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ZOLO TAROVA Oksana,
Candidate of technical sciences,
Associate professor, Associate professor
Department of commodity science and customs
affairs, State University of Trade and Economics
19 Kyoto St, Kyiv 02156, Ukraine

ORCID: 0000-0003-2534-3125
o.zolotarova@knute.edu.ua

MEREZHKO Nina,
Doctor of technical sciences, Professor,
Head of the Department of commodity science
and customs affairs,
State University of Trade and Economics
19 Kyoto St, Kyiv 02156, Ukraine

ORCID: 0000-0003-3077-9636
n.merezhko@knute.edu.ua

EU POLICY ON SUSTAINABLE TRADE: INSIGHTS FOR UKRAINE

The evolution of global trade, driven by the urgent need to protect the environment, ensure social justice and economic growth in the face of globalization, emphasizes the relevance of sustainable trade practices. This paradigm shift emerged in the late 1980s to harmonize economic prosperity with ecological and social well-being. As a prominent player in international trade, the European Union (EU) has taken a leading role in promoting and implementing sustainable trade policies.

A broad review of global studies and publications reveals a growing consensus on the necessity of sustainable trade. Scholars have explored such topics as the trade-environment relationship, economic growth's compatibility with environmental protection, and the role of trade in achieving sustainable development goals. The integration of sustainable development criteria into trade policy has also been a central topic.

This article scrutinizes the evolution of the EU policy on sustainable trade, highlighting the

ЗОЛОТАРЬОВА Оксана,
к. т. н., доцент, доцент кафедри
товарознавства та митної справи
Державного торговельно-економічного
університету
вул. Кіото 19, Київ 02156, Україна

ORCID: 0000-0003-2534-3125
o.zolotarova@knute.edu.ua

МЕРЕЖКО Ніна,
д. т. н., професор, завідувач кафедри
товарознавства та митної справи
Державного торговельно-економічного
університету
вул. Кіото, 19, м. Київ, 02156, Україна

ORCID: 0000-0003-3077-9636
n.merezhko@knute.edu.ua

ПОЛІТИКА ЄС ЩОДО СТАЛОЇ ТОРГІВЛІ: ІНСАЙТИ ДЛЯ УКРАЇНИ

Еволюція глобальної торгівлі, що обумовлена нагальною необхідністю захисту навколишнього середовища, забезпечення соціальної справедливості та економічного зростання в умовах глобалізації, підкреслює актуальність практик сталої торгівлі. Ця зміна парадигми виникла наприкінці 1980-х рр. для гармонізації економічного процвітання з екологічним і соціальним добробутом. Як видатний гравець у міжнародній торгівлі Європейський Союз (ЄС) взяв на себе провідну роль у пропаганді та впровадженні сталої торговельної політики.

Результати широкого огляду глобальних досліджень і публікацій свідчать про зростаючий консенсус щодо необхідності сталої торгівлі. Учені розглядали такі теми: відносини між торгівлею та навколишнім середовищем, сумісність економічного зростання з охороною навколишнього середовища та роль торгівлі в досягненні цілей сталого розвитку. Інтеграція критеріїв сталого розвитку в торговельну політику також була центральною темою дослідження.



significance of such research in the present global context.

The research hypothesis states that sustainable trade policies are vital to solving global economic problems, contributing to sustained economic growth. The methodology involves a thorough analysis of EU political documents and an assessment of their alignment with the global goals of sustainable development.

In the article's main sections, the authors consider various aspects of the EU's path to sustainable trade, including the integration of environmental considerations, alignment with Sustainable Development Goals (SDGs), and the historical development of sustainable trade policy. The results of this study significantly contribute to the global dialogue on sustainable trade, offering insights into the EU's path in promoting sustainable trade and providing comprehensive overview of its implications, challenges and opportunities.

Keywords: sustainable trade, EU policy evolution, environmental impact, social justice, SDGs.

У статті детально розглянуто еволюцію політики ЄС щодо сталої торгівлі, підкреслюючи важливість таких досліджень у сучасному глобальному контексті.

За гіпотезою дослідження стала торговельна політика є життєво важливою для вирішення глобальних економічних проблем, сприяючи постійному економічному зростанню. Методологія передбачає ретельний аналіз політичних документів ЄС і оцінку їх узгодження з глобальними цілями сталого розвитку.

Розглянуто різні аспекти шляху ЄС до сталої торгівлі, зокрема інтеграцію екологічних міркувань, узгодження з цілями сталого розвитку та історичний розвиток політики сталої торгівлі. Результати цього дослідження істотно сприяють глобальному діалогу щодо сталої торгівлі, пропонуючи розуміння шляху ЄС в просуванні сталої торгівлі та надаючи вичерпний огляд її наслідків, викликів та можливостей.

Ключові слова: стала торгівля, еволюція політики ЄС, вплив на навколишнє середовище, соціальна справедливість, цілі сталого розвитку.

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Introduction

The escalating challenges posed by globalisation and free trade, notably in the environmental and social domains, have necessitated a paradigm shift towards sustainable trade practices. The genesis of the concept in the late 1980s arose from the imperative to reconcile economic growth with environmental protection and social justice. As a central player in international trade, the European Union (EU) has taken a leadership role in advocating and implementing sustainable trade policies.

In recent years, academic research has shifted from a general focus on shaping suitable trade practices to a more nuanced examination of the economic, production, environmental, and climate change impacts within different industries. The academicians widely addressed the issues of the trade role in achieving sustainable development goals (*Sudsawasdi, Charoensedtasin, Pholphirul, 2020*) and the integration of sustainability criteria into trade policies (*Marx, 2018*). Several notable studies contributed valuable insights to impacts of international trade on global sustainability (*Xu & others, 2020*), mitigation pathways for sustainable development (*Danish & others, 2020*) and sustainable development pathway for climate action (*Soergel & others, 2021*). Further research delved into topics such as nexus between economic growth, energy use, international trade, and ecological

footprints (*Nathaniel & others, 2021*), optimal trade-offs for sustainability and resilience (*Rajesh, 2021*), sustainability standards in EU trade agreements (*Bronckers, Gruni, 2021*) and environmental innovation and trade openness (*Khan et al., 2022*). One of the latest studies (*Harrison, 2023*) examines sustainability provisions focused on Global Value Chains in trade agreements.

The purpose of this article is to critically examine the evolution of the EU's sustainable trade policies, aiming to uncover the underlying conditions and significance of these policies. The intent is to furnish valuable insights for Ukraine as it navigates its path toward sustainable trade. The research illuminates key aspects, offering a comprehensive overview and distilling valuable lessons for Ukraine in the formulation of its sustainable trade policies.

The hypothesis driving this research posits that insights derived from the EU's sustainable trade policies are pivotal for informing Ukraine's approach to addressing global challenges and fostering equitable economic growth. The step-by-step algorithm for testing the hypothesis involves a meticulous analysis of the EU's historical approach to sustainable trade, tracing policy evolution and assessing the alignment with global sustainability goals. The methodology involves an extensive review of EU policy documents comprising a diverse range of sources, including international agreements, policy documents, thinktank research and scholarly articles.

The main part of the article is structured into sections, each revealing a facet of the EU's sustainable trade journey. The sections encompass the integration of environmental considerations, the evolution of EU policy aligned with SDGs, the pre-2011 indirect promotion of sustainable trade, the impact of the Lisbon Treaty, and the recent alignment with the UN's SDGs in 2015. Each section succinctly presents key findings, emphasising the EU's commitment to sustainable trade. These insights serve as a guide for Ukraine, offering a nuanced understanding and actionable guidance to enhance its own sustainable trade policies in alignment with global best practices.

This research marks a starting point in the series of articles aimed to shed light on the landscape and perspectives of sustainable trade development. The intention is to provide a strong foundation for the global sustainable trade discourse and empower Ukrainian stakeholders with crucial knowledge for effective promotion and navigation of sustainable trade practices in Ukraine.

1. Genesis of the concept of sustainable trade

The idea of sustainable trade first emerged in the late 1980s and early 1990s because of increasing concern about the adverse environmental and social impacts of globalization and free trade, and a growing recognition of the need to balance economic growth with environmental protection and social justice.

The European Union (EU) as a major player in international trade (*Eurostat*, 2023) and has a significant role in promoting sustainable trade practices. The EU's trade policy is based on World Trade Organization (WTO) principles (WTO, n.d.) and covers trade in goods and services, as well as intellectual property and foreign direct investment. The EU's approach to sustainable trade involves engaging in multilateral initiatives at the international level, such as the 2030 United Nations Sustainable Development Goals Agenda (UN SDG Agenda 2030) (*UN*, 2015).

The concept of sustainable trade was initially introduced in 1987 in the Brundtland report (Brundtland Commission, 1987): "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*". Later, during the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, the EU played a leading role in the development of the Rio Declaration on Environment and Development (*UNCED*, 1992), that recognized the interdependent nature of environmental protection, economic development, and social equity, and highlighted the need for an integrated approach to sustainable development. Establishing principles for international cooperation and accountability, the declaration set the stage for subsequent international agreements and policies aimed at promoting sustainable trade.

2. Integration of Environmental Considerations into EU's Trade Policy

Following the UNCED conference, the EU set out to strengthen its environmental policies and legislation and adopted in 1993 the Programme of policy and action "Towards Sustainability" (*European Community*, 1993), better known as the Fifth Environmental Action Programme (5th EAP). The Programme established a framework for the EU environmental policy and set out the EU objectives for the period up to 2000, recognising "*the importance of integrating environmental considerations into other policies*", including trade, and emphasising the need for sustainable development.

In 1996 the Communication on Environmental Agreements (*European Community*, 1996) built upon the 5th EAP and recognized that trade and the environment were interconnected, and unsustainable trade practices could lead to negative environmental and social consequences. It called for the integration of environmental considerations into trade policy and the use of trade measures to promote sustainable development. Nonetheless, the EU had taken a number of measures to address sustainable development, there was a growing recognition that the more comprehensive and coherent approach was needed to tackle the complex challenges of sustainable development.

3. Evolution of EU Policy on Sustainable Trade and Alignment with SDGs

3.1. The Helsinki European Council and Initial Steps towards Sustainable Trade

The Helsinki European Council (*European Council, 1999*) adopted at the end of 1999 the Millennium Declaration and introduced decisions to promote a sustainable economy, in line with enlargement process, strengthening common security and defence policy. The Helsinki European Council addressed sustainable trade by urging the immediate implementation of strategies for integrating the environmental dimension into the agriculture (*Council of the EU, 1999a*), energy (*Council of the EU, 1999b*) and transport (*Council of the EU, 1999c*) sectors. Additionally, the Commission was invited by the European Council (*European Council, 1999*) "to prepare a proposal for a long-term strategy dovetailing policies for economically, socially and ecologically sustainable development to be presented to the European Council in June 2001".

3.2. Introduction of the EU Sustainable Development Strategy (EUSSD)

In 2001 the Commission subsequently proposed a European Union strategy for sustainable development (EUSSD) (*European Commission, 2001*), which was presented to and endorsed by the Gothenburg European Council (*European Council, 2001*) in June 2001. The strategy was then incorporated into the European Union's preparatory work for the 2002 World Summit on Sustainable Development (*UN, 2002*). In 2002 the EUSSD was extended to include an external dimension by the Barcelona Council (*European Council, 2002*), highlighting the significance of sustainable development in the EU's relationships with developing countries. It called for "trade policies and investment flows to be directed towards sustainable development".

3.3. Incorporating Sustainable Development in EU's External Dimension

The Renewed EU Sustainable Development Strategy (*Council of the EU, 2006*), adopted by the European Council in 2006, highlighted the need for increased efforts by the Commission and Member States "to make globalisation work for sustainable development". The EU should enhance collaboration with trading partners to harness environmental and social standards, using all levels of trade agreements to achieve genuine global sustainable development.

3.4. Pre-2011: Indirect Promotion of Sustainable Trade

Although sustainable development has been a top priority for the European Union for about a decade, it did not explicitly incorporate sustainable trade provisions into its policies until 2011, when trade and sustainable development chapters became the part of EU's free trade agreements. Prior to this, the EU had implemented various policies aimed at promoting sustainable trade indirectly. In 2008, the Commission proposed the Sustainable Consumption and Production (SCP) Action Plan (*European Commission, 2008a*), aimed to improve the products environmental performance and sustainability, increase consumer awareness, and demand for sustainable goods, and promote innovation in EU industry. The SCP Action Plan led to various initiatives in the EU policy aimed to promote sustainability, including the extended Eco-design Directive (*EU Eco-design Directive, 2009*) and revised Ecolabel Regulation (*EU Ecolabel Regulation, 2010*), regulatory frameworks and legislative initiatives on Green Public Procurement (*European Commission, 2008b*), the Resource Efficiency Roadmap (*European Commission, 2011a*), and the Eco-Innovation Action Plan (*European Commission, 2011b*).

3.5. The Lisbon Treaty and Strengthening EU's Trade Policy

The Lisbon Treaty (*Treaty of Lisbon, 2007*) brought significant changes to the EU's trade policy, including increased powers for the European Parliament, clarified EU powers on trade, and the establishment of qualified majority voting as the general rule in the Council for all aspects of trade policy, with unanimity required only in specific circumstances. These changes have helped to strengthen the EU's ability to align its trade policy with its sustainable development objectives.

Nevertheless, the Lisbon Treaty (*Treaty of Lisbon, 2007*) did not specifically mention sustainable trade provisions, but it provided the legal basis for the EU to include such provisions in its trade agreements. With the introduction of Article 207 in the Treaty, the EU was granted exclusive competence over foreign direct investment, intellectual property rights, and trade in services, empowering the EU to negotiate and finalize comprehensive trade agreements, which can encompass provisions on sustainable development. In addition to the Lisbon Treaty itself, there were certain follow-up documents and agreements that provided more guidance on how sustainable development should be integrated into EU trade policy.

3.6. Trade Policy in Alignment with EU's 2020 Strategy

Published in 2010 Communication (*European Commission, 2010*) on the EU's 2020 Strategy highlighted that open economies grow faster than closed ones, and trade is a key driver of growth for the European Union (EU),

as it promotes efficiency and innovation, boosts foreign demand for goods and services, and offers consumers access to a wider range of products at lower prices. The EU trade and investment policy should support the achievement of the "*smart, inclusive and sustainable growth*". The Communication outlined Europe's openness to foreign direct investment (FDI), which boosts competitiveness and global expansion, leading to job creation. There was some level of apprehensiveness that open trade policies could fail unless other developed and emerging partners engage in reciprocity and mutual benefit. Europe should benefit from the triple gains of open trade and investment: increased growth, higher employment, and lower consumer prices.

The European Economic and Social Committee's Opinion (*EESC*, 2010) on the EU's 2020 Strategy Communication highlighted the need for the EU's trade policy to prioritize sustainable growth, low-carbon transition, and social market economy. It suggested opening trade, ensuring security of raw materials and energy, reducing trade barriers, promoting reciprocity, employing trade protection, and upholding EU's values. Sustainable development, food security, and global solidarity should receive greater attention, and a fair transition and future WTO reform should be encouraged.

In 2011 the European Parliament passed a Resolution (*European Parliament*, 2011) urging the European Commission to develop a future trade strategy that would focus on emerging economies and the EU's long-term development strategies and challenges. The Resolution (*European Parliament*, 2011) prioritised trade policy in achieving the EU's triple objectives of smart, inclusive, and sustainable growth, emphasized environmental and social standards in future trade agreements, and encouraged comprehensive, balanced, and WTO-compatible bilateral trade agreements.

3.7. Trade for All Communication: Emphasising Sustainable Development Goals (SDGs)

In 2015, the European Union aligned with the United Nations' Sustainable Development Goals (SDGs) (*UN*, 2015) by adopting the Trade for All Communication (*European Commission*, 2015), which emphasized the significant role of trade and investment in driving economic growth and generating employment opportunities. The communication acknowledged the changing global economic system, which has resulted in international value chains, and advocated for a more transparent, open, and responsible trade and investment policy based on European values, aiming to improve conditions for all, including citizens, consumers, workers, small and large businesses, and those in developing countries. The communication concluded with the importance of promoting sustainable development, human rights, and good governance.

3.8. *Advancing Sustainable Development through EU Trade Policy*

The enforced external dimension of the EU trade policy at the post-Lisbon time resulted in the number of the EU policy documents aimed to promote adapting of trade and investment policies for countries in need (*European Commission, 2012*), achieving inclusive and sustainable growth in developing countries (*European Commission, 2014*) and advancing development through trade (*European Parliament, 2013*).

To support the EU's external trade policy the European Commission has adopted financing decisions aimed to support the external trade projects and initiatives, setting a maximum Union contribution between €18.100.000 to €19.022.638 for the annual work program to be financed from the general budget of the Union. The decision for 2021 (*European Commission, 2021a*) aimed to support the Union's external trade policy and activities relating to the Community market access strategy, whereas the decisions for 2022 (*European Commission, 2022a*) and 2023 (*European Commission, 2023*) focused more broadly on financing projects in external trade relations, including access to third country markets and trade-related initiatives.

In 2019, the European Commission released a Reflection Paper (*European Commission, 2019*) entitled "Towards a Sustainable Europe by 2030" highlighting the EU's dedication to realising the United Nations' 2030 Agenda for Sustainable Development, outlining both the challenges and opportunities that Europe faces in its pursuit of sustainability, and providing a roadmap of policy options and scenarios for achieving its objectives. The European Committee of the Regions urged (*European Committee of the Regions, 2019*) the EU to prioritize the 2030 Agenda for Sustainable Development by developing a time-bound strategy that involves all stakeholders and coordinates implementation across all levels of government, emphasising the crucial role of regions and cities and the need to build their capacity to localize the SDGs effectively.

To build a consensus around a fresh medium-term direction for EU trade policy the European Commission's launched (*European Commission, 2020*) in June 2020 a major review of the European Union's trade policy based on public consultations seeking input from the European Parliament, Member States, stakeholders, and civil society. The Trade Policy Review (*European Commission, 2021b*) published in February 2021 highlighted the necessity to adopt a new trade policy strategy that would prioritise sustainability and social equity and align with its environmental and social objectives such as the Paris Climate Agreement and the Sustainable Development Goals. This new strategy should also ensure transparent and inclusive trade negotiations, protect labour rights, and promote environmental standards in collaboration with civil society organizations.

3.9. Reviewing EU Trade Policy and Prioritising Sustainability

Following the Trade policy review (*European Commission, 2014*), the European Commission launched in June 2021 a review of the 15-Point Action Plan on Trade and Sustainable Development to improve the ability of trade agreements to promote sustainable trade. The review aimed to enhance the ability of trade agreements to promote sustainable trade, and involved an independent study, public consultation (*Open public consultation, 2021*), and feedback from EU Member States and institutions, resulting in the identification of key priorities and actions to strengthen the current approach and enforce TSD chapters in the trade agreements, including a compliance stage and targeted use of trade sanctions.

In June 2022, the European Commission released a Communication "The power of trade partnerships: together for green and just economic growth" (*European Commission, 2022b*) which seeks to enhance the Trade and Sustainable Development provisions of EU trade agreements. It was underlined that the EU's trade agreements play a significant role in driving sustainable growth in the EU and its partner countries, providing a platform for policy dialogue and cooperation on sustainability with partner countries. The Communication identified six policy priorities of the EU's TSD model that proved to need an improvement according to the TSD review: *"the need to be more proactive in the cooperation with partners; stepping up the country-specific approach; mainstreaming sustainability beyond the TSD chapter of trade agreements; increasing the monitoring of the implementation of TSD commitments; reinforcing the role of civil society; and enhancing enforcement by means of trade sanctions as a measure of last resort"*.

4. EU's sustainable trade policies: insights for Ukraine

The empirical examination of the EU's sustainable trade policies not only offers discerning insights for Ukraine's strategic shaping of its own trade landscape, but also provides a paradigmatic framework for navigating and mitigating environmental challenges inherent in trade practices. The EU's systematic integration of environmental considerations into trade policies demonstrates an acute awareness of the interplay between trade dynamics and environmental imperatives, offering methodological insights that Ukraine stands to gain in contemplating a strategic realignment.

Moreover, the EU's meticulous alignment with the Sustainable Development Goals (SDGs) serves as a substantive reference point for Ukraine as it embarks on a nuanced recalibration of its trade policies. This alignment, encompassing economic, social, and environmental dimensions, provides a blueprint for comprehensive societal well-being and economic growth through trade and investment (*European Commission, 2001*).

The post-Lisbon external trade policy of the EU is indicative of its strategic approach to international collaboration and inclusivity (*Treaty of Lisbon, 2007*), providing methodological insights that Ukraine can glean for its own challenges. Facing distinctive obstacles, Ukraine can learn from the EU's commitment to supporting nations in need, fostering inclusive growth, and advancing development through trade. This narrative offers valuable perspectives for shaping Ukraine's external trade relations, particularly in the pursuit of sustainable growth and substantive collaborations with the EU.

Additionally, the EU's Trade for All Communication (*European Commission, 2015*) emphasised the importance of transparent, open, and responsible trade and investment policies grounded in European values. This methodological approach resonates with global expectations, setting a benchmark for Ukraine. The prioritization of sustainability, human rights, and good governance becomes a methodological imperative for Ukraine to enhance its global trade positioning.

The ongoing of the EU's trade policies analysis, notably with a dedicated focus on sustainability, presents a compelling case study in adaptability and responsiveness. Ukraine, in crafting its sustainable trade policy, can draw lessons from the EU's commitment to periodic evaluations, public consultations, and the dynamic adaptation of strategies, fortifying its own trade policies (*European Commission, 2020*).

Finally, the EU's recognition of the instrumental role played by civil society in enforcing sustainable trade provisions contributes to Ukraine adopting a more inclusive and participatory methodological approach. This involves exploring ways to involve civil society organizations and other stakeholders in the formulation and oversight of its sustainable trade policies.

Conclusions

The evolution of EU policy on sustainable trade reflects a transition from acknowledging the link between trade and environmental considerations in the 1990s to a recent explicit and strategic integration of sustainability provisions. This progression includes initial steps urging strategies to integrate environmental dimensions into key sectors and an expanded focus on sustainable development in relationships with developing countries. The EU's trade policy now prioritizes sustainability, aligning with global goals, fostering inclusive growth, and adapting strategies for robust sustainable development provisions. The emphasis on the role of trade and investment in driving economic growth and generating employment opportunities remains consistent. A crucial aspect of the EU's commitment lies in externalizing sustainable trade ideas, actively promoting sustainable development beyond its borders in alignment with the United Nations' Sustainable Development Goals (SDGs). This dedication affirms the EU's role in fostering global sustainable growth.

The research affirms the hypothesis, which suggests that insights from the EU's sustainable trade policies play a pivotal role in shaping Ukraine's strategy to tackle global challenges and foster fair economic development. This confirmation stems from a thorough analysis of the EU's historical commitment to sustainable trade. The EU's consistent dedication to incorporating social and environmental factors into its trade policies, evident in its policy evolution and alignment with global sustainability goals, provides validation for the hypothesis. The EU stands out as a pioneer in sustainable development, actively addressing climate change, biodiversity loss, resource depletion, and human rights, thereby contributing to global sustainable growth.

As a vital partner in the EU's Eastern Partnership program, Ukraine holds strategic significance in regional trade and economic integration. Despite ongoing conflicts, Ukraine serves as a compelling case study for the examination of the external dimension of the EU's sustainable trade policy. The repercussions of the conflict in Ukraine had significant implications for international trade system (*IISD*, 2022; *WTO*, 2023), highlighting the urgent need for sustainable development and environmental protection in the region.

The exploration of the EU's sustainable trade policies provides Ukraine valuable insights for responsible and sustainable trade. By closely examining the EU's journey, Ukraine can draw inspiration, adapt regulatory frameworks to align with international standards, and strategically position itself in the global market. Understanding the significance of social and environmental factors in the EU's policies allows Ukraine to prioritize similar considerations, fostering economic growth and building a positive global reputation. The article's insights offer a roadmap for Ukraine to capitalize on economic opportunities, mitigate risks, and engage stakeholders effectively, contributing to Ukraine's sustainable and competitive trade future.

In synthesizing these insights, this research marks the start of a broader series illuminating the landscape of sustainable trade development and its implications for Ukraine. Subsequent studies will delve deeper into specific aspects, providing a comprehensive understanding of implications, challenges, and opportunities for Ukraine in sustainable trade policy development. The ongoing EU commitment to prioritizing sustainability offers a valuable framework for Ukraine's journey toward sustainable economic growth and resilience.

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SHYNKOYCH Andrii,
PhD in Economics,
Associate Professor of the Department of Public
Management and Administration
State University of Trade
and Economics
19, Kyoto St., 02156, Kyiv, Ukraine

ORCID: 0000-0003-2922-3796
a.shynkovych@knute.edu.ua

RURAL DEVELOPMENT AS A BASIS FOR FOOD SECURITY IN UKRAINE

Food security is one of the key goals of the state agricultural and economic policy. It forms a vector of movement towards the optimal state of the food system of any country. In this sense, food security monitoring is a continuous process. But mostly, in order to realize this goal, the development priorities and mechanisms for implementing the agricultural policy must be corrected. Each country has its own experience in implementing agricultural policy and creating a national food security system.

The food security problems of Ukraine in the conditions of the war and the post-war period of reconstruction, as well as the connection between the prospects for the development of rural areas and the increase in the level of food security, are considered. Based on the most common approaches to defining food security and the basic aspects of the modern concept of food security, taking into account the social and economic problems of rural areas of Ukraine as obstacles to strengthening the country's food security, proposals for their prevention and overcoming have been developed. The concept of Economic Ukrainian Centrism was introduced.

Keywords: food security, innovation, post-war reconstruction of Ukraine, rural development, economic Ukrainian Centrism.

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ШИНЬКОВИЧ Андрій,
к. е. н., доцент кафедри
публічного управління
та адміністрування
Державного торговельно-економічного
університету,
вул. Кіото, 19, м. Київ, 02156, Україна

ORCID: 0000-0003-2922-3796
a.shynkovych@knute.edu.ua

РОЗВИТОК СІЛЬСЬКИХ ТЕРИТОРІЙ ЯК ОСНОВА ПРОДОВОЛЬЧОЇ БЕЗПЕКИ УКРАЇНИ

Продовольча безпека – одна з ключових цілей державної аграрної та економічної політики. Вона формує вектор руху до оптимального стану продовольчої системи будь-якої країни. У цьому сенсі моніторинг продовольчої безпеки є безперервним процесом. Але здебільшого для втілення цієї мети слід скоригувати корекція пріоритети розвитку та механізмів реалізації аграрної політики. Кожна країна має свій власний досвід реалізації аграрної політики та створення національної системи продовольчої безпеки.

Розглянуто проблеми продовольчої безпеки України в умовах війни та післявоєнний період відбудови, а також зв'язок перспективи розвитку сільських територій з підвищенням рівня продовольчої безпеки. На основі найпоширеніших підходів до визначення продовольчої безпеки та базових аспектах сучасної концепції продовольчої безпеки, з огляду на соціально-економічні проблеми сільської місцевості України як переешкоди для зміцнення продовольчої безпеки країни, вироблено пропозиції щодо їх профілактування та подолання. Введено поняття "економічний україноцентризм".

Ключові слова: продовольча безпека, інновації, післявоєнна відбудова України, розвиток сільських територій, економічний україноцентризм.



