of accounting and tax accounting, including the preparation of regulated reporting in commercial organizations that carry out such activities as wholesale and retail trade, commission trade, provision of services, production, etc. Among the advantages of the specified accounting system, we can single out [7]:

– reflection of legislative changes;
– automation of routine processes in accounting;
– convenient interface;
– the possibility of keeping records of economic activity of several organizations in one or more databases;
– support for various taxation systems.

Dilovod" is a Ukrainian online service for management, accounting and reporting. Using the aforementioned service, it is possible to perform [8]:

– cash accounting (automatic download of bank statements in real time);
– sales accounting (recording of product movements at all stages of sales, payment control and order fulfillment);
– warehouse accounting (control of receipts, movement inside the warehouse, removal of goods and payment for them, registration of defect write-offs or posting of surpluses, taking inventory at any time);
– electronic reporting.

The "MASTER: Accounting" software product is designed for accounting and tax accounting at small and medium-sized businesses and utilities. It was created for the Ukrainian market and complies with the current legislation of Ukraine. Available in cloud and stationary solutions. The specified software product helps in automating such operations as [9]:

– Bank and cash register – operations with cash and their equivalents, integration with the "Client-Bank" system.
– Sales – accounting of payments with customers.
– Purchases – accounting of payments with suppliers.
– Inventory – accounting, receipt and write-off of MAs and small and medium-sized enterprises.
– Production – accounting of actual costs in the analyst section, automatic allocation of transport and procurement costs and total expenditures costs.
– FA and MA – accounting of income, depreciation, disposal of FA; implementation of revaluation and indexation; accounting for repairs and modernization of health facilities.
– Tax accounting – keeping tax accounting in accordance with the Tax Code of Ukraine.
– Operations – closing accounts at the end of the year and quarter.

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– Reports – all standard analytical forms of accounting reporting; automatic formation of financial statements.

Accounting system “SaaS Accounting” implements the ability to keep accounting and management records and display economic activity at Ukrainian enterprises in accordance with accepted accounting standards and in accordance with current legislation. A configuration for small and medium-sized commercial enterprises has been created for accounting on the territory of our state. The standard configuration contains accounting charts familiar to most accountants, which allows you to register any business transactions, prepare reports on the company's operational activities, financial reports, as well as reports regulated by state bodies with the possibility of exporting them to the electronic document flow and reporting system [10].

On the basis of the conducted research, we can conclude that the Ukrainian software market has a lot of offers for automating accounting at enterprises with different forms of ownership and areas of activity.

It should be noted that there is no single integrated software product to take into account the specifics of the activities of enterprises from various branches of the country's economy, and the implementation of software in the company's activities is a very complex and complex process.

Among the main stages of the implementation of the automation of e-commerce accounting in the field of trade, we highlight:

1. Preparatory stage.
2. Technical stage.
3. Organizational stage.
4. Testing.
5. Commissioning.

The preparatory stage consists of determining the areas of economic activity that are subject to accounting automation; assessment of technical capabilities and state of computer equipment; document flow system analysis; determining the level of ownership of existing software by employees and determining opportunities for further training; coordination of details with the developer company.

The components of the technical stage are the determination of the task and the terms of the work; outline of basic software requirements and a list of possible applications to the standard configuration; development of a plan and training methods for the company's personnel; determination of the final cost of software implementation in the business process.

The organizational stage requires the fulfillment of all previously defined tasks and technological features of the company. Also, at this stage, the developed software is already installed, configured and improved.

The final stages of the implementation of automation of the accounting system are testing, that is, checking the functionality of the software product and direct commissioning.

Therefore, software as a component of accounting and analytical support for e-commerce at trading enterprises of Ukraine is a necessity for all subjects of economic activity. But it is worth understanding that the automation of accounting processes at the enterprise is a very complex and complex process that requires careful preparation and is impossible without a detailed analysis of the enterprise's activities in all its directions.

Conclusions

The rational and individual choice of accounting automation software depends on: efficiency of accounting; quality and speed of primary documentation processing; increasing the professionalism and efficiency of the accounting service; ease and accuracy of displaying economic transactions; excellence in the formation and presentation of financial statements. The combination of these factors, in our opinion, makes it possible to obtain high-quality and timely analytical information about the financial and economic activity of the enterprise and, as a result, contribute to the improvement of the efficiency of management decision-making, profitability and profit.

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FORMATION OF ACCOUNTING AND ANALYTICAL SUPPORT FOR MANUFACTURING STOCK MANAGEMENT AT THE ENTERPRISE

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Key words:
accounting and analytical support, production stocks, stock management; accounting of production stocks, material yield, material capacity, turnover

The article examines current issues regarding the formation of accounting and analytical support in the management of industrial enterprises, in particular, in the management of production stocks. Negative factors that significantly reduce the effectiveness of management activities are given. The low degree of effectiveness of the decisions made regarding the need for the formation of stocks and their quantity can lead to the loss of profit by the enterprise due to downtime due to insufficient production stocks or to the freezing of funds due to their accumulation (inefficient use of current assets). Provided that the amount of inventory meets the needs of production and operational activity, the efficiency of inventory management increases significantly. The optimal amount of stocks is determined by the types of activities of the enterprise, the size of production. In the conditions of the modern economy, enterprises should develop a number of their own ways that will contribute to increasing efficiency in the management of production stocks. Improving the accounting and management of production stocks provides an opportunity to significantly shorten production and operational cycles, reduce costs related to stock storage, etc. In this context, the problematic aspects of the organization of accounting for production stocks are considered, the elements of accounting policy that have a significant impact on the financial results of activity are clarified, and the directions for improving the organization of accounting to ensure the performance of the analytical and control function of management are substantiated. Since industrial enterprises use a significant number of types of stocks, it is proposed to improve the accounting of transport and procurement costs, and it is also proposed to deepen the analytical accounting, which will allow obtaining detailed information in terms of materials and entities that deliver stocks to the enterprise. On the basis of the theoretical generalization of scientific approaches, the areas of analysis of production stocks are substantiated and the methodological features of each area are determined. Their application in practice will increase the informativeness of the results of the analysis of production stocks.

ПРОГРАМНЕ ЗАБЕЗПЕЧЕННЯ ЯК СКЛАДОВА ОБЛІКОВО-АНАЛІТИЧНОГО ЗАБЕЗПЕЧЕННЯ ЕЛЕКТРОННОЇ КОМЕРЦІЇ НА ТОРГОВЕЛЬНИХ ПІДПРИЄМСТВАХ УКРАЇНИ

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Ключові слова:
обліково-аналітичне забезпечення, виробничі запаси, управління запасами; облік виробничих запасів, матеріаловіддача, матеріаломісткість, оборотність

У статті досліджено актуальні питання щодо формування обліково-аналітичного забезпечення в управлінні промисловими підприємствами, зокрема, в управлінні виробничими запасами. Наведені негативні чинники, які суттєво знижують ефективність управлінської діяльності. Низький ступінь ефективності прийнятих рішень стосовно необхідності формування запасів та їх кількості може призвести до втрати підприємством прибутку внаслідок простою через недостатність виробничих запасів або до заморожування грошових коштів через їх накопичення (неефективне використання оборотних активів). За умови величини запасів, яка відповідає потребам виробництва та операційної діяльності, суттєво підвищується ефективність

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управління запасами. Оптимальна кількість запасів визначається видами діяльності підприємства, розмірами виробництва. В умовах сучасної економіки підприємства мають розробити низку власних шляхів, які сприятимуть підвищенню ефективності в управлінні виробничими запасами. Удосконалення обліку і управління виробничими запасами надає можливість значно скоротити виробничий та операційний цикли, зменшити витрати, пов'язані зі зберіганням запасів тощо. В цьому контексті розглянуто проблемні аспекти організації обліку виробничих запасів, з'ясовано елементи облікової політики що мають суттєвий вплив на фінансові результати діяльності та обґрунтовано напрями удосконалення організації обліку для забезпечення виконання аналітичної та контрольної функції управління. Оскільки промислові підприємства використовують значну кількість видів запасів, запропоновано удосконалення обліку транспортно-заготівельних витрат та запропоновано також поглибити аналітичний облік, що дозволить отримати детальну інформацію у розрізі матеріалів та суб'єктів, що здійснюють доставку запасів на підприємство. На основі теоретичного узагальнення наукових підходів обґрунтовано напрями аналізу виробничих запасів та визначено методичні особливості кожного напряму. Застосування їх на практиці підвищить інформативність результатів аналізу виробничих запасів.

Statement of the problem

Each industrial enterprise can function only under the condition of proper organization of the accounting process, including inventory accountings, which ensure the operational activity of the enterprise and the possibility of continuing production. The creation of production stocks is due to many reasons, the main of which is ensuring the economic security of the enterprise. The lack of such stocks in the required amount can lead to the loss of the company's sales markets and customers due to the instability of the production process and untimely sale of the manufactured products. Production stocks represent the main part of the cost of production of any enterprise that carries out production activities, and they are an important component of its assets. It is impossible to solve the problems associated with the effective management of production stocks if their availability, optimal quantity and efficiency of use are incompletely assessed, which is why there is a need for effective analysis methods. Thus, the research and implementation of the main areas of increasing the efficiency of the economic activity of domestic enterprises provide for the improvement of accounting and analytical support for the management of production stocks, which will make it possible to provide the management with the necessary information for making rational management decisions.

Analysis of recent studies and publications

Many scientists dealt with the problems of accounting and analytical provision of inventory management at enterprises of various industries. The problems and peculiarities of production inventory accounting were studied by L.V. Koval, Yu.V. Podmeshalska, T.V. Poleva, O.V. Tesak, and others. Areas of improvement of accounting methods, economic analysis and control of production stocks were studied by M.A. Bolyukh, V.Z. Burchevskyi, M.I. Horbatok, Y.O. Izmailov, S.V. Svirko and E.V. Mnykh etc. Such scientists as L.V. Babenko, V.G. Vasylieva, O.V. Konovalova, O.M. Polishchuk paid considerable attention to the issue of increasing the efficiency of accounting and analytical support for the management of production stocks. issues regarding the improvement of organizational aspects of accounting and analysis of production stocks in accordance with the requests of the management system remain insufficiently worked out. Increasing the efficiency of production inventory management is an urgent problem for domestic enterprises, which determines the relevance of this topic.

Objectives of the article

The purpose of the article is to study the organizational and methodological aspects of accounting and analytical support for the management of production stocks at the enterprise, to substantiate the approaches to its formation, to generalize the existing problems and to determine the areas of improvement.

The main material of the research

Accounting and analytical support is a complex mechanism that combines the processes of accounting and economic analysis with the aim of forming an objective information base in accordance with the needs of users and the specifics of production development. That is, accounting and analytical support is formed on the basis of the interaction of subsystems of accounting and economic analysis.

The formation of accounting and analytical support for the management of production stocks at the enterprise involves:

– improvement of the existing organization of the accounting system in such a way that it ensures the performance of analytical and control functions of the enterprise management system;

– development of stages and corresponding methods of analysis of the state, movement, quality and efficiency of the use of stocks, taking into account the specifics of the enterprise's activities, the peculiarities of its production and organizational structure.

Accounting of production stocks at the enterprise is a complex system using interrelated methods and principles. Each component part of the accounting process of production stocks plays its important function, and their combination makes it possible to obtain reliable accounting information about the movement of production stocks at the enterprise [5]. At the same time, it is production stocks that play a leading role in shaping the conditions for ensuring a smooth production process. Therefore, it is important to take into account all the main aspects of the organization of accounting for production stocks, because the issue of forming an accounting policy at the enterprise, including stocks, is exclusively within the competence of the business entity itself.

According to the Methodological recommendations on the accounting policy of the enterprise, the main elements of the accounting policy of the assessment and effectiveness of production stocks at the enterprise are the issue of choice [8]:

– stock accounting units (name or homogeneous group);
– the optimal method of estimating stock disposal;
– variant of accounting for production stocks in the accounting department;
– the method of accounting for transport and procurement costs.

The main performance indicators depend on the choice of the listed elements of the accounting policy in terms of stocks, in particular the cost of production, profit and indicators of the financial state of the enterprise.

As for inventory valuation, in accordance with the requirements of NP(S) 9 "Inventories", when inventory is disposed of, regardless of sale or transfer to production, their book value is estimated using one of the following methods: FIFO, weighted average cost price; regulatory costs; sales prices; the method of identified unit cost of production [7]. After analyzing each of the methods, the following features can be distinguished:

– the method of estimating the identified cost of a corresponding unit of stocks is most expedient to use for small amounts of stocks, because there is an assessment for each unit of stocks that are discarded and which are irreplaceable;
– the weighted average cost method is the most expedient to use for enterprises that use a large amount of stocks, because the cost of stocks is estimated not by each type, but by the total cost;
– a feature of the FIFO method is that the stocks that were the first to start production or arrived at the enterprise are evaluated first.

However, it must be taken into account that the choice of methods for assessing the disposal of stocks has a significant impact on the analytical indicators of financial reporting. Thus, the FIFO method overestimates financial results, because when it is used, the cost price is underestimated due to the write-off of stocks at lower "first" prices. From the point of view of calculating solvency indicators, the FIFO method is the best option for estimating inventory disposal, but it usually leads to an increase in income tax. And the weighted average cost method leads to a decrease in profit and an increase in the cost of stocks compared to the FIFO method [9].

Therefore, the management and accounting department of each enterprise independently decide which method to use during the evaluation of production stocks, because the strategy and sphere of activity of the enterprise must also be taken into account. This will make it possible to organize the process of organizing and keeping accounting more qualitatively and efficiently in accordance with the requests of the management system.

The next individual decision is the selection of an accounting option for production stocks in the accounting department of the enterprise: graded – each type of production stocks is recorded both in kind and in monetary terms, and for this, an analytical accounting card is used; batch – grouping of stocks in a batch is carried out according to nomenclature costs, and information is compiled in monetary and in-kind measures; balance – for periodic reconciliation with the warehouse, accounting employees need to compile warehouse accounting cards.

A separate problematic issue for consideration is the method of accounting for transport and procurement costs. Different opinions on this issue are highlighted in literary sources, but they all boil down to two options:

– direct inclusion of TKV in the initial cost of a unit of purchased stocks (for homogeneous stocks);
– by the average percentage (when summarizing the amount of transport and procurement costs on a separate sub-account with their further distribution).

We agree with N.I. Koval regarding the accounting of transport and procurement costs on account 29 "Transport and procurement costs" [3]. The proposed account will reflect: costs of transportation and loading of materials into vehicles; costs of storage of production stocks; costs for maintaining procurement and storage equipment; fees paid to intermediary organizations through which production stocks were purchased; packaging costs and others [3]. Along with this, it is necessary to decide on analytics. It is appropriate for account 29 "Transport and procurement costs" to open analytical accounts in the section of materials and entities that deliver stocks: 291 "Transport and procurement costs of basic materials"; 292 "Transport and procurement costs of auxiliary materials". With details: carried out by third-party enterprises; carried out by own forces.

There are also a number of provisions, the presence of which is mandatory when forming an accounting policy for the needs of the accounting organization in terms of stocks, namely: a working plan of accounts, which contains synthetic and analytical accounts, for the formation of an accounting system in order to display timely and complete information in accounting and reporting; forms of primary documents used to reflect the facts of economic activity, for which standard forms of documents are not provided for, as well as forms of documents for internal accounting reporting; rules of document circulation and accounting information processing technologies.

The purpose of the analysis of the company's production stocks is to ensure the effective implementation of the production program by minimizing material costs, reducing the volume of production stocks, reducing resource prices and improving their quality. Based on the goal, the main tasks of the analysis of the availability and use of production stocks of the enterprise are [1]:

– assessment of the reality of plans for material and technical supply, the degree of their implementation, the impact on the volume of production, its cost and other indicators of economic activity;
– assessment of the provision of the enterprise with certain types of production stocks;

– assessment of the level of intensity and efficiency of the use of material resources;

– determination of the nature of warehouse stocks, assessment of the movement and structure of consumption of material resources;

– systematization of the factors that led to the deviation of the actual indicators of the use of production stocks from the planned (forecasted);

– modeling of relationships between production volume and material intensity, material yield, other factor indicators;

– identification of intra-production reserves for saving production stocks and assessment of their impact on the volume of activity.

A significant place in the organization of analytical work belongs to the determination of the content and sequence of its individual stages, since the effectiveness of the analysis of economic activity largely depends on the correct organization. That is, to ensure the effectiveness of analytical work, it must be well thought out, planned and organized. Therefore, it is advisable to present the analytical process in the form of a certain sequence of works that are homogeneous in content, which will make it possible to systematize and optimize the methodology, reduce the complexity of analytical procedures and increase effectiveness.

It is worth noting that today the economic literature presents different approaches regarding the number and detailing of the areas of analysis of the production stocks of the enterprise, which indicates the ambiguity of the opinions of scientists. In particular, M.A. Bolyukh, V.Z. Burchevskyi, and M.I. Horbatok distinguish the following three stages of inventory analysis: analysis of the validity and effectiveness of the formation of a portfolio of contracts for the supply of material resources; analysis of effective use of material resources; analysis of the possibilities of mobilizing identified reserves to increase the efficiency of the use of material resources [2].

At the same time, E.V. Mnykh offers a slightly different model of economic analysis of the enterprise's supply of material resources and the efficiency of their use, based on the study of the goals and directions of the analysis of the use of materials, the assessment of internal and external relations of the analysis in management.

Thus, according to the author, the general model of economic analysis of the enterprise's provision of material resources and the efficiency of their use contains eight blocks: analysis of material flow; analysis of the material resources market; analysis of regulations for the regulation of the material resources market; analysis of the indicative plan; general analysis of the volume and structure of material resources; analysis of material consumption of products; analysis of material costs for production; analysis of production and financial results, which are achieved due to the rational use of material resources [4, c. 257]. The given list of areas of analysis of production stocks is characterized by excessive detail. The expediency of distinguishing the directions "Analysis of the material flow" and "Analysis of the indicative plan" is debatable.

Thus, based on the generalization of the considered approaches of scientists and in accordance with the defined tasks of the analysis, it is advisable to distinguish the following stages of the analysis of production stocks (Fig. 1):

– analysis of the enterprise's availability of production stocks;

– analysis of the volume and structure of production stocks of the enterprise;

– analysis and assessment of the efficiency of the use of production stocks;

– analysis of the influence of the efficiency of the use of stocks on the volume of production.

The study of the supply of the enterprise with stocks involves an assessment of the enterprise's general need for production stocks, an analysis of the supply of the need

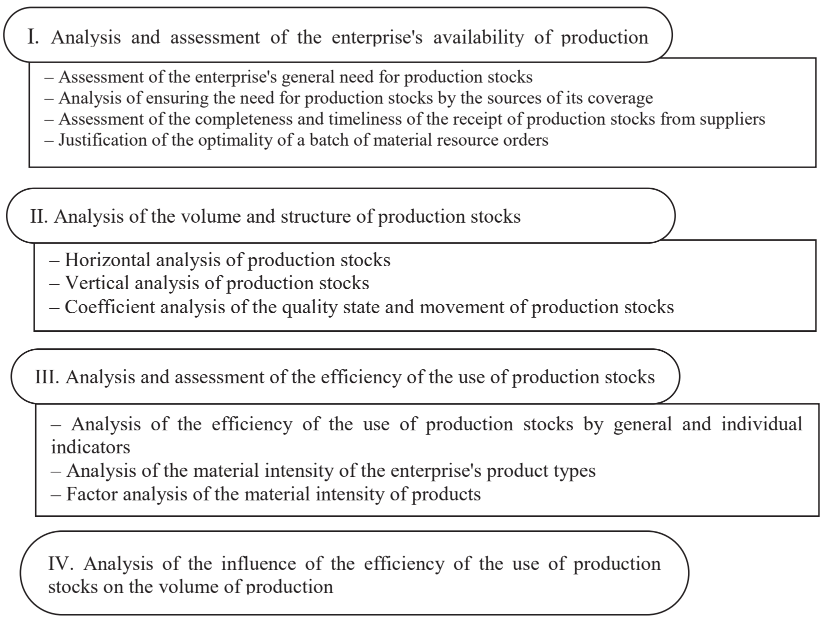

Figure 1 – Directions for the analysis of production stocks

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by the sources of its coverage. An important component is the analysis of compliance with the term of delivery of production stocks in accordance with the contract concluded with suppliers. Violation of delivery terms is the cause of non-fulfillment of the production plan and sale of finished products. The first direction of substantiating the optimality of a batch of material resource orders is completed.

When analyzing the volume and structure of production stocks, it is advisable to carry out a horizontal and vertical analysis of production stocks.

When analyzing the supply of production stocks, the quality of the stocks received from suppliers is controlled according to the standards, technical conditions for the relevant stocks. After all, in the case of non-compliance of products with quality standards, this can lead to a violation of material consumption norms, an increase in the cost price of finished products and a decrease in their quality.

The next direction is the analysis of the efficiency of the use of production stocks, which is characterized by the following indicators: profit per monetary unit of material costs; material capacity; material yield, coefficient of ratio of growth rates of production volume and production stocks, coefficient of material utilization [10].

Profit per monetary unit of material costs is the most generalizing indicator of the efficiency of the use of material resources. It is defined as the ratio of the amount of profit from the main activity and the amount of material costs. The material yield of production characterizes the output of products from each monetary unit of spent material resources and is calculated by dividing the cost of manufactured products by the amount of material costs. Material yield characterizes how many products are produced from each monetary unit of consumed material resources (raw materials, materials, fuel, energy).

The material intensity of products is a value indicator that reflects the level of material costs (without depreciation) for each monetary unit of commodity products and is calculated as the ratio of the sum of all material costs to the cost of manufactured products. In the process of analyzing the material intensity of products, a factor analysis of the specified indicator is carried out. The analysis of the material intensity is carried out in the following order: the general assessment of the material intensity of the products is determined; the change in material intensity is analyzed by individual cost elements; the effect of changing factors on the material intensity of products is determined [6]. The analysis of the material intensity of products makes it possible to find reserves for the reduction of material costs for the production of products and helps to reduce their cost price.

Conclusions

The formation of accounting and analytical support for the management of production stocks at the enterprise involves the improvement of the organization of their accounting, taking into account that the elements of the accounting policy in terms of stocks can be grouped: those that do not influence the financial results and analytical reporting indicators – this is the definition of the unit of analytical accounting of stocks; and those that have a probable impact on the analytical indicators of reporting and financial results are the methods of assessing the disposal of stocks and the procedure for accounting and distributing transport and procurement costs. Therefore, when forming an administrative document on the accounting policy, it is important to evaluate the advantages and disadvantages of each of the considered elements according to the criterion impact on financial reporting indicators. After all, the accuracy of profit determination and the level of financial condition depend on the organization and accounting of production stocks.

It is worth noting that the use of a systematic method of analysis of production stocks will allow to transparently and reliably display and control the intended use and movement of stocks, to identify potential opportunities for increasing the efficiency of their use. In turn, this will allow to identify reserves for reducing material costs and reducing the cost of production and, accordingly, increasing competitiveness and the overall efficiency of the enterprise's functioning.

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

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CURRENT STATE AND PROSPECTS OF COOPERATION BETWEEN UKRAINE AND THE UNITED KINGDOM IN THE CONTEXT OF ECONOMIC RECOVERY OF FRONTLINE COMMUNITIES

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Key words:
International cooperation, Partnership, Prospects, Restoration, War, Conflict, Innovations, Economy, Frontline communities

International cooperation between states is becoming an increasingly important mechanism for economic growth and stability, especially in regions facing war, conflict and instability. The partnership between Ukraine and the UK offers significant potential in this regard, especially for the recovery of frontline communities affected by Russia's invasion of Ukraine.

The UK understands how important a partnership with Ukraine could be in the future, allowing it to strengthen its strength as a global player, not just a regional one, as it was as part of the European Union.

This article describes the state and prospects of international cooperation between the two countries in the context of the economic recovery of frontline communities in Ukraine.

СУЧАСНИЙ СТАН ТА ПЕРСПЕКТИВИ СПІВРОБІТНИЦТВА УКРАЇНИ ТА ВЕЛИКОЇ БРИТАНІЇ В КОНТЕКСТІ ВІДНОВЛЕННЯ ЕКОНОМІКИ ПРИФРОНТОВИХ ГРОМАД

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Ключові слова:
міжнародна співпраця, партнерство, перспективи, війна, конфлікт, інновації, економіка, прифронтові громади

Міжнародна співпраця між державами стає все більш важливим механізмом економічного зростання та стабільності, особливо в регіонах, які стикаються з такими проблемами, як війни, конфлікти та нестабільність. Партнерство між Україною та Великою Британією пропонує значний потенціал у цьому відношенні, особливо для відновлення прифронтових громад, які постраждали від вторгнення Росії на території України.

Велика Британія розуміє, наскільки важливим може стати партнерство з Україною в майбутньому, це дозволить їй посилити свої сили як глобального гравця, а не лише регіонального, як це було у складі Європейського Союзу.

У цій статті розкрито стан та перспективи міжнародного співробітництва між цими двома країнами в контексті відновлення економіки прифронтових громад в Україні.

Statement of the problem

A common threat has always played a key role in bringing peoples and states together, especially when they have different historical, political, economic and cultural experiences. This especially applies to the modern relationship between Ukraine and Great Britain, which has intensified international partnership against the Russian invasion on the territory of Ukraine, jointly defending democracy, human rights and the sovereignty of states.

In the conditions of the Russian-Ukrainian war, the study of foreign relations between Ukraine and Great Britain, the analysis of the current state and prospects of cooperation in the context of the restoration of the economy of front-line communities becomes more important.

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Analysis of recent studies and publications

The issues of relations between Ukraine and Great Britain, which have been established since January 10, 1992, have always attracted the interest of scientists and researchers. Researchers such as A. Grubinko, Y. Stuzhuk, S. Savina and others studied these relations and their aspects in their scientific works [1–3]. Modern relations between Ukraine and Great Britain during the full-scale invasion of the Russian Federation on the territory of Ukraine require a more detailed study. Research on this topic requires an analysis of the interactions of both countries to reduce the impact of security threats in Europe, cooperation in international forums, British humanitarian support and political action in the context of the military conflict and after its conclusion. Also, the issue of prospects for international partnership, including economic and investment for the frontline communities of Ukraine, remains unexplored.

Objectives of the article

The purpose of the article is a comprehensive and comprehensive study of the current state and prospects of cooperation between Ukraine and Great Britain in the context of economic recovery of front-line communities.

The main material of research

The start of Russia's full-scale aggression against Ukraine on February 24, 2022 shocked the world public. During 2022–2023, this war became a true disaster, causing the largest mass displacement of people in Europe since World War II. This war not only caused enormous damage to infrastructure and communities, but also caused many tragic deaths, particularly among the civilian population, including children. Such brutality led to the destruction of dozens of cities, spoiling decades of development.

Despite the terrible reality of constant attacks and destruction, Ukrainians continue to show incredible resilience and solidarity. They unite in volunteer groups, rebuild communities and cities and plan their future path. Ukrainians amaze the whole world with their willpower and determination.

In particular, given the current situation, the Russian Federation violates the basic principles of security and cooperation, state sovereignty and territorial integrity in Europe. Its invasion of the territory of Ukraine is a threat to the entire collective event.

In this regard, it is very important to preserve the statehood of Ukraine, which acts as an important element of its sovereignty and is a subject whose influence is important for the future development of democratic Europe. Great Britain is well aware that Ukraine has become a target of Russia, and its submission to Russian influence can threaten the entire European security system.

Over a long period of time, Ukraine has experienced significant support from Great Britain, which is manifested both in political aspects and in the financial and economic spheres. This support is reflected in various events and initiatives.

One of the important events is the announcement in January 2022 of the decision to create a tripartite interstate alliance between Ukraine, Poland and Great Britain. This alliance emphasizes a deep understanding of the need for cooperation and support between states in the face of geopolitical challenges and threats. The members of this alliance decided to focus their efforts on economic, trade, energy cooperation and fight against disinformation.

The position of Great Britain regarding the support of Ukraine was quite expected. And not only because of the personality of Boris Johnson as a politician, but also in light of the new position that Great Britain occupies after leaving the EU. Britain has adopted a new strategic concept of "global Britain", which includes the strengthening of the British navy, air force and expanding the area of operations of its fleet, and the strengthening of Britain as a global player, and not just a regional one, as it was in the European Union.

Leaving the European Union forced the British to find a new course and form a new foreign policy identity. Part of the concept of "global Britain" is the opposition to big autocratic dictatorial regimes. Russia and China are called such without appeal.

Therefore, in fact, what is happening now is a new British foreign policy, when there is a wider range of partners – not only the European continent, there is a wider range of obligations to the world, and a willingness to show what we are capable of.

For the first time since the 1960s, the British want to go beyond the line of the Suez Canal to build their own bases and strengthen their own fleet. This effectively means that they now perceive the Black Sea as a region of their infrastructural military interest. Therefore, such cooperation with Ukraine, establishing the functioning of our fleet, our defense, as well as deterring Russia on all fronts, is part of the development of their fleet, the development of geopolitics.

In addition, one should not forget that this is also an image issue. Britain still has "old issues" with Russia. This applies to both cyber-attacks and dirty money. Therefore, in any case, Britain will benefit from this. If the question arises before Britain – to support Ukraine or not? It is more profitable for Britain to support Ukraine [9].

They see their interest; they need a friend like Ukraine. A typical analogy is the serious relationship between Poland and Britain. In the eyes of the British, Ukraine is a powerful state on the other side of the European continent.