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Introduction

Food security (FS) is an important component of social and economic development and a key component of the country's economic and national security. It is worth noting that the development of reproductive processes in agricultural production occurs only when the FS conditions are created, including mechanisms for combating economic threats. This is due to the fact that the food problem at the current stage of human development has a global scale.

FS implementation requires a comprehensive strategy and systemic state regulation. Refining the concept of food security is one of the most urgent tasks both in the world and in Ukraine, which is acutely experiencing the social and economic consequences of the war. Despite the fact that the FS problem in the world community is given a lot of attention, it not only remains unsolved, but also significantly worsened under the conditions of globalization, so it needs further comprehensive research.

The research of domestic and foreign scientists is devoted to the peculiarities of FS providing. O. Shevchenko describes the FS genesis in state acts, in particular, the national security strategy of Ukraine in different periods of Ukrainian independence (Shevchenko, 2021, pp. 110–117). E. Starychenko defines food security as a state favorable to ensuring food security in the economic, social and ecological spheres, during which the physical, social and economic availability of food products is guaranteed for every person (Starychenko, 2018, pp. 42–48). Famous Ukrainian scientists P. Sabluka and V. Yurchyshyn made a significant contribution to the actualization and scientific development of the topic of PB. Foreign scientists K. Araujo, U. Beck, O. Badian, J. Desir, D. Gwishiani, V. Aykroyd, J. Drese, E. Ekholm, D. Mahendra, A. Sen, S. Osmani, T. Schultz, Schengen Fen.

The aim of the article is to determine the theoretical and institutional features of food security in Ukraine under martial law, as well as transformations of public administration and approaches to ensuring food security and the need to strengthen state regulation of the development of the basic level of food security in rural areas. The research is based on the hypothesis that the driver of strengthening food security is the state regulation of the development of rural areas, which should take place under a complex and systematic approach. The hypothesis was tested using the methods of comparative analysis, generalization and synthesis.

The Ukrainian and foreign scientists' researches on the FS issues, as well as the regulatory framework and other decisions of public management and administration bodies became the theoretical and methodological basis for writing the article, the research of which was carried out using the monographic method. The methods of theoretical generalization, analysis, and synthesis were used to systematize the obtained data. Abstract-logical, hypothetical and the method of structural, functional analysis were used to develop proposals for planning state regulation of the development of rural areas and agrarian policy in general.

The theoretical significance and novelty of the article is in the introduction of the of Economic Ukrainian Centrism concept in Ukraine's foreign economic activity, as well as a list of proposals of a specific nature regarding Ukraine's food security and the development of rural areas.

Thanks to consideration of the peculiarities of food security as a component of Ukraine's national security and the level of the quality of life of the population and the country's place in global economic policy, arguments are provided that the social and economic problems of the base area of food security as rural areas, are an obstacle to strengthening food security of Ukraine, the author's proposals are presented on overcoming them.

1. Peculiarities of food security as a component of national security of Ukraine during martial law

The FS formation takes place through the creation of economic mechanisms that take into account economic interests and contribute to the development of the agricultural food sector. Although the food security situation in Ukraine is largely independent in many food parameters, before the full-scale invasion of the Russian Federation, it had a number of problems, the most important of which are technical assistance in the agricultural sector, investment projects implemented in the agro-industrial sector, priority areas of grain farming, vegetable growing and animal husbandry, aging of production capacities of processing enterprises and purchase of necessary means of production.

According to O. Chechel, food security is a state that is characterized by the protection of the food interests of people, society and the country from external and internal threats and that guarantees a correctly measured impact of factors in the presence of environmental protection. This state predicts the current situation, which contributes to the functioning of human life, the development of the economy and industry, the control of crisis phenomena and the provision of sufficient quantities of high-quality products to all population groups.

According to the definition of the World Food Program, it is a system that clearly works to ensure all segments of the country's FS through its own production of products in accordance with physiological norms, as well as the import of products that the country cannot produce (Chechel, 2014).

In the last decade, the three main approaches to defining food security, presented in the *Table*, have been the most common.

Proponents of the first are economists from countries with developed market economies. According to it, food security guarantees are implemented through imports or self-sufficiency, so there is not much difference between these options.

Table

Approaches to determining food security

Approach	Main categories	Essence
First	Consumption	Providing citizens with safe access to the amount of food necessary for a healthy active life
Second	Stock of food; solvency of the population; the balance of domestic production and imports	The state's ability to provide the necessary quantity and range of food products
Third	The number of products on the national food market and their availability to the population	It is used to determine the provision of physical and economic availability of food

Source: created by the author, based on Kulakovska, 2020.

According to the second approach, the FS provision is aimed at the implementation of important directions, in particular:

- Conformity of the food supply to a sufficient level to ensure quality nutrition;
- ensuring a sufficient level of solvency of the population;
- reducing dependence on imports while preserving the main interests of domestic producers.

The third approach is used to determine the provision of physical and economic availability of food.

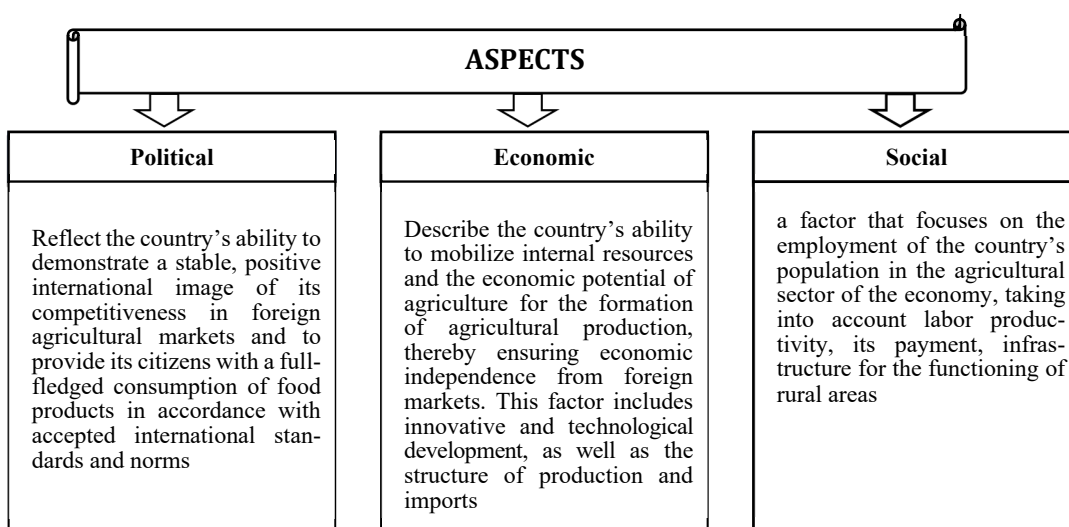
These three currently main conceptual approaches to the definition of food security do not have a separate provision for the development of rural areas as a basis for food security, if we do not take into account the views on the import of food products, which constitutes 100% of the national market.

At the same time, the level of the country's FS depends on a complex of factors: the availability of own resources, the use of available alternative resources, the level of resource consumption, etc. All this constitutes the three main aspects of the modern concept of food security, which are presented in the *Figure*.

Therefore, food security has not only consumption considerations (taking into account physiological norms), but also production and social aspects.

Ukraine is an agrarian country, so the agricultural sector is important not only in the context of providing the population with food products, but also in guaranteeing its employment and strengthening the country's export potential.

It is important to consider that the demand for food products is only increasing due to the significant increase in the number of people around the world, the climate crisis, the economic impact of COVID-19 and the existing wars. The livelihoods of millions of people in various parts of the world are at risk.



Main aspects of the modern concept of food security

Source: constructed by the author, based on Chechel, 2014.

Russia's war against Ukraine has only worsened the situation by bringing the global food crisis closer: it is causing huge losses in the agricultural and industrial sector, reducing soil fertility and reducing the number of livestock and birds. The enemy purposefully destroys objects of specialized and critically important infrastructure, destroys logistics chains. According to Corteva Agriscience™, the agricultural division of DowDuPont and the analytical agency The Economist Intelligence Unit (EIU), in 2022, the state of food security in Ukraine has significantly worsened. The country took 71st place among 113 countries (in 2021 – 58th place). There is every reason to predict that this indicator will worsen in 2023.

At the same time, during the war, the country's budget for 2023 is primarily focused on ensuring defense capability. Thus, more than 40% of budget funds are allocated to the needs of the Armed Forces of Ukraine, personnel training, medical care, social support of veterans and their family members, combat veterans, procurement of weapons, military equipment, means and equipment, modernization and repair (Law of Ukraine "About the State Budget of Ukraine for 2023", 2022).

In order to ensure the rational functioning of the economy in extremely difficult conditions, significant changes have been made to the current legislation and new legal documents have been adopted, according to A. Lysenko, "the simplified procedure for implementing land relations and certain regulatory procedures has been settled, tax benefits have been established, and a mechanism for operational transfer from combat zones of production capacities, the effectiveness of credit mechanisms was ensured, and a system of state guarantees was formed for agricultural producers" (Lysenko, 2022, pp. 71–81).

The main regulatory and legal documents that ensure the development of the economy of Ukraine and the solution of security problems in the conditions of martial law are:

- Law of Ukraine No. 2120-IX of March 15, 2022 "On Amendments to the Tax Code of Ukraine and other legislative acts of Ukraine regarding the effect of norms during the period of martial law";
- Law of Ukraine No. 2145-IX of March 24, 2022 "On Amendments to Certain Legislative Acts of Ukraine Regarding the Creation of Conditions for Ensuring Food Security in Martial Law";
- Law of Ukraine No. 2246-IX dated May 12, 2022 "On Amendments to Certain Laws of Ukraine Regarding Uninterrupted Production and Supply of Agricultural Products During Martial Law";
- Law of Ukraine No. 2247-IX dated May 12, 2022 "On Amendments to Certain Legislative Acts of Ukraine Regarding the Peculiarities of Regulating Land Relations in Martial Law";
- Decree of the Cabinet of Ministers of Ukraine No. 723 dated 14.07.2021 "Some issues of providing state guarantees on a portfolio basis" (edition dated 25.10.2022).

In order to reduce the negative impact of the war on the state of food supply, the Cabinet of Ministers of Ukraine by order dated 04/29/2022 approved the "Plan of measures to ensure food security in conditions of martial law" (Order of the CMU "Plan of measures to ensure food security in conditions of martial law"), which provides for the implementation important tasks in three areas:

- administration of the state food security system;
- providing the population of territorial communities with food products;
- regulation of foreign economic activity.

Relevant ministries, the State Statistics Service of Ukraine, military administrations regularly monitor information on the formation of the main food balance, control the level of trade allocations. The state also regulates the volume of exports of agricultural products, monitors and ensures the import needs of agricultural enterprises, accumulates information on the export of agricultural products, the number of organizations that need financing for the restoration and construction of production facilities. These measures are aimed at fulfilling important tasks related to meeting food needs, on the basis of providing agricultural enterprises with opportunities for further work. A comprehensive approach ensures the security of Ukraine and its citizens during the war.

Sustainable food security in conditions of martial law, occupation of part of the territory of Ukraine, the conduct of the Armed Forces and other structures of the liberation war is possible if the necessary measures are taken at different levels – state, regional and local. The stability of state administration at the regional level in the conditions of martial law depends on the quality of strategic planning, which, according to I. Dynnyk, "must

be based on the peculiarities of territorial communities, their inter-relationships and capabilities, which acquires special relevance in the realities of relocation of industry, businesses, labor resources" (Dylnyk, 2023, pp. 4–18).

FS is a dynamic concept that requires constant monitoring and adaptation to changes in the economy.

2. Food security is an important life quality aspect of the population and the country's place in global economic policy

The problem of FS population has always been the subject of close attention of the world community, especially in 1974, when the UN General Assembly supported the program "International commitments to ensure global food security", which was developed by the UN Food and Agriculture Organization (FAO).

Later, on the initiative of the United Nations, the Rome Declaration on World Food Security was adopted. The growing interest in food issues has intensified the vital needs of individual countries, as well as the economic problems caused by the activities of large transnational corporations (TNCs) around the world. TNCs set only high prices, regulated the production of food products and established the production of low-quality food products using chemical ingredients that are dangerous for human life.

International normative documents take into account the FS country in several aspects. The Rome Declaration on Global Food Security contains provisions that focus on the "multifaceted nature of food security" and establish the state's obligation to ensure food security. The document emphasizes that each country has its own experience in implementing agricultural policy and creating a national FS system. It should be noted that the food independence of the country has become the goal in itself of the internal policy of the national economies of the majority of countries on the planet. But, as world experience shows, no country in the world can do without food imports.

To find out how well a country deals with domestic food security problems, including comparison with the rest of the world, it is recommended to use the Global Food Security Index (GFSI), which tracks the main problems of economic availability, physical availability and food quality of 113 countries. According to this index, Ukraine ranked 63rd in 2018, 76th in 2019, 54th in 2020, 58th in 2021, and 71st in 2022 (Global Food Security Index, 2022). The current financial and economic problems that arose after the start of hostilities in our country worsened the situation in the Ukrainian agro-industrial complex and reduced investment attractiveness in this sector. Until 2022, the share of national food production in our country was constantly increasing, and, accordingly, the share of products exported abroad.

As for other indicators of food security, the year 2022 also indicates the need for a sharp increase in the state's interest in this socio-economic direction. In terms of food availability, Ukraine scored 48.1 points out of 100 and ranked 93rd in the world. According to the indicator, the weakest factors in the country are the political situation and social barriers, supply chain infrastructure, the level of agricultural scientific research, as well as food availability strategies. The worst indicator of Ukrainian food security – sustainability and adaptability (43.5 points out of 100 and 94th place in the global ranking) – reflects serious problems with access to water resources and their management, as well as shortcomings in the risk management system. The only indicator that shows the best situation is the factor of food quality and safety, according to which Ukraine received 71.3 points out of 100, or 52nd place in the world ranking (Global Food Security Index, 2022).

The Food and Agricultural Organization of the United Nations (FAO) considers Ukraine as a country that plays an important role in ensuring global food security. For example, in the record year 2018, Ukraine was on the 1st place in the world among the producers of sunflower seeds and sunflower oil, and was also included in the TOP-10 of the world food market for such important product groups as: rapeseed and honey (3rd place), corn, barley (4th place), wheat (5th place), soybean (7th place) (Agrobusiness of Ukraine, 2018).

3. Social and economic problems of the basic area of food security, rural areas of Ukraine as an obstacle to strengthening food security of Ukraine and proposals for overcoming them

The difficulties of self-management for the majority of peasants on their own land from the beginning of obtaining ownership rights to it, legislative assistance to agricultural holdings and grain traders have led farmers to the category of the population with the lowest incomes, and rural areas to the category of so-called depressed areas that have lost internal social and economic security and are characterized not only by lagging behind in social and economic development, but also by the formation of a situation that poses a danger to social relations and the economic system of the state. According to official statistics, from 1959 to 2022, the rural population of Ukraine decreased quantitatively by 9.7 million people – from 22.4 to 12.7 million. At such a fast pace, in 30 years, the rural population will decrease to 8 million people, which does not meet the needs of the population density for rural areas. From 1959 to 2021, the birth rate in rural families in Ukraine decreased by 5 times (Demographic and social statistics / Population and migration, 2022). Until now, agricultural holdings do not always see the need for the development of social infrastructure, although it increases the attractiveness of the territory, contributes to the improvement of the quality of

human potential, slows down the erosion of the working population and the destruction of settlements (Regarding the problems of the development of social infrastructure of rural settlements, 2013).

They note three main criteria for the depression of the territory: decline in production, low income per capita and high unemployment during at least the last 5 years in a row. Currently, a certain unique eclectic situation is revealed, in particular, given the high level of production that has been maintained for several decades, there is a low level of income per capita and a high level of unemployment.

As a result of these processes, there remains a high threat of decline in production potential and complete degradation of the social infrastructure of the village. Those actions and measures of the state, which have recently been carried out in relation to rural areas, do not implement expanded reproduction, which is actually capable of ensuring food security.

In order to ensure sustainable food security of Ukraine in the conditions of martial law and after the war, it is necessary to add the development of rural areas as a strategic aspect of Ukraine's food security and take a number of measures.

First of all, it is worth supplementing the Ukrainian legislation in the area of food security with separate provisions on the development of rural areas as a base for the production of agricultural raw materials, as well as marking this task as a social and economic priority.

Secondly, the development of rural areas is impossible without the reconstruction and development of rural infrastructure, but such measures must be carried out on the basis of socio-economic justification. It is important to develop infrastructure that ensures processing of raw materials on site, storage and transportation of food products. To do this, it is necessary to build new roads, warehouses and logistics centers, provide the necessary equipment and transport, as well as the objects of the social infrastructure of rural areas, necessary for the productive life of people who form the basis of the labor resources of the agricultural and industrial complex.

Thirdly, it is necessary to increase the state support of agricultural producers with a strengthening of its social orientation, as well as to strengthen control by state bodies in compliance with the requirements of environmental legislation. It is important to comprehensively provide farmers with the necessary investments, land resources, technological means and financial support from the state and local budgets. Land productivity, preservation and restoration of fertile soil properties require separate standards and control.

Fourthly, it is important to direct the efforts of the scientific community to the development of rural areas as a basis for food security, developing and implementing new technologies in all components of the agricultural sector.

The fifth point is that a separate state program should provide for a system of state incentives for the voluntary displacement of existing and the creation of new productions of the processing industry of agrarian products in rural areas, justifying the proximity to raw materials, which will reduce the logistical burden.

The sixth point is that increasing the productivity of Ukrainian production thanks to domestic raw materials will make it possible to find a solution to the problem of food security. To do this, through quotas and other protectionist measures, the balance of agricultural raw materials for the domestic market should be regulated in the interests of the national industry, and the share of raw materials in Ukrainian exports should be systematically reduced.

The seventh point is that it is considered expedient to build an integrated (hybrid) digital platform for Ukraine's food security, which can perform the functions of research and formation of demand on the food market, simplifying investment in production, and will also help the relevant state bodies to more effectively regulate Ukraine's foreign economic activity in the FS interests of Ukraine.

According to the research results of scientists N. Novikova and O. Dyachenko, digital platforms transform traditional business models into modern digital formats, which lead to significant changes in the social and economic development of society. They facilitate communication between participants in interactive ecosystems where value is created and contribute to innovation in economic activity and the social sphere. The world's leading large companies by market capitalization have adopted a platform-based hybrid business model focused on digital innovation. Digital platforms solve many problems that most companies face, for example, they process large amounts of data that can be used to build consumer profiles of users, research preferences and predict behavior, thus increasing their competitiveness in the market and creating conditions for development (Novikova, Dyachenko & Honcharenko, 2023, pp. 47–66).

The eighth point is the increase in the number of local products in the domestic market of Ukraine should be the result of import substitution coordinated by the state.

The ninth point is that Ukraine is integrated into the global market, so both the provision of its food security and the participation of our country in the formation of world food security should be carried out in cooperation with international partners, but on the basis of the key principle for our national foreign economic activity, economic Ukrainian Centrism as own independent logical strategy for achieving defined economic goals in relations with other countries on equal terms, from the point of view of realism and pragmatism in the interests of the Ukrainian economy and the Ukrainian people. Cooperation with international partners on the basis of economic Ukrainian Centrism should include the exchange of experience and technologies, financial and technical support, as well as joint projects.

Each of the listed points requires further scientific elaboration, discussion in the scientific community and additional scientific research with further detailed development and transformation into political documents.

Conclusions

Strengthening food security through state regulation of the development of rural areas is an important direction for Ukraine both during the war and during post-war reconstruction. The research confirmed the hypothesis that state regulation of the development of rural areas requires a comprehensive and systematic approach. Providing the population with safe and affordable food is a priority for the government and society. To achieve this aim, in addition to strengthening traditional food security measures, it is necessary to add the development of rural areas as a strategic aspect of Ukraine's food security: improve legislation on the development of rural areas, develop rural infrastructure, dramatically increase agricultural support programs, direct the efforts of the scientific community to the development of rural territories as the basis of food security, developing and implementing new technologies, a separate state program to shift the production of the processing industry of agricultural products to rural areas, regulate the balance of agricultural raw materials in the interests of national industry and export, ensure state coordination of import substitution, digitalization of food security, and work with international partners in these directions. All of the above should ensure a sufficient level of food security; increase the level of income from Ukrainian exports and the quality of life of the rural population.

The directions of further research in this issue should be the state regulation of the export of agricultural products from agricultural raw materials to processed products, the introduction of the latest advanced technologies for growing and processing agricultural products in accordance with EU standards, as well as uninterrupted and safe export of agricultural products.

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SHVED Yuriy,
Master, Postgraduate Student
at the Department of Economics
and Competition Policy
State University of Trade and Economics
19, Kyoto St., 02156, Kyiv, Ukraine

ORCID: 0000-0002-6977-2709
y.shved@knu.edu.ua

CONCENTRATION OF CAPITAL: DETERMINANTS WITHIN THE ECONOMY DIGITALIZATION

Capital concentration as a tool for increasing efficiency, profitability and creating a greater impact of business on the market where it operates is important for national, regional, as well as global economy. Accordingly, the study of processes of capital concentration, identification of factors that influence it, including analysis of current changes in technologies and the macroeconomic situation, are important both for making investment decisions by businesses and for state regulation to achieve the goals of economic development, increasing labor productivity and growth of well-being. In the post-2019 COVID-19 pandemic time, the world has been affected by factors that were either relatively inconspicuous or absent in recent decades, such as the post-pandemic recovery and associated macroeconomic instability, changing geopolitical situation, and continuation and deepening of digitization processes, partly reasoned by trends which were observed during the pandemic. The study proves the validity of the hypothesis about the decisive influence of the macroeconomic situation in developed countries, digitalization and changes in the geopolitical situation on the dynamics of investment flows and capital concentration in 2021–2023. Concludes on continuation of such influence in the future, which must be taken into account for the purposes of developing and implementing regulatory measures regarding the concentration of capital in Ukraine.

Keywords: capital concentration, digitalization, mergers and acquisitions, investments.

JEL Classification: E44, F21, G15, G32.

ШВЕД Юрій,
магістр, аспірант кафедри економічної теорії
та конкурентної політики
Державного торговельно-економічного
університету
вул. Кіото, 19, м. Київ, 02156, Україна

ORCID: 0000-0002-6977-2709
y.shved@knu.edu.ua

КОНЦЕНТРАЦІЯ КАПІТАЛУ: ДЕТЕРМІНАНТИ В УМОВАХ ЦИФРОВІЗАЦІЇ ЕКОНОМІКИ

Концентрація капіталу як інструмент підвищення ефективності, прибутковості та створення більшого впливу бізнесу на ринку, де він оперує, має важливе значення для економіки як окремих країн та регіонів, так і світу загалом. Відтак вивчення процесів концентрації капіталу, виявлення факторів, що впливають на нього, зокрема й з урахуванням поточних змін у технологіях і макроекономічній ситуації, є значущим як для прийняття інвестиційних рішень бізнесом, так і для державного регулювання з метою досягнення цілей економічного розвитку, підвищення продуктивності праці та зростання добробуту населення. Після пандемії COVID-19 світ зазнав впливу чинників, що або були відносно малопомітними, або взагалі відсутніми в останні десятиліття, тобто постпандемічне відновлення та пов'язана з ним макроекономічна нестабільність, зміна геополітичної ситуації та продовження і поглиблення процесів цифровізації, частково обумовлених тенденціями, що спостерігалися під час пандемії. Доведено справедливості гіпотези про вирішальний вплив макроекономічної ситуації у розвинених країнах, цифровізації та зміни геополітичної обстановки на динаміку інвестиційних потоків і концентрації капіталу у 2021–2023 рр. Зроблено висновок про продовження такого впливу в майбутньому, що необхідно враховувати для цілей розроблення та впровадження регуляторних заходів щодо концентрації капіталу в Україні.

Ключові слова: концентрація капіталу, цифровізація, злиття та поглинання, інвестиції.



Introduction

Capital concentration as a process of accumulation of controllable resources through the investment of retained earnings, as well as obtaining access to the resources of other economic entities through mergers and acquisitions for the purpose of using such resources to obtain additional advantages in the competitive struggle is one of the basics of the modern market economy. In the first case, investing the profits of past periods ensures organic growth of the business, which makes it possible to reveal the company's own potential. In the other case, the concentration of capital through the merger of several enterprises' resources helps to obtain previously unavailable opportunities thanks to the use of the potential of other businesses, as well as achieving the effect of scale. So, in a narrower sense, the creation of additional advantages and business opportunities with the concentration of capital through inorganic growth anticipates the formation of strategic alliances or corporate mergers and acquisitions (Gerasimenko, 2005). For the purposes of this study, capital concentration is interpreted in this narrower sense of gaining control over the resources of multiple enterprises. Since this analysis is focusing on trends in the world economy in the context of digitalization in general, and not only in the industries where strategic alliances are most common (for example, in the oil and gas sector, hotel and tourism, or air transport business), the data on the global market of corporate mergers and acquisitions make the basis of this research.

A broad range of research in Ukrainian and foreign scientific literature is devoted to the problems of the fundamental determinants of capital concentration, its impact on the economy and economic development in modern conditions, in particular, factors related to the development and introduction of new technologies, regulation of capital concentration. In particular, in a recently published work on the study of market dominance in the digital era (Emery, 2023), capital concentration is considered as a factor in the growth of labor productivity and social welfare. However, this does not necessarily lead to super-profitability, which is clearly a new phenomenon in the question of using market power exclusively for the enrichment of investors, as it is traditionally believed. Wang et al. (2009) prove the importance of capital concentration in the form of investments in new projects as a factor in the economic development of the country, but only under the condition of sufficient development of human resources, i.e. sufficiency of available labor force and its level of qualification, and, therefore, to create an opportunity to reveal the technological potential of such investments.

Y. Umantsiv analyzes the role of high-tech corporations in capital concentration processes. The researcher substantiates that the companies massively utilizing information and communication technologies have leading positions in the global rankings of market capitalization (primarily Apple,

Microsoft, Amazon, Alphabet, Meta), leaving behind manufacturing, oil production, transportation and trading companies (Umantsiv, 2021, p. 42–44).

A. Gerasymenko notes the insufficient functionality of the financial and credit infrastructure in Ukraine is a limiting factor for the concentration of capital through the stock market, indirectly emphasizing the importance of direct investments (primarily through corporate mergers and acquisitions), which obviously are and will be decisive for the processes of capital concentration in Ukraine both during the current war and in the post-war period. The researcher notes that "the redistribution of ownership of national assets, which occurs through the stock market, ensures the transparency of relevant concentration agreements, increasing the effectiveness of control over the concentration of business entities as a means of preventing the monopolization of domestic product markets and the economy as a whole. Currently, the vast majority of concentration agreements take place outside the stock exchanges of Ukraine" (Gerasymenko, 2014, p. 404–405).

D. Zatonatskyi concluded that the concentration of capital using foreign investments plays a decisive role in accelerating the digital development of the economy. According to the researcher, it was digitalization that started the deep transformation of international investment operations of multinational corporations (Zatonatskyi, 2022). T. Lunyova analyzes processes of capital concentration by industry. The researcher draws attention to the significant increase in the volume of deals in software and data processing (Lunyova, 2022). At the same time, obstacles to the formation of Ukraine's investment attractiveness are pointed out. T. Brennan analyzes the role of state law enforcement institutions in regulating capital concentration processes using Coase theorem (Brennan, 2020).

A group of scientists from Hungary (Ko et al., 2022) reveals the role of digital flexibility and digital competitiveness in the processes of stimulating the development of entrepreneurship. Scientists analyze the importance and role of the innovative component in stimulating the development of small entrepreneurship during digitalization. V. Glass analyzes specific cases of capital concentration (Glass, 2021). Using the example of the merger of AT&T and Time Warner, which is significant in many ways, the scientist reveals the role of institutional, cultural, mental, intra-corporate and a number of other factors in the effectiveness of the companies after their merger.

In the business environment, there is a prevailing opinion about the key role of capital concentration for business development, in particular in response to the challenges of digitalization and especially in the period after the *COVID-19* pandemic (Deloitte, 2020).

Thus, on the example of even such a brief overview of research, the breadth of issues related to the role and meaning of capital concentration, as well as ways of its implementation in modern conditions, in particular with

regard to digitalization, is obvious. The study of these problems makes it possible to develop both the necessary methodology and tools for decision-making by market players regarding the implementation of capital concentration, as well as to offer effective means of its regulation to achieve the greatest positive return for the economic development of the state.

Considering the importance of capital concentration as an element of the world economy, it would be fair to hypothesize that given the new challenges that have arisen in recent years due to negative macroeconomic influences, overcoming the consequences of the *COVID-19* pandemic, as well as a radical change in the geopolitical situation, the focus of global processes of capital concentration will also change, responding to such challenges, and increasingly shift to investments in high-tech industries, which have, on the one hand, a high development potential, and on the other hand, a high level of resistance to the specified challenges.

A separate aspect in this process is the study of investments in the Ukrainian economy in wartime conditions, when the attractiveness and security of investments in technology companies, whose target market is mostly global, and not only and not so much the Ukrainian economy, remains.

The purpose of the article is to test this hypothesis by examining the key indicators of the development of capital concentration processes in the last few years globally and their reflection in the Ukrainian economy, in particular. The study is structured as an analysis of statistical data, as well as a review of the drivers of the most significant capital concentration agreements in recent years globally, on the largest regional markets (Europe and North America), in key industries, as well as an overview of the impact of full-scale aggression against Ukraine in 2022.

The aim of the article, from the practical application of the research results stand point, is to identify the determinants of capital concentration in the conditions of the digital economy in the last few years, which can be used by market players to achieve the optimal structure of their investment portfolios or determine investment directions to obtain the maximum effect of capital concentration in order to achievement of strategic business goals. From the point of view of state regulation of capital concentration, the results of the study can be used to prioritize the means of stimulating investment in certain industries while preserving the competitive environment in such industries.

1. Market dynamics in 2021–2023

1.1. Global trends

After 2021, a period of rapid post-pandemic recovery of capital concentration through mergers and acquisitions, in 2022 a correction of this market took place. In part, this process had technical reasons, because a number of deals, which for different reasons were not completed because

of the pandemic in 2020, were closed a year later, i.e. there was a certain artificial overstatement of the volumes in the later period, while such an effect did not observed in 2022. However, new influences that developed in 2022 caused a change in market dynamics.

To understand the nature of respective drivers, we will consider the statistics of the global market of capital concentration through mergers and acquisitions and determine its drivers in the last two years. *Figure 1* shows the count and value of deals since 2011, according to Pitchbook’s Global M&A Report. As we can see, in 2021 the global market broke the volume record: deal activity recovered after the downturn caused by *COVID-19* and developed in the conditions of the so-called "bullish" confidence of investors, including rapid growth of fundamental indicators, availability of financing and high multipliers.

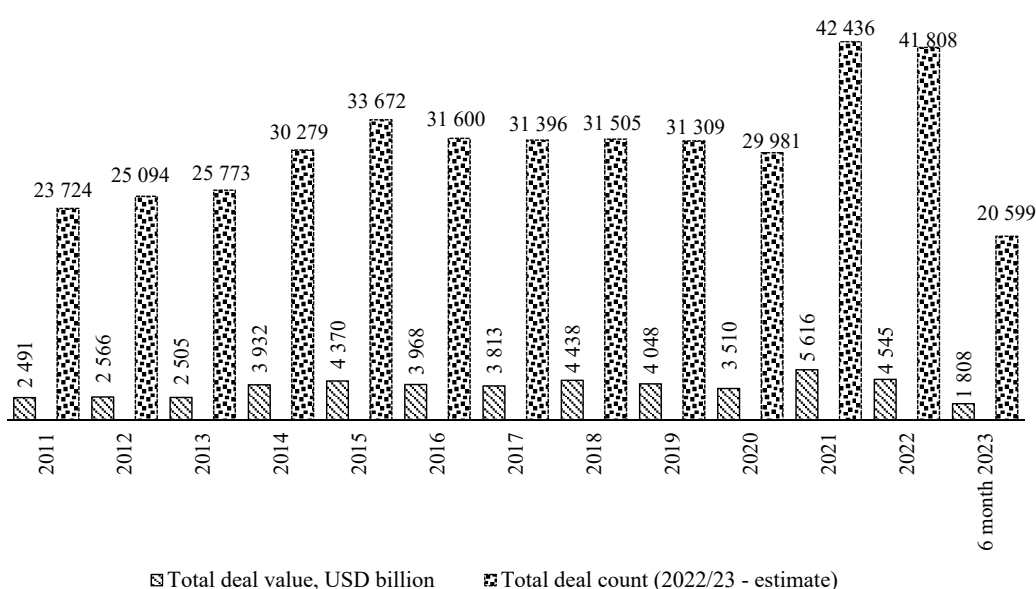


Figure 1. Global mergers and acquisitions volume in 2011 – six months 2023, USD billions

Source: PitchBook, 2023.

The total value of deals in 2022 decreased by 19.1 % to USD 4.6 trillion, but remained high compared to historical indicators and became the second best year by deal value, despite tough macroeconomic obstacles, primarily inflationary pressure and, as a result, raising interest rates in the leading countries, which generally made it difficult to finance deals (*PitchBook*, 2023). At the beginning of 2023, this trend continued – the total volume of transactions for the first six months of the year did not reach half of the value for 2022, although the seasonality factor also plays a role here.

1.2. European market

The volume of capital concentration in Europe through mergers and acquisitions remained relatively stable in 2021–2022, with the number of deals increasing to a record 16.862 in 2022, which is 1.5 % more than the previous record year (*Figure 2*). On the other hand, the total value of transactions decreased by 14.7 % compared to the previous year, i.e. their average deal value decreased.

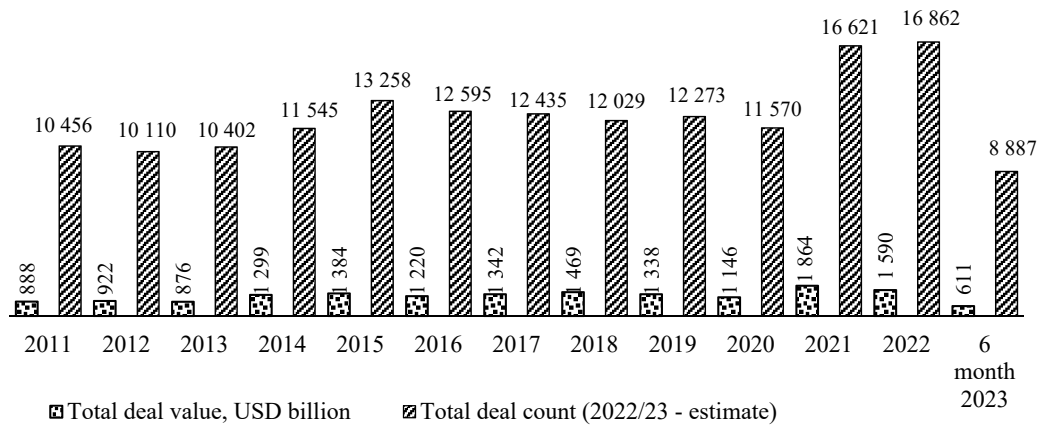


Figure 2. Europe mergers and acquisitions volume in 2011 – six months 2023, USD billions

Source: PitchBook, 2023.

The start of hostilities throughout the territory of Ukraine in February 2022, imposed economic sanctions and a sharp deterioration in relations between the EU countries and the aggressor country, as a result of the rise in prices for raw materials, became the reason for the biggest deal of the year in Europe: the German government nationalized Uniper, the largest importer of gas in the country, for USD 33.7 billion (*Reuters*, 2022), as well as the SEFE company, which previously belonged to Gazprom Germania (*Reuters*, 2022). The French government fully nationalized EDF in a deal worth USD 10 billions. The company controls nuclear power plants in France, which are key to diversifying energy supply from sources alternative to Russian gas (*Reuters*, 2022). These deals were one of the main reasons for the relatively small decline in total deal value and the increase in deal value in the European energy sector in 2022 (*PitchBook*, 2023).

Cross-border deals remained a fairly significant component of the market in Europe, in particular, every tenth deal involved a North American buyer – European properties continued to interest North American private companies and investment funds that seek to diversify their portfolios by investing in safe assets not only in North America, and take advantage of the strong dollar against the euro and the British pound (*PitchBook*, 2023). For example, the Italian infrastructure company Atlantia was acquired by a consortium involving Blackstone for USD 20.9 billion (*Reuters*, 2022),

Deutsche Telekom sold a share in its telecommunications business to a consortium involving DigitalBridge Group for USD 9.3 billion (*DigitalBridge, 2022*). A landmark deal was also the sale of the Chelsea football club to Clearlake Capital Group and Todd Boehly for USD 3.2 billion (*Clearlake Capital Group, 2022*), which, as in the case of transactions in the energy market, was a consequence of Russian aggression against Ukraine.

Thus, we conclude that the main drivers of the market in Europe in 2022 were more geopolitical events and macroeconomic circumstances both on the continent and globally than the development of technologies and digitalization.

1.3. North American market

The situation in North America was somewhat different compared to Europe. The market shrank slightly in 2022 compared to the record 2021 (*Figure 3*). Deal value fell 22% compared to 2021, when the stabilization of the *COVID-19* pandemics gave a raise to investment valuations in anticipation of economic recovery after the global lockdown, high stock prices and low interest rates (*PitchBook, 2023*).

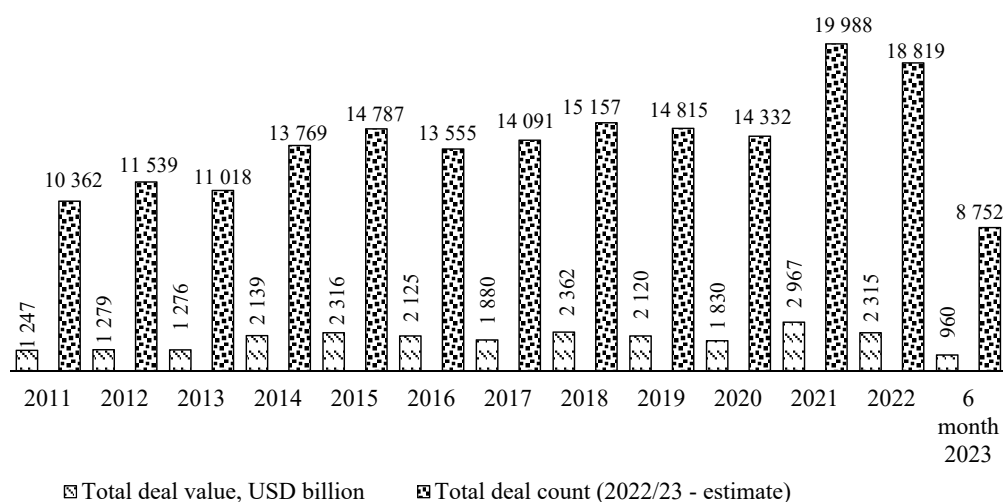


Figure 3. North America mergers and acquisitions volume in 2011 – six months 2023, USD billions

Source: *PitchBook, 2023*.

However, the economic recovery has not been as significant as expected, especially in China, the state of affairs in which has a great impact on the North American market as well. This partly led to the continuation of supply chain constraints that began during the pandemic. Soaring inflation in response to more than a decade of quantitative easing, which was imposed to tackle the 2008 financial crisis and was reinforced by government support measures during the pandemic, led central banks to respond aggressively by raising interest rates.

Armed aggression against Ukraine and related sanctions against the aggressor country created additional negative conditions for the growth of the world economy. All this combined reasoned worsening of investor sentiment, while higher interest rates had a direct impact on the ability to finance capital concentration through mergers and acquisitions. As a result, the US stock market experienced sharp losses, which led to the outflow of potential investors from the market. The three major indexes suffered their biggest annual declines since 2008: the S&P 500 ended the year down 19.4 %, losing about USD 8 trillion in market capitalization, while the Dow Jones Industrial Average fell 8.8 % and the Nasdaq Composite fell 33.1 % (*PitchBook*, 2023).

At the end of 2022, the inflationary pressure in the USA weakened (the consumer price index in annual terms was 6.5%, against 9.1 % in June, which became a 40-year high). However, the FRS continued the policy of raising the interest rate, which led to the continuation of relatively unfavorable conditions for the investment market in 2023 (*PitchBook*, 2023). Despite market volatility, the number and value of deals in North America in 2022 remained higher than the three-year pre-pandemic average (2017–2019), indicating stable volumes over the medium to long term timeframe.

1.4. Significance of USA hi-tech mergers and acquisitions

In contrast to Europe, the North American market (mainly the USA) was characterized by a much greater importance of technology deals. For example, at the beginning of 2022, an agreement was announced by Microsoft to acquire Activision Blizzard, a video game developer, for almost USD 69 billion, but the deal was closed only in October 2023 due to the resistance of regulators from various countries (*The New York Times*, 2023). A similar situation arose with Broadcom's acquisition of VMware, a cloud computing and virtualization company, for USD 61 billion – the deal was announced in the first half of 2022 and, due to resistance from regulators, is not yet completed as of early October 2023 (*Broadcom*, 2023).

In early 2022, AMD completed a USD 49 billion deal to acquire semiconductor competitor Xilinx (*AMD*, 2022). In mid-2022, Oracle finalized a USD 28 billion deal to acquire medical software developer Cerner (*Oracle*, 2021). These four deals are not only among the largest in the technology sector, but also among the largest announced or completed in 2022 in the US and the world in general. Another landmark deal announced in late 2022 and completed in July 2023 is a reflection of several of the current drivers of capital concentration: the acquisition by one of the world leaders of the arms market L3Harris Technologies of the manufacturer of missiles and related equipment Aerojet Rocketdyne for USD 4.7 billions (*L3Harris Technologies*, 2023).

The acquired company formed a new line of business for L3Harris, which previously worked in related sectors, such as avionics, software for

military purposes, etc., but did not have missile weapons production. At the same time, in early 2022, an offer for almost the same amount (USD 4.4 billion) by Lockheed Martin was canceled due to the resistance of the regulator due to fears of excessive concentration in the market, since Lockheed was a direct competitor of Aerojet Rocketdyne (Lockheed Martin, 2022).

Several current trends are reflected in this agreement, including: the impact of technology and digitalization on concentration in the technology sector; the stimulus to the development of the arms market of NATO countries as a response to geopolitical threats from the aggressor country; the significance of the role and actions of the regulator in response to excessive concentration in the US defense-industrial complex (Shved, 2022).

The first two of the specified drivers were also observed on the European market, namely: Rheinmetall announced in November 2022 and in August 2023 completed a EUR 1.2 billion deal to acquire the Spanish manufacturer of explosives Expal Systems SAU (Rheinmetall, 2023), BAE Systems announced in August 2023 an agreement for USD 5.6 billion to acquire the American manufacturer of equipment for space and defense systems Ball Aerospace (*BAE Systems*, 2023).

2. Capital concentration by sector

2.1. Market by sector composition

Global industry trends in capital concentration through mergers and acquisitions by industry are shown in *Figure 4*. We note the dominance of three main sectors throughout the observation period: B2B (Business to Business, services and supplies from business to business), B2C (Business to Consumer, consumer markets), information technologies, as well as a rather insignificant share of raw materials markets and energy.

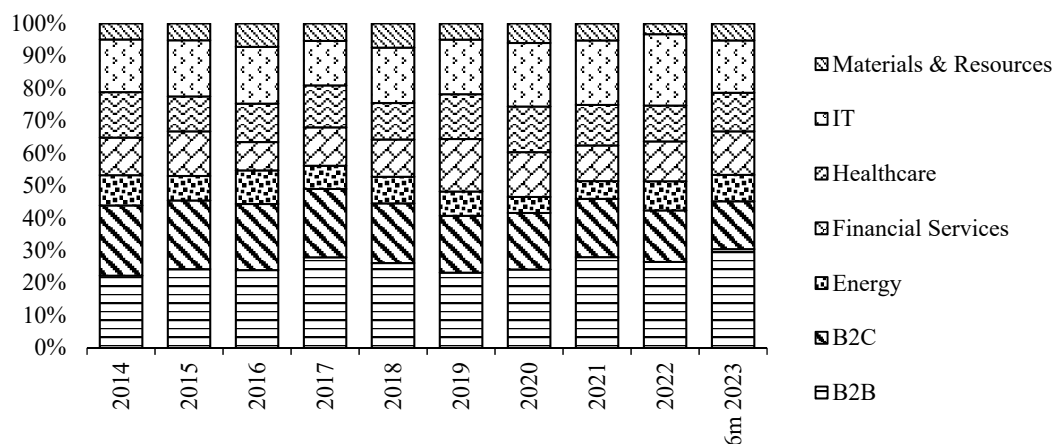


Figure 4. Capital concentration through mergers and acquisitions by sector in 2011p. – six months 2023, % of total deal value

Source: *PitchBook*, 2023.

And even on commodity markets, the impact of the mentioned trend of technology dominance as the "engine" of deals is noted. As an example, notable are trends of capital concentration in such a new sector as precision agriculture (or AgTech). The vast majority of such projects, which combine such a traditional industry as agriculture and breakthrough digitalization technologies, are still quite often at the start-up stage, and quite a few of them make their way into the list of the largest deals. However, according to some data, in 2022, 797 AgTech startups around the world attracted funding in the amount of USD 10.7 billion, which is 13 % less than in 2021, but 26 % more in the number of deals (*Global Agtech Initiative, 2022*).

In another traditional sector, energy, the agreement to acquire ECM, one of the world leaders in the production of solutions (including digital ones) for electric networks, which ensure their greater safety and reliability, by nVent Electric for USD 1.1 billion was quite indicative (*nVent, 2023*). In general, the energy sector saw a trend towards an increase in the total value of deals, which began in 2021 with the first signs of the end of the pandemic and, therefore, the optimism about the demand for energy carriers, and intensified in 2022 with the increase in the cost of oil as other commodities, as well as due to geopolitical risks caused by aggressive actions against Ukraine (the price of a barrel of Brent oil rose from approximately USD 70 in December 2021 to more than USD 110 in June 2022, although at the end of the year it decreased to the level of December 2021, and during the three quarters of 2023 continued to remain close to that). Accordingly, the value of assets rose and led to an increase in the value of deals to a level not seen since 2016 (more than USD 400 billions). At the same time, the number of deals decreased (1 076 in 2022 vs. 1 254 in 2021) (*PitchBook, 2023*). This indicates the increase in the value of assets, and not the increase in the interest of investors in the sector.

2.2. Sector trends: B2B

The following industries are included in the B2B sector: commercial goods (aviation and other mechanical engineering, defense industry, construction materials, as well as distribution of such goods), commercial services (logistics, legal, consulting, educational, managerial, marketing, security, information, etc. services), commercial transportation by all types of transport.

In the B2B segment, the impact of digitalization on capital concentration has naturally been more visible than in the resource sectors. A fairly notable deal in this sector in 2022 was the acquisition of UserTesting, which provides online testing services on various business-critical matters, for USD 1.3 billion by Thoma Bravo and Sunstone Partners (*PE Hub, 2023*). It is important to note that the acquired company went public only a year before the sale. In other words, the company transitioned from the stage of attracting capital for development (in this case through the stock exchange)

to acquisition by a large investment fund before the next step of sale to a strategic investor or the formation of a separate platform business, in a relatively insignificant period, which is a characteristic feature of deals with businesses that offer unique digital solutions.

The share of investments of private equity investments in this sector is significant: of the 20 largest deals of the IV quarter of 2022, 11 were completed by PE investors. This indicates a significant level of interest from financial investors to this market segment (*PitchBook, 2023*), and strong case for the development of this segment.

Thanks to the high level of digitalization and the importance of digital technologies in the sector, even despite the decrease in the total value of transactions in 2022, the noted large number of transactions for "young" private businesses explains the lower average value of transactions (*Figure 5*). The mentioned agreements in the defense sector also attributed to the capital concentration in B2B segment.

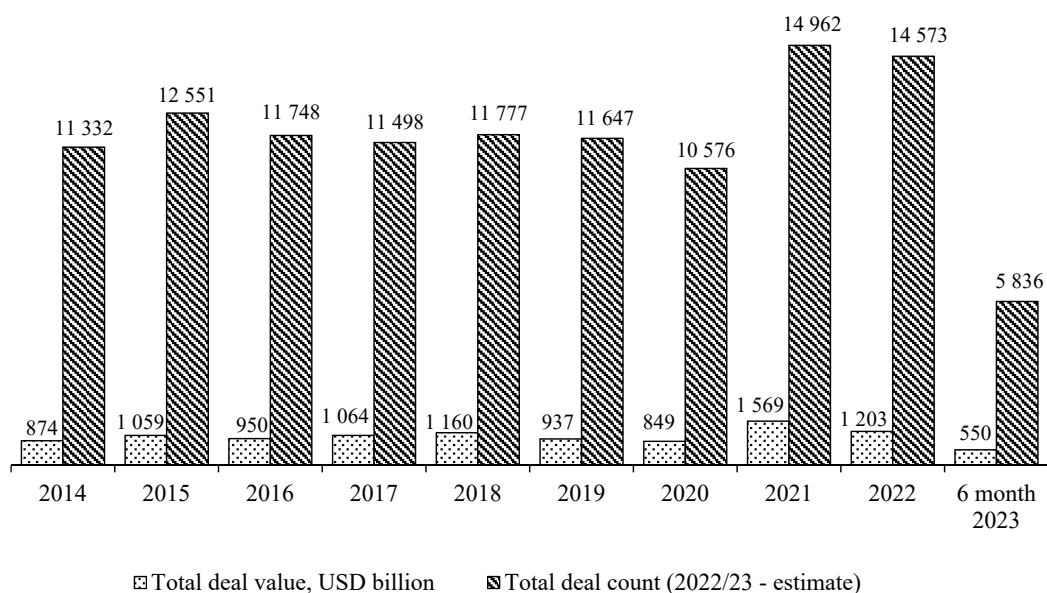


Figure 5. B2B mergers and acquisitions volume in 2011 – six months 2023, USD billions

Source: *PitchBook, 2023*.

2.3. Sector trends: consumer markets (B2C)

The B2C segment, i.e. consumer markets, also showed a decline in both volume and number of transactions in 2022 (*Figure 6*). The B2C sector includes manufacturing and distribution of clothing, home electronics, food and beverages, entertainment services and goods (except digital media), retail, personal consulting and educational services, passenger transportation, and non-commercial transportation.

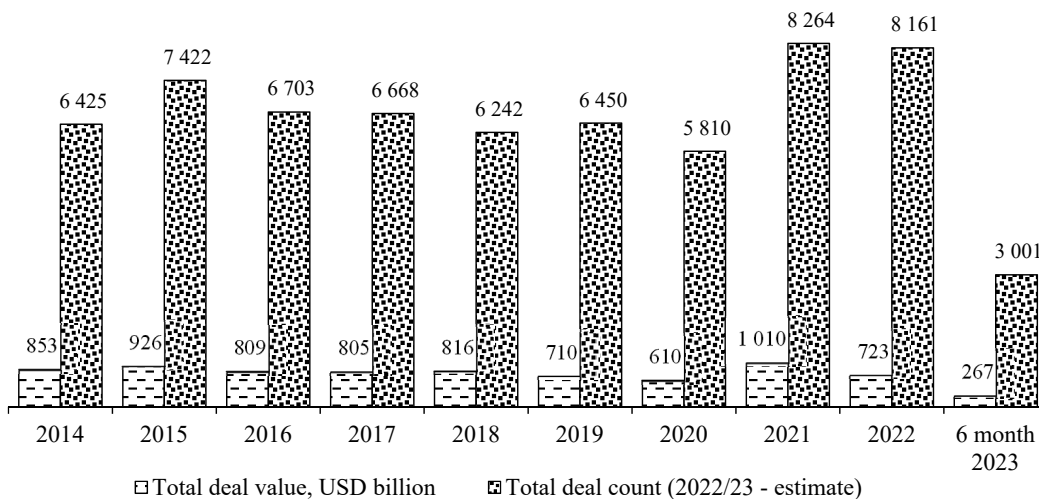


Figure 6. Consumer markets (B2C) mergers and acquisitions volume in 2014 – six months 2023, USD billions

Source: PitchBook, 2023.

In 2022, 8161 deals were completed or announced in consumer markets with a total value of USD 723 billions, which is 1 % and 28 % less than the previous year, respectively. After soaring to record value and number of deals in 2021, market activity returned to moderate levels in 2022 as consumers faced a number of headwinds that dampened demand for the sector, including inflationary pressures and the risks of a recession in 2022, while in 2021, there was an increase in consumer spending on goods and services in such areas as leisure, retail trade and the hotel and restaurant business, partly due to excess liquidity provided by state support measures during the pandemic.

One of the recent examples of digitalization impact on the concentration of capital in consumer markets is acquisition of Points, one of the North America operators of loyalty programs, by Plusgrade, which operates in the adjacent market of managing add-on services for customers of airlines, hotel chains, railways, etc. using loyalty points. The amount of the deal was USD 749 million (*Just Drinks*, 2023). Unlike Ukraine, where, as a rule, the loyalty programs segment is decentralized, in North America this line of business is consolidated by a few larger operators operators (e.g. financial companies).

And although the direct impact of digitalization on this agreement may not be obvious, the entire system of managing loyalty programs requires the availability of the necessary software and effective work with huge volumes of customer data, i.e. it is simply impossible without digitalization.

An example of another agreement with the same main driver, i.e. access to a large volume of client data, is the acquisition of the Goat Solutions marketing platform by one of the world leaders in the field of advertising, WPP, for USD 425 million (*WPP*, 2023).

Therefore, the concentration of capital in the consumer market, which by its very nature is very often dependent on the ability to manage a large amount of customer data, involves investing in new digital solutions.

2.4. Sector trends: hi-tech

Finally, let us discuss the industries in which the impact of digitalization on capital concentration is best known – financial services (fintech), health care (medtech), and information technology itself. In 2022, 3.122 financial services deals totaling USD 558 billion were announced or completed (*Figure 7*).