Additionally, the official visit of British Prime Minister Boris Johnson to Kyiv in February 2022 is of great importance. During this visit, he announced the intention of Great Britain to provide defense weapons to the Armed Forces of Ukraine. But the visit of the new Prime Minister of Great Britain Rishi Sunak in November 2022 was extremely meaningful and useful for both countries. He expressed his readiness to support Ukraine while we put pressure on Russian troops, while our infrastructure facilities and homes are being destroyed. The new Prime Minister of Great Britain did not change the policy of supporting Ukraine, which was pursued by his predecessor Boris Johnson.

An important detail is the supply of weapons from Great Britain worth hundreds of millions of pounds. Initially,

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it was light defensive weapons, such as small portable anti-tank and anti-aircraft missile systems “Javelin” and “NLAW”. But over time, since the beginning of the war, these supplies have shifted to more powerful military equipment, such as high-precision Harpoon anti-ship missile systems and heavy armored vehicles.

An important fact is the promptness and non-bureaucratic nature of the provision of British aid to Ukraine, which goes beyond the usual framework. The supply of armored vehicles, missiles and other weapons takes place promptly, even surpassing similar decisions of the USA and other European countries.

In general, military aid from the UK includes supplies of a variety of weapons, from anti-tank weapons to armored vehicles, as well as humanitarian support in the form of helmets, body armor and night vision devices. This indicates the deep support and cooperation of Great Britain in the extraordinary conditions of the conflict [5–6].

Conducting exercises is another important component of the support provided by Great Britain to the Armed Forces of Ukraine in their fight against Russian aggression. These exercises have a significant impact on training soldiers and providing them with the necessary skills to operate effectively on the front lines.

The training course, which lasts several weeks, is conducted by units of the 11th British Security Force Support Brigade. This training is especially important for volunteer recruits who may have no or limited combat experience. During the exercises, key skills necessary for effective combat operations on the front lines are imparted.

Training includes practical weapons skills, battlefield first aid, camouflage and patrol tactics. It is important that military training corresponds as much as possible to the real conditions of hostilities, so the training is organized taking into account the urban environment. Special “houses”, “walls”, “windows”, obstacles and even “blown up” cars are placed on the training grounds. The streets are lined with grenades and spent shell casings. There are elements of barbed wire, barricades and even signs with inscriptions in the Ukrainian language to ensure the most realistic practice.

This allows fighters to gain practical experience and skills necessary for effective functioning on the front line and defense of the territory of Ukraine in conditions of active conflict. The training of recruits and volunteers takes place in accordance with high standards, which contributes to increasing the combat readiness and efficiency of the Armed Forces of Ukraine [7].

The UK has a history of involvement in post-war reconstruction efforts in various war-torn countries, including some in Africa. After World War II, Great Britain participated in the reconstruction of war-torn Europe through the Marshall Plan, indirectly contributing to stability in neighboring regions. During its colonial era, Great Britain engaged in infrastructure development in many African colonies, although often to serve colonial interests. After independence, Britain continued to provide aid and assistance to some African countries, covering sectors such as education, health and infrastructure. They have also supported multilateral initiatives such as the African Development Bank and the World Bank, while promoting humanitarian and development aid on the continent. However, the degree of British involvement and financial investment varies greatly by country and time period.

The impact of British efforts, together with the post-colonial legacy, left a lasting impression on the development of African countries. While some projects have contributed positively to the development of infrastructure and institutional capacity, others have been criticized for their colonial undertones. The UK's role in rebuilding Africa is multi-faceted and dependent on evolving global priorities.

Great Britain has rich experience and knowledge in various fields, which makes it a potential source of investment for advanced communities of Ukraine.

Great Britain understands how important a partnership with Ukraine can become in the future. A key factor in Ukraine's support for London was the implementation of the strategic concept of “global Britain”, which provides for the strengthening of the British navy, air force and the expansion of the area of operations of its fleet, and the strengthening of Britain as a global player, and not only a regional one, as it was within the European Union.

The second important factor is the historical confrontation with Russia, which intensified due to the strengthening of Russian influence in the Black Sea region after the annexation of Crimea. Great Britain views the expansion of Russia's influence as a potential threat that needs to be contained, and in this context, Ukraine becomes an important place for Great Britain to act.

Great Britain perceives Russia as a threat to its national interests. Great Britain understands that Ukraine is a direct target of Russia, and if it falls under Russian control, the threat to European security increases. Supporting Ukraine corresponds to the national interests of Great Britain.

By investing in different sectors such as manufacturing, technology and services, UK investors can help these communities move away from dependence on one industry, thus reducing vulnerability to economic shocks. Cooperation between Great Britain and Ukraine can lead to the transfer of valuable knowledge and skills. British companies can bring advanced technology, management practices and training programs to advanced communities, empowering local businesses and human resources.

Investments in renewable energy and infrastructure development can have a particular impact on advanced communities. Renewable energy projects not only provide a clean source of energy, but also create jobs and stimulate economic growth. Investments in infrastructure, such as road networks and public facilities, improve the overall quality of life and attract additional investment. Great Britain's experience in renewable technologies combined with Ukraine's potential in solar and wind energy can create a win-win situation. Joint ventures in clean energy projects can boost local economies while reducing carbon emissions.

Supporting small and medium-sized enterprises in frontline communities can be a cornerstone of economic recovery. Microfinance and small business support programs will enable local entrepreneurs to start or expand

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their business. British investors could partner with local financial institutions to provide affordable credit, mentoring and training for small businesses, helping to diversify the economy. This approach not only promotes economic growth, but also promotes community sustainability.

Prospects for investment cooperation between Great Britain and Ukraine are mutually beneficial, currently the British government is looking for allies in important regions of the world. In the Asian region, these efforts are aimed at countries such as India and Vietnam, and in the European region at Ukraine and Poland. For Great Britain, relations with Ukraine are an important strategic project. Great Britain can become the main Western partner for Ukraine.

As Ukraine's leading communities gain access to capital, technology and expertise, UK investors can tap into new markets, diversify their portfolios and contribute to positive socio-economic change. In addition, such cooperation strengthens diplomatic ties and fosters a sense of solidarity, demonstrating the commitment of the international community to the well-being of conflict-affected regions.

Conclusions

In summary, international cooperation between Great Britain and Ukraine has great prospects, including for the reconstruction of frontline communities that have suffered from the war. By leveraging each other's strengths, both countries can contribute to sustainable economic growth, job creation and social stability in these regions. The partnership not only benefits the current economic landscape, but also reflects a broader commitment to global development and peace. As the two countries move forward in their investment cooperation, the potential for transformative change in Ukraine's frontline communities is becoming increasingly tangible.

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DEVELOPMENT OF UNITED TERRITORIAL COMMUNITIES: TRENDS AND PERSPECTIVES

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Key words:
united territorial communities, trends, perspectives, human resources, natural resource potential, community structure, symmetry of spatial development, quality of life

The article examines the trends and prospects of the development of united territorial communities in the conditions of today's challenges. It is substantiated that the formation of united territorial communities is a means of decentralization policy, which acts as a tool for reforming regional policy and regional development in order to increase the efficiency of the functioning of the economy at all levels of its functioning and increase the standard of living of the population through the provision of powers, financial resources and the involvement of citizens in management of the region. It is proved that the locomotive of transformations is the process of decentralization and the global challenges of today, which require territories to concentrate their efforts on achieving the maximum level of self-sufficiency based on the use of levers and mechanisms of self-organization and self-regulation. It is substantiated that the community as a complex socio-economic entity from the point of view of structural analysis represents a certain arrangement of constituent parts, that is, it has a defined structure. The structure of united territorial communities, which determines their capacity and self-sufficiency and is a prerequisite for the symmetry of spatial development and high level and quality of life of the population, has been singled out and analyzed. Two types of structure are distinguished: in the form of concentric rings, each of which identifies a separate element - a certain level of the hierarchy of community elements (human resources, community activists, regional and state authorities, external influence) and a pyramidal structure that makes it possible to determine development priorities. It was determined that there is a direct relationship between the degree of interaction of the elements of the community structure and its level of development: the more coordinated the functioning of the community's components, the greater the probability of its successful development. As a result of this interaction, relationships, values and norms in the community are formed. The directions of planning the development of territorial communities in the developed countries of the world are singled out: change in the level of responsibility; transformation of the methodology of implementation of the development management process at the local level; change of management entity.

РОЗВИТОК ОБ'ЄДНАНИХ ТЕРИТОРІАЛЬНИХ ГРОМАД: ТЕНДЕНЦІЇ ТА ПЕРСПЕКТИВИ

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Ключові слова:
об'єднані територіальні громади, тенденції, перспективи, людські ресурси, природоресурсний потенціал, структура громади, симетричність просторового розвитку, якість життя

У статті досліджуються тенденції та перспективи розвитку об'єднаних територіальних громад в умовах викликів сьогодення. Обгрунтовано, що формування об'єднаних територіальних громад - це засіб політики децентралізації, який виступає як інструмент реформування регіональної політики та регіонального розвитку задля підвищення ефективності функціонування економіки на всіх рівнях її функціонування та зростання рівня життя населення шляхом надання повноважень, фінансових коштів та залучення громадян до управління регіоном. Доведено, що локомотивом трансформацій виступає процес децентралізації та глобальні виклики сьогодення,

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які вимагають від територій концентрацію зусиль щодо досягнення максимального рівня самодостатності на основі використання важелів та механізмів самоорганізації та саморегулювання. Обгрунтовано, що громада як складне соціально-економічне утворення з точки зору структурного аналізу являє собою певне впорядкування складових частин, тобто має визначену структуру. Виокремлено та проаналізовано структуру об'єднаних територіальних громад, яка визначає їх спроможність та самодостатність і є передумовою симетричності просторового розвитку та високого рівня та якості життя населення. Виділено два види структури: у вигляді концентричних кілець, кожне з яких ідентифікує окремий елемент - певний рівень ієрархії елементів громади (людські ресурси, активісти громади, регіональна та державні органи влади, зовнішній вплив) та пірамідальну структура, котра дає можливість визначити пріоритети розвитку. Визначено, що існує прямий зв'язок між ступенем взаємодії елементів структури громади та її рівнем розвитком: чим більш узгодженим є функціонування складових громади, тим більша ймовірність успішності її розвитку. В результаті цієї взаємодії формуються взаємовідносини, цінності та норми в громаді. Виокремлено напрями планування розвитку територіальних громад у розвинутих країнах світу: зміна рівня відповідальності; трансформація методології реалізації процесу управління розвитком на локальному рівні; зміна суб'єкта управління.

Problem statement

New regularities, which are generated by globalization processes at the global level, lead to a change in the level of responsibility for development at the local level. Therefore, the role and significance of communities for the socio-economic development of territories in particular and the country as a whole increases.

At the current stage, views regarding the goals, purpose, criteria, mechanisms and vector of development at the regional level have changed significantly. The locomotive of transformations is the process of decentralization and the global challenges of today, which require territories to concentrate their efforts on achieving the maximum level of self-sufficiency based on the use of levers and mechanisms of self-organization and self-regulation. This allows not only to achieve the set goal, but also to quickly adapt to dynamic development and adapt to changes.

We emphasize that the mechanisms of self-organization and self-regulation are analogs of built-in stabilizers for united territorial communities and the national economy as a whole, because they allow to raise the level and quality of life of the population of a separate territorial entity, and in a chain reaction are the basis for the growth of national well-being.

That is, the determination of prospects and development trends of united territorial communities is relevant, despite their inability to solve national issues, but they allow to reduce the impact of negative consequences and continue to move in the direction of ensuring the symmetry of spatial development, ensuring the efficiency of the management system at the regional level.

Analysis of recent studies and publications

From the point of view of theoretical justification and practical orientation, the issue of development of united territorial communities is studied in detail by Ukrainian scientists, namely: O. Batanov [1], I. Bodrov [2], H. Monastyrskyi [3], L. Murkovich [4], V. Nakonechnyi and others. Scientists outline the issues of managing the development of united territorial communities, which are subsystems with a high level of internal self-sufficiency.

The mentioned works of scientists represent a significant contribution to the theoretical justification and practical implementation of the principles of development of united territorial communities. In our opinion, a more in-depth analysis is needed to outline the trends and prospects for the development of united territorial communities, taking into account the impact of modern challenges at the local and global levels, which allows predicting certain negative impacts, reducing their level and approaching a more symmetrical spatial development.

Highlighting previously unsolved parts of the overall problem

Given the continuation of decentralization processes and the significant impact of today's challenges, and the desire to achieve symmetrical spatial development and self-sufficiency of individual territories, the issue of trends and prospects for the development of united territorial communities requires a deeper study.

Objectives of the article

The purpose of the article is to determine the trends and prospects for the development of united territorial communities with the aim of determining ways to achieve symmetrical spatial development and self-sufficiency of individual territories.

The main material of the research

An important direction of regional development in the conditions of decentralization and the deepening of today's challenges is the formation of united territorial communities with a high level of self-sufficiency, which is a prerequisite for the effective use of human resources and natural resource potential, which in turn are able to ensure an increase in the quality of life of the population within a

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separate territory and promote growth welfare of the nation as a whole.

Let us emphasize that the formation of united territorial communities is a means of decentralization policy, which acts as a tool for reforming regional policy and regional development in order to increase the efficiency of the economy at all levels of its functioning and increase the standard of living of the population through the provision of powers, financial resources and the involvement of citizens in management of the region.

In the conditions of intensification of the decentralization processes, issues regarding the improvement of the territorial organization of the economy through the formation of effective united territorial communities, the functioning of which largely depends on resource provision, namely: human resources, financial capabilities, are becoming actualized. They not only determine the real possibilities of the functioning of the territorial community to meet its own needs, but are also able to reduce the disproportionality of socio-economic development and ensure the symmetry of spatial development, as well as determine the prospects and potential opportunities for the region in the future. In particular, the real capabilities of a territorial community are determined by various features, for example, the number of community members, age structure, population density, level of education, qualifications.

Note that the community as a complex socio-economic entity from the point of view of structural analysis represents a certain arrangement of constituent parts, that is, it has a defined structure. An important issue for the functioning and development of united territorial communities is not only the determination of the set of elements, but also the determination of the degree of coherence between them, that is, the level of interaction.

At the same time, there is a direct relationship between the degree of interaction of the elements of the community structure and its level of development: the more coordinated the functioning of the community's components, the greater the probability of its successful development. As a result of this interaction, relationships, values and norms in the community are formed.

We note that the capacity and self-sufficiency of united territorial communities is largely determined by its structure, which is a prerequisite for symmetrical spatial development and a high level and quality of life of the population.

In scientific literature, the structure of united territorial communities is presented in the form of certain concentric circles, each of which identifies a separate element (Fig. 1).

Fig. 1 shows the structure of united territorial communities as a system of concentric circles, each of which defines a corresponding level. A community is a collection of several levels, i.e. concentric circles located one inside the other:

– the first level – "heart" – human resources of the community;

– the second level – community activists – a part of the population that takes an active part in the life of the community – leaders and organizers of the community;

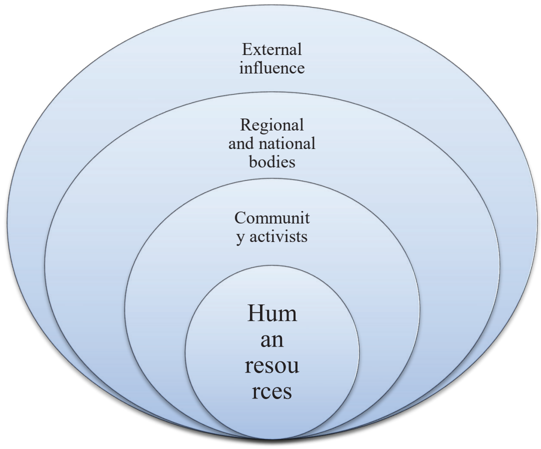

Figure 1 – The structure of united territorial communities as a system of concentric circles

Source: compiled by the author based on [5]

– the third level – regional and state authorities, which form environmental conditions for the functioning and development of the community on the basis of regulatory and legislative regulation;

– the fourth level – external influence – the external environment, which characterizes the interaction between communities of other countries of the world, the creation of conditions for international investment.

Considering the importance and priority of the elements of the community, in our opinion, its structure can be represented in the form of a pyramid (Fig. 2).

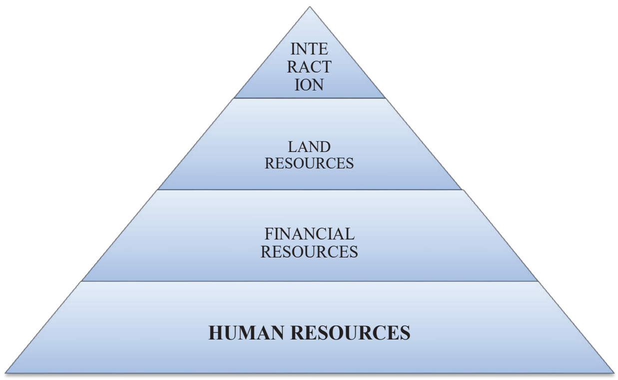

Figure 2 – The structure of the community in the form of a pyramid

Source: Built by the authors themselves

The pyramidal structure of the community (Fig. 2) shows that the "support", "base" for the development of the united territorial community is human resources, which act as the main productive force. Financial resources are on the second level, because the degree of self-sufficiency of the community depends on their availability, which in turn affects the development of human resources. The third level of the pyramid is occupied by land resources. At the same time, not only the amount of land is important, but also its structure, qualitative characteristics and rational use. The community is a complex socio-economic entity, the characteristic features of which are not only a significant number of subsystems, but also the quality of interaction between them.

The highest level is the interaction between the elements of the united territorial community. Achieving a high level of interaction is a necessary condition for the effective development of the community within a certain region and the state in general.

Let us emphasize that in the developed countries of the world significant changes have taken place in the planning of the development of territorial communities in three directions in the last period [6]:

– change in the level of responsibility: territorial authorities are responsible for local development, quality of work, education, recreation and living conditions in the community;

– transformation of the methodology of implementation of the development management process at the local level – subordinating the activities of the community to a certain strategy, which is created and implemented by the community, and its implementation takes place within the scope of project activities;

– change of the management subject – partnership and cooperation between communities, which significantly expands the scope of influence at the regional level, determining competitive advantages at the local level, forming joint projects for increasing competitiveness, etc.

Note that the development of the national economy directly depends on the motivation and ability of communities to deal with issues of local development. United territorial communities must be the subject of management and independently ensure their capacity. In addition, territorial communities are independently responsible for planning their own development, determine the future and ensure the appropriate level of well-being.

Taking into account the experience of European countries, which implemented the process of reorganization of the administrative and territorial system, stabilized internal migration. The number of rural population is more than 25%. Thus, stopping the process of population depopulation in rural areas can be carried out by creating centers of economic concentration, concentration, and creating jobs near the place of residence, solving the issue of population employment [7, p. 10–12]

In our opinion, the implementation of three priorities defined in the EU countries are important for the development of united territorial communities in the national economy, namely [8–9]:

– smart development, the basis of which is the comprehensive use of advanced knowledge and innovations;

– sustainable development, the result of which is an increase in the efficiency of the use of the resource base and an increase in the level of competitiveness

– comprehensive development leading to an increase in the level of employment of the economically active population, social and territorial integrity.

Determining the current trends in the local development of cities and territories, within which united territorial communities have been formed, makes it possible to outline key priorities and guidelines for further development.

The strategy for the development of united territorial communities should be based on a comprehensive and systematic approach that directs national practices of decentralization to long-term programs and projects.

The modern practice of sustainable development of cities and settlements within the framework of the reform of the territorial organization of power in Ukraine shows that there is a certain effectiveness and success. This is reflected in the motivation to gradually move forward, determine directions and formats of development, sources of financing, using the existing and developing a new regulatory framework for the implementation of the state policy of regional development.

Conclusions and proposals

Therefore, it is important at the current stage to be aware and understand at the level of local authorities the features of modern development, the necessary knowledge, information, skills and experience to ensure a high level of competitiveness of their communities.

The conducted research made it possible to come to the conclusion that successful communities first of all have a powerful human potential, a natural resource base, which are the basis of internal capacity and self-sufficiency. On the basis of the effective use of potential opportunities, the improvement of internal conditions of operation and development is ensured, competitiveness factors are formed, which allow attracting investment resources, developing business initiatives, while preserving already existing business entities and creating new jobs.

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REBUILDING UKRAINE'S ECONOMY IN THE CONTEXT OF EU INTEGRATION PROSPECTS

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Key words:
integration, restoration of the country's socio-economic potential, macroeconomic indicators, economic reforms, trade liberalisation

The article determines that Ukraine's integration into the EU is a crucial condition for the reconstruction of its economy, as Ukraine needs assistance in meeting its recovery needs. The scale of damage caused to the Ukrainian economy by the full-scale war is determined. The dynamics of the main macroeconomic indicators that characterise the state of the state socio-economic potential is analysed. The state of implementation of Ukraine's European integration course is considered. The degree of Ukraine's access to EU funds, programmes and instruments of assistance is studied. The volume of pre-accession assistance to Ukraine and the vector of economic reforms financed by these funds are determined. The potential impact of Ukraine's gradual integration into the EU on its investment climate is examined on the example of other EU member states. Measures aimed at liberalising EU-Ukraine trade relations are identified. The dynamics of Ukrainian export operations to the EU is studied. Measures aimed at rebuilding Ukraine's transport infrastructure and integrating it into the European transport system are analysed, as the restoration of transport infrastructure is the basis for the restoration of the economy as a whole, given the expansion of the country's transit capabilities.

ВІДБУДОВА ЕКОНОМІКИ УКРАЇНИ У КОНТЕКСТІ ПЕРСПЕКТИВ ІНТЕГРАЦІЇ В ЄС

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Ключові слова:
інтеграція, відновлення соціально-економічного потенціалу країни, макроекономічні показники, економічні реформи, лібералізація торгівлі

У статті встановлено, що інтеграція України в ЄС є визначальною умовою відбудови її економіки, адже Україна потребує допомоги у задовільнені потреб на відновлення. Визначено масштаби збитків, завданих українській економіці повномасштабною війною. Проаналізовано динаміку основних макроекономічних показників, що характеризують стан державного соціально-економічного потенціалу. Розглянуто стан реалізації Україною євроінтеграційного курсу. Досліджено ступінь доступу України до фондів, програм і інструментів допомоги ЄС. Визначено обсяг передвступної допомоги Україні й вектор реформ в економіці, здійснення яких профінансується цими коштами. На прикладі інших країн-членів ЄС розглянуто потенційний вплив поступової інтеграції України в ЄС на її інвестиційний клімат. Визначено заходи спрямовані на лібералізацію торговельних відносин Україна – ЄС. Досліджено динаміку українських експортних операцій до ЄС. Проаналізовано заходи спрямовані на відбудову транспортної інфраструктури України й на її інтеграції в європейську транспортну систему, адже відновлення транспортної інфраструктури є основою відбудови економіки в цілому, з огляду на розширення транзитних можливостей країни.

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Statement of the problem

Russian aggression has caused significant damage to the Ukrainian economy, leading to its degradation. As a result of the hostilities, a significant part of the infrastructure, industry and housing stock was destroyed or damaged. There has also been a significant decline in production, trade and investment.

In this context, Ukraine's integration into the EU is an important strategic goal of Ukraine, which will contribute to the country's economic development. Integration into the EU will open up access to the European market for Ukraine, which will help increase exports of Ukrainian goods and services. In addition, integration into the EU will help attract European investment to Ukraine's economy.

Thus, it is important to determine the vector of national economic recovery, which will accelerate the process of Ukraine's integration into the European economic space.

Analysis of recent studies and publications

The relationship between Ukraine's economic recovery and its integration into the EU has been the subject of research by many scholars. Recently, a number of papers on this topic have been published by research centres such as: Centre for Economic and Policy Research (CEPR) [1], Razumkov Centre [2], Institute for Economic Research and Policy Consulting [3].

Thus, the paper "Rebuilding Ukraine: Principles and Policies" by the Centre for Economic and Policy Research (CEPR) examines the principles and policies of rebuilding Ukraine after the devastating blow of Russian aggression. The study "Ukraine's European Integration: Realities and Prospects" by the Razumkov Centre analyses the realities and prospects of Ukraine's European integration. The authors of the study note that Ukraine's integration into the EU is an important strategic goal of Ukraine, which will contribute to the country's economic development. The potential impact of Ukraine's integration into the EU on its economy is analysed in the study "The Impact of Ukraine's Integration into the EU on its Economy" by the Institute for Economic Research and Policy Consulting. The authors note that Ukraine's integration into the EU will contribute to the growth of the country's economy, increase its competitiveness and improve the quality of life of the population.

Thus, the analysis of recent studies and publications shows that Ukraine's integration into the EU is an important factor for the country's economic recovery.

Objectives of the article

The purpose of this study is to determine the extent of the damage caused to the Ukrainian economy as a result of Russian aggression, to analyse the impact of the war on the state of the Ukrainian economy in terms of key macroeconomic indicators, and to assess the state of implementation of Ukraine's European integration course and the measures already being taken to integrate Ukraine into the European economic space.

The main material of the research

Having only just recovered from the challenges of the COVID-19 pandemic, Ukraine's economy has been hit by a full-scale war. According to World Bank analysts, direct losses have reached USD 135 billion as of 24 March. As of 24 February 2023, the amount of direct losses reached USD 135 billion, and the recovery needs amounted to USD 411 billion. [4]. The sectors that suffered the most, the cost of losses incurred by them, and the recovery needs are shown in Figure 1.

Thus, according to World Bank experts, the following sectors suffered the greatest losses: housing – USD 50 billion, or 38 % of the total losses incurred by the country during the study period; transport – USD 36 billion, or 26 %; energy – USD 11 billion or 8 %; and industry and trade – USD 11 billion or 8 % of the total losses incurred

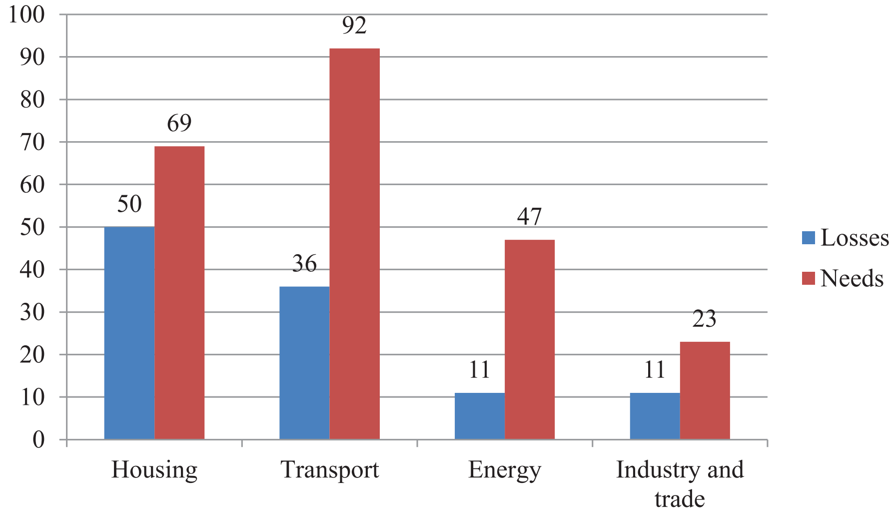

Figure 1 – Cost of losses and recovery needs by sector as of 24 February 2023, billion USD

Based on [4]

by the country. The transport sector accounts for the largest share of the cost of restoration needs – USD 92 billion, or 23 %. The restoration needs of the above mentioned sectors are as follows: housing sector – USD 69 billion, or 17 %; energy sector – USD 47 billion, or 12 %; and the industry and trade sector – USD 23 billion, or 6 %.

The devastating consequences of a full-scale war are characterised not only by the amount of damage to infrastructure facilities, but also by negative shifts in the dynamics of macroeconomic indicators. The most important indicators of the country's socio-economic situation include: GDP, inflation or consumer price index, unemployment rate, etc.

According to the classical definition, GDP is the aggregate market value of final goods and services produced by enterprises, organisations and institutions over a certain period of time on the economic territory of a country. Thus, according to the State Statistics Service of Ukraine, the real gross domestic product in 2022 decreased by 29.1 % to UAH 3865780 million, which is the deepest drop in GDP in the history of independent Ukraine [6]. In fact, the GDP level has returned to the level of the 2000s.

Another important indicator of the country's socio-economic situation is the inflation index or consumer price index. The consumer price index is an indicator that characterises changes in the general price level of products purchased by the population for non-productive consumption. It measures the change in the cost of a fixed set of consumer goods and services in the current period compared to the previous one. Thus, in 2022, the consumer price index was 26.6 % compared to the previous year [5]. That is, in 2022, prices for non-production goods and services increased by 26.6 % compared to 2021.

The last, but no less important, indicator of the country's socio-economic situation under study is the unemployment rate, which is defined as the ratio of the number of unemployed to the total number of economically active working-age population of the country (region, social group) and is expressed as a percentage. The unemployment rate of the working-age population is estimated at 25–26 % on average in 2022, which corresponds to a total of 3.2 million unemployed people, while the same indicator for 2021 was 10.3 %, which corresponds to a total of 1.7 million unemployed people [5].

Therefore, it can be concluded that the negative dynamics of the most important macroeconomic indicators characterising the country's socio-economic situation is an indicator of the destruction of established ties and the structure of the country's economy, which was caused by Ukraine's involvement in a full-scale war.