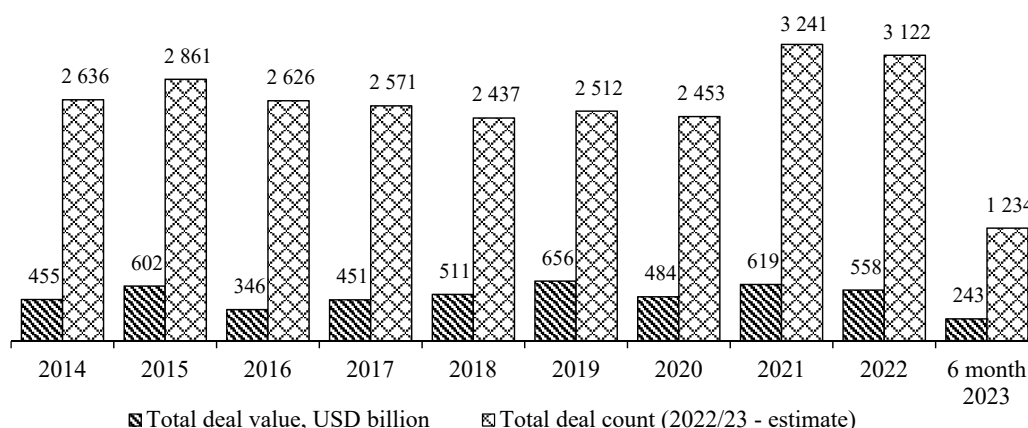


Figure 7. Financial institutions mergers and acquisitions volume in 2014 – six months 2023, USD billions

Source: *PitchBook*, 2023.

Capital concentration in the financial sector did not experience as rapid a rise as other industries in 2021, and therefore its decline in 2022 was less significant (*PitchBook*, 2023). The largest deals in the industry in 2022 involved large banking institutions, in particular the sale of HSBC’s Canadian business to the country’s largest bank RBC for USD 10 billion (*HSBC*, 2022). Major deals were also reported in insurance, for example Aegon sold its pension and life insurance division in the Netherlands to direct competitor ASR Nederland for USD 4.9 billions (*Aegon*, 2023).

The fintech sector is mostly characterized by small deals, but there are also real giants, companies with more mature technologies and a wide client base. Among these, in 2022, there were agreements to acquire Alavara, one of the leaders in the tax reporting automation market, for more than USD 8 billion, by Vista Equity Partners investment fund, as well as a USD 4 billion deal in the payment technology market – Global Payments acquired a competitor, EVO (*FinTech Global*, 2023).

Earlier we mentioned the acquisition of Cerner by Oracle. These were other big deals in the medtech segment reported too, e.g. the acquisition of Johnson & Johnson by Abiomed, a manufacturer of medical equipment using

modern digital technologies. The estimated value of the target company was USD 16.6 billion (*Johnson & Johnson, 2022*). In general, the number and value of deals in the health care sector decreased in 2022, which was partly a consequence of the end of the pandemic (*Figure 8*). However, with the example of these large deals, it is clear that digitalization plays a significant role in the concentration of capital in this industry.

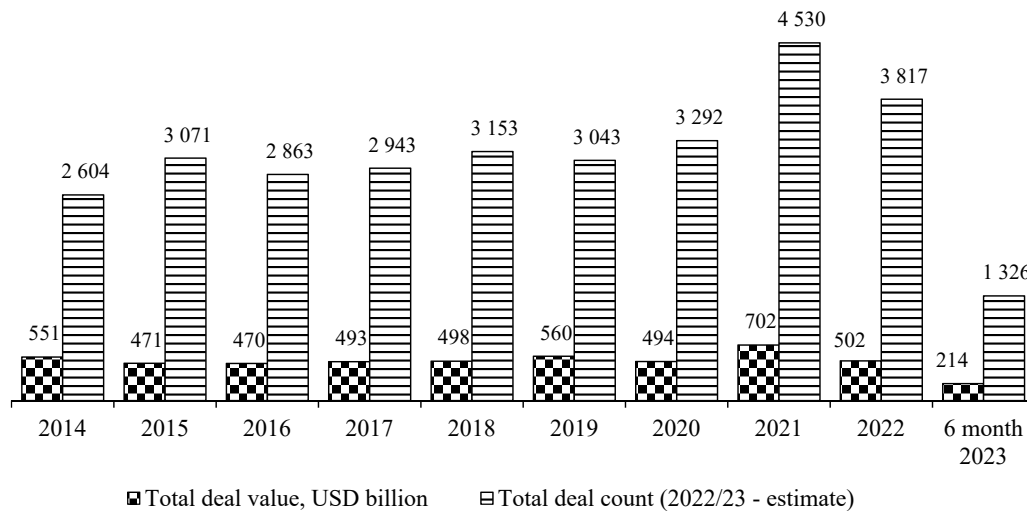


Figure 8. Healthcare mergers and acquisitions volume in 2014 – six months 2023, USD billions

Source: *PitchBook, 2023*.

In the most relevant sector for digitalization, information technology (*Figure 9*), 7.375 deals with a total value of USD 1 trillion were reported in 2022 (compared to USD 1.1 trillion in 2021). While market volume in the IT sector remained strong in the first half of 2022, the number of deals declined in the second half of the year as buyers and sellers grappled with the industry's operational restructuring tendencies (including massive layoffs by major market players that began right at the end of the year).

The number of mega deals (USD 1 billion or more) decreased at the end of the year, with 10 mega deals announced in the fourth quarter totaling less than USD 30 billions, compared to 19 deals worth more than USD 184 billions in the second quarter. The number of mega-deals is expected to continue to decline as rising interest rates and difficulties in financing deter investors from larger acquisitions. At the same time, a significant layer in the number of transactions in the sector is made up of technology sector companies at a relatively early stage of operations, i.e. the growth in the value of transactions and an increase in the role of digitalization will continue when such companies grow, improve their technological solutions, expand their solutions' functionality, integrate into new platforms, and increase their value accordingly (*PitchBook, 2023*).

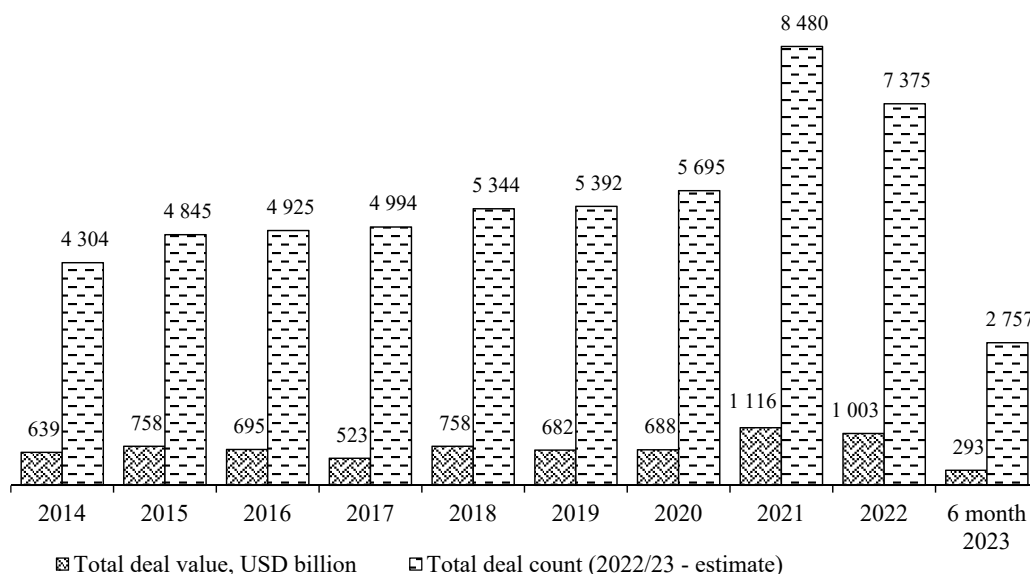


Figure 9. IT mergers and acquisitions volume in 2014 – six months 2023, USD billions

Source: PitchBook, 2023.

Therefore, although the capital concentration in the sector slowed down in late 2022 – early 2023, the achievement of the trillion value of the total value of deals in the IT sector, which is the second result in the entire history of observations, as well as the dominance of the sector in terms of the amount of the largest deals both in 2022 and early 2023 illustrates the importance of digitization for capital concentration trends both in this sector and in the global economy in general.

3. Capital concentration trends in Ukraine in 2021–2023

In 2021, the Ukrainian market was characterized by the same capital concentration trends that dominated the world. For example, according to data at the end of the year (Forbes, 2021), a sharp increase in the number and value of mergers and acquisitions was noted compared to previous years, the market volume exceeded USD 1.2 billion already in 11 months of the year, and Ukrainian startups attracted more than USD 1.6 billion of investments, which is three times higher than in the entire previous year.

Also, while traditional sectors still demonstrated higher deal value (for example, the value of the acquisition of Ivano-Frankivsk Cement and the Dnipro Metallurgical Combine exceeded USD 0.3 billion), high-tech companies from Ukraine or with Ukrainian founders led in terms of the total number of deals (for example, the acquisition of the company Depositphotos for USD 85 million, Game Labs – USD 32.5 million, Vega – USD 15 million), supported by companies involved in the production of components and raw materials for high-tech products (for example, the sale of lithium producer Petro-

Consulting for USD 15 million). Even after the start of hostilities throughout the country, at the beginning of 2022, the largest Ukrainian private investment fund Horizon Capital completed a landmark investment agreement for USD 200 million in the large Ukrainian software developer Miratech Group (*EY*, 2022).

The attraction later in 2022 of USD 30 million financing from the International Finance Corporation by Horizon Capital specifically for further investments in high-tech sectors was also indicative (*IFC*, 2022). In the middle of 2023, Horizon Capital announced the closing of the financing of its fund for more than USD 250 million for investments in Ukrainian companies (*Ukrainian World Congress*, 2023). As another example, Vesna Capital venture fund, founded by well-known Ukrainian entrepreneurs Andriy Fedoriv, Vyacheslav Klymov and Volodymyr Popereshnyuk, continues to invest in Ukrainian high-tech startups. The Turkish drone manufacturer Baykar announced at the end of 2022 its intention to build a plant in Ukraine (*Baykar*, 2022), apparently seeing the possibility of scaling its business through manufacturing in Ukraine.

These examples reveal the influence of the above mentioned world trends in capital concentration even in the conditions of military operations in Ukraine – the role of investments in high-tech businesses, being a response to geopolitical challenges in particular, is increasing.

Conclusions

We can conclude on the validity of the hypothesis regarding the decisive influence of the macroeconomic and geopolitical situation in the world and digitalization on the processes of capital concentration in 2021–2023. The main factors of the change in market dynamics were the slower-than-expected post-pandemic recovery, government measures to overcome inflationary pressure, and geopolitical trends. At the same time, since the pandemic, companies whose work is based on the use of digital technologies have become the leaders in terms of capital concentration opportunities. And, if during the pandemic this trend was primarily attributable to online communications or streaming services sectors, starting 2021, the same is applicable to the businesses involved in a wide range of digital technologies, from customer data management to high-precision weapons technologies.

At the time of the completion of this study, another armed confrontation between Israel and Hamas has begun. The number of human losses already exceeds Israel's record losses during the Yom Kippur War over 50 years ago. US interest rates are at record highs not seen in the previous 40 years (as is inflation). In other words, we note the processes that are significantly different from those that were characteristic of the world economy in a shorter-term perspective, in particular from the beginning of the 90s of the XX century, since the end of the Cold War, when international economic ties and the movement of capital, in particular, developed intensively.

The superimposition of these trends, i.e. the aggravation of geopolitical confrontation, macroeconomic instability and digitalization, and therefore the provision of mass access to information and the use of high-tech means in various aspects of life, from education and medicine to military affairs, create a new situation in the world, the global economy, interstate relations, and, accordingly, in the processes that affect investment flows and capital concentration worldwide. Instead of the word "globalization", which dominated the context of the world economy and relevant scientific research in recent decades, the word "decoupling" is being increasingly used – mainly, it is mentioned in the context of relations between the United States and China, however, by and large, we can observe the same in the mass exit of investors from developed countries from Russia after the start of full-scale military operations on the territory of Ukraine.

Therefore, digitization and geopolitics, which significantly influenced global investments and capital concentration in recent years, will be decisive factors in the socio-political development of the world, in particular international trade, financial and investment flows, and therefore, capital concentration. At the very least, this impact will manifest itself in regulatory restrictions on investment flows, changes in approaches to assessing the investment attractiveness of a particular business, and changes in the sectoral and regional priorities of investors.

From the point of view of the practice of investment activity and capital concentration, the trend of growth in the volume of investments in high-tech sectors will continue. Moreover, investments in products and solutions that allow utilizing new growth points and increasing competitiveness with the use of digital technologies as opposed to more traditional methods of economic activity in a wide range of industries, and not only in IT or, for example, the financial sector, are becoming more and more attractive. Accordingly, regulatory measures to stimulate investment activity and manage the processes of capital concentration not only in Ukraine, but also in other countries must be adjusted to stimulate the development of such technologies, for example, through the minimization of administrative and legal requirements, provided that the expected synergy of high-tech deals is proven, as well as the application of the mechanism of public-private partnership in those cases where the share of such synergy depends on the availability of state guarantees, simplified licensing or financial support at the early stages of development. In the case of Ukraine, the latter can be critical for the restructuring of the domestic defense industry with the involvement of foreign arms manufacturers.

A promising direction of further research into the determinants of capital concentration globally will be the consideration of the mentioned factors to explain these processes, as well as the development of effective means of regulatory influence to ensure the competitiveness of Ukraine and Ukrainian business on the global capital market both during the current war and in the period of post-war reconstruction.

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IANKOVETS Tetiana,
PhD in Economics, Associate Professor,
Associate Professor of the Department
of Marketing
State University of Trade and Economics
19, Kyoto St., Kyiv, 02156, Ukraine

ORCID: 0000-0002-8159-3826
t.yankovets@knu.edu.ua

DIGITAL MARKETING AND EXPERIENCE DESIGN IN RETAIL

The rapid spread of digital technologies, changes in consumer behavior, and the growth in the number of online users have led to changes in the business models of retail enterprises. Among them, the most common are: online store, electronic bulletin board, electronic marketplace, price aggregator. These business models involve the use of digital marketing methods and instruments. At the same time, taking into account the principle of omnichannel in digital marketing, it is important to ensure that consumers can make purchases in physical stores. Such additional opportunities will allow forming positive impressions of consumers. The aim of the article is to justify digital methods and instruments in creating consumer impressions. When conducting the research, general scientific methods of analysis and synthesis, system-structural analysis, comparison, systematic, logical generalization were used. The article proposes to apply the concept of impression design, which allows you to align the goals and instruments of digital marketing with interaction points on the consumer's digital journey by areas of impression detection. This ensures the formation of a unique experience for each user based on positive impressions that are planned by the enterprise. For impression planning, it is important to form a list of interaction points based on the constructed CJM-map of the consumer's path. Simultaneously with the methods and instruments of digital marketing of retail enterprises, it is recommended to use the

ЯНКОВЕЦЬ Тетяна,
к. е. н., доцент,
доцент кафедри маркетингу
Державного торговельно-економічного
університету
вул. Кіото, 19, м. Київ, 02156, Україна

ORCID: 0000-0002-8159-3826
t.yankovets@knu.edu.ua

ЦИФРОВИЙ МАРКЕТИНГ ТА ДИЗАЙН ВРАЖЕНЬ У РОЗДРІБНІЙ ТОРГІВЛІ

Стрімке поширення цифрових технологій, зміна поведінки споживачів, зростання кількості онлайн-користувачів призвели до зміни бізнес-моделей підприємств роздрібної торгівлі. Серед них найпоширенішими є: інтернет-магазин, електронна дошка оголошень, електронний маркетплейс, прайс-агрегатор. Ці бізнес-моделі передбачають використання методів та інструментів цифрового маркетингу. До того ж з погляду принципу омніканальності в цифровому маркетингу важливо забезпечити можливість споживачам здійснювати покупки у фізичних магазинах. Такі додаткові можливості дозволять формувати позитивні враження споживачів. Метою статті є обґрунтування цифрових методів та інструментів у створенні вражень споживачів підприємств роздрібної торгівлі. У ході дослідження використовувались загальнонаукові методи аналізу та синтезу, системно-структурного аналізу, порівняння, системний, логічного узагальнення. У статті запропоновано застосовувати концепцію дизайну вражень, що дає змогу узгодити цілі та інструменти цифрового маркетингу з точками взаємодії на цифровому шляху споживача за областями виявлення вражень. Це забезпечує формування унікального досвіду кожного користувача на основі позитивних вражень, які є запланованими з боку підприємства. Для планування вражень важливо сформувати перелік точок взаємодії на основі побудованої CJM-карти шляху споживача. Водночас з методами та інструментами



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latest approaches in planning consumer experiences, which includes the design of experiences. The design and delivery of planned experiences occurs at every interaction point in the consumer journey in the digital environment, both online and offline. Knowledge of the target audience and systematic work on identifying shortcomings and their elimination at each point of interaction will contribute to the formation of positive impressions, sustainable associations with the brand, improving the image and improving the user experience. This will help to achieve the goals of digital marketing and business as a whole.

Keywords: digital marketing, experience economy, experience design, retail, retail businesses, digital customer journey, touchpoints, interaction points.

цифрового маркетингу підприємств роздрібної торгівлі, рекомендовано застосовувати новітні підходи до планування вражень споживачів, до яких віднесено дизайн вражень. Дизайн та забезпечення планових вражень відбувається в кожній точці взаємодії на шляху споживача у цифровому середовищі як онлайн, так й офлайн. Знання цільової аудиторії та систематична праця щодо виявлення недоліків та їх усунення в кожній точці взаємодії сприятимуть формуванню позитивних вражень, стійких асоціацій з брендом, покращання іміджу та користувацького досвіду. Це сприятиме досягненню цілей цифрового маркетингу та бізнесу в цілому.

Ключові слова: цифровий маркетинг, економіка вражень, дизайн вражень, роздрібна торгівля, підприємства роздрібної торгівлі, цифровий шлях споживача, точки контакту, точки взаємодії.

JEL Classification: D91, M31, O33.

Introduction

Rapid changes in business conditions due to the development of digital technologies, which causes changes in consumer behavior and, accordingly, business models of enterprises, force retail trade enterprises (RTEs) to look for new ways and forms of interaction with consumers.

A significant number of scientific publications are devoted to the study of various aspects of digital marketing (DM). The analysis of literary sources revealed the evolution of scientific approaches to the essence of digital marketing from process (Oklander, Romanenko, 2015; Marchuk, 2018) to process-result (Kotler, Kartajaia, Setiavan, 2020; Polyakh, 2020; Bosovska, Bovsh, Okhrimenko, 2022). Thanks to established marketing processes systematicity and in conditions of increased competition, that it is possible to obtain planned results and form stable competitive advantages. At the same time, the rapid changes that constantly occur in the digital environment increase the risks of maintaining competitive advantages. In such conditions, it is advisable to supplement the possibilities of digital methods and tools with the latest marketing approaches to interaction with users in the digital environment. The change in value for consumers in modern conditions, from the value of goods and services to the value of impressions, contributed to the emergence and formation of the economy of impressions, the fundamental foundations of which are formulated in scientific work (Pine, Gilmore, 2021). The application of the principles of the economy of impressions in the work (Rosman, Duren, 2019) made it possible to substantiate the model of creating an impression, which the authors called impression design. They discovered five types of impressions, depending on the intensity of perception by a person: ordinary, conscious, memorable,

significant, and transforming. In addition, the authors identified five properties of impressions: frequency and strength of impact, novelty, involvement, energy, results. The combination of types and properties of impressions allows you to build a map of the design of impressions at each point of interaction between the brand and the client. Complementing the concept of experience design is the approach described in the paper (Brown, 2019). The author substantiated the aesthetic principles by which enterprises can influence the emotions and feelings of consumers through their products. This enhances positive impressions and forms associative links with the brand. Thus, by creating a sustainable and long-term value proposition, it is possible to increase customer loyalty and form long-term relationships with them. This will help increase business efficiency. The conducted analysis shows a significant number of scientific publications on DM. In addition, the issue of the application of DM methods and tools in the impression economy requires further research. This especially applies to the justification of a scientific approach to the formation of impressions on the digital journey of the consumer at each point of interaction. Applying such an approach will improve the user experience and ensure that the goals of the DM and the business as a whole are met.

The aim of the article is to justify digital methods and instruments in creating consumer impressions of retail enterprises. To achieve the set aim, the following tasks must be completed: research business models of retail enterprises in the digital environment; align digital marketing goals and tools with touchpoints in the consumer's digital path by areas of impression discovery.

Regarding the realization of the set aim, a hypothesis was formulated that retail enterprises can have a purposeful influence on the formation of consumer impressions. For this, it is advisable to apply the concept of impression design using DM methods and tools. This approach will improve the user experience, ensure the implementation of digital marketing strategies and goals, and increase business efficiency.

To test the hypothesis, the following general scientific research methods were used: analysis and synthesis, system-structural analysis, comparison (to identify RTE business models in the digital environment); systemic (for systematization of types of digital marketing campaigns; coordination of DM goals and instruments on the consumer's path; systematization of interaction points on the consumer's digital path by areas of impression detection); logical generalization (for formulating conclusions from the conducted research).

In the main part of the article, the most common RTE business models in the digital environment are highlighted; the application of the concept of impression design for the implementation of DM goals and strategies is proposed; DM instruments are systematized according to the stages of the consumer's path in the digital environment; the digital points of interaction on the path of the RTE consumer by the areas of impression detection are substantiated.

1. Business models of retail enterprises in the digital environment

In today's conditions of the spread of digital technologies in all spheres of society's activity, RTEs, along with traditional marketing instruments, use digital ones to strengthen interaction with customers in the digital world. Distinctive characteristics of digital marketing, compared to traditional marketing, are due to changes in consumer behavior (Kotler, Kartajaya, Setiawan, 2020):

- Transition from vertical to horizontal interaction of brands with consumers. It involves the segmentation of consumers based on naturally formed communities in the network, instead of the unilateral influence of brands through traditional segmentation based on the segmentation criteria of the STP concept;

- Interaction of brands with consumers based on their permission (cookies, account registration, subscription, etc. are used for this purpose). This allows you to form trusting relationships between brands and customers based on the transparency and openness of the brands' actions;

- Transition from brand identity and positioning to clarification of brand values, norms and characteristics. This makes it more flexible in relations with consumers and forms a reputation that belongs to the meaning of the brand's existence;

- Increasing the involvement of customers in interaction with the brand based on the theory of transparent commercialization, which involves the transition from the 4P concept (product, price, place, promotion) to the 4C concept (co-creation, currency, communal activation, conversation).

The most important role of digital marketing is to attract customers through call to action and "advocacy" of the brand and its product (Kotler, Kartajaya, Setiawan, 2020). Also, traditional and digital marketing have different goals. Traditional focused on initiating interaction with customers; digital – to achieve results that are much easier to measure with the use of web and mobile analytics, call tracking technology, etc., unlike traditional marketing. Therefore, the main content of the DM is the development of long-term partnerships with customers, the cultivation of defenders and promoters of the brand in the new transparent and interconnected digital world.

RTEs in the digital environment ones based on the forms, methods and instruments of trade are divided into: traditional: trade is traditionally conducted offline; e-commerce: use of modern digital technologies (Internet, mobile technologies and others); mixed format: conducting traditional and electronic trade under one brand. RTEs actively use e-commerce and mixed-format commerce. The most common modern business models used by successful domestic e-commerce enterprises are an online store, an electronic bulletin board, an electronic marketplace, and a price aggregator (Glinenko, Daynovskiy, 2018; Selishchev, 2023; Rose-Collins 2023):

- an online store is a RTE site, on which sales are made via the Internet on its own behalf of goods from its own stocks, created by purchasing from

various manufacturers. This model is used in online stores ALLO, Foxtrot, Comfy, Eldorado, Kasta, Metro, Rozetka, Intertop and others. Also, this model is used by product manufacturer brands that sell their products through their own online store, while related products of other brands can also be sold through it (Simms, Volodarka, and others);

- an electronic bulletin board is a site on which private individuals and enterprises place advertising offers of goods and services, both new and used (OLX.ua, RIA.com, Shafa.ua and others);

- an electronic marketplace is an Internet platform on which there is interaction between sellers and buyers, the implementation of transactions according to certain rules and the execution of individual elements of transactions (payment, delivery, etc.). The services of using the platform and carrying out transactions are provided by the company-owners of the electronic marketplace for a fee. Trading on marketplaces allows niche online stores to take advantage of the big players to their advantage. Electronic marketplaces include Prom.ua, Bigl.ua, Rozetka.com.ua, Epicenter Marketplace, F.ua, Kasta, Zakupka, ALLO and others;

- the price aggregator allows you to search and compare the offers of various companies, to establish appropriate connections between buyers and sellers, and to carry out transactions directly (Hotline.ua, Price.ua, e-Katalog, MagaZilla and others).

The largest share of the e-commerce market from the above is occupied by companies that combine different business models. So, for example, OLX and RIA.com use the "bulletin board + price aggregator" type model, as well as OLX and Shafa.ua – "bulletin board + electronic marketplace". Rozetka.com.ua, Epicenter Marketplace, Kasta, ALLO use the "online store + electronic marketplace" model. This allows you to use all the advantages of these models, in particular, the variety and convenience of payment forms, omnichannel. Such a complex approach to conducting business with the use of the latest technologies makes these companies market leaders. Thus, according to data from the analytical Internet service Similarweb, the most visited e-commerce sites in Ukraine in July 2023 were olx.ua (58.9 million visits per month), prom.ua (38.1 million), rozetka.com.ua (33.1 million), ria.com (24.5 million) ("SimilarWeb", n.d.).

For brands and RTE in the conditions of changes in consumer behavior, it is suggested to combine the concept of impression design (Rosman, Duren, 2019) with the latest possibilities of digital marketing, which defines the marketing activity of the enterprise using digital technologies, channels, methods, instruments, which allows due to the presence at the same time in online and offline environments and interactive interaction with consumers to develop targeted offers to achieve marketing and business goals (Rosman, Duren, 2019; Yankovets, 2022a). The above business models involve the use of DM methods and instruments. At the same time, taking into account the omnichannel principle in the DM, it is important to ensure that consumers can make purchases in physical stores.

Such additional opportunities will allow forming positive impressions of consumers.

The financial goals of DM include an increase in conversions (Performance Marketing), which helps to realize the financial goals of the business: an increase in sales, financial performance indicators, brand value, and enterprise capital. Non-financial goals include spreading knowledge about the brand (Brand Image) and improving its reputation (Brand Reputation), which allows increasing indicators of brand strength and capital. The realization of non-financial goals contributes to the realization of financial goals and, accordingly, to the improvement of business efficiency as a whole (Yankovets, 2022a).

The concept of impression design in the implementation of the specified goals of digital marketing will allow forming trusting long-term relationships of brands and retail enterprises with consumers. This will be facilitated by the design of interaction points in the consumer journey in the digital environment to improve the user experience.

2. Design of impressions on the digital customer journey

The change in consumer behavior due to the spread of digital technologies in the conditions of the emergence of the economy of impressions has led to the transformation of the customer journey.

The digital journey of the consumer is understood as the development of mutually beneficial relations between the enterprise and potential consumers, leads, and customers using digital technologies, channels, methods and instruments (Deiss, Henneberry, 2020; Yankovets, 2022b). A feature of the economy of impressions is the manifestation of a person's personality with his needs and values (Rosman, Duren, 2019; Pine, Gilmore, 2021). Impressions for each person are very personal. They can be perceived differently by different people. This causes mass personalization of goods and services in modern conditions. Considering the trends of the spread of digital technologies and digital transformation of society, individualization of production and consumption, socialization, discussion and development of social networks, a person becomes a co-creator of value for himself, which leads to personalized offers from brands (Yankovets, 2022b).