Ukraine needs help to meet its reconstruction needs. Since the beginning of the full-scale war, the country has been supported by the EU. Currently, Ukraine is receiving an unprecedented amount of assistance from the EU. Despite the fact that Ukraine chose the course of European integration after the declaration of its independence, its active implementation is taking place in the context of war, as evidenced by the fact that Ukraine has been granted the status of an EU candidate. After fulfilling certain requirements, Ukraine will have the opportunity to join the special Instrument for Pre-Accession Assistance – IPA III, as well as other EU funds and programmes – European Peace Facility, External Action Guarantee, European Union Recovery Instrument (COVID-19), Erasmus+, Invest EU Fund, Creative Europe, European Fund for Sustainable Development, etc. [2]. This instrument of pre-accession assistance provides for the allocation of €14.2 billion by 2027 to implement reforms in various areas.

Priority reforms in the economy include:

– improving tax and economic governance, promoting macroeconomic stability, implementing sustainable development goals, and building a market economy that can withstand competitive pressure within the EU;

– ensuring compliance with Acquis Communautaire rules, standards, policies and practices, including in the areas of public procurement and state aid rules;

– promoting employment of the population;

– infrastructure development;

– improving the business climate;

– improving the accessibility of digital technologies and innovations.

In addition to financing the implementation of reforms, Ukraine's special status will potentially improve the investment climate in the country. For example, in Poland, the country's FDI per capita increased between 1994 and 2004 from USD 99 to USD 2,190 after it became a candidate country. This is due to the prospects of further European integration and the fact that Poland gained the status of an EU candidate [2].

Thus, acquiring the status of an EU candidate shapes the vector of the country's recovery, which will be aimed at implementing reforms aimed at converging the Ukrainian and European socio-economic systems, provides access to financing for reforms and facilitates investment.

The first year of the full-scale war was characterised by the liberalisation of trade contacts between Ukraine and the EU.

Regulation (EU) No. 2022/870 of the European Parliament and of the Council of 30 May 2022 on the temporary liberalisation of trade between Ukraine and the EU provides for:

– temporary suspension of all tariffs provided for in Annex I-A to the Association Agreement;

– temporary suspension of anti-dumping duties;

– temporary suspension of global safeguard measures.

This regulation will be in force until 5 June 2023. Trade with the EU has become the basis for the resilience of the Ukrainian economy in the face of a full-scale war. In the first half of 2022, the EU's share in the geographical structure of Ukraine's exports was 52.2 %. The leading exports were food products, industrial goods, and agricultural products [2]. In 2022, Ukraine became the leading supplier of butter and cheese to the EU. In January-September 2022, Ukraine exported 72.43 thousand tonnes of dairy products, which is 11 % more than in the same period in 2021 [2].

The upward trend in Ukraine's exports to the EU is explained by the implementation of trade liberalisation measures with the EU and demonstrates Ukraine's gradual

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integration into the European economic space, which strengthens the national economy even in the face of a full-scale war.

As noted, the devastating impact of Russian aggression has been felt in Ukraine's infrastructure, in particular in the transport sector, whose restoration needs currently amount to USD 92 billion [4]. Rebuilding the infrastructure is a prerequisite for the further development of Ukraine's trade relations with the EU and economic recovery in general. Ukraine's transport and logistics infrastructure is currently being integrated into the European one.

In June 2022, Ukraine and the EU signed an agreement on road freight transport, which cancels the need for Ukrainian carriers to obtain relevant permits for bilateral and transit traffic to the EU. Ukraine continues to work on improving the system of road transport to the EU. At the end of April 2022, the State Service of Ukraine for Transport Safety launched the digital system "SHLYAH", which simplifies the procedure for submitting documents, managing licences, etc. to the maximum extent possible, thereby reducing the time for processing applications from 1–3 months to 1–5 days. This significantly speeds up trade operations.

Thus, restoring infrastructure, including transport infrastructure, is one of the most important priorities for rebuilding the national economy, and its integration into the European transport system will significantly expand Ukraine's transit capabilities and improve the efficiency of related sectors of the economy.

Conclusion

Thus, rebuilding the national economy is a long-term process that requires assistance to meet the recovery needs, as World Bank analysts estimate that the recovery needs as of 24 February 2023 amounted to USD 411 billion. This study identifies the role of the EU in meeting these needs. This study identifies the role of the EU in restoring Ukraine's socio-economic potential. Today's active implementation of the European integration course, as evidenced by Ukraine's acquisition of the EU candidate status, determines the vector of the country's recovery, which will be aimed at implementing reforms aimed at converging the Ukrainian and European socio-economic systems, providing access to financing for reforms and facilitating investment. The prospects for the recovery of the Ukrainian economy are also positively influenced by the gradual integration of Ukraine into the European economic space, as evidenced by the liberalisation of Ukraine-EU trade relations, the upward trend in Ukrainian exports to the EU and the expansion of Ukrainian transit opportunities.

Thus, it can be concluded that Ukraine's integration into the EU offers good prospects for rebuilding the state economy, but the process of its recovery is multifaceted and will require significant and persistent efforts of society.

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FINANCE AND MONEY TURNOVER

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THE CORPORATION'S PRICING POLICY IMPACT ON ITS FINANCIAL POSITION

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Key words:
price, pricing policy, corporation, factors, pricing, efficiency, liquidity, target, consumer, sales, industry, market, strategy, premium, demand

The article explores the essence of pricing policy and its impact on the financial condition of corporations. It delves into the Ukrainian beer market, determining the share of the analyzed group of enterprises. The indicators of the financial condition of PJSC "Carlsberg Ukraine" are scrutinized to define how they are influenced by the chosen pricing policy. The feasibility of applying pricing strategies at the corporation's enterprises is assessed. Potential enhancements to the pricing policy are investigated, and a forecast of changes in the beer market share in Ukraine is provided. Methods to enhance the efficiency of the chosen pricing policy, boosting the corporation's sales, and stimulating competitiveness are outlined. Main recommendations involve increasing the price attractiveness of products, actively adapting to market changes, further market segmentation, introducing new products, setting premium prices, and innovating with algorithmic pricing based on artificial intelligence. Implementing pricing policies of foreign brewing companies is proposed, with examples including premium pricing, price discrimination, and aggressive marketing to identify useful aspects that can drive positive innovations in quality.

ВПЛИВ ЦІНОВОЇ ПОЛІТИКИ КОРПОРАЦІЇ НА ЇЇ ФІНАНСОВИЙ СТАН

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Ключові слова:
ціна, цінова політика, корпорація, фактори, ціноутворення, ефективність, ліквідність, ціль, споживач, реалізація, галузь, ринок, стратегія, преміум, попит

У статті розглянуто сутність цінової політики і ціноутворення, та їх вплив на фінансовий стан корпорацій. Проаналізовано стан українського ринку пива, та визначено частку, яку займає аналізована група підприємств. Досліджено показники фінансового стану ПрАТ «Карлсберг Україна», визначено як саме на них впливає обрана цінова політика. Проведено оцінку доцільності використання застосовуваних стратегій ціноутворення на підприємствах корпорації. Досліджено потенційні шляхи покращення цінової політики та наведено прогноз у змінах частки ринку пива в Україні. Наведено шляхи та способи збільшення ефективності обраної цінової політики задля зростання обсягів збуту корпорації і стимулювання її конкурентоспроможності. В числі основних рекомендацій було перераховано підвищення цінової привабливості продукції, активну адаптацію до змін на ринку, подальшу сегментацію ринку та впровадження нових видів продукції, встановлення преміумних цін, рекомендовано інновацію в вигляді алгоритмічного ціноутворення, яке засноване на штучному інтелекті. Запропоновано впровадження цінових політик іноземних пивоварних компаній. В числі прикладів були наведені варіанти преміумного ціноутворення, цінової дискримінації та агресивного маркетингу, задля визначення корисних аспектів, які можуть стати рушієм для якісних позитивних нововведень.

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Statement of the problem

The pricing policy stands as a fundamental factor influencing the financial stability and capital adequacy of commercial enterprises. Determining and executing an effective and efficient pricing policy should be a top priority for managers, given the evolving modern business environment, which necessitates flexible and prudent decisions in establishing competitive and fair pricing. When establishing it, several factors need consideration, such as market conditions, the pricing preferences of the nearest competitors in the industry, and the continual fluctuations in supply and demand for manufactured products. Justifying, defining, and implementing an effective pricing strategy, which includes constant monitoring and adjustments, is a pressing issue for all modern corporations, irrespective of their organizational structure and type of activity.

Analysis of the latest research and publications

The definition of the essence of the concept of "pricing policy" varies considerably depending on the scholar. Different approaches of scientists are more the result of a set of various ideas forming the basis of their understanding of this category than one specific definition. Classical scholars such as A. Smith [1], D. Ricardo [2], E. Böhm-Bawerk [3], and others actively studied pricing and the reasons for setting specific price levels. Among modern foreign scholars, R.J. Dolan and H. Simon [4], H. Macdivitt and M. Wilkinson [5], and many others have contributed to the field. Among domestic scholars, individuals like V.V. Kyrylenko [6], M.I. Tugan-Baranovsky [7], Y.G. Tormos [8], V.I. Korniev [9], V.G. Gerasymchuk, and A.E. Rosenplanter [10] have delved into the analysis of the concept. The aforementioned researchers substantiate the expediency of continuous improvement of pricing policy, confirming the importance and relevance of studying this issue.

Objectives of the article

The purpose of the article is to analyze the pricing policy as a concept, the financial condition of the corporation, and the impact of the pricing policy on it. The article also aims to examine the state of pricing using PJSC "Carlsberg Ukraine" as an example and explore possible ways to improve it. Additionally, the article delves into the experiences of foreign corporations in this area and identifies competitive advantages that could be utilized, especially by managers of "Carlsberg".

Summary of the main research material

Corporate pricing is one of the most complex yet crucial aspects of management, directly impacting revenues, profits, and their subsequent allocation in the production cycle. In today's globalized world, where competition in industries is increasingly intense, the selection of the right pricing strategy becomes a decisive factor in a company's overall performance. Consequently, prices influence virtually every aspect related to performance: sales, profit, and consumer attitudes toward the brand.

The issue of prices encompasses various aspects that help understand the reasons behind a corporation's choice of a particular pricing strategy. "Price is primarily an instrument of the company's commercial policy. That is why any discussion of pricing methods and rules makes sense only when we know what the company wants to achieve by setting certain prices for its products or services" [11]. A well-chosen pricing strategy can determine the success of an enterprise in the market and impact its profitability.

To develop a pricing strategy effectively, a corporation must clearly define its goals, which it aims to achieve through the sale of goods or services. Typically, the primary goal is to maximize profit, but intermediate goals may vary, such as protecting interests, overcoming competitors, gaining new markets, introducing a new product, efficient cost recovery, or stabilizing revenues.

In today's dynamic market conditions, product pricing demands a sophisticated and flexible approach. Given this complexity, it is essential for a corporation to perceive pricing as a highly intricate process influenced by numerous factors. Instead of relying on a universal pricing method with fixed factors, managers should integrate different approaches and consider various factors influencing the pricing process. This approach will help find an optimal and reasonable price for products, ensuring high competitiveness and contributing to the company's development.

The study will continue by examining the impact of pricing policy on the financial condition of the corporation, using PJSC "Carlsberg Ukraine" as an example. Carlsberg Group, a formidable international brewing group with production facilities in over 20 countries, holds the fourth position among global brewing corporations in terms of revenue [12]. Carlsberg Group entered the Ukrainian market in 2001 by acquiring a 50 % stake in Baltic Beverages Holding, which controlled three breweries in Ukraine. In 2008, the Danish company acquired a share of the assets of Scottish & Newcastle, the second co-owner of Baltic Beverages Holding, gaining full control over the holding [12]. Today, the Carlsberg Group's representative office in Ukraine is known as Carlsberg Ukraine PrJSC, with 100 % ownership by Baltic Beverages Invest Aktiebolag [13].

To examine the impact of the pricing policy on the financial condition of the corporation, we will analyze key indicators of its liquidity, financial stability, and profitability. The results of the liquidity analysis of the company's balance sheet are presented in Table 1.

Table 1 – Liquidity ratios of PJSC "Carlsberg Ukraine" for 2019–2022

	2019	2020	2021	2022
Current liquidity ratio	1,448	1,391	1,345	1,959
Quick ratio	1,094	1,137	1,104	1,612
Absolute liquidity ratio	0,682	0,767	0,681	1,214
Inventory coverage ratio	4,129	5,547	5,612	5,656

Source: compiled by the authors based on [15]

The obtained values provide insights into the potential ability of the corporation to fulfill its financial obligations. Primarily, the current liquidity ratio indicates the company's insufficient ability to meet current financial obligations with current assets. Only in 2022 does its value approach the recommended range (2.0–2.5). Conversely, the quick ratio significantly exceeds the normative value (0.7–0.8), indicating a substantial share of receivables in the company's current assets and, therefore, potential issues with product sales and pricing policy. The absolute liquidity ratio also surpasses the recommended values (0.2–0.3), demonstrating the financial stability of the corporation. However, it also suggests the immobilization of cash and cash equivalents from turnover. The inventory coverage ratio, indicating the company's ability to fulfill obligations through inventories, maintains consistently high values throughout the analyzed period. The ambiguity in the dynamics of this indicator lies in its demonstration of medium-term financial stability while hinting at potential overstocking by the company. In conclusion, it is noteworthy that PJSC "Carlsberg Ukraine" maintains sufficient liquidity, influenced in part by the prices set for products by the corporation.

A preliminary conclusion can be drawn that pricing policy can have a significant impact on the financial position of corporations. A properly chosen pricing strategy contributes significantly to increasing profitability and building competitive advantages. To avoid undesirable negative consequences of an incorrectly chosen pricing policy, corporate managers need to take into account the specifics of the market, consumers, and the general environment.

Certainly, pricing policy has an impact on the liquidity of the corporation. Increasing values of liquidity ratios, particularly current and quick, indicate a balance between current assets and financial liabilities. This suggests that the pricing strategy not only helps increase profitability but also provides sufficient cash liquidity to meet obligations in a timely manner. Determining competitive advantages and assessing the stability of the company's financial position in the context of market challenges highlights the role of pricing policy in this context.

Financial stability ratios are also crucial indicators for analysis. Through an effective pricing strategy, a company can influence the level of profitability and the generation of its own funds, as reflected in the ratios of autonomy and financial independence. The use of optimal pricing strategies can also impact the financing structure, ensuring a balance between equity and debt, resulting in changes in the values of financial dependence and capitalization ratios. This list of indicators specifically relates to the financial resources of the corporation, characterizing them in one way or another, or demonstrating dependencies with other indicators of property values that can be utilized in the production process (Table 2).

The table indicates that the corporation is undergoing risky changes in the financial structure but exhibits signs of stability and potential improvement in financial stability in 2022.

Table 2 – Indicators of financial stability of PJSC "Carlsberg Ukraine" for 2019–2022

	2019	**2020**	**2021**	**2022**
Autonomy ratio	0,628	0,600	0,566	0,652
Financial dependency ratio	1,591	1,665	1,768	1,533
Ratio of financial independence from capitalized sources	0,986	0,977	0,982	0,986
Debt to equity ratio	0,577	0,641	0,749	0,519

Source: compiled by the authors based on [15]

To analyze the financial condition, it is also crucial to examine profitability ratios. These financial indicators assess the efficiency and profitability of enterprises, indicating how much of the revenue is converted into profit in various aspects of business operations. In analyzing them within the context of PJSC "Carlsberg Ukraine," we selected indicators that best characterize the financial resources of the enterprise (Table 3).

Table 3 – Profitability indicators of PJSC "Carlsberg Ukraine" for 2019–2022

	2019	**2020**	**2021**	**2022**
Return on total capital	0,299	0,309	0,238	0,211
Return on equity	0,476	0,514	0,420	0,324
Return on sales	0,170	0,204	0,161	0,169

Source: compiled by the authors based on [15]

Table 4 shows a downward trend in the profitability of both total and equity capital. This trend may indicate the need to improve the company's asset and financial management strategies. However, the stability of the return on sales is a positive aspect, indicating the corporation's ability to maintain efficiency in generating profit from sales. It also highlights the effectiveness of the pricing policy in improving the company's results.

The calculations and analysis of the coefficients demonstrate a satisfactory level of financial stability for PJSC "Carlsberg Ukraine." While there are some problematic issues, these can be addressed through joint efforts by the company's managers to make necessary improvements.

A more detailed analysis of the company's performance indicators reveals that Carlsberg has an effective pricing policy for its market segment. This effectiveness is evident in the volume of products produced compared to net sales revenue. The holding's companies consistently sell their products using an efficient, extensive logistics system, coupled with a stable pricing policy. Overall, the pricing system can be characterized as quite effective, given that no significant declines in the volume of products sold were observed during the analyzed periods.

A number of approaches could be employed to enhance overall performance by implementing new methods in pricing policy. For instance, to improve the pricing strategy, it is suggested to develop approaches for premium pricing. Premium prices can be justified by the high quality of the product, exclusivity, rarity, or a strategic positioning of

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the product. Premium pricing often conveys to consumers that the product is of exceptionally high quality, though it requires significant marketing and promotional expenses. The advantage of this method lies in enhancing the overall image of the company's products, concurrently establishing a relatively high profit margin if sales are sufficient.

Another recommended strategy for corporations is the adoption of dynamic pricing algorithms. Algorithmic pricing involves setting optimal prices through the utilization of machine learning and artificial intelligence to maximize revenue, increase profits, or achieve other business objectives defined by retailers [16]. In the current stage of technological development, the use of such innovation stands as one of the most powerful ways to gain a competitive advantage. This approach is particularly pertinent for Carlsberg Ukraine due to the significant number of brands and products. Automating price setting with machine algorithms would prove more efficient, eliminating the human factor. Prices for specific product types could be determined based on historical data, analyzing past price levels, changes in demand, and other relevant factors.

Market segmentation and the introduction of new products within the corporation represent another approach, albeit a strategic one. This involves dividing the target market into different segments based on specific characteristics to more effectively direct marketing efforts and pricing. To enhance the pricing policy using this method, it is crucial to consider the needs and demands of different consumer groups. Carlsberg is already utilizing this system, but it requires revision and refinement.

It is advisable to consider the pricing strategies of foreign breweries as a direction for improving the pricing policy. Analyzing the successes and failures of other companies in the industry allows for the identification of new ways to enhance the pricing policy and, consequently, the overall stability of the corporation.

For instance, the American market extensively employs premium pricing, driven by the consistently inflated cost of raw materials. Consumers in the US understand and accept pricing when it comes to quality beer. Breweries have the opportunity to build brand loyalty through trust, ensuring consumers don't perceive the pricing as an attempt to keep up with market competitors. Establishing this level of trust means that if a consumer sees a 4-pack of their favorite brand of beer priced at $15, they don't feel cheated. They understand what they are paying for – a premium-quality beer at a fair price. While the Ukrainian market differs somewhat from the American market, the principle remains the same, and Carlsberg Ukraine effectively employs this approach by setting special prices for its premium brands [16].

Belgian breweries exemplify price discrimination. Belgium takes pride in being the "country of beer"? leading to unique pricing policies among lesser-known breweries. Many local producers charge a significantly higher price for their products when sold in the neighborhood around the brewery. While the average cost of selling locally is likely lower (due to reduced transportation costs), the locals' pride in their regional brand gives brewers a certain monopoly power, which they willingly leverage. Brewers increase their profits, redistribute them, and grow, thanks to the consumption behavior of local residents [17].

German breweries can serve as an example of an aggressive marketing strategy. German beer producers heavily invest in brand promotion. According to Statista 2019, the German beer industry, in general, spends more on marketing than all other alcoholic beverage producers in the country. Ranking third in marketing spending after the sweets and dairy industries, the beer industry accounts for 12 % of all marketing spending on food and beverages in Germany [18]. The success of this strategy is evident, as German breweries work for export, promote their brands globally, and Germany is renowned worldwide for its beer, with events like Oktoberfest gaining international recognition. The profitability of this approach is apparent: the growing popularity and recognition of brands contribute to both domestic consumption and successful entry into foreign markets, ultimately enhancing profitability and strengthening the position of German beer producers globally.

It's essential to note that domestic and foreign companies may employ different pricing strategies based on various factors such as market conditions, competition, consumer preferences, and strategic goals. However, there are typical approaches that are not geographically specific and have a universal impact. The pricing policy of breweries should also consider local characteristics, cultural nuances, and consumer customs in specific countries or regions.

Conclusions

Pricing policy has a significant impact on a corporation's financial position. It is a key tool for achieving commercial goals and determines the efficiency of all stages of the production cycle and the sales system. A properly selected, effective, and balanced pricing policy will make a substantial contribution to financial stability and success. In the context of constant competition and a changing business environment, the issue of improving and optimizing existing pricing strategies becomes quite relevant. Therefore, suggestions and recommendations using market segmentation, premium pricing, and artificial intelligence capabilities are becoming crucial tools for enhancing and increasing the effectiveness of existing pricing policies. Utilizing the experience of foreign companies in market segmentation can provide a source of useful information and interesting schemes that can be adopted and adapted for one's own purposes.

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THE IMPACT OF TAXES ON THE FINANCIAL AND ECONOMIC ACTIVITIES OF ENTERPRISES IN UKRAINE: ASSESSMENT AND DIRECTIONS FOR OPTIMIZING THE TAX BURDEN

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Key words:
tax system, state budget, taxes, tax revenues, tax debt, general and simplified taxation system, tax burden, results of enterprises, optimization of tax burden

The article examines the essence of the tax system, taxes and types of tax revenues to the state budget of Ukraine. Based on the analysis of the state budget revenues, it was determined that the control over the stability of Ukrainian business acquires an important role. Types of taxes were considered, which made it possible to estimate the amount of tax revenues to the state budget and record the negative dynamics of the tax debt of enterprises during the martial law. The main structural features of the simplified taxation system and the general taxation system, the main types of taxes inherent in them are determined. The status of the state and assessment of the tax burden on PrJSC "Kremenchutsk Confectionery Factory "Roshen" was carried out. The dynamics of the company's tax and fee obligations have been determined. It has been established that today there is a problem of a high tax burden on industrial enterprises, which has a significant impact on the performance of domestic enterprises. The problems of the tax system of Ukraine are identified and directions for its improvement are proposed in order to bring it closer to the standards of the European Union. In today's conditions, the urgent direction is to preserve and restore the work of Ukrainian industrial enterprises by promoting the implementation of proposals (E-reform proposal "10:10:10") at the government level; participation in the European program "Fiscalis"; introduction of foreign experience in stimulating the participation of enterprises in charity events; increasing the share of investment in research and development of innovative technologies (strengthening the level of protection of state programs against cyber attacks), development of artificial intelligence (software AI Tax, Receipt AI, ZeroTax Al, Flyfin tax). It has been proven that optimization of the tax burden for enterprises, improvement of the tax system will be one of the prerequisites for improving the indicators of the industrial sector in the future and will make it possible to transfer the country's economy to a more modern level of innovative development.

ВПЛИВ ПОДАТКІВ НА ФІНАНСОВО-ГОСПОДАРСЬКУ ДІЯЛЬНІСТЬ ПІДПРИЄМСТВ В УКРАЇНІ: ОЦІНКА ТА НАПРЯМКИ ОПТИМІЗАЦІЇ ПОДАТКОВОГО НАВАНТАЖЕННЯ

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Ключові слова:
податкова система, державний бюджет, податки, податкові надходження, податковий борг, загальна та спрощена система оподаткування, податкове навантаження, результати діяльності підприємств, оптимізація податкового навантаження

У статті розглянуто сутність податкової системи, податків та різновиди податкових надходжень до державного бюджету України. На підставі аналізу обсягів доходів державного бюджету визначено, що важливої ролі набуває контроль за стабільністю українського бізнесу. Розглянуто різновиди податків, що дало можливість оцінити обсяги податкових надходжень до державного бюджету та зафіксувати негативну динаміку податкового боргу підприємств під час воєнного стану. Визначено основні структурні особливості спрощеної системи оподаткування і загальної системи оподаткування, основні види податків, які їм притаманні. Досліджено стан та здійснено оцінку податкового навантаження на ПрАТ «Кременчуцька кондитерська фабрика «Рошен». Визначено динаміку зобов'язань з податків

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і зборів підприємства. Встановлено, що на сьогоднішній день існує проблема високого податкового навантаження на промислові підприємства, яке має значний вплив на результати діяльності вітчизняних підприємств. Визначено проблеми податкової системи України та запропоновано напрямки її удосконалення з метою її наближення до стандартів Європейського Союзу. В умовах сьогодення актуальним напрямком є збереження та відновлення роботи українських промислових підприємств шляхом сприяння впровадження пропозицій (пропозиція Е-реформа «10:10:10») на рівні уряду; участі у європейській програмі «Fiscalis»; впровадження зарубіжного досвіду стосовно стимулювання участі підприємств у благодійних заходах; збільшення частки інвестицій у дослідження та розробки інноваційних технологій (посилення рівня захисту державних програм від кібератак), розвиток штучного інтелекту (програмне забезпечення AI Tax, Receipt AI, ZeroTax Al, Flyfin tax). Доведено, що оптимізація податкового навантаження для підприємств, вдосконалення податкової системи стане однією із передумов для покращення показників промислового сектору в майбутньому і дасть змогу перевести економіку країни на більш сучасний рівень інноваційного розвитку.

Statement of the problem

In today's conditions, enterprises are constantly influenced by factors of the external and internal environment, which affects the results of their financial and economic activities. One of the influencing factors is the level of the tax burden, which causes a decrease in the income of enterprises. Under such conditions, there is a need to research and determine the level of the tax burden on the results of operations and to formulate proposals for optimizing the tax burden. The introduction of such measures will avoid the situation of tax evasion at enterprises, ensure the timely fulfillment of tax obligations, and support and improve performance.

Analysis of recent studies and publications

The question of researching the tax burden on industrial enterprises is revealed in the works of the following domestic and foreign scientists: M.G. Voloshchuk, I.I. Matyola, T.O. Karabin, O.V. Bilash [1]; T.L. Tomnyuk [2]; V.I. Kuz [4]; V.L. Andrushchenko [5]; L. Matviychuk, L. Oliynyk [12]; O.V. Poberezhets, A.O. Gusev [13]; A.O. Gusev [14]; T.S. Cherkas, I.I. Dolzhenko [15], O.A. Mikhalchenko [17, p. 54–59], A. Mengden, D. Bunn [18], Yu Lu, Rui Liu, Yuhe Cao, Yuhan Li [19].

However, the problem of optimizing the tax burden is not fully explored, because the current conditions, the financial condition of industrial enterprises, and the directions for improving the tax system of Ukraine have not been determined.

Objectives of the article

The purpose of the article is to study the impact of taxes on the financial and economic activity of enterprises, to determine the problems of the enterprise in the aspect of paying taxes, to form directions for optimizing the tax burden.

The task of the article is: the study of the essence of the tax; definition of types of taxes according to the tax code of Ukraine; analysis of the dynamics of tax revenues to the state budget and tax revenues by type of activity; research on the dynamics of tax debt; assessment of the level of tax burden of PJSC “Kremenchutsk Confectionery Factory “Roshen”; determination of the company's problems in the aspect of paying taxes, formation of directions for optimization of the tax burden, provision of recommendations regarding the improvement of the company's financial condition.

Summary of the main research material

Implementation of a timely and balanced tax policy will contribute to the growth of tax revenues to the state budget and will ensure the optimization of tax pressure on industrial enterprises of Ukraine. Today, the financial and economic activity of industrial enterprises is under significant tax pressure. Therefore, it is important to reform and improve the tax system in order to optimize the tax burden on the activities of enterprises. This will contribute to the reduction of tax debt, the stability of tax revenues to the state and local budgets. Therefore, modernization of the tax system by bringing it closer to European standards will speed up integration processes with the EU.

The tax system is “a set of state-wide taxes and fees that are paid to the budgets of all levels in accordance with the current tax code” [1, p. 24].

According to the Tax Code of Ukraine Art. 6 “tax is a mandatory, unconditional payment to the relevant budget or to a single account managed by taxpayers” [3].

V.I. Kuz interprets the concept of “taxes” as “a complex economic category that characterizes the relationships of a financial and distributive nature between the state entity and other subjects of the system” [4, p. 7].

According to V.L. Andrushchenko, “taxes are payments of individuals and corporations that are democratic in terms of the procedure of establishment, but compulsory in the form of collection, intended for the transfer of financial resources from the private sector to the state for the purpose of financing public, national, governmental needs in an alternative way to the emission and loans” [5].

T.L. Tomnyuk defines the category of “taxes” as “mandatory payments that are legally established by the state, paid by legal entities and individuals in the process of redistributing part of the value of the gross domestic product and accumulated in centralized monetary funds for financial support of the state's performance of the functions assigned to it" [2, p. 17].

Also, the concept of tax is considered as "a complex financial category that characterizes the financial relations between the state and members of society, which arise in the process of GDP distribution due to the withdrawal by the state of a part of the gross national income and its redistribution for the purpose of financing state expenses" [11, p. 34].

In our opinion, taxes are mandatory payments that are established at the state level and collected from taxpayers to the state or local budget.

In fig. 1 shows the classification of taxes according to the Tax Code of Ukraine, namely the following distribution: national and local taxes and fees [3].

Having considered the classification of taxes in Ukraine, it is necessary to examine the existing taxation systems. "The simplified system of taxation, accounting and reporting is a special mechanism for the administration of taxes and fees, which establishes the replacement of the payment of individual taxes and fees, established by clause 297.1 of the Tax Code of Ukraine, with the payment of a single tax, with the simultaneous maintenance of simplified accounting and reporting" [3].

The main feature of the simplified system is that the company has high profits, but there is a low level of taxation. With a significant share of the costs of the business entity, it is better to work on a general basis. In addition, the amount of the single tax for groups 1, 2 and 3 depends on the amount of income, the permitted number of employees and types of activities.

"The general taxation system is the working conditions for entrepreneurs and organizations that do not have the right or it is not profitable for them to switch to the application of the simplified taxation regime. There is no need to meet any restrictions on the types of activities, the number of employees or the amount of income on the general taxation system" [9]. The general system of taxation differs from the simplified one in that, when paying taxes, the company's profit is taken as a basis, and not the total income received from its activities. In addition, according to the general system, the following expenses are assumed: rent of premises, payment of utility services, travel expenses, purchases of various raw materials and equipment, etc. [9].

Taking into account the considered types of taxes, we will analyze the dynamics of revenues of the state budget of Ukraine and tax revenues to the state budget. In the table 1 presents the dynamics of revenues to the state budget of Ukraine.

From the table 1, it can be noted that there was a reduction in 2022 compared to 2021 in the volume of tax revenues by -14.2 %, trust funds by -35 %, official transfers by -24.7 %. Along with this, in 2022 versus 2021, we observe an increase in non-tax revenues, income from capital transactions, funds from foreign countries and international organizations.

Considering the data of fig. 2, it should be noted that for the period of 2019–2020, non-tax revenues increased by 14.07 %, for the period of 2020–2021, there was

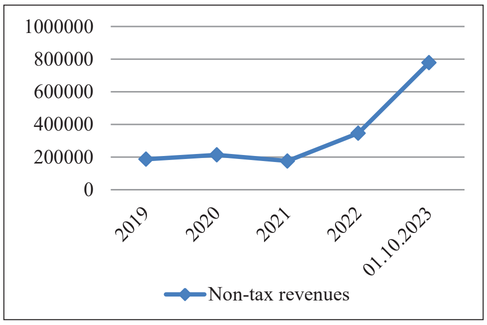
Figure 1 – Classification of types of taxes and fees in Ukraine

Source: compiled based on [3]

Table 1 – Revenues of the state budget of Ukraine for 2021–01.10.2023 (million UAH)

Name of indicators	2021	2022	01.10.2023	Deviation 2022 to 2021	
				UAH million	%
Tax revenues	1107090,9	949764,4	845348,2	-157326,5	-14,2
Non-tax revenues	175358	346327,7	778431,2	170969,7	97,5
Income from capital transactions	328,7	611,0	70,7	282,3	85,9
Funds from foreign countries and international organizations	1289,9	481090,7	362996,5	479800,8	37197
Trust funds	209,4	136,2	405,8	-73,2	-35
Official transfers	12576,1	9465,6	29201,2	-3110,5	-24,7

Source: compiled based on [6]



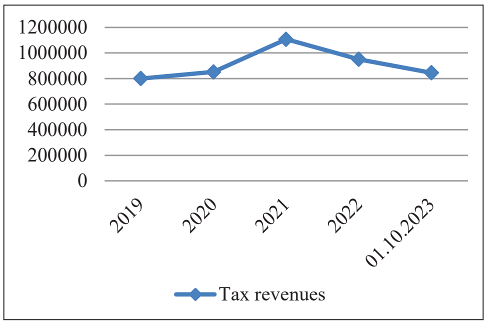


Figure 2 – Dynamics of tax and non-tax revenues for the period 2019–01.10.2023 (million UAH)

Source: compiled based on [6]

a decrease of 17.65 %, for the period of 2021–2022 – an increase of 97.50 % and for 2022–01.10.2023 – an increase of 124.76 %.

As for tax revenues, there was an increase of 6.42 % in 2019–2020, and by 30.08 % in 2020–2021. However, for the period of 2021–2022, this indicator decreased by 14.21 %, and in 2022–01.10.2023 – by 10.99 %.

According to the data in the table 2, it can be seen that the share of the main tax revenues decreased for the period of 2021–2022, namely: excise tax (-36.9 %), corporate income tax (-20.8 %), value added tax (-12.9 %). The increase in revenues to the state budget occurred from the tax and levy on the income of individuals (7.8 %), rent for the use of subsoil (7.1 %) as of 2021–2022.

In the table 3 analyzed tax revenues by types of activities for the period 2021-2023. In general, we observe a slight increase in tax revenues during 2021-2022: supply of electricity, gas, steam, and air conditioning (23.7 %), wholesale and retail trade (46, 2 %), financial and insurance activities (29.0 %), public administration and defense; mandatory social insurance (97.3 %). The decrease in tax revenues occurred in the period 2021-2022: agriculture, forestry and fishing (28.2 %), extractive industry and quarry development (11.6 %), processing industry (5.8 %).

Table 2 – Dynamics of tax revenues to the state budget of Ukraine for 2021–01.09.2023 (billion UAH)

Name of indicators	2021	2022	01.09.2023	Deviation 2022 to 2021	
				billion	UAH
Corporate income tax	147,8	117,0	106,1	-30,8	-20,8
Personal income tax and levy	137,6	148,4	125,1	10,8	7,8
VAT	536,5	467,0	407,5	-69,5	-12,9
Excise tax	162,5	102,4	124,9	-60,1	-36,9
Rent for the use of subsoil	75,6	81,0	46,1	5,4	7,1

Source: compiled based on [6]

Table 3 – Income of taxes by types of activities for the period 2021-01.10.2023 (thousand UAH)

Indicators	01.01.2021	01.01.2022	01.01.2023	01.10.2023	Relative deviation from 01.01.2023 to 01.01.2022, %
1	2	3	4	5	6
Agriculture, forestry and fisheries	31987099,5	32086149,7	23053278,5	12624764,5	-28,2
Mining and quarrying	90864306,1	145713231,2	128837739,2	78022067,2	-11,6
Processing industry	86145242,8	96812302,3	91181587,2	97745279,9	-5,8
Supply of electricity, gas, steam and air conditioning	36232240,9	56119850,8	69428045,4	43462817,8	23,7
Water supply; sewerage, waste management	4211804,8	5101326,7	4398663,6	3711137,2	-13,8
Construction	16342595,4	19114621,1	16846769,9	12496348,5	-11,9
Wholesale and retail trade; repair of motor vehicles and motorcycles	40909798,0	73672978,9	107699941,4	84780284,4	46,2
Transport, warehousing, postal and courier activities	42085290,5	47658040,7	43999990,2	32197001,3	-7,7
Temporary accommodation and catering	2135605,8	2505562,5	1574774,8	2224460,3	-37,1

End of table 3

1	2	3	4	5	6
Information and telecommunications	22483711,6	26825185,7	26295271,1	22573742,6	-2,0
Financial and insurance activities	47846955,9	44035644,1	56794269,7	46017288,3	29,0
Real estate transactions	8693965,9	10563620,7	8460443,2	7427537,4	-19,9
Professional, scientific and technical activity	77434103,3	25363439,4	23800330,3	22551422,4	-6,2
Activities in the field of administrative and auxiliary services	8382194,3	10760705,7	9932414,2	7529347,1	-7,7
Public administration and defense; compulsory social insurance	21824804,8	25140297,1	49614279,3	42770285,3	97,3
Education	6362942,3	8195993,1	7718774,3	5577118,0	-5,8
Health care and provision of social assistance	7652136,9	10135498,4	9648316,9	7720316,9	-4,8
Arts, sports, entertainment and recreation	1367692,4	1717043,5	1605087,8	6408692,0	-6,5
Provision of other types of services	1031941,4	1269728,8	1165398,9	1094319,9	-8,2
Activities of households	523,7	487,5	122,9	4,8	-74,8

Source: compiled based on [16]

Along with the study of the dynamics of tax revenues to the state budget, the variability of the tax debt should be analyzed. “Tax debt – the sum of the agreed monetary obligation, not paid by the taxpayer within the period established by the tax code of Ukraine, and the outstanding penalty” [3].

The dynamics of the tax debt is shown in fig. 3. It is possible to see an increase in the tax debt (excluding customs payments) during 2020–2022, which indicates an increase in the inability of taxpayers to pay taxes on time, especially in the last two years, and is due to the impact of military operations on the financial condition of enterprises, losses incurred from destruction infrastructure. The total amount of debt for customs payments in 2022 compared to 2021 decreased.

“Today, the ROSHEN confectionery factory in Kremenchug employs about 500 people, and its production capacity can reach 300 tons per day. ROSHEN Corporation installed high-quality German, Dutch and Czech equipment at the factory, which has no analogues in Ukraine. ROSHEN production in Kremenchuk is focused on the production of caramel products – lollipop, milk, with various fillings. The factory is the only Ukrainian producer of lollipop caramel with powdered effervescent filling” [8]. The dynamics of indicators of financial and economic activity for 2021–2022 are shown in the table 4.

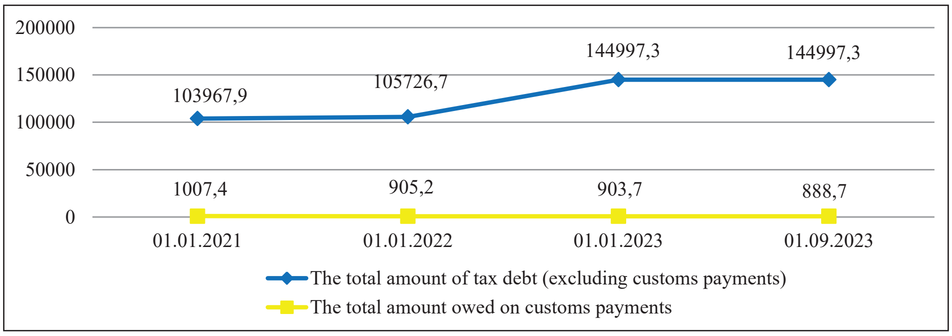


Figure 3 – Dynamics of tax debt for the period 01.01.2021–01.10.2023 (million UAH)

Source: compiled based on [16]

Table 4 – Indicators of financial and economic activity of PJSC “Kremenchuk confectionery factory “Roshen” for 2021–2022 (thousand UAH)

Indicators	**2021**	**2022**	**Deviation 2022 to 2021**	
			thousand UAH	**%**
1	2	3	4	5
Current assets	103097	96565	-6532	-6 %
Non-current assets	339852	342716	2864	1 %
Net income from the sale of products (goods, works, services)	342530	347394	4864	1 %
Equity	399640	400014	374	0 %

End of table 4

1	2	3	4	5
Current liabilities	40502	37033	-3469	-9 %
Long-term liabilities	2807	2234	-573	-20 %
Cost of goods sold (goods, works, services)	303114	295980	-7134	-2 %
Gross profit	39416	51414	11998	30 %
Financial result from operating activities: profit	6822	436	-6386	-94 %
Financial result before taxation: profit	6768	456	-6312	-93 %
Net financial result (profit)	5550	374	-5176	-93 %
Other operating income	931	1003	72	8 %

Source: compiled based on [10]

Taking into account the analyzed data, it should be noted that in 2022, relative to 2021, there was an increase in the following indicators: gross profit (30 %), other operating income (8 %), non-current assets (1 %), net income from sales of products (goods, works, services) (1 %). At the same time, in 2022, relative to 2021, there is a decrease in the indicators of: financial result from operating activities: profit (-94 %), financial result before taxation: profit (-93 %), net financial result (profit) (-93 %), long-term liabilities (-20 %), current liabilities (-9 %), current assets (-6 %), cost of goods sold (goods, works, services) (-2 %).

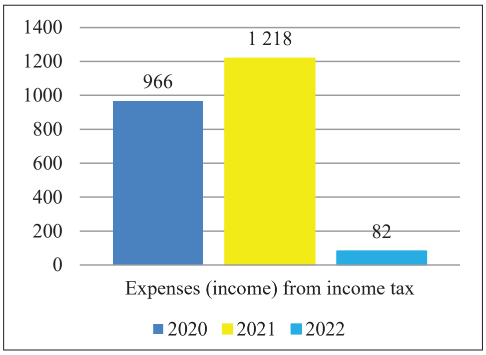
In fig. 4 shows the reduction of income tax expenses for 2020-2022, which indicates a decrease in solvency and profitability of the enterprise under the influence of external and internal factors. In addition, during 2022, the obligations from taxes and fees also decreased.

During the studied period, relative to 2021, negative changes are observed in terms of the company's indicators: spending on paying income tax obligations (-79.1 %), spending on paying value-added tax obligations (-4.3 %), spending on payment of obligations from other taxes and fees (-5.1 %).

Taking into account the data of the analysis of the financial and economic activity of PJSC Kremenchuk confectionery factory "Roshen", we will proceed to the assessment of the level of the tax burden for 2021–2022 (Table 5).

From the table 5, it is possible to see a significant decrease in most of the indicators of the total tax burden during 2021–2022: the share of accounts payable according to settlements with the budget in the total volume of current liabilities (-36 %), the level of the tax burden relative to gross revenue (-9 %), the ratio tax burden on own capital (-10 %), the level of the tax burden relative to the number of employees (-7 %), tax burden for the Single social contribution (-10 %), the level of the tax burden relative to the value of assets (-6 %). Along with this, a significant increase in the tax burden among this group of indicators occurred according to the coefficient of the ratio of receivables and payables according to calculations with the budget (73 %) and the coefficient of diversion of current assets into receivables according to calculations with the budget (8 %). There have been no special changes in the effective income tax rate (0 %) over the past 2 years.

Taking into account the results of the conducted research, it should be noted that the main problems of the tax system of Ukraine are: the presence of corruption schemes at the local and national levels during martial law; significant tax pressure on enterprises operating on the general taxation system and lack of tax benefits; tax evasion of various enterprises due to lack of tax audits; the difficulty of submitting tax reporting in the remote service system for enterprises that work on a simplified taxation system; irrational use of tax revenues at the local and national levels; variability of tax legislation and



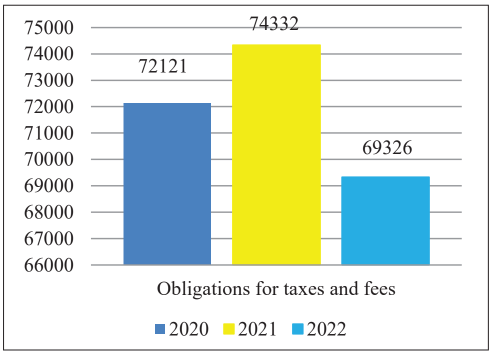


Figure 4 – Dynamics of income tax expenses, tax liabilities and fees in 2020–2022 (thousand UAH)

Source: compiled based on [10]

Table 5 – Tax burden of PJSC "Kremenchuk confectionery factory "Roshen" for 2021–2022 (thousand UAH)

Indicators	**2021**	**2022**	**Deviation from 2022 to 2021, %**
Income tax rate	0,05	0,01	-80,00
The coefficient of the tax burden on equity capital	0,19	0,17	-10,53
The coefficient of diversion of current assets into accounts receivable according to calculations with the budget	0,59	0,64	8,47
The share of accounts payable according to calculations with the budget in the total amount of current liabilities	1,37	0,88	-35,77
The coefficient of the ratio of receivables and payables according to calculations with the budget	1,09	1,89	73,39
Tax burden for the Single social contribution	0,1	0,09	-10,00
The level of the tax burden relative to gross revenue	0,22	0,2	-9,09
The level of the tax burden relative to the number of employees	148,66	138,65	-6,73
The level of the tax burden relative to the value of assets	0,17	0,16	-5,88
Effective income tax rate	-0,18	-0,18	0,00

Source: compiled based on [10; 12, p. 194–196; 13, p. 128–129; 14, p. 317–318]

untimely informing of taxpayers; complexity of the tax administration system; blocking tax invoices.

In order to improve the tax system of Ukraine, directions for optimizing the tax burden on industrial enterprises have been formed, in particular: reducing the level of tax burden for enterprises that, in addition to their main activity, are engaged in charitable and volunteer activities; legislative activity (implementation of the E-reform proposal "10:10:10" for business); continuation of digitization of the State Tax Service of Ukraine, strengthening the level of protection of state programs against cyber attacks; international cooperation, i.e. exchange of experience between domestic and foreign professionals in order to deepen Ukraine's participation in the EU program "Fiscalis"; implementation of AI Tax, Receipt AI, ZeroTax Al, Flyfin tax software; timely informing taxpayers about changes in tax legislation; study and implementation of the experience of EU countries regarding the taxation of enterprise activities.

In order to improve the financial condition of the investigated company PJSC "Kremenchuk Confectionery Factory "Roshen", it is advisable to: observe the principles of tax planning (adequacy of expenses, legal responsibility, confidentiality, controllability, admissible combination of form and content, neutrality, diversification, autonomy), introduction of artificial intelligence (software Flyfin tax, Receipt AI).

Thus, a competent and balanced tax policy will contribute to the improvement of the financial condition of industrial enterprises. Currently, there are problems in the tax system that significantly affect the financial and economic activity of enterprises and the filling of the state budget. Further digitalization of the State Tax Service of Ukraine, improvement of tax legislation, establishment of international cooperation, study of the experience of EU countries and application of artificial intelligence are expedient to solve existing shortcomings.

Conclusions

According to the results of the research, it was determined that the financial condition of PJSC "Kremenchutsk Confectionery Factory "Roshen" during the research period is stable, but there is a decrease in income and an increase in the level of tax pressure. It was established that the tax system of Ukraine has a number of problems that affected the filling of the state budget. It is expedient to reform the tax system by taking into account the experience of the European Union, implementing the digitalization of the State Tax Service of Ukraine, which will contribute to the optimization of the tax burden and the reduction of tax debt of enterprises.

It is expedient to introduce established directions for optimizing the tax burden, which will reduce the tax burden of domestic industrial enterprises, ensure the growth of indicators of financial activity, and contribute to integration processes in the tax sphere between the EU and Ukraine. Overcoming the existing problems in the tax system of Ukraine, its reform and the introduction of innovations in the form of digitalization of the mechanism for paying taxes and fees to the state and local budgets will contribute to the efficient and transparent work of the State Tax Service of Ukraine.

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LABOUR ECONOMICS, PERSONNEL MANAGEMENT AND MARKETING

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MANAGING THE SELECTION AND HIRING OF PERSONNEL IN THE ORGANIZATION

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Key words:
personnel, organization, selection, hiring, personality profile, vacancy, personality profile, recruiting, qualification card

The need for highly qualified employees at any enterprise is determined. It is noted that business success depends on the availability of highly qualified employees. It is substantiated that in order to improve the performance of any organization, management needs quick and accurate decisions on the selection of employees. It is analyzed that recruiting is one of the stages of the personnel management system, which includes the methods used by organizations to ensure the best quality of labor. The definitions of the concepts of selection and recruitment of personnel, their tasks and significance for the organization are indicated. The qualification card is characterized. It is investigated that the selection of employees is the first stage in the process of filling vacant positions and includes studying the characteristics of the vacant position, considering the requirements for attracting suitable candidates, establishing contacts with these applicants and searching for their replacement. It is noted that recruitment begins with determining the availability of a vacancy. The author describes the concept of a vacancy for which a job description is required (actions and goals that make up the content of work), as well as personal requirements of the specialty, abilities and personal qualities. The concept of personality profile, which includes a mental image – the image of an ideal or normal professional – is revealed.

УПРАВЛІННЯ ПІДБОРОМ І НАЙМОМ ПЕРСОНАЛУ В ОРГАНІЗАЦІЇ

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Ключові слова:
персонал, організація, підбір, найм, профіль особистості, вакансія, профіль особистості, рекрутинг, кваліфікаційна карта

Визначено потребу у висококваліфікованих співробітниках на будь-якому підприємстві. Зазначено, що успіх бізнесу залежить від наявності висококваліфікованих працівників. Обґрунтовано, що для покращення результатів діяльності будь-якої організації керівництво потребує швидких і точних рішень щодо відбору працівників. Проаналізовано, що рекрутинг є одним із етапів системи управління персоналом, який включає в себе методи, які використовують організації для забезпечення найкращої якості робочої сили. Зазначено визначення понять відбір і найм персоналу, їх завдання та значущість для організації. Охарактеризовано кваліфікаційну карту. Досліджено, що відбір співробітників є першим етапом у процесі заміщення вакантних посад і включає вивчення характеристик вакантної посади, розгляд вимог щодо залучення відповідних кандидатів, встановлення контактів з цими претендентами та пошук їх заміщення. Зазначено, що підбір персоналу починається з визначення наявності вакансії. Розглянуто опис поняття вакансії, для якій необхідна посадова інструкція (дії та цілі, що складають зміст роботи), а також особисті вимоги спеціальності, здібності та особистісні якості. Розкрито поняття профіль особистості, що включає ментальний образ – образ ідеального або нормального професіонала.

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Problem statement

The selection and recruitment of employees as one of the most important elements of an organization's HR management system is of great interest due to the growing importance of human resources and intellectual capital for maintaining the organization's competitiveness. If earlier the competitive advantage of one company over another was seen mainly in the technical aspect, for example, in terms of the availability and level of use of technology and the latest production equipment, nowadays the most important competitive advantage is the organization. employees who are distinguished by a high level of professional competence.

It is difficult to overestimate the importance of the recruitment and selection process, as it often determines the future of an organization. At the present stage, the selection and recruitment of employees is a priority task facing the organization's management. Today, many reliable and effective recruitment methods have been developed, but practice shows that not all organizations have yet reviewed the selection practices for all applicants. It is undeniable that the HR management process of any organization begins with the selection process, and the ability to select the right employees is the basis for developing their skills, which will benefit employees and the organization as a whole.

Analysis of recent studies and publications

The problem of managing the selection and recruitment of employees at various enterprises and organizations has been widely researched and considered in the works of domestic and foreign scholars: V.R. Vesnina, R. Bennett, O.O. Hetman, G.T. Graham, C.M. Didier, P.F. Drucker, S.A. Ivanova, O.V. Krushelnytska, A.V. Lobzy, A. Mescona, R.M. Fedoriak, and others. However, at the moment there is no universal system of recruitment and hiring that can be applied to every organization, so current research in this area is aimed at finding international methods of employee selection.

Formulation of the objectives of the article. The purpose of this article is to summarize the theoretical provisions on the selection and recruitment of organizational personnel.

Summary of the main research material

In the process of organizing the activities of any organization, the personnel management system, or the so-called personnel management, comes first. E. Michaels, H. Handfill Jones, H. Axelrod, world-famous management professionals, in their famous book "The War for Talent" [1] mention that in the 21st century the need for highly qualified employees is much more than supply. It is clear that the success of a business depends on the availability of such employees, so employers compete with each other in the struggle for efficient workers who can maximize their performance. In such situations, the management of any organization needs fast and accurate solutions for employee selection.

Recruiting is one of the stages of the human resources management system, which includes the methods that organizations use to ensure the best quality of workforce and candidates that can be hired when needed. Sometimes the entire process of working with employees is compared to their selection and placement. In fact, the state of an organization largely depends on the work of its employees, so there is no more important task than the selection of employees based on the business qualities of candidates and their suitability for the position [2]. As O.V. Kruchelnytska rightly notes, employee selection is the process of studying the psychological and professional qualities of employees in order to establish compliance with the requirements of the workplace and selecting available applicants as one of the most suitable for the job, taking into account its qualifications, specialization, personal qualities, abilities, character and interests of the organization [4]. According to H.T. Graham and R. Bennett, recruitment is the first stage in the process of filling vacant positions, which includes studying the characteristics of the vacant position, considering the requirements for attracting suitable candidates, establishing contacts with these applicants and searching for their replacement. job applicant questionnaire [3].

Thus, employee recruitment is a system of objective actions aimed at attracting candidates with the necessary qualities to achieve the goals set by the organization. It is the search, evaluation and hiring of people who are ready and able to work, have the necessary skills and share the company's values. The complexity of recruitment lies primarily in the need to coordinate the activities of staff and management in organizing this process. Creating a certain algorithm of actions during the selection and hiring of employees allows for an effective implementation of this process. Therefore, the issues of establishing a system of employee selection and recruitment are relevant, which makes it possible to reduce the cost of these activities and reduce the number of employees [5]. In our opinion, the special importance of employee selection in an organization is as follows:

1) the selection process eliminates the worst candidates and those who are not suitable for the vacancies. This helps the organization avoid possible problems that may arise in the future due to the wrong choice of a particular candidate (e.g., inconsistency of professional or personal characteristics with the requirements of the vacancy, inconsistency with the work group or company values). Inability to withstand pressure in the workplace, etc.);

2) a well-organized recruitment process allows the organization to spend more time and effort that would normally be spent on finding the right candidate. In other words, a selection process based on science will increase the efficiency of the HR department and allow the employees of this department to pay attention to other issues (such as adaptation, training and development of employees, incentives, etc);

3) properly selected personnel perform their duties well. Their moral and responsible attitude to work will benefit the entire organization: its efficiency will increase;

4) a properly selected employee will easily fit into the working group, which, in turn, will benefit all participants in the labor process: the ties established in the working group will not be broken (which means that the efficiency

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of its work will not decrease or even increase), the new employee will feel comfortable from the first days of work (which will shorten the adaptation period), and the organization's management will be relieved of the need to resolve various disputes that may arise in the event of an incorrect selection of a candidate;

5) the employee will be fully satisfied with his or her work, which is very important because most people spend a lot of time at work, it is one of the priorities of their lives. The amount of recruitment work required is often determined by the gap between the available labor force and future demand. In this case, such issues as retirement, transfer, dismissal due to the expiration of the employment contract, and expansion of the organization's activities are considered. As J. Stradwick correctly notes, recruitment begins with determining the availability of a vacancy, i.e., before starting the selection process, the following alternatives should be considered [6]:

– can the job be outsourced to another company on the basis of a contract? If some activities are not an important part of the business, then outsourcing them to an external organization can save money and time for managers;

– is it possible to reorganize the work? Is it possible to eliminate a permanent position by dividing the work into parts, then get rid of the unnecessary ones and distribute the rest to other employees of the department (or other departments)? Here it is necessary to recall the principle of job enrichment. For example, when a manager is fired, you don't need to look for a replacement, you need to give the current employee more responsibility and decision-making ability. This not only increases efficiency, but also challenges the employee's confidence in the workplace and leads to job satisfaction. This, of course, comes with some additional costs, as employees are unlikely to want to take on additional responsibilities without a pay raise. However, if 7–8 % of employees are paid an additional 5 %, then in general, by losing a job, you can get a lot of savings;

– can I change my work schedule? If the job outlook is unclear, it makes sense to explore the possibility of working overtime until the situation becomes clearer or hiring someone on a part-time basis. This approach provides some flexibility in case the workload increases in the future. However, paying overtime can be expensive, and an overtime system may not be successful in the long run;

– can work be automated? In recent years, progress has been made in automating office work, followed by logistics and manufacturing. Although there is little possibility of replacing a machine operator, the appearance of a vacancy makes it possible to radically revise the entire organization of the workflow;

– is this job rewarding? It is still surprising how many positions there are, even in very small companies, whose true benefits are never discussed. The advent of space may finally provide such an opportunity. If one of the alternative methods does not solve the problem and you need to hire someone, you can move on to defining the detailed characteristics of the vacancy.

To describe a vacancy, you need a job description (the actions and goals that make up the content of the job), as well as the personal requirements of the specialty, abilities, and personal qualities that an employee must have to succeed in the job. Job descriptions can be of two main types, depending on their focus: performing a specific task or being responsible. In these two ways, a person's propensity for responsibility prevails. It should also be remembered that a job description is one of the first detailed sources of information for candidates, so the first step is to clearly define responsibilities [6].

For a selection program to be effective, it is necessary to clearly define the qualities of personnel required for the respective activity. The requirements should be adjusted so that they are fully employee-driven. "Reference" standards for each requirement are developed based on the characteristics of people already working in the business who are well suited to their duties. If the list of requirements for employees is too long, it may be impossible to make a choice. Recruitment begins with a detailed definition of who the organization needs. Traditionally, this process is based on the preparation of a job description, i.e. a document that describes the main tasks of employees in a given workplace. During the selection process, the manager must determine how well the candidate can perform these tasks. To facilitate recruitment, many organizations have begun to create, in addition to the job description, a document that describes the main characteristics that an employee must have to be successful in this position – an identity card and questionnaires.

A qualification card is a set of qualifications, such as education, special skills (knowledge of languages, computer skills, driving), which an employee must possess to hold the position. A qualification card is a tool that greatly simplifies the candidate selection process. Using a system of indicators allows you to systematically evaluate and compare candidates. At the same time, this process leaves out personal characteristics and professional development potential [3].

This drawback can be overcome by a personal personality (or the image of an ideal employee), which is a person's personal characteristics, such as his or her ability to perform certain tasks, types of behavior, focus, ability to work in a group, originality, identity, etc. When assessing a candidate, a personality map is used in the same way as a qualification map: the candidate's abilities are compared with the abilities of the relevant employee [2].

Personal requirements inform the candidate about the traits and qualities needed for the job. They serve to self-select by reducing the number of unsuitable candidates. They are also useful for creating preliminary lists, where the quality of candidates can be compared to what is needed to see who is the best fit during the next stage of selection. Without clearly defined personal criteria, exam candidates will be personality and enthusiasm driven [4]. To make it easier, the personal requirements of employees are set in the form of a personality profile.

A personality profile is a description of the psychological, sectoral, technological, sanitary and hygienic and other characteristics of a specialist, profession, showing the activities of this profession and the problems of its development related to individual psychophysiological qualities of a person and the organization of production.

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It includes a mental image – the image of an ideal or normal professional, framed in terms of psychologically measurable qualities. The psychological professional characteristic of psychology is obtained as a result of psychological analysis of professional activity. Having determined the requirements for the candidate, we proceed to the next stage – attracting candidates.