The stages of the consumer's digital journey include awareness, engagement, subscription, conversion, enthusiasm, ascent, advocate, and promoter. If the company has at least one customer, it means that the customer journey is present, even if the company did not consciously work on it. The existence of the customer journey is important from the point of view of conveying the consumer value of the product, the ability to smoothly and delicately promote it along this path from the "awareness" stage to the "promoter" stage. Effective means of such promotion are digital marketing campaigns, which are targeted coordinated actions aimed at such movement

using digital technologies, channels, methods and instruments, and have specific features (Deiss, Henneberry, 2020; Yankovets, 2022b):

- purposefulness: coordinated actions aimed at achieving a specific goal;
- Multi-Element: Every marketing campaign needs assets (website, mobile app, content, design) as well as instruments (e.g. email software or web forms). Assets must be visible, so it is necessary to ensure targeted traffic to the digital asset, as well as track and measure in real time how the campaign is progressing to optimize it;

- Smoothness and delicacy: the most successful campaigns are those that lead the potential customer along the path to the consumer gently and gradually. To facilitate the promotion of a person on the consumer’s path, it is necessary to include in the campaign a "call to action", that is, an appeal that prompts an immediate response ("fill out the form", "buy today", "follow the link", "register", etc.). At the same time, it is important to eliminate the friction between the potential client and the action expected from him (for example, you cannot immediately offer a cold potential customer the most expensive offer of the company, this will scare him away. And it is possible and even necessary to offer a free sample or any appropriate value for a symbolic payment);

- ease of adaptability: the advantage of digital marketing campaigns over physical ones (such as direct mail) is that it is much easier to carry out any marketing activity in a digital environment, since the tracking of how the campaigns are progressing takes place constantly, in real time, and their results are available instantly, allowing you to quickly optimize your campaigns and get the best results.

In general, digital marketing campaigns, depending on the goals of digital marketing, are divided into three main types (*Figure 1*) emotional.

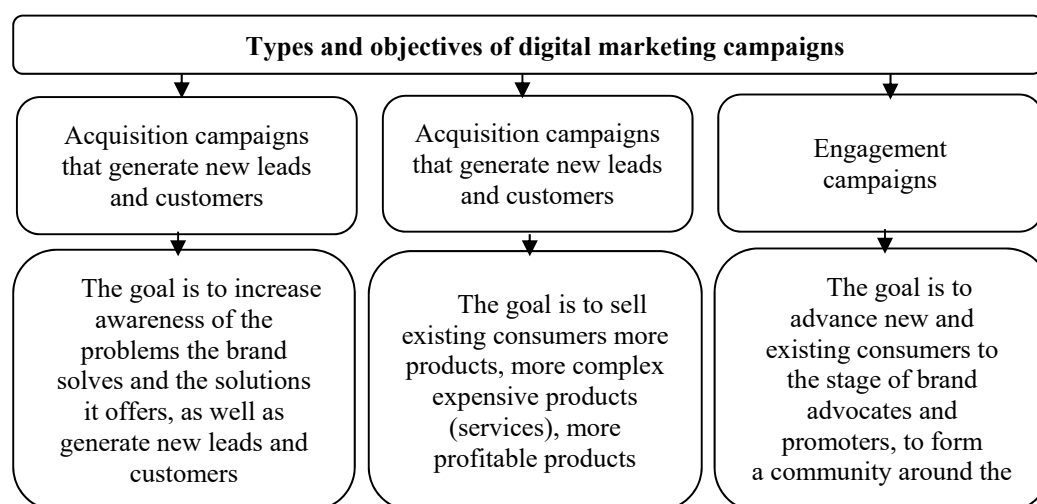


Figure 1. The main types of digital marketing campaigns

Source: systematized by the author according to Deiss and Henneberry, 2020.

The company needs all three types of digital marketing campaigns for business development, the right selection of which allows you to promote the consumer on his way. No campaign can replace another. Each campaign is conducted to achieve a specific goal. Yes, an acquisition campaign cannot do the job of a monetization campaign. And a monetization campaign can't do the job of an engagement campaign. Therefore, in order to maintain stable development, the enterprise needs to form a balanced calendar of all three types of marketing campaigns based on the balancing of business goals and the corresponding goals of the DM. So, for example, if you focus on conducting only acquisition campaigns, it will be almost impossible to reach business profitability. If, on the contrary, you focus only on conducting monetization campaigns, the company will not receive new leads and customers, which will lead to a halt in growth. If you conduct only engagement campaigns, it is possible to form a loyal audience, but it will be almost impossible to convert them into buyers without an incentive to buy.

Therefore, in order to maintain and develop the brand and business, the company needs to acquire new leads and customers, monetize them and attract consumers to the brand, form a loyal audience, grow brand advocates and promoters. In the Table 1 digital marketing instruments were systematized that are used at various stages of the digital customer journey in accordance with the set marketing goals and digital marketing campaigns (*Table 1*).

The consumer's movement of any enterprise, including a retail enterprise, in a digital way occurs discretely through contact points, the whole set of which constitutes a dynamic path of the consumer, in the process of his interaction with the brand. In the *Table 2* the direction of systematization of interaction points by areas of impressions highlighted in the work of Pine and Gilmore (2021) was suggested. Thanks to the approach proposed by the author, retailers get the opportunity to plan interaction points and justify digital marketing instruments at each stage of the digital customer journey using the concept of experience design, depending on the area of experiences and expected results for consumers.

In order to identify and form its own complete list of interaction points, the enterprise needs to develop a CJM map of the digital customer journey with a description of the portrait, specifying the consumer's goals at each stage and his expectations. For this, it is convenient to use software tools, for example, the Miro digital visualization platform.

On the basis of the CJM map, the most complete list of points of interaction with consumers is formed, each of which may contain a significant number of contact points. So, for example, the point of interaction is an email to a new subscriber including the following points of contact: the brand logo, the text of the letter, the design of the letter, links in the letter, its scheme and click ability, click ability of interactive elements of the letter, etc. Or the point of interaction is social Facebook network, points of contact: page name, page cover, avatar photo, brand logo, page description, page design, each post, reels, stories are separate points of contact, used hashtags, company employees' responses to personal direct messages, etc.

Table 1

Digital marketing goals and instruments in the digital customer journey

	Brand Image	Brand Image	Performance Marketing	Performance Marketing	Brand Reputation	Performance Marketing	Performance Marketing	Brand Reputation
Strategic goals of digital marketing	Increasing awareness of problems and solutions	Increasing interest in the brand's product	Obtaining new leads	Acquiring new customers	Onboarding leads and customers	Selling a key offer	Monetization of existing leads and customers	Building a community of brand promoters
Digital marketing campaigns	Acquisition			Monetization			Involvement	
Objectives of digital marketing campaigns	Raising awareness of the problems the brand solves and the solutions it offers, as well as generating new leads and customers							
Stages of the digital customer journey	awareness	Involvement	Subscription	Conversion	Enthusiasm	Ascent	Advocate	Promoter
Digital marketing instruments	Google Ads, YouTube videos, Facebook/Instagram Ads, MediaAds, radio, TV, billboards, brochures (QR codes)	Blogs, forums, podcasts, online video reviews, Facebook/Instagram Ads, content marketing	Social media contacts, search marketing, online subscriptions, webinar registration, email subscription	Offer of inexpensive goods, services, webinars, product demonstration	Onboarding, marketing in social media	Selling a key offer, marketing automation (CRM, e-mail, chat bots, messengers, push notifications)	Remarketing, personalized targeted offers, reviews, UGC content	UGC content, maintaining brand and product value, lovemark, gift marketing

Source: developed by the author.

Table 2

Digital points of interaction on the customer journey of retail enterprises

Areas of impression detection	The digital journey of the consumer							
	Awareness	Involvement	Subscription	Conversion	Enthusiasm	Ascent	Advocate	Promoter
Entertainment	Advertising videos, banners, advertising sites	Interactive advertising, entertainment posts, blog, entertainment events near and in stores	Interactive forms of interaction, a welcome letter to a new subscriber	Contest announcements, discount offers, form for filling out customer data, creative check	Entertaining posts on social networks, digital screens in the store	Questionnaires, coupon with promo code, club card, gift certificates	Email letters with address offers, blog articles, silver club card, reviews	Gold VIP Club Card, UGC content, birthday gifts
Aesthetics	Brand logo, corporate style, design of advertising messages	Website, store design, advertising creatives, information in Google My Business	Design of e-mails, registration form, thematic design of store interiors	Design of fitting rooms, price tags, smells, appearance of store staff, cash registers, receipts, packaging	Design of novelty cards on the website, demonstration of product aesthetics in the store	Design of club card, coupon, certificates	Loyalty program silver card design	Gold card design of VIP customer loyalty program
Teaching	Texts of advertising materials, informational materials	Content on the website, expert posts in social networks	Longread, landing, navigation in the store	Webinar, product demonstration in the store, self-service terminals	Blog, expert posts on social networks, staff expertise	Cards with a description of goods with offers of related goods, sales promotion measures	Thematic events for silver card holders, blog articles, master classes	Thematic events for VIP gold card holders, online and offline training
Departure from reality	Thematic activities of online and offline event marketing	Virtual showcases, inspiring content	Mobile application	Product in 3D size in the sales hall, on the website	Digital fitting rooms in the sales hall, application	Product in virtual/augmented reality	Telegram chat, inspiring articles	Telegram chat, away VIP events, wow effect

Source: developed by the author

Or the point of interaction is the cash register area in the sales hall, points of contact: the cash register, the cashier, his form, facial expression, how he communicates, etc., the display of goods near the cash register, the digital screen, posters, printed materials, the music that plays, the sound of audio advertisements, packages, payment terminal, check, etc.

Forming a complete list of interaction points and corresponding contact points in accordance with the goals and expectations of the target consumer makes it possible to identify opportunities for improving the brand's interaction with him. For each touchpoint, a planned experience design is developed for a better interaction with consumers. This approach to the digital path of the consumer, using the concept of impression design, and interaction with him at all points of contact will ensure the implementation of the main content of digital marketing, namely the development of long-term partnerships with customers, the cultivation of defenders and promoters of the brand, due to the creation and maintenance of positive impressions.

Conclusions

Nowadays, in the situation of increased competition in the digital environment and the emergence of an impression economy, it is advisable for retail enterprises to use the latest methods aimed at creating positive consumer impressions along with digital marketing methods and instruments. This will make it possible to form a loyal audience, maintain long-term relations with it, and grow brand advocates and promoters.

Advances in digital technology and changing consumer behavior have led to the growth of online audiences. The consequence of this is a change in the RTE business models. The most common ones include an online store, an electronic bulletin board, an electronic marketplace, and a price aggregator. DM provides for the presence of the enterprise simultaneously in online and offline environments. Therefore, along with electronic business models, it is advisable to provide consumers with the opportunity to make purchases in physical stores in order to ensure a better user experience.

Applying the concept of experience design allows you to align digital marketing goals and instruments. with digital interaction points in the digital customer journey. Retail consumer experience design involves planning the experience at every point of interaction, both online and offline. Therefore, the formation of a list of such points based on the CJM-map of the digital customer journey, knowledge of the target audience and systematic work to identify shortcomings and eliminate them at each point of interaction will contribute to improving the user experience and achieving the goals of digital marketing and business in general.

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BAI Serhii,

Master, Doctor of Sciences (Economics),
Professor, Head of the Department
of Management
State University of Trade and Economics
19, Kyoto St., Kyiv, 02156, Ukraine

ORCID: 0000-0003-0599-2582

s.bay@knute.edu.ua

YELISIEIEV Vadym,

Postgraduate student of Department
of Management
State University of Trade
and Economics
19, Kyoto St., Kyiv, 02156, Ukraine

ORCID: 0000-0001-7488-9306

v.yelisyeyev@knute.edu.ua

**ENTERPRISE
MANAGEMENT: WARTIME
CHALLENGES**

Full-scale invasion of the Russian federation on the territory of Ukraine has significantly changed operating conditions of Ukrainian enterprises, forcing management to look for new ways to organize business-processes. Methods of enterprise management used in pre-crisis period no longer can guarantee stable functioning of a company. Therefore, there is a need to develop new approaches that correspond to the actual conditions. This research aims to identify the factors influencing the management system at Ukrainian enterprises, and tools used by the management of Ukrainian enterprises to ensure effective work in the conditions of martial law. Methods of generalization, analysis and synthesis, comparison, scientific abstraction and systematization were applied in process of research. In this research changes in the operating conditions of enterprises in Ukraine under the influence of the factors of the systemic crisis caused by the state of war, the nature and level of losses from their consequences were studied. The difficulties faced by Ukrainian enterprises in the conditions of martial law and the factors that provoke them were determined. The methods used to ensure the stability of enterprises in a crisis state were defined. As a result it was concluded that in order to overcome the systemic negative issues caused by

БАЙ Сергій,

магістр, д. е. н., професор,
завідувач кафедри менеджменту
Державного торговельно-економічного
університету
вул. Кіото, 19, м. Київ, 02156, Україна

ORCID: 0000-0003-0599-2582

s.bay@knute.edu.ua

ЄЛІСЄЄВ Вадим,

аспірант кафедри менеджменту
Державного торговельно-економічного
університету
вул. Кіото, 19, м. Київ, 02156, Україна

ORCID: 0000-0001-7488-9306

v.yelisyeyev@knute.edu.ua

**УПРАВЛІННЯ
ПІДПРИЄМСТВАМИ: ВИКЛИКИ
ВОЄННОГО ЧАСУ**

Повномасштабне вторгнення російської федерації на територію України серйозно змінило умови діяльності українських підприємств, змушуючи менеджмент шукати нові шляхи організації бізнес-процесів. Методи управління підприємством, що застосовувались у докризовий період, не здатні забезпечити стабільну роботу підприємства. Відтак, існує потреба в розробленні нових підходів, що відповідають актуальній ситуації. Метою роботи є ідентифікація факторів впливу воєнного стану на систему управління на українських підприємствах та інструментарію, що використовується менеджментом українських підприємств для забезпечення ефективної роботи в умовах воєнного стану. Із застосуванням методів узагальнення, аналізу та синтезу, порівняння, наукового абстрагування та систематизації досліджено зміни умов діяльності підприємств в Україні під впливом факторів системної кризи, спричиненої воєнним станом, характером та рівнем збитків від їх наслідків. Визначено труднощі, з якими стикаються українські підприємства в умовах воєнного стану, та фактори, які їх провокують; методи, які застосовуються для забезпечення стабільності підприємств в умовах кризового стану. Виявлено, що для подолання системних негативних явищ, спричинених воєнним станом, на підприємствах



the martial law, it is necessary to change management approaches at enterprises. The priority directions of such changes should be the implementation of new technologies, the development of new management structures, and the focus on deepening interaction with personnel.

Keywords: enterprise management, martial law, relocation of enterprises.

необхідно змінити підходи до управління. Пріоритетними напрямками таких змін мають стати імплементація нових технологій, розроблення нових управлінських структур, орієнтація на поглиблення взаємодії з персоналом.

Ключові слова: управління підприємством, воєнний стан, релокація підприємств.

JEL Classification: D21, J32, L23.

Introduction

The efficiency of the enterprise, its competitiveness depends primarily on the quality of managerial decisions. The process of adoption and implementation of most of them is always carried out under conditions of certain uncertainty and variability of the internal and external environment. However, martial law and the COVID-19 pandemic that preceded it led to comprehensive changes in the operating conditions of Ukrainian enterprises. Under such conditions, the ability to quickly adapt all the enterprises business processes to new realities has become a key competency for enterprise management. In times of crisis it is especially important that the team is united and ready to work together to ensure successful accomplishment of the enterprises mission. This can be achieved by including team members in the change management process, ensuring sufficient communication and involving them in the decision-making process. Under such conditions, the question of how quickly and effectively the enterprise will be able to adapt to new conditions and how effectively it will work in new realities depends on the enterprises management and its ability to make adequate management decisions.

War is a catastrophic phenomenon for the economy, as logistics chains, production facilities and infrastructure facilities are destroyed, which significantly complicates the activities of the entire business. In this regard, a large number of enterprises are reducing or ceasing their activities. To ensure profitable activities under difficult crisis conditions, each business entity must organize the uninterrupted operation of the enterprise in conditions of martial state.

However, due to the specific conditions of operation in during martial law and a significant number of unique problems that cannot be qualitatively solved by classical management tools, there is a need to update the theoretical and methodical toolkit of enterprise management in a state of crisis in order to provide the management of enterprises with effective and efficient tools for organizing the activities of enterprises in conditions of martial law. However, due to the specific conditions of operation in the conditions of martial law and a significant number of unique problems that cannot be qualitatively solved by classical management tools, there is a need to update the theoretical and methodical tools of enterprise management in a crisis state

in order to provide the management of enterprises with effective and practical tools for organizing the activity of enterprises under martial law.

Due to the importance of the topic of business management, it is clear that it has been extensively researched by academics. Fundamental contributions to the theory of enterprise management were made by F. Herzberg (Herzberg, 1993), A. Marshall (Marshall, 1890), A. Maslow (Abraham H. Maslow, 1970), A. Smith (Smith, 1776), F. Taylor (Frederick Taylor, 1911), A. Fayol (Fayol, 1917), T. Schultz (Schultz, 1975) and others. At the same time, enterprise management under martial law has its own specifics compared to normal conditions, and therefore requires a deeper study. Given the rarity of such circumstances as martial law, the opportunity to investigate enterprise management in such conditions is rare. Among the studies available to us, it is worth noting the work of B.D. Mabry and K. Srisermbhok, who analyze the specifics of labor relations between personnel and management in Thai enterprises during the period of martial law in 1958–1956 and 1976–1981 (Mabry & Srisermbhok, 1985). A. Korbonski examines the impact of the martial law in Poland in 1981 on agricultural enterprises and concludes that in the post-war period they show much higher efficiency than before (Korbonski, 1990). Management of the enterprise in the conditions of martial law is closely related to the question of risk management. This side of the issue is much more researched. In particular, F. Bromiley, M. McShane, A. Nair, E. Rustambekov (Bromiley et al., 2015) describe the general principles and approaches to the organization of risk management at enterprises and emphasize the need to adapt the risk management system to new challenges in time to ensure its sustainability and efficiency.

Enterprise management in a crisis situation has become particularly important interest for Ukrainian researchers in the context of the COVID-19 pandemic and martial law in Ukraine. In particular, B. Danylyshyn and I. Bogdan revealed the directions of implementation by national authorities of macroeconomic regulation measures aimed to protect national economies from unfavorable external circumstances and substantiated the priorities of systemic stabilization policy and anti-crisis measures at enterprises. (Danylyshyn & Bohdan, 2020). Y. Kostenko, A. Korolenko and M. Guz analyzed the factors of financial stability of an enterprise under martial law and came to the conclusion that in crisis conditions the requirements for the solvency of an enterprise increased. In turn, the requirements for profitability and turnover are reduced (Kostenko et al., 2022). I. Fedulova and M. Dzhulay predicted the losses of Ukrainian entities as a result of the crisis situation based on an analysis of the economic effect of the introduction of quarantine restrictions due to the COVID-19 pandemic (Fedulova & Dzhulay, 2020). A. Kuzmin, A. Yurinetz, A. Emelyanov, T. Yasinska and I. Prokopenko considered the use of economic and mathematical modeling of current investment tools for crisis management at enterprises and came to

the conclusion that enterprises have an opportunity to overcome the financial crisis and avoid bankruptcy using urgent investment tools for anti-crisis management (Kuzmin et al., 2023). S. Mekhovich, A. Tomilin and V. Mishchenko consider the role of international communications in ensuring the sustainability of an enterprise in a crisis situation and give examples of the possible positive influence of megaeconomic, macroeconomic, mesoeconomic and microeconomic factors on the choice and implementation of an anti-crisis investment strategy (Mekhovich, Tomilin, Mishchenko, 2023).

However, taking into account the significant amount of research by scientists, it should be noted that the question of enterprise management under martial law is currently insufficiently researched, in particular due to the uniqueness of the situation in which Ukrainian enterprises find themselves, the dynamic change in the conditions of their activity, and the appearance of a war-related of challenges, which were not actively considered by economists during the last decades. The need to improve the quality of enterprise management in the conditions of martial law dictates the need to expand the available methodological tools in this area.

The purpose of the article is to investigate the factors and peculiarities of the functioning of Ukrainian enterprises that arose and changed as a result of the martial law, to define and improve the tools used by the management of enterprises to ensure the efficiency of their activities. The research is based on the hypothesis that the implementation of new approaches to enterprise management and the strengthening of the adaptability of managerial activity to the realities of a martial law will ensure the possibility of efficient operation in a crisis situation and will provide enterprises with competitive advantages in the post-war period. To achieve the goal, the following methods were used: generalization and systematization – for researching the scientific work of Ukrainian and foreign scientists on the topic of enterprise management under martial law; analysis and synthesis, comparison – to assess the effectiveness of various management methods used at enterprises under martial law; scientific abstraction, induction and deduction – to determine the strategic priorities of management activities at enterprises.

The information base of the research was the works of Ukrainian and foreign scientists on the topic of risk management, enterprise management, as well as the experience of domestic enterprises that successfully conduct activities under martial law.

The structure of the main part of the study includes two sections, the first of which is devoted to changes in the operating conditions of enterprises caused by the state of war. The second chapter examines the peculiarities of the implementation of management activities in the crisis conditions of martial law.

1. Factors influencing the operating conditions of Ukrainian enterprises

The full-scale Russian invasion of Ukraine has had a very serious impact on the operating conditions of Ukrainian enterprises. The activities of enterprises under martial law have particularly changed under the influence of the following factors.

Mass emigration of the population. With the beginning of full-scale military operations on February 24, 2022, a significant number of Ukrainian citizens were forced to go abroad. The number and composition of the population that left Ukraine is difficult to determine precisely, however, according to various estimates, more than 6.7 million people left Ukraine and did not return, a significant part of which is the economically active population (OPORA, n.d.). A small part of these emigrants have retained their previous jobs and continue to work for Ukrainian enterprises, however, due to the move, these employees have a number of special needs, such as the need to be able to work remotely, new tools for cooperation with employees working in a different time zone, assistance with registration and legal procedures abroad. Thus, enterprises need to reorganize the work process and personnel support system in such a way as to meet these needs. Most Ukrainian citizens who travel abroad are looking for employment opportunities in the host country, thereby reducing the size of the economically active population in the Ukrainian labor market. Therefore, it becomes more difficult for Ukrainian enterprises to attract new employees, which in turn stimulates the organization of a personnel management system aimed to retain existing employees.

Internal population movement. In addition to travel abroad, the factor of population movement within Ukraine has significant weight. According to various estimates, about 8 million people were forced to leave their place of residence. Their movement was uneven in time and space. In the first half of 2022, the leaders in the number of internally displaced persons received were Transcarpathian, Ivano-Frankivsk, Chernivtsi and Ternopil regions. However, starting in the fall of 2022, their share gradually decreased and the Dnipropetrovsk and Kharkiv regions became the leaders in the number of internally displaced persons received. This is due to the de-occupation of the northern regions of Ukraine and the transformation of the central regions into conditionally safe ones, due to which some internally displaced persons were able to return home or closer to home (Bil, 2022). Such a move did not change the amount of labor resources for the economy as a whole, but it seriously changed the situation for individual business entities, since the relocation of workers to other regions of Ukraine creates the need to reorganize the labor process in order to make it more flexible and provide the possibility of remote

work. This reorganization leads to associated needs, such as providing staff with communication equipment and laptop computers, and therefore requires additional training in their use. In addition, the risk of loss of enterprise property and leakage of confidential information increases. If it is impossible to organize remote work, there is a need to find and train new employees.

Relocation and restructuring of enterprises. Against the background of active hostilities in certain regions and military risks throughout Ukraine, the need for relocation arises not only among individual citizens, but also among enterprises. With the outbreak of a full-scale war, Ukrainian enterprises had to change their activities in a following way:

- 41 % of enterprises remain fully operational;
- 50 % – enterprises continue to operate partially;
- 29 % of enterprises moved within Ukraine;
- 19 % moved outside of Ukraine;
- 15 % of enterprises had to close offices in certain regions;
- 2 % – enterprises had to completely cease operations (CEO Club Ukraine, 2022).

The process of moving an enterprise itself is quite complicated from a management point of view. It is necessary to systematize data about employees' family members, organize relocation for them, and provide displaced employees with temporary or permanent housing. It is also necessary, if possible, to transport fixed assets, or if their movement is not possible, it is necessary to purchase or otherwise obtain new fixed assets at a new place of work and, if possible, sell or otherwise write off the old ones. To establish work in new conditions and overcome the stress of moving, an onboarding procedure is necessary. In addition, often during a relocation, an enterprise has to get rid of functional divisions that have lost relevance or create new ones that are necessary for better organization of work under the new conditions. Such measures require rapid staffing and accelerated training of new employees to ensure their integration into the team.

Due to the complexity of such procedures and the significant costs required for their implementation, the state is introducing targeted programs to assist enterprises in relocating. In particular, enterprises from territories affected by hostilities can receive government support with the selection of a new location for facilities, the relocation of enterprise property to a new location, the search for new employees and a place of residence for displaced workers, as well as assistance in establishing logistics, purchase and sales activities. During a year and a half of the full-scale war, 840 enterprises used the program to relocate. The *Table 1* below shows the distribution of enterprises by the regions to which they moved, which shows the uneven distribution of enterprises.

Table 1

Relocated enterprises by region

Region	Relocated enterprises (units)	%
Lviv	199	23.69
Transcarpathian	120	14.29
Chernivtsi	78	9.29
Ivano-Frankivsk	70	8.33
Dnipropetrovsk	65	7.74
Khmelnyska	62	7.38
Ternopil	51	6.07
Kyiv	49	5.83
Vinnytsia	43	5.12
Cherkasy	24	2.86
Poltavska	19	2.26
Volynska	18	2.14
Kirovogradska	17	2.02
Rivne	16	1.90
Zhytomyr	6	0.71
Odessa	3	0.36

Source: compiled by the authors based on data from (Opendatabot, 2023).

Rocket attacks and associated risks. One of the characteristic features of the Russian-Ukrainian war is chaotic shelling of the territory of Ukraine leading to the destruction of critical infrastructure. Under such conditions it is impossible to ensure the safety of employees when working in offices or other enterprise premises. Therefore, during an air raid signal, workers are advised to stop work and move to a civil protection shelter. In addition, in some cities of Ukraine, public transport suspends traffic during an air raid. Thus, regular air raids reduce working hours and reduce labor productivity due to wasted time. In addition, this mode of operation significantly complicates the organization of the work process, since management is tasked with monitoring safety in the enterprise. If there is no shelter at the enterprise or in order to save time, the management of the enterprise may decide to transfer employees to remote work. However, such a solution also entails complications. In addition to the need to digitalize the work process and provide employees with appropriate technical means, there is a risk of unreliable operation of the energy and communication infrastructure, since there is a possibility of shelling damage to facilities that provide production by distribution and transportation of water, electricity, gas supply and heat. In the absence of these resources, employees cannot effectively perform their work remotely and when implementing stabilization and emergency shutdown schedules it becomes necessary to adjust employee work schedules accordingly. Transferring workers back to the enterprise premises is also not an easy solution, as it poses danger to life and health of workers.