The biggest challenge at this stage is the budget the company can spend and the human resources it has to choose from.

There are two possible sources that can attract potential candidates: external and internal, depending on the type of HR policy (open or closed) adopted by the organization. Internal sources of filling vacancies include internal competition, skill mix, staff turnover, etc.

If it is not possible to fill a vacancy using internal sources, the company turns to external sources, such as employment centers (services) working with students and graduates of higher education institutions, recruitment (personnel) agencies, search for freelancers, advertising in the mass media, and use of websites on the Internet.

It is worth noting that the most effective is the use of comprehensive methods and resources for finding candidates, when selecting which the company should rely on indicators of financial and economic activity, production characteristics, changes in the labor market and the economy in general [2].

There are many ways to ensure the high quality of employees from the moment of employment in the internal and external culture. Important elements of methods and technologies are the selection, selection of professionals and the recruitment process.

Employee selection is a measurement process that helps to create employees whose quantitative and qualitative characteristics meet the company's goals and objectives. In its most general form, employee selection is the identification, comparison, and connection of the general requirements of the organization and the employee's workplace with the characteristics of a particular person [5]. During the selection of persons for positions, the tasks of recruitment are solved based on the general requirements for a person as a carrier of certain social qualities, taking into account the health status of the future employee, age, level of education, nationality, length of service, etc. Such a selection helps to find specialists who are able to work in business, rather than engage in a particular type of professional activity.

There is an important problem in assessing employees as subjects - a great challenge that does not depend on who is assessing the candidate: the employer or the assessment expert, as well as on the method of assessment, whether it is a biased interview – the person himself or a test. Its developers may also be guided by personal views. The basis for hateful behavior can be a person's appearance (constitution, weight, height) or behavior.

Conclusions

Thus, the selection and recruitment of employees is a process of objective actions aimed at selecting candidates with the necessary qualities to achieve the goals set by the organization. It is the search, evaluation and hiring of people who are ready and able to work, have the necessary skills and share the company's values. Employee selection is the process of studying the psychological and professional qualities of an employee in order to determine his or her suitability for the duties of a job or a specific position, selecting the most suitable candidate from among the applicants, taking into account the suitability. This includes his or her qualifications, specialization, personal qualities and abilities, the nature of the activity, the interests of the organization and the employee. High-quality recruitment helps to increase the organization's profit, productivity and employee morale, which ultimately helps the company to grow.

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PECULIARITIES OF EMPLOYMENT IN THE IT SECTOR DURING THE WAR

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Key words:
competition, hackathon, IT industry, labor market, team projects, training center

The article analyzes the current situation with employment in the IT sector, which has occurred since the beginning of the full-scale war in Ukraine. Statistical data on the job market overload are presented and the consequences of this problem are emphasized. Various IT experts explain the main reasons for the high competition among junior specialists. The experts criticize the approaches to the educational process in private educational institutions that do not provide graduates with the work experience on real projects and teamwork that IT companies are looking for. Based on the existing experience of cooperation between Ukrainian IT clusters and universities, the author proposes a promising solution that has already shown its effectiveness in the international arena. It would allow students of private IT schools to work on live cases in a team, demonstrate and improve their professional skills, develop a network of connections, compete for the main prize and present themselves to recruiters of various IT companies. The article summarizes the dynamics of organized hackathons in Ukraine over the past 7 years.

ОСОБЛИВОСТІ ПРАЦЕВЛАШТУВАННЯ В ІТ СФЕРІ В УМОВАХ ВІЙНИ

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Ключові слова:
ІТ сфера, командні проєкти, конкуренція, навчальний центр, ринок праці, хакатон

У статті розглянута поточна ситуація щодо працевлаштування в ІТ сфері, яка склалась від початку повномасштабної війни в Україні. Наведено статистичні дані щодо перевантаженості ринку праці, а також підкреслено наслідки цієї проблеми. Приводиться пояснення основних причин високої конкуренції серед молодих спеціалістів різноманітними експертами з ІТ сфери. В статті критикуються підходи до навчального процесу в приватних навчальних закладах, які не надають випускникам досвіду роботи на реальних проєктах та роботи в команді, які ціняться ІТ компаніями. На основі вже існуючого досвіду кооперації українських ІТ кластерів та ВНЗ, пропонується перспективне рішення, що вже показало свою ефективність на міжнародній арені. Воно б дозволило студентам приватних ІТ-шкіл попрацювати над живими кейсами в команді, продемонструвати та підвищити свої професійні навички, розвинути мережу зв'язків, позмагатись за головний приз і зарекомендувати себе рекрутерам різноманітних ІТ компаній. У підсумку наведено динаміку організованих хакатонів в Україні за останні 7 років.

Statement of the problem

In recent years, the share of IT services exports to the global market has increased significantly and this area has become appealing to many Ukrainians. In general, until 2022, the IT sector showed predictable dynamics in the number of vacancies and could meet the growing demand of employees but the picture has changed dramatically since the outbreak of war. The labor market is in a severe crisis and competition between job seekers has risen to a new level. This is especially noticeable for junior specialists with no or minimal work experience, who are unable to find a job in IT companies. Currently, even taking specialized courses in IT training centers does not guarantee that a graduate will receive a long-awaited job offer. That is why there is a need to analyze and find new methods and approaches in education, which would allow a newcomer to increase their competitiveness in the national and international labor markets and get a job in an IT company.

Analysis of recent studies and publications

Prominent Ukrainian scientists, including A. Kolot, L. Lisogor, V. Petiukh, L. Shevchenko, V. Blyzniuk, I. Bondar, M. Vedernikova, O. Pishchulina and others, have studied the problems of various aspects of the labor market in Ukraine. However, the described approaches for stabilizing the situation on the labor market do not take into consideration the current realities, namely the introduction of martial law in Ukraine. Hence, this issue requires additional analysis and research, given the current labor market conditions.

Objectives of the article

The purpose of the study is to analyze current approaches in the training of IT specialists and to propose ways to improve the competitiveness of job seekers in the Ukrainian and international labor markets.

The main material of the research

As a result of the full-scale war started by the aggressor country, a huge number of Ukrainians lost their jobs. Some were able to find work elsewhere; some were forced to change their field of activity; many left the country in search of safety. According to a new report by the International Labor Organization (ILO), about 4.8 million jobs have been lost in Ukraine since the beginning of the Russian aggression [1].

Thus, the number of candidates for one position has overwhelm the labor market. This affected not only the IT sector, but also other fields (Fig. 1) but the IT industry is the leader. This was quite natural as people were looking for security in different parts of the world and the IT sector offered the possibility of remote work [2]. In addition, the information technology sector remained almost the only industry that maintained its economic position despite the war [3].

Naturally, as the number of unemployed Ukrainians has increased so has the demand for IT courses. However, there is a problem here: increased competition. There are dozens or even hundreds of candidates applying for the same position. This fact is confirmed by various studies and statistical reports of job search sites as "Work.ua", "Jobs.dou.ua" and "Djinni.co" (Fig. 2) [2].

As we can see from the data above, the gap in the number of vacancies and resumes has been noticeable since the beginning of the war. Until February 2022, this index was at the level of ~65 % and since April of the same year it has fallen to ~12 %. Only a year later, in March 2023, the index recovered to ~30 % and has remained relatively stable.

As mentioned earlier, the situation is the worst for young specialists. Intetics says that the crisis in the market has the most painful effect on beginners in IT: the number

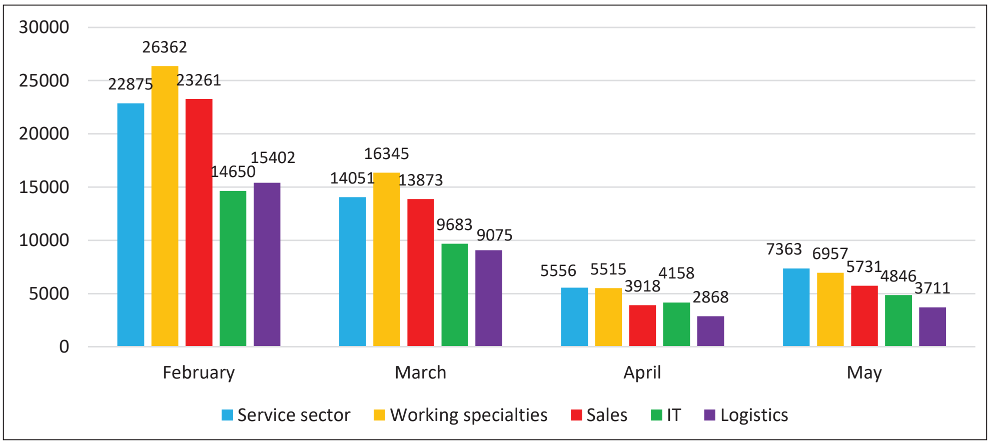

Figure 1 – Dynamics of the number of job vacancies in different categories, 2022

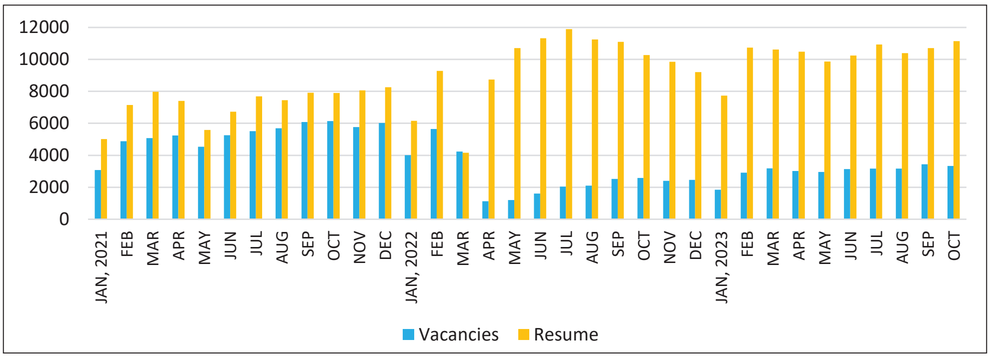

Figure 2 – The correlation between the number of vacancies and resumes in the field of "IT, computers, Internet" on the website "Work.ua"

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of junior candidates is growing steadily, which we cannot say about the number of job offers [4]. If you look at the dynamics of the number of responses to one vacancy with less than 1 year of work experience, you will notice that this index has increased 3–4 times (Fig. 3) as evidenced by statistics from the website "Jobs.dou.ua" [5].

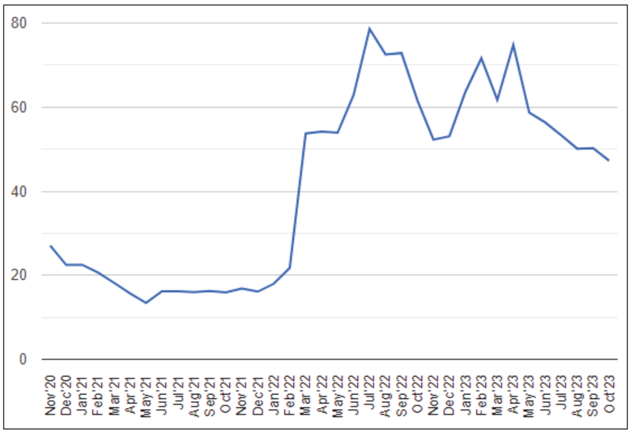

Figure 3 – Dynamics of the number of responses per vacancy

Sigma Software notes that the market is slightly oversaturated but not even with Junior-level specialists, but rather with Trainees, i.e. people who have just graduated from courses and have minimal (several months) experience or no experience working on commercial projects at all [4].

Because of this, it can take more than a week from the moment you submit your resume to the moment you receive an invitation to the first interview. According to Olena Melnyk, Deputy Director of the Employment Policy Implementation Department of the State Employment Center, the average job search now takes almost three months [6]. According to experts who have managed to find a job in an IT company during this period, it is quite common to go through 10–20 interviews before finding a first job in IT.

The main consequences of the labor market overload with young specialists include the following [4]:

– cheaper labor. Due to the high competition, novice specialists, even if they have good skills and experience, may accept lower compensation just to avoid being unemployed, Intetics suggests;

– additional risk and financial burden on the employing company when hiring a specialist without experience. But on the positive side, bootcamps, hackathons and internships organized by companies help junior specialists gain their first real experience, according to AllSTARSIT;

– difficulties in the full adaptation of a new specialist. Companies need to "build up the experience" of training newcomers by creating educational programs with a practical component (internships, workshops, schools, internships and trainings). Candidates without experience should also try to gain this experience, even by joining professional communities in their specialty or by joining a real-life case or project.

So, we can say with confidence that there is a problem in the labor market. Competition for vacancies is greater than in 2014 and 2019 and the question arises of increasing the competitiveness of candidates not only in the national but also in the international labor market.

In order for customers, investments and new projects to return to Ukraine, first, we need to win and stabilize the economy. Second, we need to improve the quality of training for young specialists both at corporate training centers and at universities and private educational institutions. Thus, education remains the key factor that will affect both the professionalism of teams in companies and the ability of newcomers to get a job.

SoftServe, for example, continues developing both its corporate training solutions and collaborative projects with universities. For example, this year the company expanded the number of dual programs with universities from four in Lviv to nine across Ukraine, covering Kyiv, Dnipro, and Kharkiv for the first time. Moreover, the Lviv IT Cluster has additionally focused on vocational education in Ukraine. It is considered another link that can provide companies with experienced Junior or Strong-Junior specialists [4].

Currently, the process of studying in private educational institutions in the IT sector has changed a bit. Looking at this situation a few years ago, there is a certain difference in approaches to education. Earlier it was enough for a company to provide basic theory, experience in solving problems and working on their own pet project so that a specialist was ready to write a resume and get a job in an IT company. Now in order to remain competitive in the market the approaches of training centers have changed and they focus on job guarantees without improving the quality of education.

For example, ProgAcademy and MateAcademy emphasize in their course programs that they will refund your money if you fail to get a job in the company within 12 weeks after submitting your first resume, under certain conditions.

Other companies, such as NeoGoIt, are focused on entering the international market and offer a close-to-the-academic training (online master's degree), lasting two years with a certain number of ECTS credits and an international certificate of completion, which is valid in more than 50 countries.

In addition, the above-mentioned MateAcademy and also BetrootAcademy, Training center by Freshcode offer students consultations on employment in IT companies (resume writing, mock interviews) to increase their chances of getting a first job offer.

The previously mentioned company "Training center by Freshcode" offers students to be employed in their IT company under a number of specific conditions:

– successful completion of practical tasks and passing the exam project with a high score;

– personal recommendation of the mentor for employment;

– availability of a vacant position in the parent IT company.

However, the training center should be commended for using such approaches even before the war began, as it was created based on an existing IT company and what was its competitive feature back then has become almost a necessity today.

However, these adaptations are more likely to be focused on meeting the company's own needs and maintaining a competitive position in the market. There have been no fundamental changes in the process of teaching. Specialists are still limited by their industry experience and are lacking the skills to work with commercial projects and working in a team, which are most valued in IT companies.

In my opinion, a simple but elegant solution to this problem is to organize relevant events that allow students of training centers to work in teams in solving a number of tasks and implementing a specific project.

Today, many higher education institutions are introducing the practice of teamwork in the educational process to address topical issues. Moreover, this trend is popular outside of universities and is practiced all over the world.

The so-called hackathons are organized events during which specialists of the same specialty (but not necessarily) form teams and solve a specific task or develop an effective solution during a limited time (usually 24 hours). Experienced mentors support teams by answering questions and giving advice. All teams present their ideas to the jury at a pitching session. The winners usually receive valuable prizes as well as various kinds of support to bring the project to life (from advice and mentoring to financial assistance) [7].

Among the popular hackathons held for students and interns in Ukraine are the following:

– hackathon for Metinvest interns;
– students' hackathon from the MHP agricultural complex;
– Int20h hackathon and others.

Hackathons often solve problems not just for specific companies or industries but also for the whole society. For example, at the medical hackathon organized by the Massachusetts Institute of Technology, a 3D printing technology for prostheses was developed [7]. In addition, at the NATO TIDE hackathon, the Ukrainian team won by developing an algorithm for automatically determining the geolocation of devices based on received IP addresses to reconnoiter enemy positions [8]. Many world-famous startups, such as Twitter, Facebook, and Zapier were created at hackathons and later grew into multi-billion dollar products [9].

In other words, by participating in such events students can gain a number of benefits:

– professional development. Specialists can test their capabilities, exchange ideas, see how others work and thus invest in their development as professionals;
– career opportunities. Such events will bring together great professionals in one place and enable recruiters to find talented staff as well as allow students to showcase their capabilities;
– networking. An additional advantage is a lot of quality communication and new acquaintances. Each contact with mentors, juries or organizers can result in a benefit – a joint project, job offer, investment or expert advice;
– valuable prizes. It all depends on the specific hackathon but usually the winners receive gifts from the organizers, partners or sponsors of the event.

The popularity of hackathons is confirmed by statistics (Fig. 4). From 2017 to 2019, there was an increase in the organization of such events but since 2020 the number of hackathons in Ukraine has decreased due to the pandemic and war [10].

Of course, these events are designed to be volunteer activities (without payment), but they solve the problems described above with limited practical experience of a newcomer and teamwork. In addition, they provide students the opportunity to build connections in the IT environment and find like-minded people. Participation or especially victory in such events will definitely increase your chances of being selected for a specific position in an IT company among other candidates.

In addition, in 2023, a startup was launched based on the concept of teamwork and solving various problems for specialists without work experience (similar to a hackathon). Of course, students of IT courses are engaged in the development of pet projects that visualize their skills but they do not give them the experience of real teamwork.

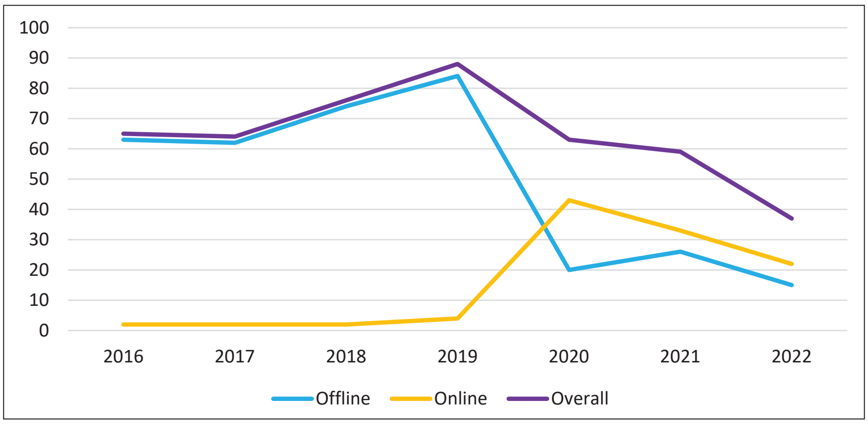

Figure 4 – Number of hackathons held in Ukraine, by year

Therefore, in order to enable specialists from different fields to interact in a team and create their own product the "Team challenge" was created [11].

And I am glad that progress is being made in this direction, because thanks to such services, people will be able to improve their skills and work in a team environment with diverse specialists remotely (allegedly to adopt commercial experience in product development), even without being students.

Conclusions

Therefore, I think the problem of competitiveness in the labor market for young professionals is quite relevant. Educational institutions cannot fully meet the requirements for candidates to be hired in IT companies. The main problem is the lack of project experience and lack of teamwork.

The implementation of the described approaches, based on hackathons and the "Team challenge" product concept, helps to build networking, search for talent, potential employment, etc. People will get free but valuable experience working on real projects and gain teamwork skills.

Private educational institutions in cooperation with IT companies should learn from the experience of Ukrainian IT clusters that have been holding such events for a long time and have demonstrated their effectiveness. As a result, this will increase the competitiveness of Trainee and Junior specialists in the national and international labor markets as well as provide an additional powerful boost to the Ukrainian economy.

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INNOVATIVE TECHNOLOGIES FOR SELECTING CANDIDATES IN ORGANIZATIONS

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Key words:
Artificial intelligence, recruitment process, candidates experiences, employer tool, recruitment industry

The article explores the field of innovative technologies in the selection of candidates for organisations, emphasising their role in increasing efficiency, reducing recruitment costs and improving the quality of staff. With a focus on behavioural analysis systems and artificial intelligence, the authors show how these technologies analyse candidate behaviour in real time, assess emotional intelligence, and automate processes such as CV review and online testing. The article outlines methods of optimising the selection process, with a particular focus on artificial intelligence and machine learning for objective decision-making: automated CV screening, interactive online tools and video interviews. The authors present a model of a digital recruitment system with a list of key elements, such as automated pre-screening using artificial intelligence, data analytics, virtual interviews, mobile applications, augmented virtual reality for skills testing, and reliable data protection mechanisms. The model of a digital recruitment system emphasises the importance of using innovative technologies as tools rather than replacing human experience, and also highlights ethical considerations and data security. The potential benefits of innovative technologies are grouped.

ІННОВАЦІЙНІ ТЕХНОЛОГІЇ ВІДБОРУ КАНДИДАТІВ В ОРГАНІЗАЦІЯХ

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Ключові слова:
штучний інтелект, рекрутинговий процес, досвід кандидатів, інструмент роботодавця, рекрутингова індустрія

У статті досліджено сферу інноваційних технологій у відборі кандидатів для організацій, підкреслено їх роль у підвищенні ефективності, зниженні витрат на рекрутинг і підвищенні якості персоналу. Авторами розкрито, акцентуючи увагу на системах поведінкового аналізу та штучному інтелекті, як ці технології аналізують поведінку кандидатів у режимі реального часу, оцінюють емоційний інтелект та автоматизують такі процеси, як рецензування резюме та онлайн-тестування. У статті окреслено методи оптимізації відбору, з особливим акцентом на штучному інтелекті та машинному навчанні для об'єктивного прийняття рішень: автоматизований відбір резюме, інтерактивні онлайн-інструменти та відеоінтерв'ю. Авторами представлено модель цифрової системи підбору персоналу з переліком ключових елементів, таких як автоматизований попередній відбір за допомогою штучного інтлекту, аналітика даних, віртуальні співбесіди, мобільні додатки, доповнена віртуальна реальність для тестування навичок і надійні механізми захисту даних. У моделі цифрової системи підбору підкреслено важливість використання інноваційних технологій як інструментів, а не заміни людського досвіду, а також наголошено на етичних міркуваннях і безпеці даних. Згруповано потенційні переваги інноваційних технологій.

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Statement of the problem

In the evolving landscape of information technology and human resource management, it has been noted over the decades that these two realms have become intricately intertwined, giving rise to new terms such as human resource information systems, digital human resource management, automated human resource processes, enterprise resource planning with the integration of the Internet of Things (IoT), data mining, and the recent incorporation of artificial intelligence. This infusion of new technologies can be likened to adding fresh ingredients to an old recipe.

Once again, the dynamism of information technology is evident in its continual innovation within the business sector. The latest technological solutions devised to address the intricate challenges across various organizational functions are capturing the attention of managers across different departments, domains, and areas, including the human resource department. This ongoing evolution underscores the significant impact of technology on reshaping traditional approaches to human resource management.

Today, there are numerous attempts to develop software aimed at automating recruitment processes. However, most of these developments are limited in their applicability to innovative enterprises. They are either focused on analyzing texts with a limited range of topics or rely solely on formal indicators of applicants' education or professional qualifications.

Analysis of the latest research and publications

The analysis of recent research and publications encompasses key works that delve into European human resource management policies, knowledge management practices, and challenges in the recruitment and selection process.

C. Brewster and A. Hegewisch [1] provided a comprehensive survey of human resource management practices in Europe. By utilizing the Price Waterhouse Cranfield survey, Brewster and Hegewisch explore the alignment and divergence between HR policies and actual practices. The research sheds light on the dynamics of HRM in different European contexts, offering valuable insights into the challenges and successes of HR policies in the region. Inkinen's review [2] focuses on the empirical research surrounding knowledge management practices and their impact on firm performance. By analyzing a range of studies, the author synthesizes findings to provide a holistic understanding of the relationship between knowledge management and organizational success. The work contributes valuable insights for organizations seeking to leverage knowledge effectively for enhanced performance. Rozario and Venkatraman's empirical study [3] delves into the challenges faced in the recruitment and selection process. By employing empirical methods, the authors identify and analyze the obstacles organizations encounter during candidate selection. The research is instrumental in providing practical implications for improving recruitment processes, addressing the identified challenges, and optimizing talent acquisition strategies. In summary, these works contribute significantly to the understanding of European HRM practices, the impact of knowledge management on firm performance, and the empirical challenges associated with recruitment and selection processes. The collective insights from these publications offer a well-rounded perspective for researchers, practitioners, and organizations aiming to enhance their human resource and knowledge management practices.

Objectives of the article

The purpose of this study is to provide an analytical overview of digital methods capable of recognizing the competencies of specialists, followed by an analysis of the applicability of such solutions for specific recruitment procedures.

The main research material of the research

Innovative technologies for selecting candidates in organizations are the latest tools that help to efficiently select candidates for vacant positions, reducing recruitment costs and improving the quality of personnel. However, such technologies require significant investments and are often used in large organizations.

One of the innovative technologies used in organizations for candidate selection is behavioral analysis systems. These systems are used to analyze the behavior of candidates in real time while communicating with recruiters or during online interviews. Behavioral analysis systems are used to determine the level of emotional intelligence of candidates, their level of confidence, and other aspects of their behavior. This allows recruiters to understand more about candidates and their suitability for a particular position.

Another innovative technology that is currently very popular in recruiting is the use of artificial intelligence. Artificial intelligence is used to automate many candidate selection processes. For example, artificial intelligence can be used to automate the process of reviewing resumes, identifying keywords that indicate a certain level of experience or skills of a candidate, and selecting candidates based on the analysis of their profile on social media and other sources. Online tests have also become popular to determine the level of knowledge and skills of candidates. These tests can be specifically designed for a particular position or use well-known tests already on the market.

One of the innovative technologies is the automated selection of resumes. To do this, analyzer programs are used that read information from resumes and weed out candidates who do not meet the requirements for the position. This approach reduces the time spent on reviewing resumes and increases the accuracy of candidate selection.

Interactive selection tools that allow candidates to complete tasks online are also increasingly used. These can be video interviews or tests using interactive elements. Such tools can increase the efficiency of candidate selection and reduce the cost of organizing the interview process.

Innovative candidate selection technologies also include the use of artificial intelligence and machine learning. This allows you to analyze large amounts of

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data about candidates, which allows you to make a more objective selection and predict the candidates' ability to succeed in the organization. For example, you can use analytics tools to analyze candidates' social networks to get a more complete picture of their skills and interests. You can also use speech analysis to evaluate the quality of a candidate's communication and his or her ability to relate to other employees.

Innovative recruitment technologies also help to improve the quality of candidates selected for a position. For example, some organizations use video interviewing services to select candidates. Such interviews allow for a more detailed assessment of candidates and their skills.

Innovative technologies can also help improve the process of interacting with candidates. One example is the use of chatbots to communicate with candidates. Chatbots allow you to provide 24/7 support and answers to candidates' questions. This saves recruiters time and improves candidate engagement.

The process of electronic recruitment encompasses various stages, including the attraction, selection, and interview of candidates, as well as acquiring additional information, finalizing contracts, and onboarding new employees. Several contemporary factors contribute to the growing prevalence of e-recruitment, notably mobilization, socialization, globalization, recruitment automation, visualization, skills standardization, and the emergence of job aggregators. To facilitate these aspects, additional electronic resources such as social media, mobile recruitment platforms, and automated HR management systems become imperative. Currently, there exist approximately ten modern recruitment methods and tools designed to assist recruiters in their personnel management endeavors.

Upon examining the definitions outlined in Table 1, it becomes evident that contemporary HR practices encompass a diverse array of recruitment tools, among which recruitment technology software tools hold a prominent position. The advent of digital innovations has ushered in substantial consequences and transformations across various domains, with recruiting being no exception. Leading-edge recruitment firms consistently seek out the most effective online tools and software to streamline their processes. These tools systematically aid in every facet of the hiring process, while supplementary resources have the potential to revolutionize the approach to social media recruiting and the onboarding of new employees.

Also he authors propose a Model of a digital recruitment system (integration of innovations in the HR process). In today's business environment, companies are increasingly using digital recruitment systems to improve the efficiency and accuracy of candidate selection. Below are the key elements of such a system.

1. Automated pre-selection using artificial intelligence (AI): The system uses AI to analyze and categorize candidates' resumes. Machine learning algorithms identify key skills, education, and work experience, helping recruiters to pre-screen candidates faster and more efficiently.

2. Data analytics to predict success: the system uses data analytics to create predictive models of candidate success. Based on historical data and interview results, the system develops models that help predict the likelihood of a candidate's success in a particular position.

3. Virtual interviews and assessment of communication skills: the system includes virtual interviews and tests that allow candidates to demonstrate their communication skills and analytical abilities. This can be done through specialized platforms or using virtual technologies.

4. Mobile application for convenient candidate interaction: the system provides a mobile application that allows candidates to quickly view vacancies, send their resumes and receive notifications about the status of their applications. This makes the process of interaction with candidates more convenient and mobile.

5. Use of augmented virtual reality (VR) for skills testing: the system can implement VR to create simulations of real work scenarios where candidates are offered tasks that allow recruiters to assess their skills and reactions in real-world conditions.

6. Effective data protection and ethics mechanisms: the digital selection system respects the privacy of candidates and uses effective data protection mechanisms. When using AI and data analytics, the system adheres to ethical standards and defined rules for the use of information.

Table 1 – Software products used in the recruitment system

Software product	Brief characteristics
Github	It serves as a platform for individuals or teams working on projects, offering employers a comprehensive understanding of those who can contribute value to their business.
Meetup	This system facilitates connections between employers and industry professionals. Even if one lacks the time to attend an event, an innovative recruitment approach involves identifying individuals interested in a specific event and reaching out to them if they prove to be promising prospects.
1 – Page	The platform efficiently identifies the most relevant candidates by providing up-to-date information and contact details.
Jobs2Careers	Employing a pay-per-candidate model for posting job openings, this software simplifies the process.
Zao	This system is designed for seamless management of rewards and incentives for referrals, incorporating social recruiting strategies.
SparkHire	Specializing in video interviews, it streamlines the interviewing process for remote or busy candidates, allowing the creation of question templates.
HireVue	Emphasis is placed on the quality of video and audio. The interviews undergo evaluation using predictive analytics and come with valuable reporting features.

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This digital recruitment system integrates innovative technologies to provide more accurate and faster candidate selection, ensuring that the company is able to attract and retain highly professional employees.

Thus, innovative candidate selection technologies in organizations can greatly facilitate the process of recruiting qualified employees and ensure higher quality selection. They allow you to automate many processes and reduce the time and resources spent on finding and selecting candidates.

It is important to note that the use of innovative candidate selection technologies should not replace the work of recruiters and people involved in candidate selection. Technology should be used as a tool to improve the selection process, not as a substitute for human expertise. In addition, it is important to ensure the confidentiality and security of candidate data collected during the selection process. Companies must comply with all rules and regulations to prevent possible problems with candidate data. Finally, it is important to remember that while innovative candidate selection technologies can make the selection process easier, they do not guarantee job success. It is important to remember that the success of an organization depends on the team of employees and their collective experience and knowledge.

Innovative candidate selection technologies in organizations can be a great supportive tool to ensure higher quality selection and recruitment of qualified employees.

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IMPROVEMENT OF THE MANAGEMENT SYSTEM ENTERPRISE PERSONNEL

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Key words:
personnel, enterprise, personnel management, recruitment and selection process, motivation, standard

The concept of personnel management is substantiated. The system of personnel management, developed by leading domestic companies with consideration of introduction of advanced foreign technologies of personnel management and stimulation of own expertise, is researched. The subsystems of personnel management are disclosed. The principles of creation of management systems in accordance with the international standard ISO 9001:2000 are defined. The main factors of human resource management are considered. The links of the personnel system are substantiated. The process of motivation of employees is revealed, which consists of three groups of motivation: methods of motivation of subjects, methods of social stimulation and methods of moral motivation. The revealed groups of incentives are specified. Ways to improve the efficiency of the personnel management system are developed.

УДОСКОНАЛЕННЯ СИСТЕМИ УПРАВЛІННЯ ПЕРСОНАЛОМ ПІДПРИЄМСТВА

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Ключові слова:
персонал, підприємство, управління персоналом, процес набору та відбору, мотивація, стандарт

Обгрунтовано поняття управління персоналом. Досліджено систему управління персоналом, яка розроблена провідними вітчизняними компаніями з урахуванням впровадження передових зарубіжних технологій управління персоналом та стимулюванням власної експертизи. Розкрито підсистеми управління персоналом. Визначено принципи створенні системами управління відповідно до міжнародного стандарту ISO 9001:2000. Розглянуто основні фактори управління людськими ресурсами. Обгрунтовано ланки кадрової системи. Розкрито процес мотивації працівників, який складається з трьох груп мотивації: методи мотивації суб'єктів, методи соціального стимулювання й методи моральної мотивації. Розкриті групи заохочень конкретизовані. Розроблені шляхи підвищення ефективності системи управління персоналом.

Problem statement

In today's market environment in Ukraine, the main factor of national competitiveness is not natural and economic, but human resources, i.e. personnel, which is one of the most important resources of an enterprise necessary to achieve all goals and objectives. Every enterprise of any form of business has a human resources management system or personnel system. If the existing system is practical and mobile, it can be easily changed (improved) if necessary. If parts of the HR system are uncertain, then its adjustment becomes problematic and even impossible, so it is necessary to evaluate the existing HR system.

Analysis of the latest research and publications

Analysis of the works of various scholars, including: S.V. Belyaeva, A.M. Vinogradskaya, M.D. Vinogradsky, I.M. Dashko, O.V. Krushelnytska and other scientists from both Ukraine and foreign practice prove that personnel management is a system consisting of parts, i.e. internal systems, each of which has its own uniqueness.

Formulation of the objectives of the article

The aim of the work is to form a personnel management system at an enterprise on the basis of the personnel management system of ISO 9001:2000, based on the

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identification of typical components of the personnel management system and the identification of opportunities and directions for their standardization.

Summary of the main research material

Human resources management can be defined as an activity aimed at achieving the most efficient use of personnel to achieve the company's goals and personal objectives. The former are traditionally associated with ensuring business integrity. Moreover, efficiency is sometimes understood in a narrow sense, for example, as maximizing profits. Increasingly, however, efficiency is viewed not only in economic terms, such as savings, quality, production, creativity, and profit, but also in a general context related to ideas, personal and psychological aspects such as employee satisfaction with their work [2].

The HR management system developed by leading domestic companies, taking into account the introduction of advanced foreign HR management technologies and stimulating their own expertise, today includes the following subsystems:

1. Analysis and planning of personnel: this subsystem includes the development of personnel policy, development of a personnel management strategy, personnel talent and labor market analysis, personnel planning, forecasting personnel needs, organizing advertising and establishing interaction with external organizations.
2. Selection and recruitment of employees: conducting interviews, tests, surveys to demonstrate the level of intelligence, professionalism, communication skills and other necessary qualities.
3. Organization of staff training and development: staff training, reconstruction and professional development, induction, organization of staff growth, formal and professional promotion and staff development, work with the personnel database.
4. Personnel appraisal and relocation: carrying out activities aimed at showing that the results of the task, the quality and abilities of the employee's personality meet the requirements of the work performed.
5. Salary management.
6. Motivation of employees: development of incentive systems, development of remuneration systems, participation of employees in the profit and capital of the business, development of moral incentive systems for employees.
7. Accounting of employees of the enterprise: accounts of admission, transfer, allowances and payments to employees, dismissal of employees, organization of effective use of employees, management of employment of employees, management of employees.
8. Organization of labor relations in business: assessment of employees' performance of their work duties, formation of employees' sense of responsibility, analysis and regulation of team and individual relations, management of industrial conflicts and stress, social and psychological diagnostics, establishment of corporate culture norms, handling labor relations complaints.
9. Creation of working conditions: creation of safe working conditions for employees; compliance with the rules of work psychology, ergonomics, technical aesthetics; employee safety.
10. Community development and social cooperation: organization of nutrition, health care and family services, entertainment and cultural and recreational activities, conflict and stress management, organization of social insurance.
11. Personal security.
12. Legal and informational support of the HR management process: resolution of legal issues in labor relations, preparation of regulatory documents on them, provision of necessary information to all HR departments [1; 3].

The following principles were defined when creating a management system in accordance with the international standard ISO 9001:2000

– concentration of employees in the HR management system to solve the most important tasks;
– specialization of work in the personnel management system;
– parallel implementation of individual management decisions;
– adaptation of the HR management system to changes in the organization's goals;
– sequence of work on the creation of a personnel management system;
– continuation of work of employees of the personnel management system;
– rhythmicity in the performance of tasks;
– order and purpose of data required to make an administrative decision [4].

According to internal and external practice, the personnel management system (HR system) is a logical chain through which each employee goes through the entire working cycle of the company – from recruitment to employment.

The success of human resource management is determined by two main factors:

1) the ability of the enterprise to clearly define the employee behavior required to achieve its strategy;
2) the ability to apply effective management techniques to guide the behavior of the employees it wants [8].

Both tasks are equally important and challenging, especially in the context of changing economic markets.

The listed parts and corresponding systems are subject to standards according to ISO 9001:2000. When building a human resources system, it is necessary to remember that it is a market entity, and customers are authorities and structural units that have problems with employees, and suppliers are other sectors, training centers, recruitment agencies and training organizations. The labor management system should be aligned with the business and the market. The analysis of Ukrainian companies has shown that every company has the listed links of the HR system in one form or another [5].

In order for it to be successful, it is necessary to adequately assess each of them, which is what the standards allow. Let's take a look at each of the systems below:

1. The recruitment and selection process is linked to the situation on the labor market. If the supply in this

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market exceeds the demand, then a long list of candidates for a particular position is compiled. Each candidate on this list has to be evaluated according to certain criteria.

As a result of this initial evaluation, the list is shortened. Each candidate from this list is subjected to an evaluation process, which is conducted by the HR manager, department head, or head of the organization. If the demand exceeds the supply, it is recommended to continue evaluating candidates without shortening the list [7].

The preparation of documents and the recruitment process must comply with the legislation of Ukraine for a certain period, and the meaning of building a candidate assessment system is based on the candidate's movement up the ladder "employee supervisor – head of department – head of the enterprise". It should be noted that, depending on the specifics, needs and tasks that the company solves through the assessment process, it may have a global assessment system that is used or classified in the systems of specific positions.

2. The way employees are adapted may vary depending on the specifics of the enterprise, its social policy, customs and other conditions. The main purpose of this system is to provide services to a young person who has started work in the form of information about the enterprise, distribution, position and guaranteed assistance with respect to positions. The purpose of these services is to quickly and effectively help new employees to master the production process, feel the team and become a full-fledged part of it.

3. Employee motivation system. An important part of the levels of the work system should be occupied by processes that, in particular, study goals and counter-goals. First of all, it is necessary to introduce technical means of obtaining information to solve the problem of employee motivation. At the level of registration:

– periods for determining the level of employee motivation;

– a document containing the results of the analysis;

– a way to use these results and collected statistics to improve the incentive system;

– use of information on employee motivation in documents related to the company's development prospects [6].

It should be emphasized that assessing the level of employee motivation at enterprises is a new, relevant and particularly important area. The experience of this area shows the most typical mistake: a clear and competent method is substituted by the attention of managers without searching, collecting and analyzing motivational statistics.

If an employee's goals are the internal engine of a person's life and work, then motivation is the "fuel" that determines the quantity and quality of the work of a particular employee – the "machine" of the business. The process of employee motivation consists of three groups of motivation:

– methods of motivating subjects (types of salary, additional payments, bonuses, financial assistance, bonus system, compensation, distribution)

– methods of social incentives (vouchers, travel, professional development, interest-free loans, health insurance);

– methods of moral motivation (gratitude, presentation of a valuable gift, "best in class" awards, flexible work schedule).

All groups of incentives are specific and frequently used in practice. The analytical information obtained during the incentive study should be used to improve the incentive system. Therefore, the incentive system should not be developed by itself, but as a result of monitoring the motivational activities of employees.

4. Employee development system. This system consists of two parts: a system of physical development of employees and a system of professional and knowledge development. The physical development system includes sports facilities, sports grounds, and daily sports activities. The professional development of employees is an important process that directly affects the competitiveness of the business.

As already mentioned, the quality management system in accordance with MS ISO 900:2000 is based on two fundamental methods – process and system.

The international standard ISO 900:2000 requires the creation of documented procedures for each selected process of the HR system, so the above systems provide a real basis for the correct construction of the HR system and its documentation.

Unfortunately, most Ukrainian companies do not currently use documents in their HR systems. After all, the company's standard HR system is efficient and effective. Building HR systems and their standards in accordance with ISO 9001:2000 will give Ukrainian companies a real competitive advantage – experienced, trained, properly motivated and motivated employees.

Conclusions

Improving the management structure of the enterprise and its Thus, the movement of every enterprise depends on its personnel. People determine the feasibility of equipment and technology, they determine the amount of work to be done, adapt their capabilities to the structure of the organization, so employees are the core and most important part of any management system and any production system.

So, based on the above factors, the following are the ways to improve the efficiency of the HR management system:

– special units, effective broadcasting of most activities; determination of management capabilities based on professional competence;

– creation of effective working conditions, which requires proper organization and equipment of employees' workplaces, their planning, ensuring the best working conditions; equipment and computerization of workplaces;

– development of an information system that ensures effective communication between employees and company departments;

– application of an adequate management style in internal and external issues affecting the business;

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– wide representation of active forms of coordination of activities of all entities involved in the company's HR management;

– introducing the practice of training young specialists and intensive training of employees for effective adaptation to work;

– commodity incentives for employees and monitoring of wages and other incentive factors, which allows to assess the current state of the problem, find out the reasons for its occurrence, clarify the ways of organizing a system of commodity incentives; introduction of progressive forms of non-material incentives for employees;

– participation of employees in the process of developing and making management decisions;

– assistance in finding a new job and selection of appropriate vacancies in case of dismissal (employment);

– creating an organizational business culture, developing common values recognized and approved by employees.

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FORMATION OF A COMPREHENSIVE APPROACH TO ASSESSING THE EFFECTIVENESS OF STAFF INCENTIVES AT THE ENTERPRISE

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Key words:
personnel, staff motivation, productivity, enterprise, personnel evaluation, personnel management, system

The article examines the theoretical aspects of staff work stimulation, presents a thorough analysis of approaches to determining the content of work stimulation, and offers its own vision of this concept. The main stages of the process of forming a labor incentive system at the enterprise are grouped, it is established that the lack of an appropriate level of development and functioning of the labor incentive system can be considered as one of the consequences of insufficiently developed and formed business processes, accordingly, it is proposed to improve the assessment of the effectiveness of personnel incentives at the enterprise, and a scheme is formed a comprehensive approach to assessing the effectiveness of staff stimulation at the enterprise.

ФОРМУВАННЯ КОМПЛЕКСНОГО ПІДХОДУ ДО ОЦІНКИ ЕФЕКТИВНОСТІ СТИМУЛЮВАННЯ ПЕРСОНАЛУ НА ПІДПРИЄМСТВІ

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Ключові слова:
персонал, мотивація персоналу, продуктивність праці, підприємство, оцінка персоналу, управління персоналом, система

У статті досліджено теоретичні аспекти стимулювання праці персоналу, представлено ґрунтовний аналіз підходів до визначення змісту стимулювання праці та запропоновано власне бачення цього поняття. Згруповано основні етапи процесу формування системи стимулювання праці на підприємстві, встановлено, що відсутність належного рівня розвитку та функціонування системи стимулювання праці можна розглядати в якості одного з наслідків недостатньо розвинених і сформованих бізнес-процесів, відповідно запропоновано удосконалити оцінку ефективності стимулювання персоналу на підприємстві та сформовано схему комплексного підходу до оцінки ефективності стимулювання персоналу на підприємстві.

Problem statement

Analysis of the labor incentive system at the enterprise is one of the key factors in the exit of many enterprises of the real sector of the economy from the crisis situation and ensuring their stable economic growth. This, in turn, has a positive effect on the level of economic security and increasing the risk tolerance of business entities in modern conditions of economic turbulence and uncertainty. Increasing the productivity of business processes means expanding the boundaries of the business entity's activities under the conditions of achieving relative savings in the use of resources. This is especially important for the process of using labor resources, as one of the most important factors in the development of the enterprise. Achieving high rates of personnel return is impossible without the formation of an effective labor incentive system. In view of the above, the investigated issue is quite relevant, as it forms the prerequisites for ensuring the effective work of individual enterprises, as well as industries and the economy as a whole.

Analysis of recent research and publications

Having studied the latest research on staff incentives, we analysed the authors' publications: A.A. Zakharova, L.M. Shulgina, A.O. Klymchuk, A.M. Mykhailov, P.A. Strelbitsky, T.I. Lysenko, I.V. Usichenko, G.V. Volkivska, S.I. Derevyanko, T.I. Batrakova, V.M. Gelman and others. Having thoroughly studied the approaches to the concept of staff incentives, it should be noted that a significant number of works on the topic are theoretical in nature and do not take into account the turbulent environment and the current

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state, and the authors' works do not contain a comprehensive approach to assessing the effectiveness of staff incentives at the enterprise, so the topic requires further research and improvement.

Formulation of the goals of the article

The article is aimed at studying the existing approaches to defining the concept of staff incentives, improving it, and proposals for forming a comprehensive approach to assessing the effectiveness of staff incentives at an enterprise.

Presentation of the main research material

In the current conditions of certain problems and crisis phenomena in the economy, ensuring the efficiency of enterprises, including in the area of employee incentives, is a rather urgent issue. An important prerequisite for achieving the efficiency of economic activity is the establishment of an optimal system of staff incentives and the formation of appropriate motivational mechanisms.

The labour incentive system is a rather multifaceted and complex concept. In order to study its essential aspects, it is necessary to first define the content of the concept of labour incentives. Modern scientific literature includes many approaches to its interpretation, taking into account different points of view of different authors, the main ones of which are shown in Table 1.1.

Analysing the various definitions of labour incentives given in Table 1, we can note the lack of consensus among scientists on the essential form. When describing the concept, such defining terms are used as a way of managing an employee's labour behaviour, influence on the motivational structure of a personality, influence on an employee, economic incentives, a way of remunerating employees, a system of material and moral incentives, application of incentives to a person, etc.

Some scholars equate the system of labour incentives with the effectiveness (efficiency) of the enterprise. However, in our opinion, such a statement cannot be reasonable. Agreeing with this opinion, on the one hand, it is possible to assert a direct link between the efficiency of activity and the optimality of labour incentives. However, on the other hand, the system of labour incentives is only a part of the economic system within a particular enterprise. After all, the motivational mechanism alone is not able to ensure the appropriate level of efficiency of activity. This requires an effective organisation of sales, financial policy, marketing management, etc. Therefore, the existence of a labour incentive system is mandatory for effective operation, provided that it is linked to other management subsystems and contributes to their development.

Based on a synthesis of the above interpretations, we will provide our own definition of the concept of "staff incentives" as a combination of economic forms and methods of encouraging employees to increase their interest and economic responsibility for the results of activities that contribute to the dynamic development of a business entity and increase the efficiency of its activities.

In today's turbulent economic environment, an important role is given to the identification of individual components of the labour incentive system in various aspects of management. According to the authors of the researched work, the process of forming a labour incentive system at an enterprise should be considered as a complex of a number of complementary stages, which are shown in Fig. 1.

The lack of an adequate level of development and functioning of the labour incentive system can be seen as one of the consequences of insufficiently developed and established business processes [2].

The working conditions at an enterprise are of great importance in the process of forming a labour incentive system and its impact on various aspects of labour organisation. The presence of conflicting relations at the enterprise may have a negative impact on the formation of the labour incentive system, as well as on the existing

Table 1.1 – Scientific approaches to determining the content of labour incentives

Author / Source	Definition
Tax Code of Ukraine	basic and additional wages, other incentive and compensation payments paid (provided) to the taxpayer in connection with the employment relationship in accordance with the law
International Accounting Standard	all forms of compensation provided by by the business entity in exchange for services rendered by employees.
Accounting Regulation (standard)	current and future income of an individual and/or members of his/her family, which are related to the current and past work of an individual at a particular enterprise (institution, organisation) and are paid directly by the enterprise or through a third party
Zakharova A.A., Dolgaleva O.V., Shulgina L.M.	all forms of current and future compensation and additional benefits provided by the state economic entity of the donation independently or through a third party to the employee and his or her family members
Klymchuk A.O., Mykhaylov A.M.	an element of production costs and, at the same time, the main factor in ensuring the material interest of employees in achieving high end results of work
Strembitsky P.A., Strelbitska O.P.	the aggregate of payments and compensations in money (currency) and (or) in kind held by an employee (currently accrued by him/her) for a certain period of time (day, month, year)
Lysenko T.I., Usichenko I.V. , Volkivska G.V., Derevyanko S.I.	a system of tangible and intangible incentives for staff to motivate them to increase the results of economic activity both in terms of individual business processes and in the form of the final result, which is monetised in the form of profit
Batrakova T. I., Chernyshova A. V.	the aggregate of all compensation provided by an entity in exchange for services rendered by employees. The definition refers to services rendered in the past (past work)

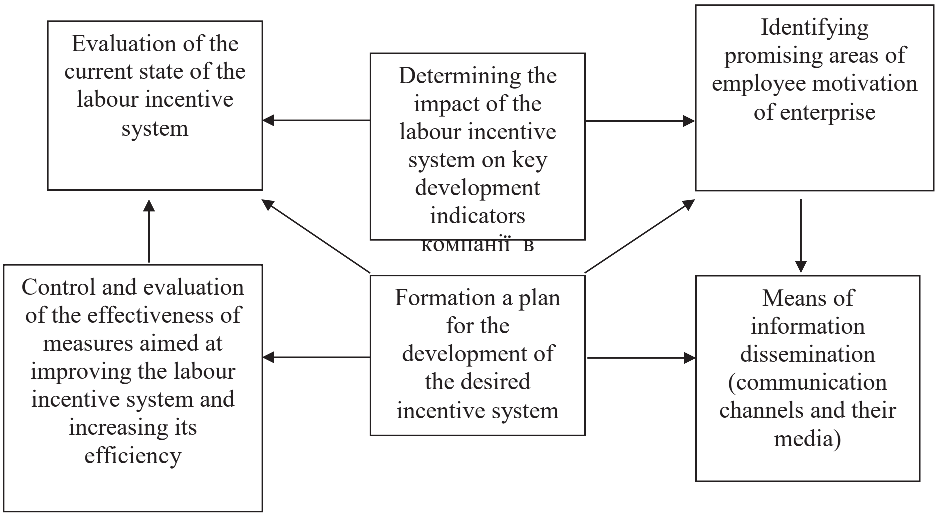

Figure 1 – The main stages of the process of forming a labour incentive system at an enterprise [formed by the authors]

norms and values of the team. Consideration of the interests and values of employees is of great importance in the targeted development of an incentive system. On the one hand, management can rely on them when implementing the norms of the labour incentive system. On the other hand, they can be used as a motivation for employees to master the norms of the labour incentive system. Thus, wages can be used as an incentive to apply the principles of reforming the labour incentive system in practice [3].

In addition, analysing the views of scholars and practicing managers, it can be noted that a significant number of researchers believe that if a company is able to pay competitive (high) wages, this is the highest incentive for employees in today's environment, but in our opinion, the essence of staff incentives is, first of all, non-financial motivation and satisfaction of primary needs at the moral level, which is more significant for most employees than monetary remuneration, especially given the current environment.

Our own research confirms that trust in and relationships with management are the most influential factors in employee engagement, along with involvement in company changes, interesting work, autonomy and trust, which is realised through giving staff the right to make certain decisions within their competence. At the same time, openness and accessibility to management are of great importance, as employees can ask for more information at any time (good communication) and make sure they are making the right choice. It is also important for employees to be confident in their decision-making so that in case of wrong actions, they do not receive social sanctions that will lead to stress in the workplace, burnout, and today an important aspect is to avoid professional burnout and stress in the workplace (especially in martial law). It should also be borne in mind that we are now living in a time of lifelong learning - in the process of continuous learning to master new things, so this has also become one of the basic needs of modern staff, the desire to learn, improve, and acquire new competencies is a need, and accordingly, providing such opportunities from the employer will also be an effective incentive. All of the above results in overall labour productivity and efficiency, which are the main indicators of an effective staff incentive system.

The process of economic evaluation of the labour incentive system is often identified with the analysis of the efficiency of labour costs and the return on labour resources. Indeed, the economic criteria for the return on labour costs characterise the extent to which the company's labour resources (personnel) are used optimally. However, in addition to personnel, other types of resources are also involved in production processes, such as financial, material, land, energy, information, etc.

After analysing the material and conducting a study of the theoretical aspects of staff incentives, we have developed a comprehensive approach to assessing the effectiveness of labour incentives. Let's consider the main indicators for assessing the effectiveness of labour incentives at an enterprise (Fig. 2).

Conclusion

Thus, labour incentives can be viewed as a set of tangible and intangible means of motivating labour, expressed in monetary and non-monetary forms, which are designed to ensure a long-term effect of increasing staff productivity. The purpose of the labour incentive system of an enterprise and its top managers is to ensure efficient work. This is achieved through the competent design and proper implementation of the production (service) process. The working conditions at the enterprise are of great importance in the process of forming a labour incentive system and its impact on various aspects of labour organisation. The presence of conflicting relations at an enterprise can negatively affect both the formation of a labour incentive system and the existing norms and values of the team. A special feature of the formation of an optimal labour incentive system in modern conditions

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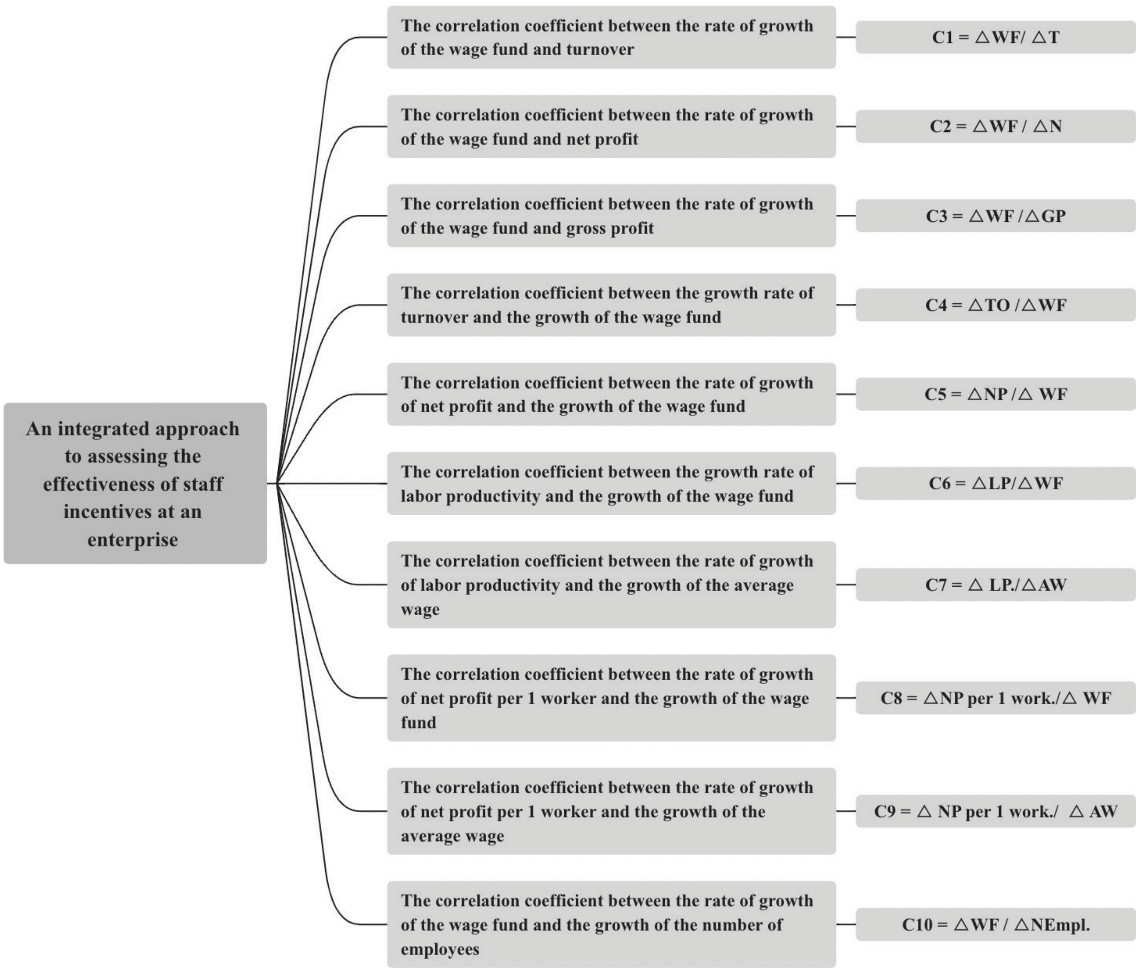

Figure 2 – An integrated approach to assessing the effectiveness of staff incentives at an enterprise [formed by the authors]

is the use of a logistics approach to the movement and use of labour resources. The production system is inherently a complex set of individual production factors and their management tools, which are interconnected by logistics channels. Labour resources are considered as an integral element of this system.

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EVALUATION OF EMPLOYEE PERFORMANCE TO ENHANCE ORGANIZATIONAL CAPACITY

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Key words:
personnel, personnel performance evaluation, human resource potential, personnel assessment methods

The article analyzes the theoretical aspects and basic methods of modern approaches to performance appraisal of an organization's personnel. It is determined that performance appraisal is a process that collects and analyzes information on task performance, as well as behavior and other factors that affect an employee's work. The relevance of artificial intelligence tools for assessing the effectiveness of staff performance is substantiated. The article discusses a comprehensive staff evaluation system based on professional, business, and personal skills. Inspired by leading national companies, the system categorizes employees by work experience and education, applying a scoring system for various criteria. Evaluation, conducted by direct managers, incorporates scores for professional and business skills, performance, and introduces an innovation score. The results guide decisions of the certification commission, emphasizing labor potential, career development, and feedback. The system aims to holistically assess employees, considering their abilities, competence, and innovation in fulfilling obligations and achieving corporate standards.