Additionally, offices and manufacturing facilities may suffer from infrastructure disruptions. The installation of electric generators makes it possible to establish a work process but it involves the engagement of relevant specialists who install and maintain them. Consequently, there's a need to either find and train them or to sign a contract with an external service provider.

Mobilization activities. Due to the martial law in Ukraine, mobilization has been announced. For Ukrainian enterprises this means a decrease in labor supply and a constant likelihood of losing male employees of military age. In addition, if an employee is called up for military service, the enterprise is obliged to retain his job (without maintaining wages), which will further complicate finding a new employee for this vacancy. As a result of this factor, men become less attractive candidates for vacancies than women. Another feature arising from this factor is changes in the maintenance of personnel records. Consequently, personnel management specialists are required to keep records of employees liable for military service and within seven days have to notify the relevant territorial recruitment and social support centers about the acceptance and dismissal of conscripts, those liable for military service and reservists.

Changes in labor legislation. In order to adapt the normative legal acts of Ukraine to the conditions of martial law, a number of laws and regulations were adopted that affect the relationship between an employer and an employee and accordingly change the specifics of personnel management at enterprises. In particular, it is worth noting: Law of Ukraine "On Organization of Labor Relations Under Martial Law" (2022); Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine to Optimize Labor Relations" (2022); Law of Ukraine "On Employment" dated September (2022).

The adoption of these documents introduces the following changes:

- the employer can increase working hours from 40 to 60 hours a week; the duration of shortened working hours provided for workers with shortened working day at critical infrastructure facilities is from 36 to 40 hours;
- the employer can limit rest for employees from 42 to 24 consecutive hours per week and the duration of annual leave to 24 days;
- the employer can independently change the start and end time of the shift; he can transfer the employee to another job not specified in the employment contract without his consent and without reducing the salary;
- the employer may refuse to grant unused leave for previous periods as well as he may refuse to grant vacation to employees who work at critical infrastructure facilities;
- an employer may dismiss an employee during the period of temporary incapacity for work or during vacation (except for maternity leave or parental leave until the child reaches the age of three); due to the impossibility of

providing an employee with the work specified in the employment contract due to the destruction (absence) of production equipment, organizational and technical conditions, means of production or property of the employer as a result of hostilities;

- an employee can terminate an employment contract if there is a threat to his life and health or the enterprise is located in a war zone;

- the ban on working at weekends is canceled. It also includes reduced working hours at night, reduced working day on the eve of a holiday, transfer of a day off to a working day if the holiday falls on a day off, restrictions on overtime work, limiting the maximum period of unpaid leave to 15 days (for an employee who is an internally displaced person or has left the territory of Ukraine the duration of unpaid leave can be increased to 90 days), the need for prior consent of the trade union organization to terminate the employment contract at the initiative of the employer, the need to notify the employee about a change in the essential working conditions and a change in the payment conditions 2 months before their introduction;

- the term "suspension of the employment contract" is introduced providing for the possibility at the initiative of both an employer and an employee, to temporarily terminate the employment relationship due to armed aggression against Ukraine for the period of martial law;

- the employer may not pay wages on time if he proves that this is due to hostilities or other insurmountable circumstances. If an enterprise cannot pay wages due to hostilities, it must pay them after resuming work.

The above conditions allow the employer to use stricter methods in personnel management, sacrificing the interests of employees for the sake of achieving the enterprise's goal.

2. Latest practices of enterprise management under martial law

The combination of the above factors has created difficult conditions for the functioning of Ukrainian enterprises. To overcome these difficulties and adapt to new conditions it is necessary to apply new management practices.

Primarily, it should be carried out on the basis of maintaining control over the enterprise and preventing uncertainty due to the loss of communication with employees and clients, preserving the human resources of the enterprise and adapting and updating business processes for maximum compliance with new conditions. To ensure these conditions, the management of the enterprise must quickly determine the most important short-term priorities of the enterprise and concentrate efforts on the tasks related to them, while ensuring the effectiveness of the communication system in order to have up-to-date and correct information about the real state of affairs at the enterprise.

Examples of management solutions that can be implemented and are partially implemented at enterprises within the framework of this strategy are:

Application of digital technologies to ensure effective work in unstable conditions. In order to ensure the personal safety of employees and due to circumstances a significant part of Ukrainian enterprises were forced to switch to a completely remote or mixed mode of work. As a rule, a mixed mode of work involves a physical visit by an employee to the workplace once in a certain period to work with primary documents or other activities that cannot be carried out remotely and are remote most of the time. *Table 2* shows the distribution of Ukrainian enterprises by method of organizing work.

Table 2

Distribution of Ukrainian enterprises according to work organization

Enterprises	Working remotely, %	Work in mixed mode, %	Work offline, %	Work from abroad, %
Micro enterprises (<10 people)	20	41	33	5
Small enterprises (10-50 people)	12	45	42	1
Medium enterprises (50-500 people)	10	55	34	1
Large enterprises (>500 people)	20	52	28	0

Source: compiled by the authors based on data from (Kyivstar Business Hub, 2023).

We can see that most enterprises provide at least some employees with the ability to work remotely. To ensure the effectiveness of such a model, extensive digitalization of a large number of work processes was necessary. This was done by transferring all work communications to specific messengers (slack, microsoft teams, mattermost). This made it possible to adapt work communication to remote work because in addition to the obvious advantage of online communication these programs save all communications, thus simplifying reporting and allowing employees working on different schedules to communicate more effectively with each other, since there is no need to prove information for each employee. More comprehensive methods included the transition to the use of project management systems (Jira, Trello, Asana, Wrike). Such systems visualize the project management system, providing the ability to create a map of each individual task and mark in it all the actions taken to solve this task, also linking it with other tasks. Thus, the manager, like each individual employee, can see the entire system of tasks that the enterprise is currently working on and his role in the overall system. In addition to the obvious advantage of the simplicity and transparency of such a system it also allows the employee to more clearly understand the system of interaction between various departments of the enterprise, as well as their role in it.

Developing a more flexible organizational structure. Given the significant number of risks, from losing employees to losing customer bases or suppliers, many businesses have been forced to make changes to their organizational structure to make it more adaptive and flexible. Examples of such changes include increased training of staff to ensure greater interchangeability within the organization, giving individual workers freedom of action within their project.

Investments in providing comfortable conditions for workers. Martial law carries a significant number of dangers for citizens of Ukraine. First of all, the risk of disconnecting a number of communications due to damage to infrastructure networks. Workers cannot be expected to be productive if they are unable to meet their own physiological needs. Under such conditions many enterprises have decided to provide their staff not only with comfortable working conditions but also with comfortable living conditions. During the winter period when the risk of long-term blackouts was extremely high most enterprises worked to provide, in addition to workplaces, kitchens and sleeping places in their offices and production facilities in order to accommodate workers in case of force majeure. A number of enterprises have provided workers with high-capacity uninterruptible batteries and Starlink satellite communication terminals for domestic use and not only for work. In addition to providing the basic needs of employees such a policy enhances the sense of interdependence between an employee and a enterprise and therefore reduces staff turnover.

Paying more attention to the psychological health of workers. Under stressful conditions caused by martial law and its consequences workers become especially vulnerable to negative psychological conditions such as professional burnout, depression, apathy, etc. This moral and psychological state reduces labor productivity and increases the likelihood of making mistakes at work. To prevent such negative effects a significant number of enterprises consider it necessary to take specialized measures aimed at ensuring the normal psychological state of employees. These events can range from those aimed at creating a favorable climate in a team (team building events, parties, charity events, tree planting, etc.) to specialized seminars with psychologists aimed at informing employees about the symptoms of mental problems and ways to prevent them.

Changing the planning horizon. In a situation where government policy, market requirements and other conditions for the functioning of an enterprise are constantly changing it becomes much more difficult to predict and plan the activities of an enterprise for the long term. In conditions of uncertainty, management often has to abandon long-term and even medium-term planning, since even within a year the operating conditions of the enterprise can change to diametrically opposite ones, which will make pre-established goals irrelevant. To solve this problem, a significant part of

enterprises decided to reduce the planning horizon. Thus, about 60 % of micro enterprises (up to 10 employees), 56 % of small enterprises (10–50 employees), 41 % of medium-sized enterprises (50–500 employees) now plan their activities only a month in advance. 14 % of micro-enterprises, 18 % of small enterprises, 18 % of medium-sized enterprises, 21 % of large enterprises plan quarterly activities. Planning a strategy for six months is considered by: 4 % of micro enterprises, 5 % of small enterprises, 11 % of medium enterprises, 7 % of large enterprises. A strategy is planned for a year or more: 2 % of micro enterprises, 5 % of small enterprises, 5 % of medium-sized enterprises, 5 % of large enterprises. In general, under the influence of crisis phenomena during the planning period, 84 % of micro enterprises, 84 % of small enterprises, 79 % of medium-sized enterprises, 62 % of large enterprises had to be laid off (Kyivstar Business Hub, 2023). As a rule, along with a decrease in the planning period some of its characteristic features also change. In particular, the plans developed at enterprises now have great variability and include different scenarios for the development of events. Key factors influencing the activities of the enterprise and different options for changing these factors are identified. Based on these options, the risks and opportunities that the enterprise will have under each of the scenarios are determined and, in accordance with this, a set of solutions is prepared that are most suitable for maintaining the effective operation of the enterprise under different scenarios. This approach allows us to guarantee maximum stability of the enterprise in the short term, even under crisis conditions.

Conclusions

Russia's full-scale military invasion of Ukraine entailed a significant number of problems that complicate the lives of citizens and the functioning of enterprises. Among these factors the most significant are the mass movements of the economically active population within Ukraine and abroad, the relocation of enterprises to relatively safe regions and the destruction of infrastructure as a result of hostilities and legislative innovations aimed to increase the military potential of Ukraine while simultaneously narrowing the rights of workers.

It was determined that most of Ukrainian enterprises have felt the negative influence of these factors such as high staff turnover, low labor productivity, a shortage of qualified specialists, the inability to properly organize the work process, lack of cooperation from the side of staff, etc.

Currently, to cope with the negative impact of the above-mentioned effects, the management of Ukrainian enterprises uses such tools as short-term planning instead of strategic planning, flexible organizational structure, strengthening of communication between different management units. The role of social tools, whose action is aimed at supporting employees,

preserving their physical and mental health, and providing them with everything necessary to establish a stable and reliable work process even under unfavorable external conditions, is rising. Active use of information technologies and digitization of management processes increase the effectiveness of these tools.

The key mission facing the management of Ukrainian enterprises is the implementation of the methods developed during the crisis into management tools and their use for the effective development of enterprises in the post-war period in order to ensure high competitiveness on national and foreign markets. The question of management of Ukrainian enterprises in the post-war period and the qualitative use of anti-crisis tools in the everyday functioning of enterprises will be revealed in further research.

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FEDULOVA Iryna,

Doctor of Sciences (Economics), Professor,
Professor of the Department of Management
State University of Trade and Economics
19, Kyoto St., Kyiv, 02156, Ukraine

ORCID: 0000-0002-8802-137X
i.fedulova@knute.edu.ua

DZHULAI Maryna,

Master, PhD student of the Department
of Management
State University of Trade and Economics
19, Kyoto St., Kyiv, 02156, Ukraine

ORCID: 0000-0001-7297-5892
m.dzhulai@knute.edu.ua

THE ATTRACTIVENESS OF TRADE ENTERPRISES IN THE LABOR MARKET

Students are an attractive segment on the labor market, as young people learn quickly, have the skills to work with modern information technologies, are inclined to support and develop corporate culture, etc. The aim of the article is to determine the level of attractiveness of trade enterprises from students' opinion, taking into account modern trends in the development of the labor market. The hypothetical assumption is that trade enterprises do not differ significantly in terms of their attractiveness for students when they choose a place of work or internship.

The conducted research of modern trends in the development of the Ukrainian labor market showed that significant changes took place during the war, in particular, the number of vacancies decreased by 25 times. Enterprises, for their part, tried first of all to keep the existing staff and were looking for new opportunities for successful operation. There has been a mass migration of the population to safe places, currently about 20% of the population of Ukraine is abroad. Preservation of the working population in Ukraine is an important task of the state and business. The number of vacancies in the field of trade increased by 67% in 8 months of 2023, stabilization took place in the field of trade on the labor market in August according to the R-Index.

ФЕДУЛОВА Ірина,

д. е. н., професор, професор кафедри менеджменту
Державного торговельно-економічного
університету
вул. Кіото, 19, м. Київ, 02156, Україна

ORCID: 0000-0002-8802-137X
i.fedulova@knute.edu.ua

ДЖУЛАЙ Марина,

магістр, аспірант кафедри менеджменту
Державного торговельно-економічного
університету
вул. Кіото, 19, м. Київ, 02156, Україна

ORCID: 0000-0001-7297-5892
m.dzhulai@knute.edu.ua

ПРИВАБЛИВІСТЬ ПІДПРИЄМСТВ ТОРГІВЛІ НА РИНКУ ПРАЦІ

Студенти є привабливим сегментом на ринку праці, оскільки молодь швидко навчається, володіє навичками роботи з сучасними інформаційними технологіями, схильна до підтримки і розвитку корпоративної культури тощо. Метою статті є визначення рівня привабливості торговельних підприємств з погляду студентів з урахуванням сучасних тенденцій розвитку ринку праці. Гіпотетичним припущенням є те, що для студентів при виборі місця роботи та стажування, торговельні підприємства за своєю привабливістю між собою суттєво не відрізняються. Проведене результати дослідження сучасних трендів розвитку українського ринку праці свідчать, що під час війни відбулися суттєві зміни, зокрема кількість вакансій зменшилася у 25 разів. Підприємства, зі свого боку, намагались насамперед зберегти наявний персонал і шукали нові можливості для успішного функціонування. Відбулась масова міграція населення у безпечні місця – наразі за кордоном перебуває близько 20 % населення України. Збереження працездатного населення в Україні є важливим завданням держави і бізнесу. Кількість вакансій у сфері торгівлі за 8 місяців 2023 р. зросла на 67 %, у серпні у сфері торгівлі на ринку праці за R-Index відбулась стабілізація.



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The students' perception of the enterprises attractiveness for work and internship was studied. For this, the survey was conducted among students (1341 respondents) with and without work experience. To analyze the results of the survey, the following methods were used: mathematical expectation, root mean square deviation and coefficient of variation of the expert evaluation results. Enterprises were rated according to their attractiveness for work and internships in the field of trade. Among the 9 leading enterprises, according to the survey results, Rozetka, Fozzy Group and Comfy were identified as the most attractive. The conducted research will make it possible to identify the best practices of employer brand management, and will help enterprises to take into account the expectations of their target audience.

Keywords: students' employment, labor market, division of labor, enterprise attractiveness, level of attractiveness, employer's brand.

Досліджено сприйняття студентами привабливості підприємств для роботи та стажування. Для цього проведено опитування серед студентів (1341 респондент) з досвідом та без досвіду роботи. Для аналізу результатів опитування використано: математичне сподівання, середньоквадратичне відхилення та коефіцієнт варіації результатів експертної оцінки. Проведено рейтингування підприємств за їх привабливістю для роботи та стажування у сфері торгівлі. Серед 9 провідних підприємств найбільш привабливими за результатами опитування визначено "Rozetka", "Fozzy Group" і "Comfy". Проведене дослідження дасть змогу виявити найкращі практики управління брендом роботодавця, допоможе підприємствам враховувати очікування своєї цільової аудиторії.

Ключові слова: працевлаштування студентів, ринок праці, розподіл праці, привабливість підприємства, рівень привабливості, бренд роботодавця.

JEL Classification: J21, J23, J44, J60.

Introduction

The formation of the enterprise attractiveness on the labor market is relevant for the search and hiring of personnel, because every enterprise seeks to provide itself with personnel of the necessary intellectual and emotional level, ready to develop together. The COVID-19 pandemic and the war have affected both the labor market in general and the ability of businesses to hire staff quickly. All this requires new approaches to personnel policy. When searching candidates for enterprises for a future job, the skills to master quickly and use modern information technologies in their activities are important. Students make up the majority of candidates for entry-level positions in the company. For a student and for a university graduate, the main issue is to find a job which will allow him to put own knowledge and skills into practice and get a reward for it. Today, students, while still studying at the university, want to find a job at least part-time and gain experience. This enables them to clarify their desired direction of career development which creates certain opportunities for employers. Currently, companies need to differentiate themselves from other companies in the labor market; they strive to help their employees feel the values, mission and spirit of the company.

Scientists include the question of determining the enterprise attractiveness on the labor market as part of the general problem of forming an employer's brand, its positive reputation on the labor market. Thus, the Rosethorn's work of 2009 defines the main characteristics of the

enterprise attractiveness for a potential employee, such as: economic, containing compensation and benefits; functional (when the employee acquires a certain skill); psychological (self-identification, comparison with the status of the company). In Mosley's work of 2009, the enterprise attractiveness is described as a set of qualities by which it is associated in the target audience. In Tsymbalyuk's work of 2015, the enterprise attractiveness is considered as its sustainable image on the labor market. Stepanov, Tuzhilkin (2018) consider the employer brand as a set of economic, professional, and psychological benefits that candidates receive while working for the company. Bilorus T. V., Firsova S. G. (2018) interpret the attractiveness of the employer as a set of basic values that distinguish the company in the labor market and that allow to find and attract qualified candidates for vacancies quickly. Smetaniuk O. A. (2020) defines the employer brand as internal measures with effective feedback to employees, material and non-material motivation, an effective personnel evaluation system, the opportunity for employee development and training. Dragan, Solomka, Maznyk (2022) investigate the main factors and best practices of an employer brand formation in food industry enterprises. Varis, I., Kravchuk, O., Spirina, K. (2022) identified the main channels of employer brand promotion among Ukrainian companies. The authors note that the measurement of involvement in social networks will become more important in future of employer branding: the success of attracting candidates; quality of candidates; retention rate. A new direction in the field of brand management is Emotional Text Mining (Greso, 2020), it is extracting short information from a large amount of text in a fast mode to understand the essence of the process. In brand management, by analogy, this can be seen as an analysis of an employer-enterprise in social networks. This approach is especially important for students. When searching for information about an employer, they focus mostly on social networks and a small amount of information messages.

However, the problem of determining the enterprise attractiveness, which takes into account modern trends in the labor market, the digitalization of the economy, the challenges of the pandemic, wars, the demands of employers to employees and potential job seekers to the desired place of work, remains unsolved. This will help companies to create an employer brand for young people, increase the number of candidates for one position, and provide employees with the necessary intellectual and emotional level.

The aim of the research is to determine the level of attractiveness of trade enterprises, from students' view, taking into account modern trends in the development of the labor market.

To achieve the aim, the following tasks are set:

- to analyze the changes that took place in the labor market during the war;
- to analyze the level of attractiveness of trade enterprises on the labor market, from the students' view based on the results of an expert survey.

The hypothetical assumption is that when choosing a place of work and internship, trade enterprises for students do not differ significantly in terms of attractiveness on the labor market.

The information base of the research is a students' survey, which was conducted in cooperation with Ukrainian universities and student organizations in May, 2021. 1.341 respondents took part in the survey, which was conducted in Ukrainian universities and student organizations, Telegram channels and Instagram pages of student councils; they identified their priority enterprises for internships and work in each field. The respondents were 776 students without work experience and 565 students or graduates with experience from 1 to 5 years. To determine the TOP companies that offer internships and vacancies for students and participated in the study, it was analyzed career sites, previous employer brand ratings of TOP companies in trade and their market shares. TOP-9 large trade enterprises were selected for the research. The expert survey was conducted online using Google Form. Microsoft Excel software was used to analyze the results of the expert survey.

During the analysis, the Pareto chart was used, which helped to identify and visually separate trade enterprises that demonstrate 80 % attractiveness on the labor market.

Mathematical processing of survey results was carried out on the basis of a probable approach. In accordance with this, the mathematical expectation, standard deviation and coefficient of variation of the results of survey evaluations are determined. These indicators were used to generalize the results of the survey and determine the general level of trade enterprise attractiveness for choosing a place of internship and work, from the point of students' view. A Net Promoter Score was calculated for each researched trading company in order to determine the level of their commitment to future employees.

1. Analysis of changes in the labor market during the war

The macroeconomic factor influencing the labor market in Ukraine was the full-scale invasion and the declaration of martial law in the country from February 24, 2022. The general trend of the labor market was the closing of vacancies at most employers or a 25-fold decrease in offers for candidates. The priorities of all enterprises were aimed at keeping employees safe, relocating business and employees to a safe place. It is appropriate to analyze the change in the average monthly salary in 2021–2022 (*Table 1*).

Table 1

Dynamics of changes in the average salary in Ukraine for 2021–2022

Month	Average salary					
	2021, UAH		2022, UAH		changes in 2022/2021, %	
	vacancies	resumes	vacancies	resumes	vacancies	resumes
January	13023	14017	14127	15642	8.48	11.59
February	13061	13591	14413	15606	10.35	14.83
March	13071	13751	14802	15870	13.24	15.41
April	13230	13635	13476	15662	1.86	14.87
May	13240	14235	13395	15412	1.17	8.27
June	13111	14322	13635	15357	4.00	7.23
July	13372	14321	13674	15617	2.26	9.05
August	13510	14863	13879	15707	2.73	5.68
September	13506	14868	13766	15744	1.93	5.89
October	13840	15281	14290	15967	3.25	4.49
November	13980	15095	14455	16102	3.40	6.67
December	14038	15378	14712	16313	4.80	6.08

Source: compiled according to Work.ua (2023, September 10).

The average salary in 2022 is higher even in the first month of the full-scale invasion (February–March) compared to 2021. However, the desired salary level of candidates is 2–7 percentage points less than that offered by employers. As a result of rapid mass migration, most Ukrainians have lost their work, so one family member remained financially solvent. According to the job search site Work.ua, the general decrease in the level of average wages in 2022 is observed due to the low number of high-paying vacancies. That is, in 2022, if there are vacancies, the Ukrainian employer will primarily consider candidates for entry-level positions with low qualifications or no need for them.

According to the data of the Ministry of Social Policy of Ukraine, as of September 4, 2023, 4.892.130 internally displaced persons (IDPs) were registered in Ukraine, of which 59.8 % were women and 40.2 % were men. By age group, IDPs are mostly 31–40 and 61–70 years old (*Figure 1*). The number of children who were forced to change their place of residence is 1.093.821.

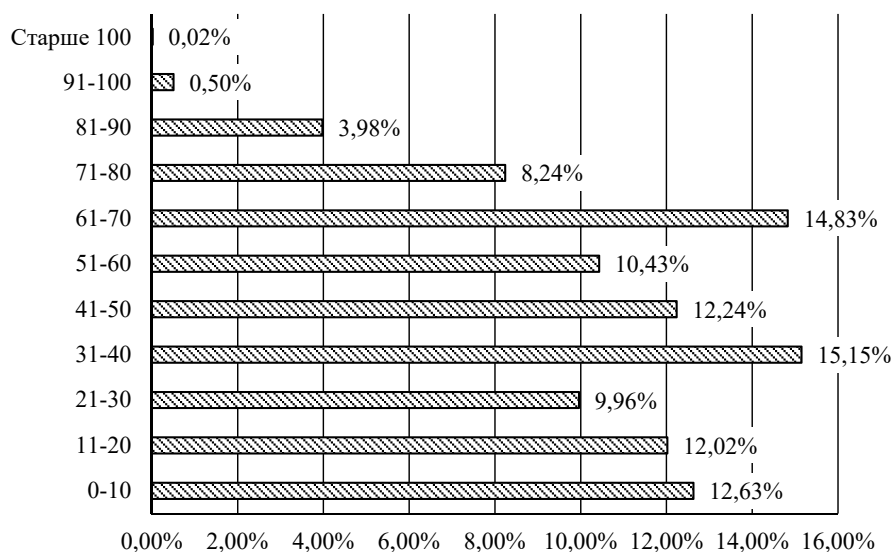


Figure 1. Distribution of IDPs by age groups as of September 4, 2023

Source: Ministry of Social Policy of Ukraine (September 1, 2023).

The largest number of IDPs who have lost their jobs is observed in the Donetsk and Kharkiv regions of Ukraine. Thanks to the employers' application of a flexible approach to personnel management, namely the remote work format, the majority of officially registered IDPs remained solvent. Employers' quick response to changes in the labor market is their competitive advantage.

As of September 4, 2023, according to the Ministry of Finance of Ukraine, the ratio of the number of registered unemployed to the total population of Ukraine is decreasing despite the full-scale war (Figure 2). However, this is not a relevant trend due to the high level of migration of the working population outside the country.

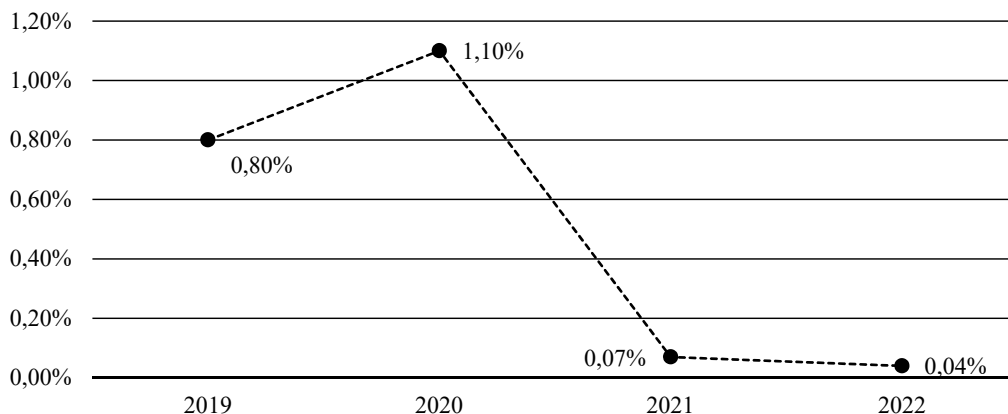


Figure 2. Dynamics of changes in the share of the unemployed to the population in Ukraine for 2019–2022

Source: Ministry of Finance of Ukraine (2023, September 5).

According to forecasts of the National Bank of Ukraine (September 5, 2023), unemployment in Ukraine will remain at the level of 26% in 2023. Gradually, the labor market crisis in 2024–2025 will due to an increase in the number of jobs for the working population. The recovery of employment in Ukraine is predicted thanks to grants for business support and development from foreign investors and lending by Ukrainian banks. A significant increase in wages is not predicted due to the high level of inflation in Ukraine.

According to the State Migration Service of Ukraine, the number of passports received by citizens of Ukraine for travel abroad in the 1st quarter of 2023 compared to 2022 increased by 48 % (Figure. 3). Thus, the number of able-bodied people planning to go abroad has increased over the past year. Most of them are women and children, as men have limited opportunities to cross the border due to the state of war in the country. In 2020–2021, due to COVID-19, the number of Ukrainians wishing to cross the border was halved.