ОЦІНКА РЕЗУЛЬТАТІВ ПРАЦІ ПЕРСОНАЛУ З МЕТОЮ ПІДВИЩЕННЯ КАДРОВОГО ПОТЕНЦІАЛУ ОРГАНІЗАЦІЇ

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Ключові слова:
персонал, оцінка ефективності персоналу, кадровий потенціал, методи оцінки персоналу

У статті проаналізовано теоретичні аспекти та основні методики сучасних підходів до оцінки результатів праці персоналу організації. Визначено, що оцінка результатів праці є процесом, що забезпечує збір і аналіз інформації про виконання завдань, а також поведінку та інші фактори, що впливають на роботу працівника. Обґрунтовано актуальність інструментів штучного інтелекту для оцінки ефективності діяльності персоналу. У статті розглядається комплексна система оцінки персоналу, яка базується на професійних, бізнес- та особистісних навичках. Інспірована досвідом провідних національних компаній, система категоризує працівників за робочим стажем та освітою, застосовуючи систему оцінки для різних критеріїв. Оцінка, проводжена безпосередньо керівниками, включає бали за професійні та бізнес-навички, ефективність і вводить бал інновацій. Результати визначають рішення атестаційної комісії, наголошуючи на потенціалі працівника, розвитку кар'єри та зворотному зв'язку. Система спрямована на комплексну оцінку працівників, враховуючи їхні здібності, компетентність та інноваційність виконання обов'язків та досягнення корпоративних стандартів.

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Statement of the problem

Human resources management, both external and internal, is one of the most important aspects of strategic management of a modern enterprise, as the innovative economy and modernisation of production are increasing the role of staff and increasing attention to the level of their competencies, skills, knowledge and personal qualities. The focus on identifying hidden opportunities of employees, investing in human capital, efficient use of potential abilities and creating conditions for the implementation and development of human resources increases the competitiveness of the enterprise in the market of relevant goods and services. Currently, evaluating the staff stands as a key benchmark for effective performance. This evaluation process guarantees the acquisition of comprehensive and precise information about each employee. It facilitates the gathering of all necessary details concerning individual employees, allowing for an assessment of how well each employee aligns with office requirements. Additionally, it contributes to enhancing the efficacy of staff management and development while fostering an improved psychological climate within the collective. The staff evaluation empowers executives and human resources management services to conduct more effective human resources management. It aids in the enhancement of workforce dynamics by engaging new employees, thereby replacing those who may not fulfill their duties adequately and, consequently, promoting overall efficiency.

Analysis of the latest research and publications

In K. Methode, O. Osunsan [4] study mentioned that in the current global knowledge economy, organizations in advanced countries worldwide heavily rely on their workforce for survival. In the contemporary era, achieving enhanced staff performance remains a crucial objective for organizations striving to maintain business success. G. Rusu [5] considers that consequently, companies endeavor to optimize the performance of each employee, considering the factors that contribute to organizational performance. A. Eliyana [6] reckons that with advancements in information flow and technology, increased global civic engagement necessitates organizational change, making it imperative for management attention to ensure continuous progress in performance. However, three factors – business support, skills, managerial effectiveness, and workforce productivity – have been identified as influencing organizational performance.

Objectives of the article

The article is aimed at analysing the existing approaches to assessment of personnel efficiency and developing a model for calculating efficiency with a view to improving the methods of personnel management and organisational development.

The main research material of the research

The link between the growth of an enterprise's human resources potential and the assessment of staff performance reflects an important interaction between two key aspects of an organisation's resource management. First and foremost, staff training and development helps to improve their skills and knowledge. This, in turn, leads to an increase in staff efficiency and the ability to achieve better results. The assessment of staff performance becomes a tool for determining how well goals are being achieved and for identifying areas where performance can be improved. Thus, an organisation that invests in the development of its workforce and improves its performance appraisal process is better positioned to achieve greater success by fostering the growth of its human capital and improving the performance of its workforce.

The growth of the company's human resources potential can be achieved by providing employees with access to education, training and professional skills development, which in turn increases their expertise and affects the quality of work performed. Performance appraisals identify issues and shortcomings that require immediate attention and help management make informed decisions about the next steps to improve work processes and motivate staff. The coordinated use of performance appraisal and human resource development creates a harmonious cycle where the acquired knowledge and skills of employees are supported and reinforced by the appraisal system, resulting in a sustainable increase in the company's productivity and competitiveness.

Performance appraisal is a process that collects and analyses information about task performance, behaviour and other factors that affect an employee's work. Performance appraisal is critical to the success of any organisation. It helps to identify areas where employees are performing at their best and those that need improvement. Performance appraisals also help to identify training needs, development opportunities and areas for promotion. It is an important tool for managing employee performance and ensuring that employees are aligned with the organisation's goals and objectives.

The methods of employee appraisal are constantly evolving, and the following is a look at the most popular methods of appraisal today. There are several methods of performance appraisal, including goal-based appraisal, 360-degree appraisal, and objective-based appraisal.

Depending on the internal organisation of the company, the methods of staff performance appraisal may vary. However, some common methods include:

1. Achievement appraisal: this method of appraisal is to determine the employee's achievements in the workplace, including their success in completing tasks and improving the quality of work. Various tools can be used for this purpose, such as diaries, regular reports, discussions with management, customer evaluations, etc.
2. 360-degree evaluation: this method means that an employee is evaluated not only by his or her direct supervisor, but also by colleagues, subordinates, clients and other stakeholders. This gives a complete picture of the employee's work and allows you to assess their contribution to the team and the company as a whole.

Features of the 360˚ assessment:

– allows the organisation to realise the importance of alignment between managerial behaviour, employee behaviour, unit performance and customer expectations;

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– recognises the complexity of management and the value of information coming from different sources, while assessing not only the professional but also the leadership qualities of the employee;

– allows to develop an employee development plan for his/her professional, managerial and leadership competences, his/her maximum integration into the organisation, which undoubtedly affects both employee satisfaction and company performance.

Key Performance Indicators (KPIs): This assessment method is used to measure an employee's performance based on specific metrics that are defined based on the company's business strategy. KPIs may vary from position to position within the company and may include, for example, sales, costs, quality of work, customer service, etc.

3. Developmental assessment method: this assessment method focuses on the potential development of an employee and identifies opportunities for further training and skill development.

4. Assessment centre, which is based on a comprehensive assessment of the employee's abilities and professional qualities. The assessment centre may use a variety of tools, such as group discussions, interviews, testing and other methods, to get a complete picture of the candidate or employee.

5. Benchmarking method: the employee is compared to other employees performing similar work and ranked by the number of points. Benchmarking method: an employee is compared to other employees performing similar work and ranked by the number of points.

6. Self-assessment method: the employee independently assesses his/her work, identifies the strengths and weaknesses of his/her performance, and makes plans for the future. Peer comparison method: the employee is compared with other employees performing similar work and ranked by the number of points.

7. Assessment methods using artificial intelligence. The emergence of artificial intelligence (AI) has revolutionised business and especially HR. The use of AI in HR has transformed its approaches, making them more automated and efficient. Recruitment and selection processes are more accurate, decisions are made faster, and costs are reduced.

Artificial intelligence can be successfully used to evaluate employee performance in many ways. Here are some ways it can be applied:

• Analysing productivity data: AI can analyse large amounts of employee productivity data, including time frames, tasks, and completed projects. It can highlight key performance indicators and provide a more objective assessment of performance.

• Automated skills assessment: AI can analyse the skills and abilities of employees based on data from CVs, internal assessments and other sources. It helps determine how well employees meet the needs of specific positions.

• Evaluation according to key performance indicators (KPIs): AI can monitor KPIs and help determine which employees are achieving goals and to what level. It can also provide recommendations on further steps to improve results.

• Feedback and employee satisfaction assessment: AI can analyse data from employee satisfaction questionnaires, comments, and feedback to identify trends and issues that affect productivity and team satisfaction.

• Predicting employee outflow: AI can analyse data to predict which employees are likely to leave the company and provide recommendations on measures to retain them.

• Personal development of employees: AI can provide individual development plans for employees based on their current skills and goals.

The use of AI in these areas can significantly improve the assessment of staff performance, making it more objective, accurate and contributing to more efficient staff management.

8. Using integral coefficients. In the context of heads and managers, the assessment involves qualitative aspects that indirectly impact the anticipated outcomes. Rather than being quantified by numbers, these aspects characterize employees based on criteria aligned with an idealized perception of how official duties and functions should be executed, integral components of the office framework. Therefore, when appraising employees, it is prudent to consider quantitative metrics [2].

Presently, managers are expected to meet three criteria: professional, business, and personal skills. Drawing on fundamental requirements for managers and drawing from the experiences of leading national companies, a staff evaluation system has been established for the company. Consequently, the evaluation of staff is based on their business and professional skills.

In the study of K. Ahaverdiieva [2] the selection of evaluation criteria is grounded in references specific to the distinctive features of corporate business. Concerning work experience, employees are categorized into different levels: less than 3 years is deemed a low level, 3–5 years is an average level, 5–10 years is above average, and above 10 years is considered a high level.

Educational attainment is assessed as follows: a high level corresponds to employees with an academic degree, above-average for those with higher education, average for those with advanced education, and low for those with secondary education. For all other criteria, evaluation is conducted by the direct manager. Each aspect of professional and business skills, as well as performance, is assigned its own level and scored as follows:

– low – 0.5, average – 1;
– above average – 1.5;
– high – 2 scores.

Each feature will be assigned a score ranging from 0.5 to 2, based on specific values, for the employee. In this context, the professional level ratio of the employee will be determined using the formula:

$$Rpr = \sum L \times SVc,$$

where L represents the relevant level, and SVc denotes the specific value of the relevant criterion. The employee is expected to adhere to the requirements set for them concerning official duties, context and work nature, as well as corporate requirements and culture.

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The evaluation encompasses not only the potential abilities, professional level, and competence of the employees but also the realization of these capabilities in fulfilling assumed obligations and achieving corporate performance standards.

Thus, evaluation of performance for the stated period shall be determined as the amount of evaluation of feature levels in terms of specific values. It shall mean the difficulty of work. The comprehensive evaluation of the employees shall be calculated using the formula:

$$CE = Sh \times Ss + Sh \times P + Sh \times Q,$$

where, Sh – share of relevant skills per total evaluation, %;
Ss – scores of professional and business skills of the employee;
P – scores for performance;
Q – scores of innovation.

The innovation score can be determined, for example, based on the number and quality of ideas that an employee has contributed to work processes, the implementation of innovative solutions, or participation in projects aimed at developing new products or improving existing processes. This indicator will take into account the level of innovation that the employee brings to their work, helping to improve the assessment of their performance.

The evaluation results are the basis for further decision of the certification commission and they are also focused on the evaluation of labor potential, career development, feedback and etc.

Conclusion

There are several benefits to conducting a staff performance appraisal. Firstly, it allows management to identify high performers who can be rewarded for their work and promoted to a higher salary position. Secondly, performance appraisals can identify low-performing employees who may need additional training and skill development. In addition, it can be useful in identifying those employees who may be dismissed due to low productivity.

The choice of an employee assessment method depends on many factors, such as the type of business, job characteristics, number of employees and other factors. Personnel assessment is a complex process that requires a careful approach and professional training

Personnel performance appraisal is an important part of the organisation's resource management process. It allows management to identify high-performing and low-performing employees, identify problem areas and opportunities to improve business performance. Performance appraisals can also assist in career planning for employees and in identifying skill development and training needs. In addition, it can be useful for determining salary increases and rewards.

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PROJECT MANAGEMENT AND FINANCIAL AND ECONOMIC SECURITY IN THE CONDITIONS OF GLOBALIZATION

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MODERN APPROACHES TO ASSESSING PROBLEMS OF FINANCIAL AND ECONOMIC SECURITY OF UKRAINE

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Key words:
financial and economic security, shadow economy, corruption, economic crime, unfair competition, public debt

The article examines and analyzes the views of domestic and foreign scientists regarding the essence of the concept of "financial security" and "economic crime". It is established that financial and economic security is the basis for many spheres in the middle of every country. It was determined that today there are quite a lot of threats to financial and economic security in Ukraine: rising inflation, shadow economy, rising unemployment, corruption, high level of public debt, reduction of gross accumulation of fixed capital and many other factors that should be investigated. Investigating the impact of economic crimes in Ukraine, in relation to other criteria, it was established that this indicator is only 6 %, but the losses from them exceed billions of hryvnias annually. If we talk specifically about the results of the Ukrainian economy, then according to data, 51 % of Ukrainian organizations have become victims of economic crime. It was determined that, in addition to economic crimes, the financial and economic security of the state and other spheres of life are negatively affected by corruption. Corruption in social, political, legal and economic aspects is considered. It was established that another threat to the national interests and national security of Ukraine in the economic sphere is the "shadow economy". It has been proven that there is no reliable and one hundred percent means of combating the shadow economy, because even the "legalization of shadow relations" with the help of amnesty and other steps at the level of declarative slogans will lead to the deepening of the crisis, the development of the shadow economy and, ultimately, the self-isolation of Ukraine. This is primarily related to the imperfection of the accounting and reporting system, the lack of stable and balanced legislation that would control financial and economic relations. It was determined that one of the threats to financial and economic security is unfair competition and the level of public debt. It is noted that for the stable development of the country, a low level of state indebtedness is a guarantee of stabilization of the situation in the economy. Using statistical methods, the level of the shadow economy in Ukraine and the rate of increase / decrease in the level of real GDP were analyzed; the shadow share of various sectors of the economy in GDP, as well as the total foreign and guaranteed debt of Ukraine, which is almost twice as much in 2020 as in 2009. It has been established that financial and economic security is the basis for sustainable development of the country.

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СУЧАСНІ ПІДХОДИ ДО ОЦІНКИ ПРОБЛЕМ ФІНАНСОВО-ЕКОНОМІЧНОЇ БЕЗПЕКИ УКРАЇНИ

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Ключові слова:
фінансово-економічна безпека, тіньова економіка, корупція, економічна злочинність, недобросовісна конкуренція, державний борг

У статті досліджено та проаналізовано погляди вітчизняних та зарубіжних науковців щодо сутності поняття «фінансова безпека» та «економічна злочинність». Встановлено, що фінансово-економічна безпека є основою для багатьох сфер в середині кожної країни. Визначено, що на сьогодні в Україні існує досить багато загроз фінансово-економічної безпеки: зростання інфляції, тіньова економіка, зростання безробіття, корупція, високий рівень державного боргу, зменшення валового нагромадження основного капіталу та багато інших чинників, які слід досліджувати. Досліджуючи вплив економічних злочинів в Україні, у відношенні з іншими критеріями, встановлено, що даний показник становить лише 6 %, проте збитки від них щорічно перевищують мільярди гривень. Якщо говорити конкретно про результати української економіки, то за даними 51 % українські організації стали жертвами економічного злочину. Визначено, що крім економічних злочинів на фінансово-економічну безпеку держави та інші сфери життєдіяльності впливає негативно впливає корупція. Розглянуто корупцію в соціальному, політичному, правовому та економічному аспектах. Встановлено, що ще однією із загроз національним інтересам і національній безпеці України в економічній сфері є «тіньова економіка». Доведено, що немає вірогідного та стовідсоткового засобу для боротьби з тіньовою економікою, адже навіть «легалізація тіньових відносин» за допомогою амністії та інших кроків на рівні декларативних гасел призведуть до поглиблення кризи, розвитку тіньової економіки та зрештою – самоізоляції України. Це перш за все має зв’язок з недосконалістю системи обліку та звітності, брак стабільно і збалансованого законодавства, яке б контролювало фінансово-економічні відносини. Визначено, що однією з загроз фінансово-економічної безпеки є також недобросовісна конкуренція та рівень державного боргу. Зазначено, що для стабільного розвитку країни є низький рівень заборгованості держави, адже це є гарантом стабілізації ситуації в економіці. Використовуючи методи статистики, проаналізовано рівень тіньової економіки в Україні і темпи приросту/зниження рівня реального ВВП; тіньову частку різних галузей економіки у ВВП а також загальний зовнішній та гарантований борг України, який майже вдвічі більше у 2020 році аніж у 2009 році. Встановлено, що фінансово-економічна безпека є базою для сталого розвитку країни.

Statement of the problem

In modern Ukraine, there are a number of problems in the economic sphere, which have intensified against the background of the war. For many years, professors and specialists in the economic field have been collecting information and statistical data to highlight and analyze the cause of the country's financial and economic instability. After all, financial and economic security is primarily a reliable foundation for the future of an economically powerful state. Ukraine aspires not only to become strong in the economy, but also to ensure the well-being and social development of its citizens. However, this task is complicated by a number of factors, including excessive dependence on external financing, low trust in financial institutions, economic instability, corruption, inflation, war and other economic and political factors affecting the financial sector and the general economic situation in the country. Despite some progress in reforming the financial sector and fighting corruption, there are a number of pressing problems that require attention and quick solutions. The first stage of overcoming the problem is the identification of existing problems by the authorities and citizens. Next, the economic sector of Ukraine needs constant analysis, attention and appropriate actions.

Analysis of recent studies and publications

Research in the field of financial and economic security was carried out by such scientists as: V.M. Geets, R.S. Papekhin, I.A. Blank, M.Yu. Pogosova, M.K. Mamardashvili, T.U. Schultz, R.A. Podlasa and others. The listed scientists studied the issue of threats to Ukraine's financial security, analyzed the causes and consequences of these threats, and put forward their own ideas for solving existing problems. I.A. Blank gave a detailed definition of the concept of “financial security”, M.K. Mamardashvili claims that economic crime can be considered as a kind of “fixed point of intensity”, T.U. Schultz analyzed and formed his own vision of the concept of “economic crime”, which can help in the fight against it in our country, and V.M. Geets, R.S. Papekhin. M.Yu. Pogosova and R.A. Podlas analyzed the situation of financial and economic security in Ukraine, gave their conclusions about it, which set the pace for deepening the study of this problem. The understanding of economic security and a number of threats in the economic sphere is based on their research and results.

Objectives of the article

The main task of the article is to analyze and understand the issues of financial and economic security and threats to the state's economy, to determine the need to fight and protect financial and economic security in Ukraine.

The main material of the research

Professor I.O. Blank believes that “financial security is a quantitatively and qualitatively determined level of financial condition that provides stable protection of priority balanced financial interests from identified real and potential threats of an internal and external nature, the parameters of which are determined on the basis of financial philosophy and create the necessary prerequisites for financial support of sustainable development in the current and prospective period”. Based on such a broad and complete definition, one can come to the conclusion that financial and economic security is the basis for many areas in the middle of each country, because the stability of the currency, the level of the risk of inflation, a sharp increase in fuel prices and many other areas depend on the financial and economic security of the country . However, it is impossible to preserve the “ideal” state of the economy, due to constant threats and problems that have a negative and very strong impact on the level of security of the state [5].

Threats to financial and economic security should be considered all actions that negatively affect the development of the country's economy, complicate or even make impossible the realization of national interests, as well as create a direct danger to the socio-economic and/or political system, national values or livelihoods of the entire nation and individual. Today, there are quite a lot of threats to financial and economic security in Ukraine: rising inflation, shadow economy, rising unemployment, corruption, high level of public debt, reduction of the gross accumulation of fixed capital and many other factors that should be investigated.

The first category of threats is the much-talked-about “economic crime”. In general, the concept of “economic crime” currently does not exist in the legal field, but it is very often used by scientists and analysts in the field of economics. M. Mamardashvili believes that economic crime can be considered as a kind of “fixed point of intensity”, i.e. as a phenomenon, the content of which has not been fully clarified and cannot be fully clarified, but knowing it is an important incentive for the continuous search for new content [6]. The founder of the theory of economic crime is the American criminologist E. Sutherland, who introduced the concept of “white-collar” crime: “this is anti-social, enrichment-oriented behavior of persons who occupy a socially prestigious position in society and, within the framework of their professional activity, act in such a way that, while simultaneously obeying the law the rest of the people, abuse the public trust enjoyed by their group”. Crimes of an economic orientation differ from others in their rapid adaptation to new conditions and forms of business activity and mastery of banking and customs currency technologies. According to the Constitution of Ukraine since 1996, the main principles of the new economic system were formed, according to which all forms of ownership are protected by the state and competition is supported in the state and international markets. But the transition of our country to a new economic system led to a crisis in all spheres of life, due to which increasingly large-scale economic crime began to appear. However, this definition was immediately criticized by other scientists, led by Schulz, who rather harshly pointed out that the criteria of “abuse of trust” too widen the boundaries of crime, classifying any untruth as economic crime. Among the foreign authors, we should also mention the Chief Director of the Crime Prevention Council at the Swedish Department of Justice, Boo Svensson, who conducted an analysis of this phenomenon and called it economic crime, which includes, first of all, crimes aimed at the direct motive of economic gain [1].

Taking into account the data of official statistics, the share of so-called economic crimes in Ukraine, in relation to other criteria, is only 6 %, but the losses from them annually exceed billions of hryvnias. In 2020, Price water house Coopers (PwC) conducted research on the threat level of economic crimes around the world. According to the results of these studies, it was found that more than 47 % of organizations on the global stage were affected by economic crimes and fraud during the last two years. If we talk specifically about the results of the Ukrainian economy, then according to data, 51 % of Ukrainian organizations have become victims of economic crime. Compared to 2018, the indicators increased (previous years did not exceed 47–48 %). These statistics were divided into blocks according to the types of crimes committed: misappropriation of property accounted for 47 %, bribery and corruption also accounted for 47 %, customer fraud and cybercrime accounted for 31 %, and procurement fraud – 31 %.

The second category of the most widespread threats to the financial and economic security of the state is corruption. One of the main aspects for understanding the concept of corruption is the definition of subjects of corruption: civil servants; deputies of councils of all levels; heads of local councils; military; other persons whose administrative responsibility is stipulated by disciplinary statutes, as well as those whose service is defined as state [9].

Corruption has a negative impact not only directly on the country's economy, but also on other spheres of life. For example, corruption has a negative impact on the social aspect – the destruction of state authorities and a decrease in the level of trust between people, which destroys the state and society from the inside. If we take into account the political aspect of corruption, then there is a direct relationship. As a social phenomenon, corruption cannot exist outside the government, or without its participation. The government implements an anti-corruption policy, changing the pace and dynamics of corruption, its percentage of existence in the country, and the government also creates the same corruption. We can say that power and corruption are eternal companions of each other. The legal aspect is determined by the offense, criminal, administrative and civil legal actions aimed at causing damage to the economy. And, of course, the economic aspect, because corruption is the use of official position to obtain income. It is an element of relationships and their direct, unfortunately, negative consequence. If we talk about statistics that are really impressive, from the 2000s to 2010, about 67 % of Ukrainians who were directly involved in government affairs admitted that they had a direct relationship with corruption. In a 2010 survey, 30–49.9 % of respondents admitted to paying bribes to public service providers in the past year; in a similar study in 2007, 18–32 % of respondents reported paying a bribe. It can be considered that these indicators are not very high, but if we compare, for example, with Great Britain, then at the same time its indicators reached 1.9 %. The issue of corruption is not only bribery between officials, this problem occurs everywhere, and even in the field of education in our country. Among the students surveyed, 33 % admitted that they encountered corruption in their educational institution, and 29 % heard about cases of corruption from other students. According to a study by Transparency International conducted in 2008, 47.3 % of university students said that they had been asked for bribes; of them, 29 % voluntarily paid a bribe. According to the statistics provided to us by Transparency International in 2018, it can be seen that the tax service ranks first among the most corrupt spheres – more than 25 %, and the last place is occupied by local government bodies – 1.4 %. In addition, it is estimated that corruption crimes account for approximately 700 million dollars per year. In 2020, the Ministry of Internal Affairs published statistics based on the results of 2020, where, based on the review of 3,908 criminal proceedings in the field of corruption, it was established that the state suffered 3.025 billion hryvnias as a result of economic crimes, including corruption. The Law of Ukraine "On the Prevention of Corruption" № 49, Article 2056 has been in effect on the territory of our country since October 14, 2014 and entailed a number of changes in 57 articles of various Laws. This fact makes us understand that corruption as a phenomenon is much more painful and widespread, because it is not for nothing that the authorities are so actively trying to fight such a financial and economic threat [4].

The third category of threats includes the shadow economy, which, according to Art. 7 of the Law of Ukraine "On the Basics of National Security of Ukraine" is recognized as one of the threats to the national interests and national security of Ukraine in the economic sphere. In general, the shadow economy is a type of economic activity in which the results of this economy are not reflected in the official statistics of the national economy. Unfortunately, even now there is no reliable and one hundred percent means of combating the shadow economy, because even the "legalization of shadow relations" with the help of amnesty and other steps at the level of declarative slogans will lead to the deepening of the crisis, the development of the shadow economy and, ultimately, the self-isolation of Ukraine (Fig. 1). This is primarily related to the imperfection of the accounting and reporting system, the lack of stable and balanced legislation that would control financial and economic relations. According to the methodology of the UN system of national accounts, all manifestations of the shadow economy are divided into two groups:

– productive, the results of which are taken into account in the GDP;

– crimes against persons and property, which are not included in GDP and recorded in a special account to reduce statistical errors.

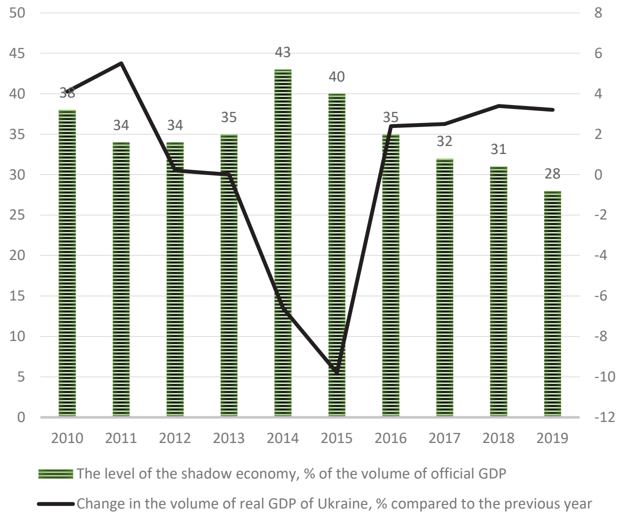

Figure 1 – Integral indicator of the level of the shadow economy in Ukraine (in % of the volume of official GDP) and rates of increase/decrease in the level of real GDP (in % to the corresponding period of the previous year)

Source: compiled by the authors based on [2]

The level of the shadow economy of Ukraine decreased by 1 p.p. up to 31 % of GDP according to the results of the three quarters of 2021, this is stated in the report of the Ministry of Economy. By the way, this is 32 % lower than the level of the shadow economy for the previous 10 years. The share of "shadows" decreased most significantly in the real estate sector – from 44 % to 30 % over the year, which, among other things, led to a reduction in losses received in the sector and an increase in consumption. For the same reasons, the level of shadowing decreased in the transport industry (by 10 percentage points to 44 %), in the processing industry (by 9 percentage points to 26 %) and in the mining industry (by 8 percentage points to 31 %). In addition, the easing of the quarantine allowed the trade sector to become more transparent by 7 percentage points. and reduce the "shadow" to 19 %. In construction, the share remained unchanged at the level of 28 % due to the increase in the price of raw materials necessary for the performance of works [2, 8].

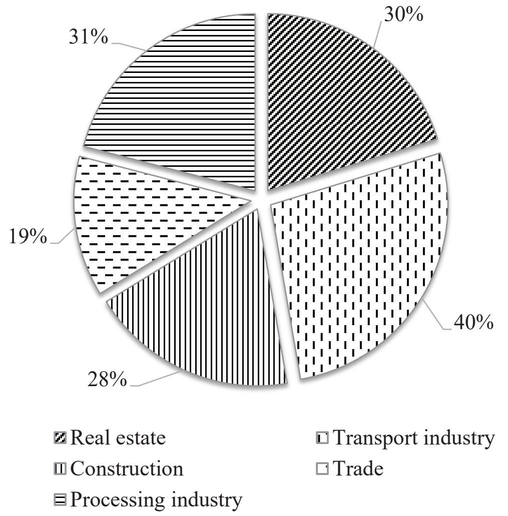

Figure 2 – Shadow share in GDP of economic sectors
Source: compiled by the authors based on [8]

The fourth category represents unfair competition. The word "concurrentia" translated from Latin means "competition, rivalry". In the economy, competition is a rivalry between producers of goods for the most favorable conditions for the production and sale of goods. In the economy, there is so-called unfair competition, which harms not the security of the country's economy. If we talk about specific examples recorded on the territory of Ukraine, we can recall when in 2020 an investigation was conducted due to mass complaints against a producer of butter. This product, in addition to supply to various stores, was also wholesaled for use by schools, kindergartens, hospitals and other institutions. Very often there have been incidents of poisoning or upset stomach among consumers of this particular oil. After a series of checks and analyzes of the product composition, it was established that the content of non-dairy and vegetable fats sometimes reached 90–100 %. After the trial and establishing the circumstances, the manufacturer was fined more than 140 million hryvnias. This situation is a good example of unfair competition, when the manufacturer wanted to save money on the production of goods, while receiving a large income [11].

Unfair competition includes espionage. Espionage, as you can understand, exists not only in the middle of the state, between enterprises operating on the Ukrainian market, but also outside the borders of our country. Thus, the Security Service of Ukraine reported that starting from 2014 and until 2022, investigative bodies investigated 20,822 criminal proceedings based on the fact of committing crimes against the national financial and economic security of Ukraine. States that carry out espionage against Ukraine have never spared the power and means to carry out reconnaissance and subversive activities, even in such a form as espionage. That is why the government of Ukraine pays great attention to the protection of state secrets:

"1. Transfer or collection for the purpose of transfer to a foreign state, a foreign organization or their representatives, information constituting a state secret, if these actions are committed by a foreigner or a stateless person, shall be punishable by imprisonment for a term of ten to fifteen years with or without confiscation of property.