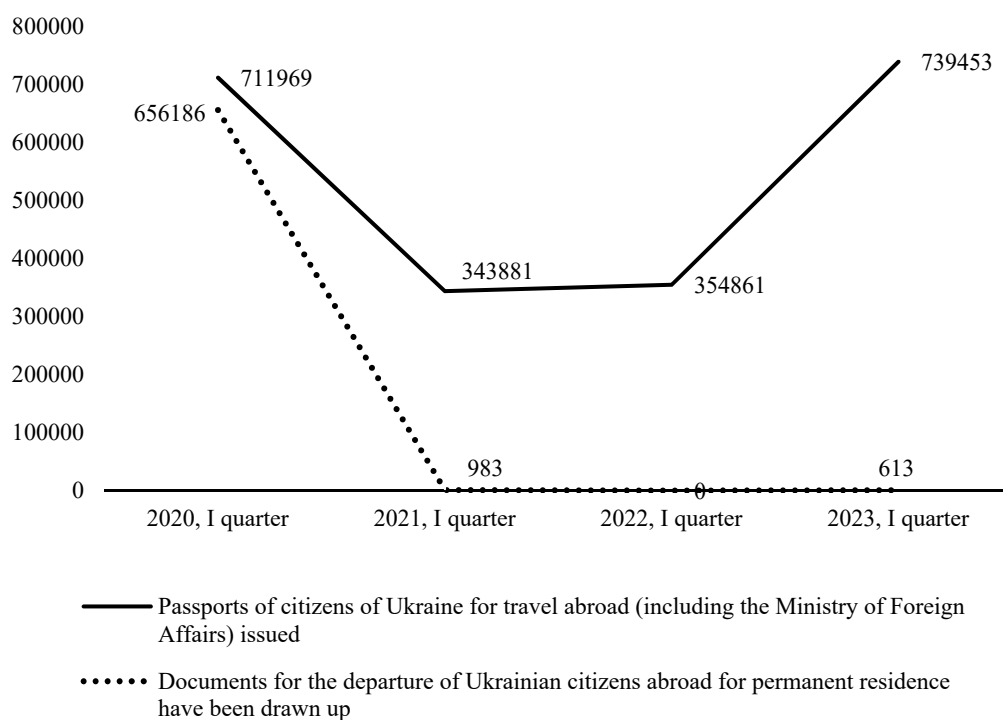


Figure 3. Dynamics of obtaining passports of citizens of Ukraine for travel abroad in 2020–2023

Source: State Migration Service of Ukraine (August 30, 2023).

Migration within Ukraine, according to official data, is most observed in the following regions: Donetsk (10.66 %), Kharkiv (9.08 %), Dnipropetrovsk (9.04 %), Kyiv Region (6.98 %) and Kyiv (7.44 %) (Figure 4). This is due to the geography of the invasion of the territory of Ukraine by Russia and constant shelling.

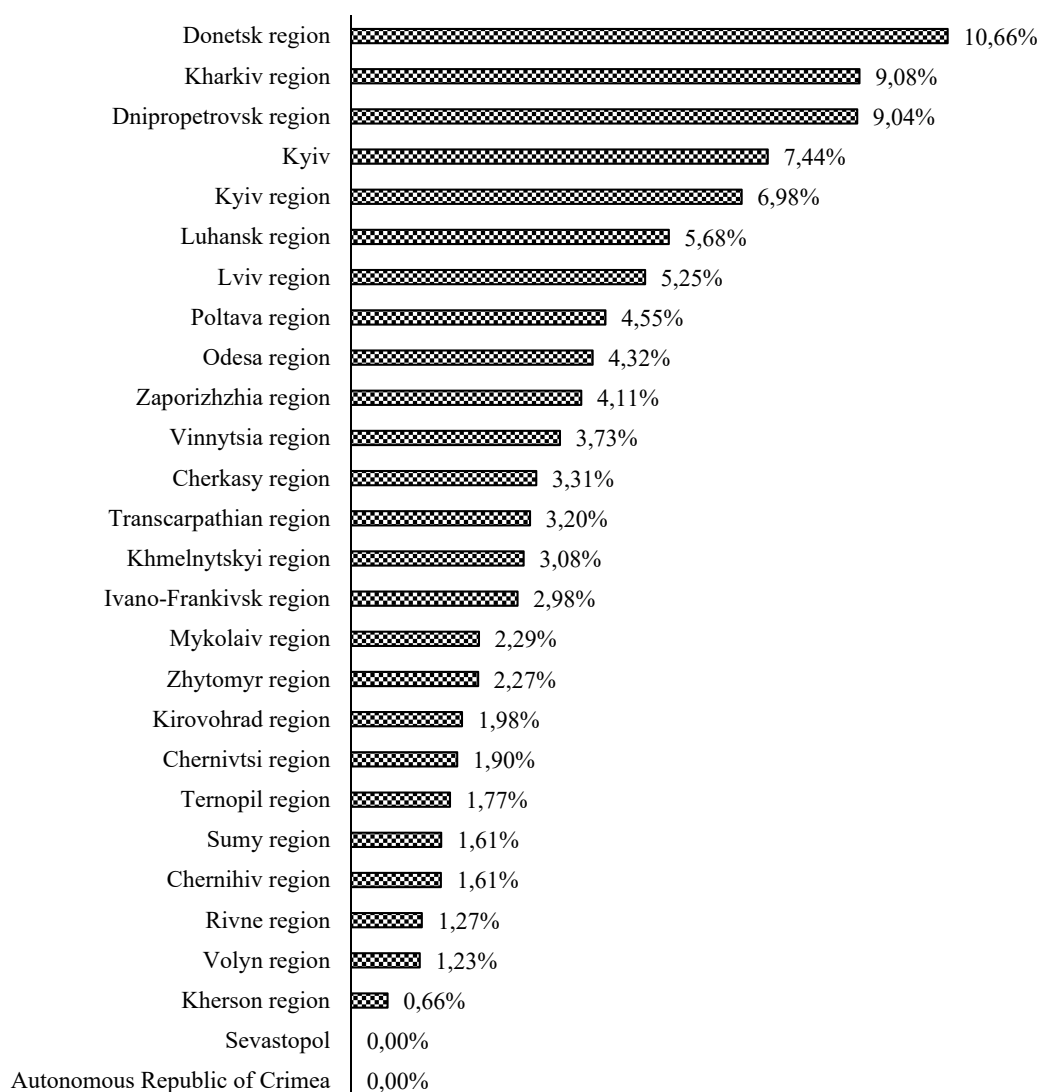


Figure 4. Migration of IDPs within Ukraine in 2022, %

Source: Civic Network OPORA (September 7, 2023).

According to the Ministry of Foreign Affairs of Ukraine, as of June 21, 2023, there are 8.177.000 Ukrainian citizens abroad, which is about 20 % of the existing population of Ukraine by February 24, 2022. Most of them are in three countries, and only 6 % of Ukrainians are on consular records abroad. According to the Office of the United Nations High Commissioner for Refugees, as of September 6, 2023, 6.201.600 Ukrainians were officially registered in the world and received refugee status. Of them, 5.832.400 (94 %) found temporary protection in European countries. The countries that accepted the largest number of Ukrainian refugees are Poland (50.68 %) and the Czech Republic (19.18 %) (Figure 5). This is due to the geographical location of the countries that are part of the European Union, and the conditions of material support at the state level for Ukrainian refugees.

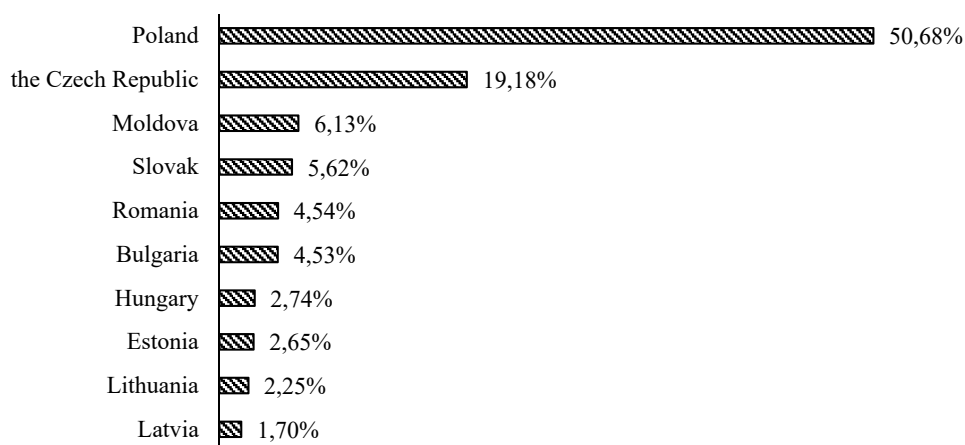


Figure 5. The structure of the location of refugees from Ukraine in Europe by country in 2022, %

Source: Office of the United Nations High Commissioner for Refugees (September 6, 2023).

In 2021, there was a sharp increase in unemployment in the EU to the level of 8.7 % (7.7 % in 2020). This is due to the COVID-19 pandemic, which began in 2020. The unemployment rate in the EU countries has a general tendency to decrease since the beginning of 2022 and remains at the level of 6.7 %, which is a rather high indicator. The countries with the highest unemployment rate are Spain, Greece, and Serbia. At the same time, unemployment is observed mainly in cities.

According to data (Eurostat Statistics Explained, August 20, 2023), in general, in all EU countries from 2020 to 2022, unemployment among young people aged 15 to 29 years was observed at a higher level compared to other age categories and amounted to 11.3 %. Candidates aged 15 to 74 have an average rate that is 5 percentage points lower – 6.3 %. Accordingly, the trend towards a high level of unemployment among young people has always arisen due to the fact that such seekers start working after finishing university. The average age of a university (not college) student in the EU is 25 to 35 years old. After school, most students choose to study at vocational technical schools for specialization and then at universities. On average across EU countries, the highest unemployment rate among students is registered in Greece (24.3 %), Spain (11.2 %), Italy (17.5 %) and Serbia (12.1 %). The lowest level of unemployment among young people is in the Czech Republic (4.2 %). For Ukrainian youth, there is certain closeness in the approach to study and work with the countries of Poland and the Czech Republic. This is due to geographical and mental proximity. The main sources of job search among young people are advertisements on job search sites and recommendations of friends/acquaintances. The least popular job search tools are participation of students in educational trainings from employers, internships, use of resources of employment agencies.

Based on the results of the analysis of the EU and Ukrainian market, an active recovery of the employment of the working population and a decrease in the unemployment rate under the influence of the recovery of the economy are predicted. Due to the high migration due to the war, Ukrainian employers should reduce the requirements for candidates and be more flexible regarding the remote work format. This will ensure the necessary number of qualified candidates for open positions in the company.

In *Figure 6* shows the dynamics of the situation on the labor market in the field of trade.

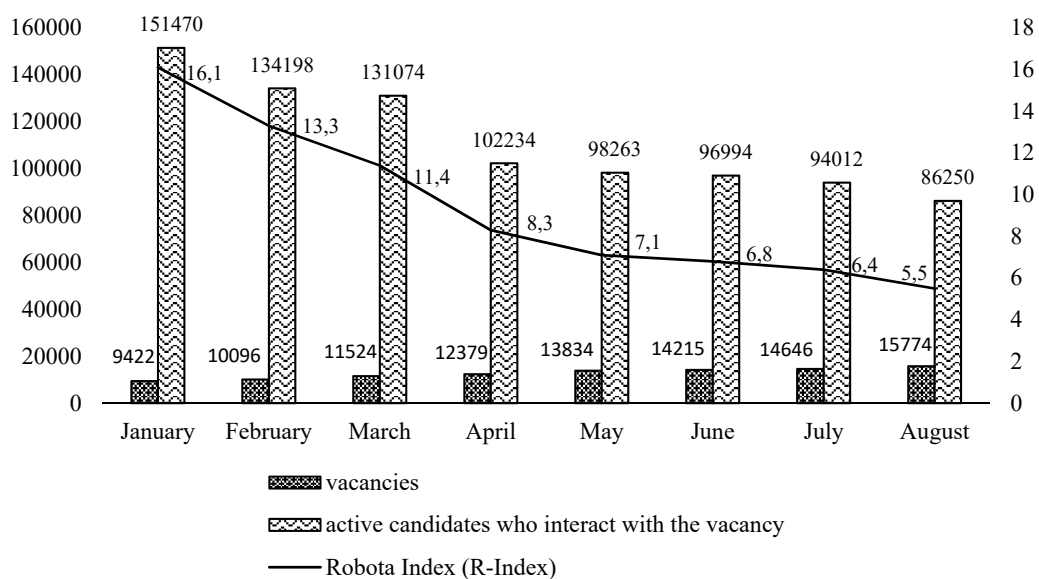


Figure 6. Dynamics of the number of vacancies in the field of trade for 8 months of 2023

Source: Robota.ua. Analysis of the labor market in Ukraine (September 20, 2023).

As it can be seen in Figure. 6, the number of trade vacancies has increased by 67 % over the past 8 months, i.e., it has grown by 8 % every month. And the number of active candidates interacting with enterprises decreased by 46 % during this period, that is, almost twice. Accordingly, there is a certain need for employees in the trade labor market, and companies compete with each other in terms of attracting personnel.

The Robota Index (R-Index) is an index that shows the ratio of active candidates interacting with the company to the number of vacancies in the market according to the selected parameters. There is the following categorization of R-Index parameters: 0–2 – acute shortage of applicants; 2–4 – shortage of applicants; 4–8 – a healthy ratio between employers and job seekers; 8–12 – high level of competition among job seekers, employer’s market; from 12 – a high level of competition among searchers for jobs (Robota.ua, 2023). The number of candidates for one vacancy in January was 16,

and in August – already 5. Accordingly, there was high competition among employers for personnel in January, while in August the market stabilized somewhat and is approaching equilibrium.

In the *Table 2* it is shown the most popular trade vacancies for 8 months of 2023.

Table 2

The most popular vacancies in the retail sector for 8 months of 2023

Position	Average month salary, UAH	<i>R-Index</i>
Seller-consultant	13 800	11.7
Cashier	14 500	6.7
Store manager	28 100	6.7
Deputy store manager	21 300	6.05
Guardian	12 100	8.2

Source: Robota.ua. Analysis of the labor market in Ukraine (September 20, 2023).

The results of the analysis show that the highest level of competition among employers for personnel for the position of consultant seller (*R-Index* – 11.7), followed by a security guard (*R-Index* – 8.2); for the positions of cashier, store manager and deputy store manager, there is a healthy ratio between applicants and employers.

2. Determining the trade enterprise attractiveness for work and internship, from students' view

The attractiveness of employers in the labor market depends on many factors, in particular, the level of wages, transparency of employment, opportunities for career growth and training, work schedule, level of corporate culture, etc. But in the conditions of war, as the research showed, the level of competition among employers in the labor market is determined by other parameters. First of all, it is a shortage of jobs and the financial stability of employers. As of August 31, 2023, the labor market in Ukraine is beginning to stabilize gradually, enterprises are resuming work, and the question of determining their attractiveness for job seekers is becoming an important task.

To determine the level of attractiveness of the employer, from the point of view of choosing a future place of work, a survey of the student audience was conducted, the structure of which by year, areas of study, respectively, is shown in *Figure 7, 8*.

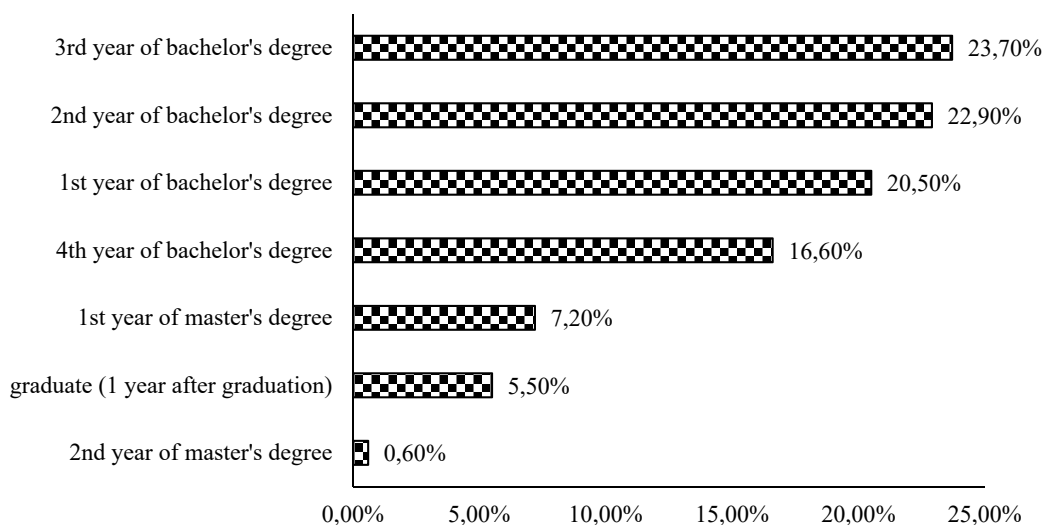


Figure 7. The share of respondents according to the year of study at the university in 2021

Source: determined by the authors based on survey results.

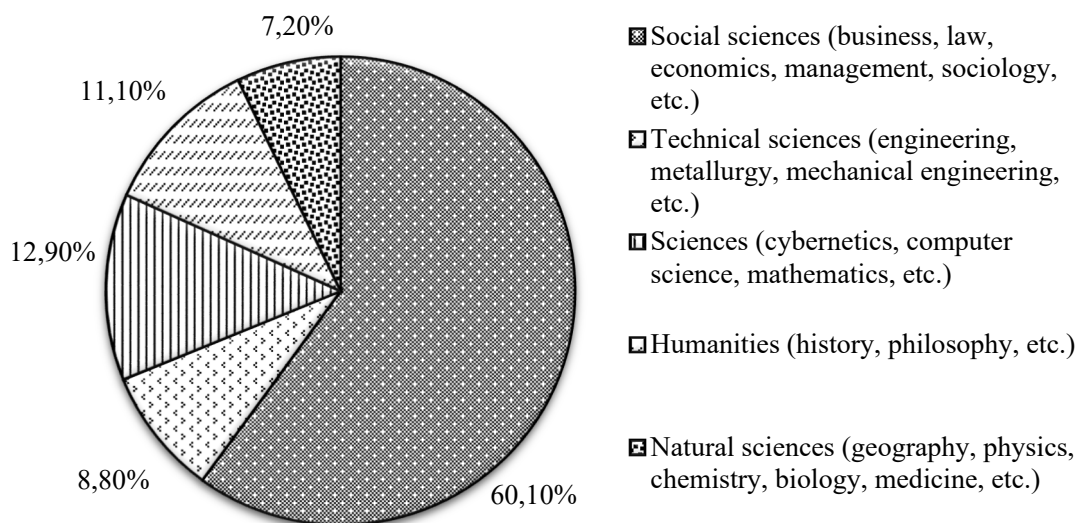


Figure 8. The share of respondents according to the field of study in 2021

Source: calculated by the authors based on survey results.

In order to identify the best practices in the formation of value propositions by modern companies willing to hire young people, a study of the priority workplace for students was conducted. Indirectly, this determines enterprises with effective employer brands.

For a generalized assessment of the level of attractiveness of enterprises for work, the following scoring system was used:

- 1 – the least attractive place of work;
- 2 – average level of job attractiveness;
- 3 – the most desirable place of work.

Thus, a scale for rating the level of attractiveness from 1 to 3 points is used.

In *Figure 9* shows the share of surveyed respondents who chose this enterprise for work and internship.

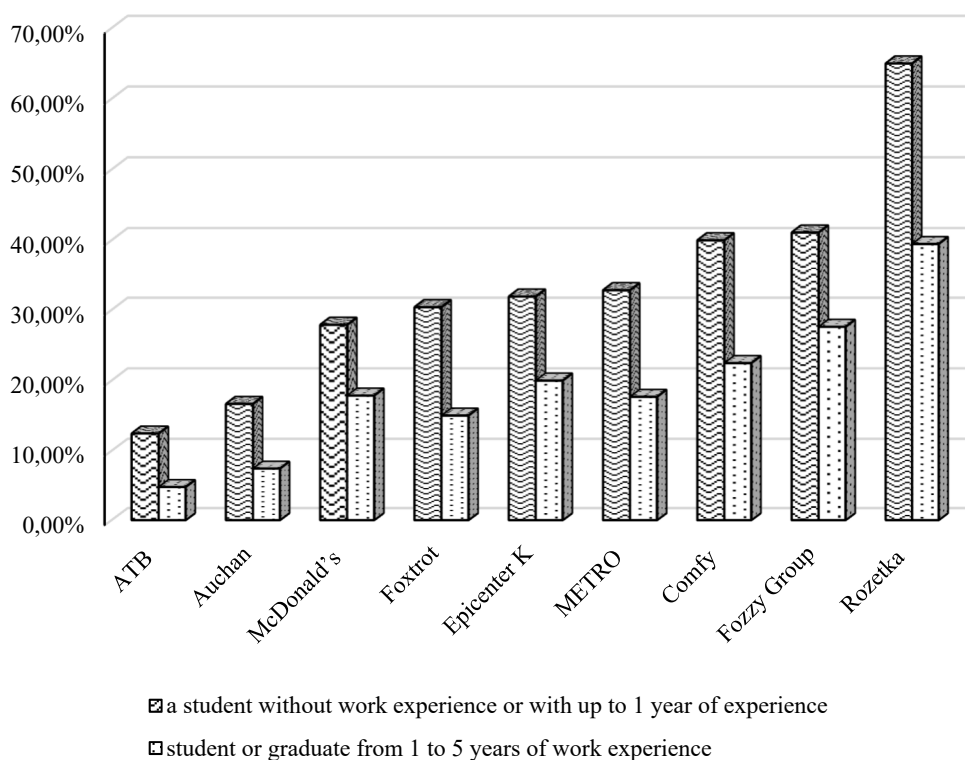


Figure 9. TOP trade companies for work and internships, from the point of view of students with and without work experience, % of surveyed respondents who chose this company in 2021

Source: determined by the authors based on survey results.

Among the trade enterprises for work and internship, the most attractive, according to the students, was Rozetka (*Figure 9*), an e-commerce company that sells various goods from products to electronic devices. Such a result is due more to the popularity of the company's trade brand than to the employer's brand. The second company in the rating is Fozzy Group, which has offline grocery stores throughout Ukraine. The least attractive for internships is ATB, which does not encourage students to become part of their team. Instead, according to the results of the analysis, ATB is a more attractive place to work for candidates over 40 years old.

3. Methodical tools for assessing the level of trade enterprise attractiveness for work and internship

To generalize the results of assessing the level of attractiveness of enterprises for work and internship, a probabilistic approach was used, which is based on the definition of mathematical expectation, root mean square deviation and coefficient of variation of the results of questionnaire assessments.

At the first stage, the probability of obtaining an appropriate score for each factor is determined by the formula:

$$X_{ij} = \frac{a_{ij}}{\sum_{j=1}^4 a_{ij}}, \quad (1)$$

where X_{ij} is the probability of obtaining a grade j for the i -th factor; a_{ij} – the number of students who provided an assessment of j factor i ; and i is the index of the factor ($i=1, \dots, n$); n – number of factors; j is the value of the factor estimate ($j=1, \dots, 3$).

As a result, we will get a matrix of probabilities of evaluations of answers to questionnaire questions:

$$\begin{matrix} X_{11} & X_{12} & X_{13} & X_{14} \\ \dots & \dots & \dots & \dots \\ X_{i1} & X_{i2} & X_{i3} & X_{i4} \end{matrix} \quad (2)$$

Each row of this matrix is a grouped statistical series of the probability of receiving the j -th rating for each i -th researched factor of the evaluation system for the selection of enterprises for internship. Thus, for a generalized evaluation of the factor, it is possible to use indicators of mathematical expectation, root mean square deviation and coefficient of variation.

The mathematical expectation of the assessment for each i -th factor is considered as an integral assessment of the level of attractiveness of the company for work and internship and can be calculated by the formula:

$$M(X_i) = \sum_{j=1}^4 j \cdot X_{ij}. \quad (3)$$

The mathematical expectation of the factor scores shows the average score of the factor on a three-point scale.

The root mean square deviation for each i -th factor is calculated by the formula:

$$\sigma(X_i) = \sqrt{\sum_{j=1}^4 (j - M(X_i))^2}. \quad (4)$$

The average squared deviation shows the amount of fluctuations in the assessment of each factor around its mathematical expectation, that is, it determines the degree of dispersion of the respondents' assessments.

The coefficient of variation is calculated according to the formula:

$$CV(X_i) = \frac{\sigma(X_i)}{M(X_i)} \cdot 100 \% \tag{5}$$

The coefficient of variation shows the amount of variation in percentage per unit expected factor estimate. With the help of this indicator, it is possible to determine how big the differences are in the assessment of this factor by students.

4. Results of the student survey regarding the trade enterprise attractiveness for work and internship

In the *Table 3* shows the survey results of students regarding their assessment of the attractiveness of trade enterprises for work and internship.

Table 3

The results of a student survey of trade enterprise attractiveness for work and internships

The company name	The number of respondents who chose an answer			Probability of obtained grades		
	the least attractive place to work	average level of job attractiveness	the most desirable place of work	the least attractive place to work	average level of job attractiveness	the most desirable place of work
ATB	439	99	27	0.78	0.18	0.05
Auchan	325	198	42	0.58	0.35	0.07
Foxtrot	230	250	85	0.41	0.44	0.15
METRO	233	232	100	0.41	0.41	0.18
McDonald's	282	182	101	0.50	0.32	0.18
Epicenter K	229	223	113	0.41	0.39	0.20
Comfy	204	234	127	0.36	0.41	0.22
Fozzy Group	193	216	156	0.34	0.38	0.28
Rozetka	110	232	223	0.19	0.41	0.39

Source: calculated by the authors based on survey results.

According to the proposed method, formulas (3–5) are used to determine the mathematical expectation, root mean square deviation, and coefficient of variation for the score evaluation of the importance of the factors of choosing an enterprise for work (*Table 4*).

Table 4

Statistical analysis of student survey results regarding the level of trade enterprise attractiveness for work and internship

The company name	Average level of attractiveness	Mean square deviation	Coefficient of variation, %
ATB	1.27	0.54	42.60
Auchan	1.50	0.63	42.12
Foxtrot	1.74	0.70	40.22
METRO	1.76	0.73	41.41
McDonald's	1.68	0.76	45.16
Epicenter K	1.79	0.75	41.81
Comfy	1.86	0.75	40.41
Fozzy Group	1.93	0.78	40.49
Rozetka	2.20	0.74	33.69

Source: calculated by the authors based on survey results.

The average level of attractiveness of the studied enterprises among students on a 3-point scale was distributed from 1.27 to 2.2. The company Rozetka received the highest rating, and ATB received the lowest rating. At the same time, 8 out of 9 studied enterprises were evaluated by students at an above average level, that is, their evaluation was higher than 1.5.

The root mean square deviation of the student survey results ranges from 0.54 to 0.78. The larger the root mean square deviation, the more scattered the responses of the respondents according to the average level of attractiveness of enterprises. The root mean square deviation was used to determine the coefficient of variation, which can be used to determine the percentage of response fluctuations relative to their average level. In the conducted study, the coefficient of variation ranged from 33.69 % for Rozetka to 45.16 % for McDonald's. Students' opinions regarding the choice of Rozetka for work have less variability, that is, the level of attractiveness is 2.2 ± 0.74 , or 2.2 ± 33.69 %. The results of the survey for McDonald's have a higher level of variability among students – the level of attractiveness of this employer is 1.68 ± 0.76 or 1.68 ± 45.16 %.