2. A person who stopped the activities provided for in part one of this article and voluntarily informed the state authorities about what was done is exempted from criminal liability, if as a result of this and the measures taken, damage to the interests of Ukraine was prevented" – according to Article 114, as amended in accordance with Laws No. 1183-VII dated 08.04.2014, № 1689-VII dated 07.10.2014 [3].

Threats also include a high level of public debt. It should be noted that a low level of state debt is essential for the stable development of the country, because it is a guarantor of the stabilization of the situation in the economy. At the beginning of 2020, the total foreign and guaranteed debt of Ukraine amounted to 49.81 billion dollars – this is almost twice as much as in 2009. This amount can be divided into the total external debt of Ukraine, which amounted to 40.45 billion dollars, and the external state-guaranteed debt of Ukraine, which was equal to 9.36 billion dollars (Fig. 3) [7].

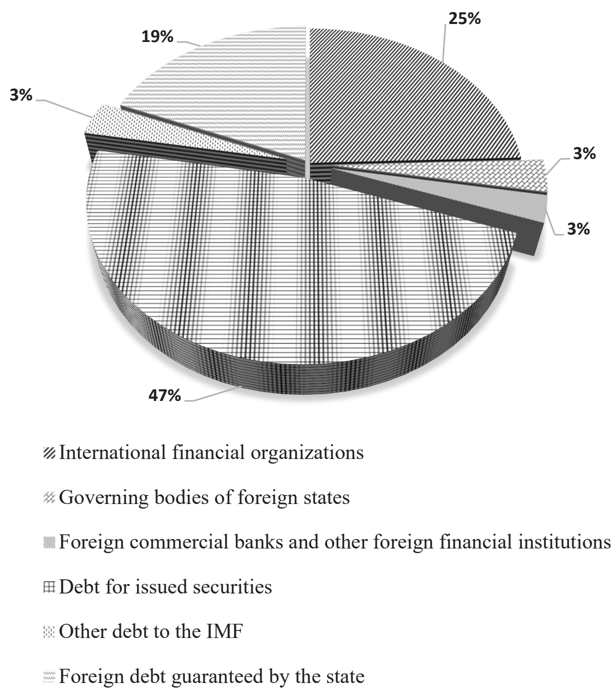

Figure 3 – Debt of Ukraine for 2020, %
Source: compiled by the authors based on [7]

If we talk about the present, then according to the Ministry of Finance, the total foreign debt of Ukraine is 3.584 trillion hryvnias or 98.03 billion dollars. Financial support from partner countries is very important for our country now, and this is an indisputable fact, but the debt will have to be paid sooner or later. It is because of this that many Ukrainians are very cautious and almost

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distrustful of bank accounts and do not expect economic progress in the country in the near future – everyone is afraid of inflation. Based on this, the level of social needs of people falls, psychology, science and many other components of life suffer. Here, the connection between the financial and economic sphere and other spheres is clearly observed [10].

Conclusions

During the research, it became clear that the state of financial and economic security depends on internal and external factors, on the government, the state and each of us. In order to combat threats to financial and economic security, it is necessary not only to implement new laws regulating the economic sphere of Ukraine, but also to pay attention to all sectors of life, because the economy is not a separate link. First of all, it is a big web that is interconnected: economy, psychology, science, environment, family, law and power – everything that surrounds us complements each other, shaping our life, our comfort, well-being and our development.

Therefore, the financial security of business entities plays an important role in ensuring national economic security. Therefore, the strengthening of such an important component of the country's economic security – financial security – depends to a large extent on the improvement of indicators of the efficiency of the functioning of enterprises, their provision of real economic growth; strengthening the financial potential of individual business entities and, as a result, the economy as a whole.

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FORMATION OF THE PROJECT TEAM IN THE WAR AND POST-WAR PERIOD AT PJSC ZAPORIZHVOGNETRYV

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Key words:
project team, wartime period, "Zaporizhvohnetryv" PJSC, enterprise, project management, team effectiveness

The article analyzes the intricacies of forming a project team during the wartime and post-war period at the enterprise "Zaporizhvohnetriv" PJSC. The justification for creating a project team during the Russian-Ukrainian war period lies in its unique challenges, including the stressful impact of military actions, environmental instability, resource shortages, and more. During the wartime and post-war period, establishing a project team transcends mere success; it becomes a critical factor for the survival of the enterprise. The conducted research has led to the development of recommendations for forming a project team during these challenging periods, aiming to enhance productivity and competitiveness. The flexibility and adaptability of the project team formation process during wartime have been emphasized. Challenges that emerge during these periods can be unpredictable, and it has been identified that employees may experience stress and anxiety. Therefore, fostering an atmosphere of support and trust within the team is crucial. Special attention is given to the necessity for a well-motivated team with shared goals. The importance of effective communication and collaboration within the team is highlighted. Recognizing the inevitability of changes during the wartime and post-war period, the team should be prepared for such adjustments. Forming a project team during these periods is a complex task demanding significant efforts from leaders and employees. Successfully accomplishing this task can provide the enterprise with a competitive edge and contribute to its rapid development.

ФОРМУВАННЯ КОМАНДИ ПРОЄКТУ У ВОЄННИЙ ТА ПІСЛЯВОЄННИЙ ПЕРІОД НА ПІДПРИЄМСТВІ ПРАТ «ЗАПОРІЖВОГНЕТРИВ»

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Ключові слова:
команда проєкту, воєнний період, ПрАТ «Запоріжвогнетрив», підприємство, управління проєктами, ефективність команди

Стаття присвячена аналізу особливостей здійснення формування команди проєкту у воєнний та післявоєнний період на базі підприємства ПрАТ «Запоріжвогнетрив». Обгрунтовано доцільність формування команди проєкту у період російсько-української війни, яка в цей період має свої особливості, які пов'язані зі стресовим впливом воєнних дій, нестабільністю зовнішнього середовища, нестачею ресурсів тощо. У воєнний та післявоєнний період формування команди є не просто питанням успіху, а питанням виживання підприємства. На основі проведеного дослідження розроблено рекомендації щодо формування команди проєкту у воєнний та післявоєнний період для підвищення продуктивності та конкурентоспроможності підприємства. Доведено, що у воєнний час формування команди проєкту має бути більш гнучким та адаптивним до змін. Виклики, що виникають у воєнний та післявоєнний період можуть бути непередбачуваними. Визначено, що працівники можуть відчувати стрес та тривогу, тому важливо створити в команді атмосферу підтримки та довіри. Особливу увагу приділено тому факту, що команда повинна бути добре мотивована та мати спільні цілі. Виявлено доцільність забезпечення ефективної комунікації та співпраці всередині команди. Розглянуто, що команда повинна бути готова

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до змін, які можуть виникнути в воєнний та післявоєнний період. Формування команди проєкту в воєнний та післявоєнний період є складним завданням, яке вимагає від керівників та працівників значних зусиль. Однак, якщо це завдання буде виконане успішно, воно може забезпечити підприємству конкурентні переваги та сприяти його стрімкому розвитку.

Statement of the problem

During the wartime and post-war periods at "Zaporizhvohnetryv" PJSC, it is necessary to form project teams capable of working in challenging conditions. The effectiveness of the team is a key factor in the success of the project. Therefore, it is important to consider the peculiarities of team formation and the context of the time. However, forming a project team in the conditions of war and post-war recovery has its specific challenges, associated with the stressful impact of military actions, instability of the external environment, and resource shortages. These peculiarities must be taken into account in the formation of the project team to ensure its effectiveness and the success of the project.

Analysis of recent studies and publications

The principles of project team formation have been discussed by domestic and foreign researchers, namely: L.P. Batenko [1], O.A. Zahorodniuk [1], O.V. Yehorchenkov [2], N.Y. Yehorchenkova [2], Y.Y. Kataeva [2], Katzenbach D.R. [3], V.V. Lishchynska [1], V.O. Moskalenko [4], A.V. Olenich [5], Z.Y. Shatska [5], L. McClare [7].

In the research conducted by I.V. Shulzhenko and O.M. Pomaz, it was observed that the flexibility and ability of employees to execute all necessary tasks for the organization's success, driven by effective motivation, are fundamental elements of team management, thereby justifying the expediency of such management [6]. The comparative analysis of project teams, examining characteristics of both traditional and new types, is addressed in the works of A.V. Olenich and Z.Y. Shatska [5]. V.O. Moskalenko underscores the significance of meticulous adherence to stages in the formation of project teams[4].

After reviewing professional and scientific studies, especially the theoretical and methodological aspects of project team formation and organization, the analysis of managerial aspects that facilitate a higher level of effectiveness in team collaboration remains relevant during the wartime and post-war periods.

Objectives of the article

The objectives of this research are to develop recommendations for forming a project team during wartime and the post-war period to enhance the productivity and competitiveness of "Zaporizhvohnetryv" PJSC.

The main material of research

The team formation process is a strategic element of effective management. It is important to consider that the process of forming and developing a team into a mature structure spans a certain period of time. Creating a positive atmosphere within the team, actively promoting collaboration during team work, and fostering interdependence and trust among its members are the foundations for its effective growth [8]. The formation of a project team involves addressing the following tasks:

– defining the tasks and goals of the team;
– assessing the team's needs.;
– searching for candidates;
– selecting candidates;
– forming the team.

Therefore, forming a project team is a complex and responsible process that requires careful planning and implementation of all the stages discussed above.

Teams, as defined by Salas, Beard, and Tannenbaum, consist of individuals with different skills and experiences that they use to achieve common goals [9]. Team members take responsibility for their tasks and assist each other in reaching shared objectives. They are also capable of performing various roles within the team to ensure the success of the assigned task. A team with the right competencies and skills is more likely to achieve success [10].

Team effectiveness is its ability to yield benefits that exceed the costs of its creation and maintenance. The assessment of effectiveness can be approached from:

• Management: how the team collaborates to achieve its goals.
• Profit: whether maintaining the team is rational.
• Evaluation criteria: the performance indicators defined for the team.
• Outcomes: the results produced by the team [11].

Therefore, an effective team is one that delivers more benefits than the costs incurred in maintaining it. Assessing team effectiveness allows determining whether it achieves its goals and whether it is cost-effective.

The military actions since the beginning of the full-scale invasion on February 24, 2022, have posed a significant challenge to Ukrainian businesses. Many companies were forced to suspend or even cease their operations entirely. PJSC "Zaporizhvohnetryv" is one of the leading producers of refractory materials in Ukraine. The enterprise is located in Zaporizhzhia, which was one of the first cities affected by Russian aggression. The company supported the production of goods essential for the country's defense needs and the reconstruction of infrastructure after the war. PJSC "Zaporizhvohnetryv" implemented a series of measures to ensure the safety of employees and production:

1. Implemented round-the-clock shifts at the enterprise.
2. Established protective shelters for employees.
3. Secured reserves of raw materials and supplies in case of supply disruptions.

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Thanks to these measures, the enterprise was able to continue its operations without interruptions and did not suffer significant losses.

After the war, PJSC "Zaporizhvohnetryv" aims to restore production. The company plans to regain lost production capacity and expand manufacturing. To achieve this goal, the company is implementing a series of measures: a production recovery plan, procurement of new equipment and materials, recruitment, and training of additional personnel. The company also plans to diversify its product range and venture into the production of new types of products.

During the wartime and post-war periods, the company also faces the task of forming effective teams capable of successfully implementing the company's development strategy. The formation of teams during the wartime and post-war periods has its peculiarities. During this period, it is essential to consider factors such as:

– high levels of stress and uncertainty;
– unstable economic conditions;
– the necessity to adapt to new circumstances.

Based on the research, a set of recommendations has been developed, including a focus on people, creating an atmosphere of trust and support, ensuring clarity of goals and tasks, providing opportunities for growth and development, and motivating teamwork towards the ultimate outcome of both individual units and the entire enterprise.

Therefore, the formation of teams during wartime and the post-war period should be aimed at creating a comfortable and motivating environment for employees, as well as ensuring their development and growth. PJSC "Zaporizhvohnetryv" has the potential to enhance the effectiveness of team formation by focusing not only on tasks and goals, but also on the development of business processes, technologies, material and non-material assets, as well as the personnel of the enterprise and the establishment of trusting relationships within teams.

Conclusions

During wartime and the post-war period, the formation of a project team must be particularly thorough and responsible. The enterprise should consider not only current needs but also future development prospects. In this context, cost-effectiveness is one of the most crucial factors. The enterprise needs to assemble a project team that will efficiently utilize available resources. Flexibility is also a significant requirement. The enterprise must be prepared for changes in the external environment and within the company. The project team should be capable of quickly adapting to new conditions and making effective decisions in complex situations. Preserving or enhancing the workforce's productivity is a key task for any enterprise, especially during wartime and the post-war period. The enterprise should form a project team consisting of highly qualified professionals with experience in wartime conditions, capable of effectively accomplishing assigned tasks. The implementation of these measures will enable the enterprise to form a project team capable of successfully accomplishing set tasks and ensuring the enterprise's successful operation during wartime and the post-war period.

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PROJECT PORTFOLIO MANAGEMENT OF IT COMPANIES

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project portfolio management, chief information officer, framework, business unit, human resources, IT projects

In this article, I delve into the complex field of project management within contemporary organizations, with a particular focus on the Information Technology (IT) sector. The central theme revolves around the growing interdependence of projects, as truly independent projects have become increasingly rare.
The business of delivering IT services is marked by its non-cyclical nature, where projects vary significantly in terms of their duration, core objectives, and the nature of the work involved. It's worth emphasizing that the critical resource in this context is the specialists themselves, each contributing a unique combination of education, qualifications, experience, skills, knowledge, and a project history that informs their work.
IT projects exhibit a wide array of forms, including those with fixed time and cost structures, projects requiring payment upon work completion and material usage, long-term commitments to dedicated teams, and even the establishment of specialized development or competence centers. While individual project management seeks to ensure the timely and budget-friendly delivery of a product, portfolio management has its sights set on maximizing the overall returns from the entire portfolio of projects. Consequently, comprehensive examination, awareness, understanding, and careful optimization across various aspects of this domain are imperative for achieving effective outcomes.
To address these intricate challenges, the organization has crafted three distinct programs tailored to the specific needs of various business units. They are Matrix Organisation, Opportunity Life Cycle and Opportunity Lifecycle Decomposition.

УПРАВЛІННЯ ПОРТФЕЛЕМ ПРОЄКТІВ ІТ-КОМПАНІЙ

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Ключові слова:
управління портфелем проектів, директор з інформаційних технологій, фреймворк, бізнес-підрозділ, людські ресурси, ІТ-проекти

У цій статті я заглиблююсь у складну сферу управління проектами в сучасних організаціях, приділяючи особливу увагу сектору інформаційних технологій (ІТ). Центральна тема обертається навколо зростаючої взаємозалежності проектів, оскільки справді незалежні проекти стають дедалі рідшими.
Бізнес із надання ІТ-послуг відзначається нециклічним характером, коли проекти значно відрізняються за тривалістю, основними цілями та характером роботи. Варто підкреслити, що найважливішим ресурсом у цьому контексті є самі спеціалісти, кожен з яких вносить унікальну комбінацію освіти, кваліфікації, досвіду, навичок, знань та історії проекту, яка інформує їхню роботу.
ІТ-проекти демонструють широкий спектр форм, включаючи проекти з фіксованим часом і структурою витрат, проекти, що вимагають оплати після завершення роботи та використання матеріалів, довгострокові зобов'язання перед спеціалізованими командами та навіть створення спеціалізованих центрів розвитку або компетенції. У той час як управління окремими проектами прагне забезпечити своєчасну та бюджетну поставку продукту, управління портфелем має на меті максимізацію загального прибутку від усього портфеля проектів. Отже, комплексне дослідження, обізнаність,

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розуміння та ретельна оптимізація різних аспектів цієї сфери є обов'язковими для досягнення ефективних результатів.
Щоб вирішити ці складні завдання, організація розробила три різні програми, адаптовані до конкретних потреб різних бізнес-підрозділів. Це матрична організація, життєвий цикл можливостей та декомпозиція життєвого циклу можливостей.

Statement of the problem

Organizations embarking on projects are essentially making forward-looking investments. These investments serve various purposes, such as enhancing value for shareholders or owners, ensuring the organization's continuity, or improving revenue and cost management. Similar to financial investments, projects necessitate the allocation of an organization's resources, encompassing financial capital, human resources, and managerial time. The goal for each investment is to be effectively managed to optimize the expected returns or benefits while simultaneously mitigating associated risks.

Investments are chosen based on their superiority when compared to other investment options. To maximize advantages and minimize risks across all investments, organizations only proceed with those investments that offer a greater relative benefit. These selections are made within the confines of the organization's overall risk tolerance.

Project Portfolio Management (PPM) adheres to similar principles as investment portfolio management, focusing on optimizing the collection of projects to maximize overall benefits while minimizing portfolio-wide risks. Senior management often deviates from the project portfolio management model and typically does not make IT project investment decisions (Kendall & Rollins, 2003). Instead, IT projects are frequently initiated and executed without due consideration for the benefits they will generate or the cumulative risks to the organization posed by all IT projects.

Analysis of recent studies and publications

In the absence of IT-Project Portfolio Management, adversely affects project success, as has been reported previously by many world-known researchers and management scientists (T. Reyck, H. Lockett, M. Wright, P. Nijkamp, Z.J. Acs, J. Pfeffer, A.S. Sohal, Th. Ramayah, K. Lyytinen) as well as Ukrainian scholars, such V.P. Rubalko, V.L. Kompanietc, M.K. Lytvinenko, M.O. Kopan etc. Prominent scientists have played a vital role in advancing the field of project portfolio management, yet numerous challenges persist, given the rapid evolution of the IT industry.

Objectives of the article

The article aims to investigate the compelling reasons for transitioning to portfolio management for companies with a focus on the implementation of IT projects. It also explores both conventional and innovative methods for shaping and managing project portfolios in IT companies.

The main material of the research

Today in any organization it is difficult to find a project that would exist on its own, without interaction with other projects. There is no cyclical nature in the business of providing IT services - projects vary in duration, in essence, and in the nature of the work. And the main resource is specialists, for each of whom his education, qualifications, experience, skills, knowledge, and project history are of great importance.

Projects can be with a fixed time and cost, with payment upon completion of work and materials spent, with a dedicated team for a long period, or even with the construction of a dedicated development center or competence center. If the goal of managing an individual project is to create a product on time and within budget, then the goal of portfolio management is to obtain the greatest return from the implementation of the complete set of projects. In this regard, a deep study, awareness, understanding and maximum optimization of the entire range of issues in this area of activity to achieve effective results is of particular importance. Let's take a look at one of IT companies.

The IT business unit faced a pressing need to swiftly demonstrate the value-added services IT could offer in project deliveries and in response to the business's service requests. Adding to the complexity, there was a lack of transparency regarding the total project costs and the allocation of resources across the ongoing projects.

The primary challenge for the new chief information officer (CIO) was to:

1. Guarantee that IT resources were directed toward projects that brought tangible value to the business.
2. Establish the capability to track and report on the progress and business benefits achieved by these projects.
3. The initiated organizational change, in response to the business challenge, ultimately resulted in the implementation of PMM for the unit [1].

The organization created four distinct programs of work, each tailored to the specific needs of various business units, following a matrix structure. Program managers were appointed to oversee these programs, with a primary focus on achieving immediate enhancements in the following areas:

1. **Introducing Senior Management to Project Management's Value Proposition:** The program managers were tasked with familiarizing senior management within the business units with the benefits and value that effective project management brings to the organization. This involved highlighting how project management practices can contribute to the achievement of strategic goals.

2. **Implementing Cost-Benefit Analysis for All Projects:** Another critical task involved the introduction of cost-benefit analysis for all projects. This process aimed to assess the potential returns and costs associated with each project, helping to prioritize initiatives that offered the greatest value and aligning project decisions with business objectives.

Additionally, as an ongoing responsibility, the program managers were assigned the following tasks:

• Enhancing project communications to ensure effective information flow between IT and the Business Units.

• Ensuring active involvement of stakeholders in project planning and execution, improving collaboration and buy-in.

• Enhancing project planning in coordination with the Business Units to streamline project execution and align with their specific needs and objectives.

Program Managers played a pivotal role as the primary point of contact for communication with the business units, serving as embedded representatives of the IT business unit within these units. Their responsibilities encompassed both immediate improvements and the ongoing advancement of project management practices and collaboration [2].

IT Matrix Organisation: Capability / Programs

The organization organized its work into four distinct programs, aligning them with specific business units, following a matrix organizational structure. Program managers were selected to lead these programs, with a primary objective of promptly implementing enhancements in the following areas:

1. **Familiarizing Senior Management of Business Units with the Value of Project Management:** program managers were tasked with introducing the senior management of the business units to the benefits and advantages of effective project management. This involved demonstrating how sound project management practices can contribute to the organization's success and strategic objectives.

2. **Introducing Cost-Benefit Analysis for All Projects:** Another critical objective was the introduction of cost-benefit analysis for all projects. This process aimed to evaluate the potential returns and costs associated with each project, enabling the prioritization of initiatives that offered the greatest value and aligning project decisions with the business's goals [3].

Additionally, as an ongoing responsibility, program managers were mandated to:

• Enhance project communications to ensure effective information flow between the IT department and the business units.

• Ensure active stakeholder involvement in project planning and execution, fostering collaboration and support.

• Improve project planning processes in collaboration with the business units, streamlining project execution and aligning it with their specific needs and objectives.

Program managers played a pivotal role as the primary contact points for communication with the business units and were designated as the IT business unit representatives embedded within the business units. Their responsibilities encompassed both immediate improvements and the continuous advancement of project management practices and collaborative efforts (Fig. 1).

On the other side of the matrix, resource capabilities were formed and resource managers appointed. Resources are assigned at the request of project managers, who manage these projects and are prioritized with the business units to ensure focused completion of projects [3].

Opportunity Life Cycle

The opportunity life cycle was created to establish standardized processes for managing all IT initiatives, including projects, and to facilitate the evaluation of the portfolio. A project approval and sanctioning process was already in place and was being used for various initiatives, including those related to IT. This existing process was incorporated into the opportunity life cycle framework.

The opportunity life cycle serves as a model for continuous enhancement of all IT initiatives, whether they are initiated by the business units or the IT department itself. It encompasses a wide array of activities, such as updating IT infrastructure and renewing application software, among

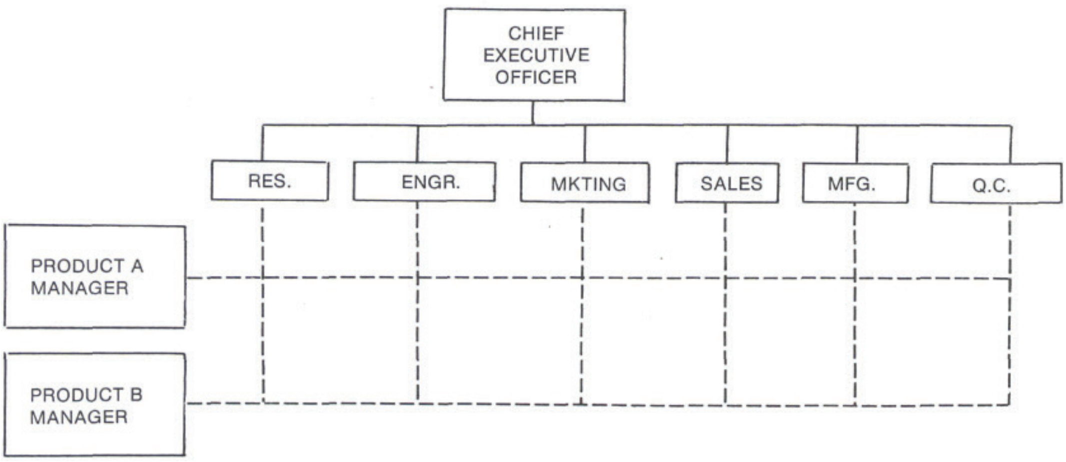

Figure 1 – IT Matrix Organisation

others. Its purpose is to provide a structured approach to managing and improving IT initiatives while ensuring alignment with the organization's objectives (Fig. 2).

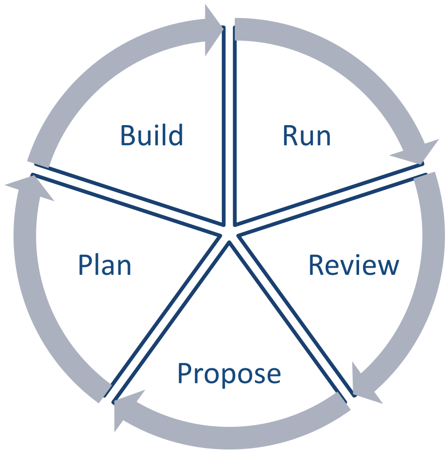

Figure 2 – The Opportunity Life Cycle

The opportunity life cycle has five phases:

1. Proposal Phase. In this phase the IT opportunity is recorded and the expected business benefits and business risks quantified and business-strategy alignment validated.
2. Planning Phase. In the Planning phase, approved Proposals of Initiatives are planned in detail for execution. Business benefits and risks are evaluated again based on information obtained and generated in the planning phase.
3. Build Phase. The build phase is the project execution phase, with benefit realization, project progress and business risk mitigation being monitored.
4. Run Phase. IT service delivery is depicted in this phase.
5. Refresh. Regular reviews on benefits of existing systems and applications are depicted in the Refresh phase [4].

All IT initiatives will need to be consider and evaluated based on the:

1. Business Principles that apply to the IT business unit
2. The Information and Communication Technology (ICT) Architecture
3. The Infrastructure Architecture
4. The Applications Architecture

The introduction of the opportunity life cycle placed a strong emphasis on the approval and authorization procedures that precede the actual implementation of IT-PPM. In essence, the processes outlined in the opportunity life cycle serve as the foundation for the implementation of IT-PPM. Therefore, it is essential to delve into more comprehensive details regarding each of the phases within the opportunity life cycle [5].

Opportunity Lifecycle Decomposition

The opportunity life cycle phases form the top of the exhibit and details of each phase are recorded under the phase.

An opportunity life cycle phase is made up of four aspects:

• Phase Responsibility. The responsible person for conducting and completing the phase.

• Key Elements of the phase. These key elements are prescribed.

• Phase Acceptance Criteria are used for each phase deliverable and completion of the phase. Approval to proceed allows for the initiative to proceed to the next Phase.

• Portfolio Performance Criteria include the evaluation criteria for all initiatives combined. This aspect forms the basis for the performance criteria of all work effort expended on initiatives within a phase. For example an assessment is made as to whether the performance of all activities for a particular phase provides the business benefits that are expected.

Two elements of the opportunity life cycle decomposition are expanded on to explain the usage of the opportunity life cycle processes and procedures:

a. The first recording of the opportunity and the initial Assessment.

b. Status Changes of the opportunity life cycle.

It is seen as important that all opportunities are recorded at the time that these Opportunities become known to the IT business unit (through the IT Program Manager) and that no opportunity selection is made outside the formal phase work effort. The recording of the opportunity assumes that every opportunity needs to be assessed in the formally prescribed process. Each recorded Opportunity must be supported by the Sponsor, who is the responsible individual from the business unit that will benefit from the opportunity. An alignment with the business-strategy is not required at this stage in the process so that new opportunities are not curtailed by assumed constraints thus allowing for entrepreneurial activities or new industry developments to become considered in the process.

The Scope of the opportunity recording is limited to a mutually agreed and understood description of the opportunity including an overview of the Business Benefits and Risks that are attached to the opportunity. The opportunity description must also include a description of the current situation and the benefits and risks attached to not following through with the proposed opportunity. The description of the current situation with respect to the Opportunity is required to ensure that the assessment of the opportunity includes the “do nothing” option [5].

The Initial Assessment of the Recorded Opportunity, whether or not the Opportunity should proceed to the Proposal Phase is based on:

• The expected Business Benefit and the Business Risks that are attached to the Opportunity.

• The Business Risks that are attached to not following through with the Opportunity to the Proposal phase.

Whether or not a Status Change from one phase of the Opportunity Life Cycle to the next phase is followed through is dependent on two sets of criteria. Firstly, the Description and Benefit / Risk Analysis must be accepted and agreed. This agreement on the Description of the Opportunity and the veracity of the information is assessed in a walkthrough with the respected responsible individuals involved. At the highest level, the CIO and the Business Sponsor must be in agreement on the Opportunity Description and Benefits /

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Risks of the Opportunity. Without this agreement there is no basis to proceed with the Opportunity to the next phase.

Secondly, the Approval to Proceed to the next phase of the Opportunity Life Cycle is based on a relative position of the opportunity amongst all other opportunities, on availability of resources that are required for the next phase and the forward commitment of resources that is made already for other opportunities. For example if the forward commitments on accepted opportunities show that a project will over-commit available resources then an assessment needs to be made as to the relative position of the opportunity in all other phases of the opportunity life cycle. Thus, whether or not an opportunity proceeds to the next phase should also consider whether the Opportunity will be able to complete all phases of the life cycle and will not be stalled in subsequent phases because of lack of resources.

Conclusions

The challenges outlined in the article primarily pertain to IT companies in stages of growth and development. The move toward a systematic portfolio project management approach represents a natural evolution in the organization's management structure, akin to the shift from a matrix-based system to a project-based management system. It is of paramount importance to establish clear criteria for project selection and removal within the portfolio.

The research's scientific and theoretical contribution lies in the creation of a novel definition for "project portfolio" in the realm of Information Technology. Furthermore, the study has advanced the methodology surrounding the optimization of project portfolio management in IT industry companies, both in theoretical and practical terms.

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