In *Figure 10*, a Pareto diagram is constructed to determine the level of attractiveness of trade enterprises for work and internships from the point of view of students. With the help of such an analysis, it is possible to determine

the most attractive trade enterprises for determining the place of internship and work, which account for 80 % of the students' choice.

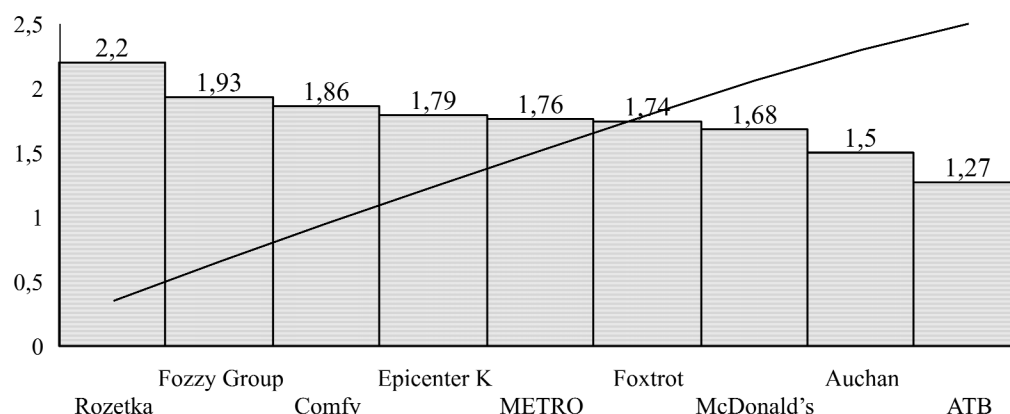


Figure 10. Generalized assessment of the level of trade enterprise attractiveness for work and internships for students

Source: calculated by the authors based on survey results.

The results of the analysis of the Pareto diagram show that 80 % of the students' choice of trade enterprises fell on 6 enterprises: Rozetka, Fozzy Group, Comfy, Epicenter K, METRO, Foxtrot.

For a deeper analysis and understanding of the level of attractiveness of enterprises for work and internship, the Net Promoter Score was also calculated – as the difference between the shares of students who gave the enterprise the highest and lowest attractiveness score for work and internship.

Attractiveness and loyalty for work and internship of employees among students can be considered as target metrics of enterprises (Table 5).

Table 5

Determination of the Net Promoter Score level of trade enterprise attractiveness for work and internship from students' view

The company name	Probability of choosing and recommending the company to others			Net Promoter Score
	critics	neutrals	supporters	
ATB	0.78	0.18	0.05	-0.73
Auchan	0.58	0.35	0.07	-0.50
Foxtrot	0.41	0.44	0.15	-0.26
METRO	0.41	0.41	0.18	-0.24
McDonald's	0.50	0.32	0.18	-0.32
Epicenter K	0.41	0.39	0.20	-0.21
Comfy	0.36	0.41	0.22	-0.14
Fozzy Group	0.34	0.38	0.28	-0.07
Rozetka	0.19	0.41	0.39	0.20

Source: calculated by the authors based on survey results.

Usually, to determine customer loyalty, the evaluation results are distributed as follows: more than 0.5 – everything is very good, and the company is among the market leaders; from 0.3 to 0.5 – a good result, but there is an adverse incident, or management errors can negatively affect the reputation; up to 0.3 – there are small problems at the enterprise that require attention to management, product, customers or employees; less than 0 – the number of dissatisfied customers significantly exceeds the number of satisfied customers, so if there are alternatives in the market, it will be very difficult to retain customers. We will also use this scale to assess the attractiveness of the employer. Only Rozetka has a Net Promoter Score greater than 0. That is, this company, although it has some problems in terms of its attractiveness in the employment market, has twice as many supporters as critics due to the high proportion of neutrals.

Thus, we can conclude that for enterprises with a high level of Net Promoter Score, the process of hiring young progressive workers is easier. Such enterprises can gain an advantage due to the high loyalty of employees within the company, they do not need to spend a lot of time looking for employees and do not need to do it often. Loyal employees work much more efficiently. Often, new employees come to hire on the advice of loyal employees they know.

Thus, as a result of the conducted research, enterprises with a high level of attractiveness for work and internships from the point of view of students were identified. This makes it possible to additionally conduct an analysis of best practices in these employers regarding the formed value propositions for the labor market.

Conclusions

The war in Ukraine had a significant impact on the labor market. The main trends were the closure of enterprises, mass job loss among the population, mass migration, and a decrease in offers on the labor market. As a result, the number of registered unemployed increased, although this trend is stopped in 2023. Business development support from the state, the banking sector, and foreign investors is necessary to restore the operation of enterprises and create jobs. Businesses in Ukraine should reduce requirements for job candidates and be flexible to a mixed work format. The Robota Index showed that in 8 months of 2023, the labor market stabilized somewhat and came close to equilibrium. Thus, the number of candidates for one vacancy in August was three times less than in January.

A study of the priority workplace for students in order to identify the best practices in the formation of value propositions by modern companies willing to hire young people revealed that the most desired workplace for students in the field of commerce is Rozetka, Fozzy Group and Comfy which is due to the popularity of these brands, the level of their informatization of business processes, flexible work schedule. Indirectly, this determines

enterprises with effective employer brands. The least attractive, from the point of view of students, are the enterprises of the ATB network. Thus, the research results revealed exemplary companies with an established employer brand. HR brands can be used by agencies, HR departments of international and national companies for additional analysis of their best practices regarding the formed value propositions.

The disadvantage of the research is the lack of open questions. Fixing this shortcoming would increase the complexity of processing survey results, which is not justified.

Further research will be aimed at building a methodological toolkit for evaluating the employer brand and organizing management activities regarding its formation by enterprises.

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CHUGUNOV Igor,
Doctor of Sciences (Economics),
Professor,
Head of the Department of Finance
State University of Trade and Economics
19, Kyoto St., Kyiv, 02156, Ukraine

ORCID: 0000-0002-3612-7236
i.chugunov@knute.edu.ua

LIUBCHAK Iryna,
Master, Assistant of the Department of Finance
State University of Trade
and Economics
19, Kyoto St., Kyiv, 02156, Ukraine

ORCID: 0000-0002-3988-2704
i.lyubchak@knute.edu.ua

INSTITUTIONAL FRAMEWORK FOR BUDGET PLANNING

The study of the institutional foundations of budget planning determines the activities of institutions in the field of forming the revenue part of the budget, effective planning of the expenditure part, ensuring the balance of the budget and increasing the level of macroeconomic balance, which is especially relevant during the period of martial law in order to adapt the institutional environment to social, economic and social transformations in the country. The institutional environment of budget planning is important, as one of the main regulators of budget relations, with the aim of ensuring macroeconomic balance both in the short-term period and in the medium-term perspective. Adaptation of the institutional environment to social and economic changes and determination of priority directions for the further development of financial and budgetary relations require attention. The article aims to reveal the institutional foundations of budget planning in the system of macroeconomic regulation. The main research methods are dialectical and systemic. Structural, comparative, factorial and logical methods were

ЧУГУНОВ Ігор,
д. е. н., професор,
завідувач кафедри фінансів
Державного торговельно-економічного
університету
вул. Кіото, 19, м. Київ, 02156, Україна

ORCID: 0000-0002-3612-7236
i.chugunov@knute.edu.ua

ЛЮБЧАК Ірина,
магістр, асистент кафедри фінансів
Державного торговельно-економічного
університету
вул. Кіото, 19, м. Київ, 02156, Україна

ORCID: 0000-0002-3988-2704
i.lyubchak@knute.edu.ua

ІНСТИТУЦІЙНІ ЗАСАДИ БЮДЖЕТНОГО ПЛАНУВАННЯ

Дослідження інституційних засад бюджетного планування визначає діяльність інститутів у сфері формування дохідної частини бюджету, ефективного планування видаткової частини, забезпечення збалансованості бюджету та підвищення рівня макроекономічної рівноваги, що особливо актуалізується під час воєнного стану задля адаптації інституційного середовища до соціальних, економічних та суспільних трансформацій у країні. Важливим є інституційне середовище планування бюджету як одного з основних регуляторів бюджетних відносин з метою забезпечення макроекономічної рівноваги як у короткостроковому періоді, так і у середньостроковій перспективі. Потребують уваги адаптація інституційного середовища до соціально-економічних змін та визначення пріоритетних напрямів подальшого розвитку фінансово-бюджетних відносин. Метою статті є розкриття інституційних основ бюджетного планування в системі макроекономічного регулювання. Основними методами дослідження є діалектичний та системний. Також використано



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also used. In the course of the research, the essence of the institutional environment of budget planning was determined, the content of the budget institute and the budget policy institute was revealed. Adaptive changes in the institutional environment of budget formation, which were caused by the start of a full-scale war, are analyzed and priority directions for further improvement and development of the institutional environment of budget planning are given. Effective institutional environment of budget planning has a significant impact on the level of macroeconomic balance, social and economic development of the country and achievement of priorities determined by medium-term social goals. The state of war on the territory of Ukraine has become a rather significant challenge, including for the financial and budgetary institutional environment. The conducted study of the current legislative framework indicates a gradual change in the institutional environment of budget formation before transformations in social, economic, and public relations. Further improvement and development of the institutional environment for budget formation in terms of creation and implementation of effective financial mechanisms is appropriate, in order to ensure macroeconomic stability and further socio-economic development of the country.

Keywords: budget planning, budget policy, institutional environment, budget planning, macroeconomic regulation, social and economic development of the country.

структурний, порівняльний, факторний та логічний методи. У ході дослідження визначено сутність інституційного середовища планування бюджету, розкрито зміст інституту бюджету та інституту бюджетної політики. Проаналізовано адаптивні зміни в інституційному середовищі формування бюджету, які спричинені початком повномасштабної війни, та наведено пріоритетні напрями подальшого вдосконалення та розвитку інституційного середовища бюджетного планування. Дієве інституційне середовище бюджетного планування впливає на рівень макроекономічної рівноваги, соціально-економічний розвиток країни та досягнення пріоритетів, визначених середньостроковими суспільними цілями. Воєнний стан в Україні став значним викликом, у тому числі і для фінансово-бюджетного інституційного середовища. Результати дослідження чинної законодавчої бази свідчать про поступову зміну інституційного середовища формування бюджету у соціальних, економічних, суспільних відносинах. Доцільним є подальше удосконалення та розвиток інституційного середовища формування бюджету в частині створення та реалізації дієвих фінансових механізмів з метою забезпечення макроекономічної стабільності та подальшого соціально-економічного розвитку країни.

Ключові слова: бюджетне планування, бюджетна політика, інституційне середовище, бюджетне планування, макроекономічне регулювання, соціально-економічний розвиток країни.

JEL Classification: E 60, H 61, H 70.

Introduction

The budget is an important tool for regulating the social, economic, investment, and foreign policy of the state. The economic downturn caused by martial law on the territory of Ukraine has significantly changed the mechanisms of forming budgetary relations: critical dependence on external financial support, reduction of the revenue part of the budget, and increase of budget expenditures in the area of national defense and security. Under such conditions, attention to the study of the institutional foundations of budget planning as an important element of macroeconomic balance, which is due to the need to adapt the institutional environment to socio-economic transformations and transformation of the country's economy, is increasing.

Leading foreign financiers and economists, including: L. Evelan, J. Keynes, P. Samuelson, M. Sapala, N. Tzenios, paid attention to the study of issues related to the institutional foundations of budget formation. Domestic scientists who studied the sphere of budget formation as an element

of macroeconomic regulation are A. Mazaraki, I. Chugunov, T. Kaneva, M. Pasichnyi, V. Makohon. The dynamism and instability of social, economic, societal processes and their impact on the social and economic state in the country require further study of the institutional foundations of budget planning regarding the possibilities of their adaptation to complex economic realities.

In his scientific article, L. Avellan, A. J. Galindo Andrade, J. Leon-Diaz (Avellan et al., 2020), prove that in national economies that arise with armed military conflicts, changes in public administration affect the institutional foundations of budget planning through the distribution of military costs. The relationship between military spending and economic growth will also change, namely: an increase in funds for war financing, a decrease in funds for financing economic development. To solve these problems, it is necessary to gradually adapt and transform the entire institutional environment in accordance with the social and economic situation in the country.

Foreign authors M. Sapala (Sapała, 2019), N. Tsenios (Tzenios, 2022) specify the combination of possibilities of approaches to modern budgeting through the transformation of the current institutional environment in combination with the establishment of the fiscal framework of budgets. In their works, they emphasize multi-year planning and the peculiarities of budgeting in communities.

In their research, J. Haan, B. Gootjes (Haan, Gootjes, 2022) determined the impact of institutional changes on budget indicators and indicators, focusing on the transparency of budget policy.

Cause-and-effect relationships between adaptive changes in the institutional foundations of budget planning and macroeconomic stability are investigated in the works of: M. Pasichnyi (Pasichnyi, 2020), T. Kaneva (Kaneva, 2021), and V. Makohon (Makohon, 2023). Scientists claim that at the current stage of state formation, adaptive changes in the institutional environment of budgeting affect the macroeconomic balance in the country.

The article aims to reveal the institutional foundations of budget planning in the system of macroeconomic regulation. The research is based on the hypothesis that the gradual adaptation and transformation of the institutional foundations of budget planning will ensure macroeconomic stability in the face of crisis phenomena. The hypothesis is confirmed by the analysis of the financial indicators presented in the draft Law of Ukraine "On the State Budget of Ukraine for 2024" and the planned indicators for 2025–2026, calculated by the authors.

In the course of the research, a number of general scientific methods were used, which made it possible to achieve the set goal. In particular: the dialectical method (clarification of the role and significance of the institutional foundations of budget planning), the historical-legal method (the study of the stages of establishing the institutional foundations of budget planning), the formal-logical method (the definition of the concept of

"institution"), the system method (the study of the organizational and managerial foundations of the formation institutional foundations); scientific abstraction (justification of strategic priorities of institutional aspects of budget planning).

The information base of the research is the laws and regulatory acts of Ukraine, official data of the Ministry of Finance of Ukraine, scientific publications of foreign and domestic researchers, and the authors' own research.

The structure of the main part of the study includes three sections, the first of which is devoted to the study of the historical aspect of the development of budget planning institutions. The second chapter defines the institutional structure of budget planning. The third section is devoted to the analysis of the adaptation of the current institutional environment of budget planning to the conditions of martial law and the prospects for its further improvement.

1. Historical aspect of the development of budget planning institutions

The budget is one of the main elements of ensuring the social and economic development of the country. The stability of the financial system and sustainable economic development depends on the effectiveness and efficiency of budget formation. Institutional foundations of budget planning are an element of effective influence on social and economic development and improvement of the level of population provision. The institutional environment is an integral tool for influencing the development of the economy in order to achieve the priorities stipulated by the long-term national goals, as well as ensuring the balance of the budget in conditions of economic recession. The invasion of the territory of Ukraine and the introduction of martial law actualized the issue of studying the institutional environment of budget planning and the possibility of its adaptation to modern realities.

Despite the large number of studies by domestic and foreign scientists devoted to the institutional foundations of budget planning in the system of macroeconomic regulation, the multifacetedness of this definition determines disagreements in its interpretation.

Representatives of institutionalism interpret the concept of "institutions" as "the rules of the game in society, or more precisely, restrictions invented by people that direct human interaction in a certain direction" (Kejns, 1935). Restrictions shape the active participation of society in social, economic and public spheres of activity. There are two types of restrictions: formal, regulated at the national level (legislative acts) and informal (rules and customs of behavior), which are implemented through the use of benefits, sanctions, etc. (Avellan, Galindo Andrade, Leon-Diaz, 2020).

In general, the institutional approach is the participation of state financial institutions in the mechanism of budget formation, applying the appropriate regulatory and legal framework. The task of the institutions is to manage the budget formation process at all its stages, adapt to social, economic and societal changes and ensure the effectiveness of budget relations (Samuelson, Nordhaus, 2010). Structurally, the institutional environment of budget planning is divided into state institutions and the legal framework (Tzenios, 2022). In the system of budget formation, the main institutions are the budget system, the tax system, the monetary system, the currency system, and others, which during the period of their activity are in the process of constant adaptation to the economic environment.

The scientific interpretation of institutionalization is represented by the use of national laws, norms and rules, which should serve to "satisfy some social need" (Ayobami et al., 2022). This interpretation of institutionalization is an inverted identity of the content of an officially recognized law or rule to satisfy a public need. Institutional concepts of performers are understood as scenarios for their activities within the rules of the institution, and institutional incentives are formal and informal incentives within the framework of institutional rules.

2. Institutional structure of budget planning

In the structure of the institutional environment of budgetary planning as an element of macroeconomic regulation, the main role is occupied by the state, which forms and implements budgetary, tax, monetary, social, investment, and innovation policies. The state, as the main element in the structure of the institutional environment, forms the legal field, the regulatory and legal framework, with the help of which the state and local budgets are formed. The institution of the state, forming the legal field, regulates both budgetary relations and, in general, socio-economic relations within the institutional environment of society. Taking into account the socio-economic changes in the country caused by the introduction of martial law, the state ensures the formation of an adaptive financial and economic environment, in accordance with the established legislation.

The budget as a complex institutional structure reflects a set of institutions, structures, norms and rules. The institutional structure of the budget should correlate with social and economic needs in society, thereby ensuring the achievement of goals and priorities provided for by the relevant national tasks.

State administration bodies are an integral part of the institutional environment of budget planning. Financial institutions direct their activities to strengthen the revenue part of the budget, balance the budget, and rational use of the expenditure part of the budget, thereby ensuring the socio-economic development of the country.

Institutions can be presented as the result of processes that took place in previous periods of time and therefore they correspond, first of all, to the past environment. A stable set of basic institutions that determine the evolutionary development of subsequent institutional structures is an institutional matrix that implements the concept of a system of rational structural and functional transformations. Budget balance is important, first of all, between planned and actual indicators, including as a ratio to gross domestic product, revenue and expenditure parts of the budget, budget deficit, public debt, and their structuring (Chugunov, Makohon, 2023). An appropriate balance is necessary between financial-budgetary and social, economic indicators in terms of administrative-territorial units, effective indicators of budget programs, achievement of the corresponding social goal and budget expenditures of the main managers of budget funds.

The transformation of socio-economic processes in the country necessitates the need for a high-quality institutional environment for budget planning, which primarily concerns the regulatory and legal framework. Legislation and regulatory framework is a legal manifestation of the budget institution and characterizes its socio-economic complexity. The Constitution of Ukraine, the Budget Code of Ukraine, the Tax Code of Ukraine, the Law of Ukraine "On the State Budget of Ukraine", the relevant resolutions of the Cabinet of Ministers of Ukraine, the orders of the Ministry of Finance of Ukraine on issues of budget formation oblige to observe the norms and rules regulated at the national level in the budget process (Law of Ukraine "On the State Budget of Ukraine for 2023", 2022).

The budget as an institution performs the function of distribution and redistribution of the gross domestic product to meet the needs of the population. In the institutional environment, the budget institute is a regulatory tool, performing such functions as fiscal, distribution, control, stimulation, and investment.

The budget institute functions in accordance with the norms and rules regulated by legislation and is an economic institute that has an appropriate structure and performs the functions assigned to it to ensure the socio-economic development of the country; an integral part of social relations, and its effectiveness depends on the institutional environment of society, as well as those transformational processes taking place in the country (Saad, 2021).

The budget institute is in constant interaction with other institutes: institutes of budget revenues and budget expenditures, institute of inter-budget relations, institute of public debt, budget deficit. The main goal of the budget institution is the formation of the revenue part through the institution of budget revenues and the rational distribution of resources through the institution of budget expenditures, ensuring the balance of the budget. The Institute of State Financial Control and the Institute of Budget Regulation ensure the stability of the budget system, strengthening macroeconomic stability in the country, balancing state finances, and forming priorities for the prospective period.

Budgetary policy as a social and economic institution includes a system of mechanisms and rules of interaction between the state and economic entities. The Institute of Budget Policy, operating within the institutional environment of budget formation, is a system that includes methods, forms and levers of formation and use of budget funds – instruments of state regulation of the economy in the field of budgetary relations.

3. Analysis of the current institutional environment adaptation of budget planning to the conditions of martial law and the prospects for its further improvement

Prospective budget planning and forecasting is a necessary condition for the implementation of macroeconomic regulation in the field of budget relations. Budget planning and forecasting are the basis for setting priorities for the medium and long term. Prospective budget planning and forecasting affects the balance of the budget, the financial architecture of the revenue part of the budget, and the expenditure part of the budget, inter-budgetary relations. The development of long-term forecasts and plans makes it possible to realize the main task of budget regulation – achieving sustainable growth of the population's well-being based on the rational distribution and redistribution of the public product through the system of public finances (Chugunov, 2021).

The institutional environment for the formation of perspective budget planning and forecasting is reflected in the following legal acts: Budget Code of Ukraine, clause 1, Article 45 "The Ministry of Finance of Ukraine carries out budget forecasting and analysis"; Resolution of the Cabinet of Ministers of Ukraine "On the Ministry of Finance of Ukraine", item 4. "The Ministry of Finance, in accordance with the tasks assigned to it: ... Prepares and specifies the forecast of the State Budget of Ukraine for the next two budget periods"; Resolution of the Cabinet of Ministers of Ukraine "On the State Fiscal Service of Ukraine", item 4. "The SFS, in accordance with the tasks assigned to it: ... Prepares proposals regarding the forecast of budget revenues, taking into account the forecast of macroeconomic indicators...". We consider it expedient to institutionally strengthen the functional component of budget planning and forecasting. The institutional environment of budget planning cannot be permanent; it must have the property of transformation to changes in the social, economic and public spheres. The state of war in the country affected changes in all spheres of activity, accordingly, the institutional environment of budget formation must also adapt to the new conditions. The main changes in the institutional environment of budget formation caused by the state of war are the introduction of amendments and additions to the Budget Code of Ukraine, the adoption of the resolution "On Amendments to the Resolution of the Cabinet of Ministers of Ukraine dated March 11, 2022", the introduced

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changes simplify the organization of the budget process in territories that are temporarily out of control to the Ukrainian authorities, simplified conditions for the implementation of budgetary powers by the military administrations of settlements, regional, district and city administrations were defined, the issue of approval of draft decisions on the transfer of funds in the form of interbudgetary transfer was settled ("On making changes to the resolution of the Cabinet of Ministers of Ukraine", 2022; Law of Ukraine "On the State Budget of Ukraine for 2023", 2022).

The Regulation of the Law of Ukraine "On Amendments to the Tax Code of Ukraine and Other Legislative Acts of Ukraine Regarding Taxation Features and Reporting in the Period of Wartime" provides the following tax benefits: non-application of liability for tax violations during martial law and postponement of obligations by taxpayers provided for by tax legislation; tax benefits related to the exemption from taxation of assistance to ensure the defense of the state. Changes in the Tax Code of Ukraine, in particular, clause 9.1 of subsection 8, indicate the exemption of individuals – entrepreneurs – payers of the single tax of the first and second groups from the payment of the single tax. These changes in the institutional environment of budget formation significantly affect the formation of the revenue part of the budget and the expenditure part of the budget (Official site of the Ministry of Finance of Ukraine, n.d.).

Adaptive changes in the institutional environment of the budget are confirmed by the financial indicators presented in the draft Law of Ukraine "On the State Budget of Ukraine for 2024" (Official site of the Ministry of Finance of Ukraine, n.d.) and the planned indicators for 2025–2026, calculated by the authors. *Table* shows the indicators of the revenue part of the budget, the budget deficit, lending, the expenditure part of the budget and their specific weight to the gross domestic product.

Table

Planned indicators of the State Budget of Ukraine for 2024–2026, UAH billion

Budget indicators	2024	% to the GDP	2025	% to the GDP	2026	% to the GDP
Budget revenues	1746.3	22.32	2011.3	21.84	2295.9	21.55
General fund	1574.5	20.12	1813.3	19.69	2070.1	19.43
Special fund	171.8	2.20	198.0	2.15	225.8	2.12
Budget deficit	1593.5	20.36	1370.4	14.88	1080.3	10.14
General fund	1531.2	19.57	1316.9	14.30	1037.7	9.74
Special fund	62.3	0.79	53.5	0.58	42.6	0.40
Lending	30.9	0.39	29.5	0.32	12.8	0.12
Budget expenditures	3308.9	42.29	3352.2	36.40	3363.4	31.57
General fund	3108.2	39.72	3148.5	34.19	3159.3	29.65
Special fund	200.7	2.57	203.7	2.21	204.1	1.92

Source: Official site of the Ministry of Finance of Ukraine.

The study of the current legislative framework indicates the gradual adaptation of the institutional environment of budget formation to the transformational changes caused by the full-scale invasion of the territory of Ukraine. In order to ensure macroeconomic balance during the period of martial law, the priority of the budget strategy should be the change of the state's budgetary orientations. Budget funding must be directed to the military-industrial complex, social protection of the population, basic medical and educational services (Chugunov, 2021). To maintain macroeconomic stability during martial law, the state as an institution must ensure the effective operation of all business entities, primarily including support for the real sector of the economy. During the period of martial law, it is important to introduce a number of tax benefits, in particular in terms of exemption from payment of certain taxes, reduction of tax rates, provision of tax incentives and tax holidays. It is necessary to adapt, improve and develop the institutional potential of budget formation, creating effective mechanisms in the field of budgetary relations in order to increase the level of macroeconomic stability, ensure the socio-economic development of the country, and social protection of the population.

Conclusions

The institutional environment is an important element in the budget formation system. Effective institutional environment of budget planning has a significant impact on the level of macroeconomic balance, social and economic development of the country and achievement of priorities determined by medium-term and long-term goals. The state of war significantly affected the mechanism of functioning of all areas, including the implementation of the financial and budgetary institutional environment. There is a gradual adaptation of the institutional environment of budget planning to transformational changes in social, economic, and public relations. It is important to implement a balanced, consistent and systematic budget policy using fiscal instruments and financial and budgetary mechanisms. One of the important tasks of implementing an effective financial institutional environment is the improvement of the basic principles of the institutional architecture of the budget system, which is determined by the set of relevant relationships between the components of this system, the mechanisms of their optimization with the aim of influencing the dynamics of economic growth indicators. The application of the provisions of institutional architecture will provide an opportunity to determine the level of functioning and balance of the budget system as an important component of state regulation of the economy and improve the quality of the budget process in Ukraine. Further development and improvement of the financial institutional space, formation of effective budgetary mechanisms for social development, restoration of economic growth, and ensuring public trust in state institutions are expedient.

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KALINICHENKO Oleh,
Master, PhD student
of the Department of Management
State University of Trade and Economics
19, Kyoto St., Kyiv, 02156, Ukraine

ORCID: 0000-0002-3716-3706
o.kalinichenko@knu.edu.ua

HIGHER EDUCATION IN TIMES OF WAR: VECTORS OF INNOVATIVE DEVELOPMENT

Higher education is a key sphere that fosters resilience and ensures economic growth in the country. As Ukrainian higher education continued to evolve, the challenge of implementing modern innovative approaches and technologies in the educational process has become more prominent. Innovative activities have become perhaps the most critical area of higher education institutions' activities, as they enable the system to adapt absolutely to external factors. The aim of this article is to determine the features of innovative activities in higher education institutions in the context of Russia's military aggression and approaches to ensure its effectiveness. The following general scientific methods were used in the research: theoretical generalization, grouping, and systematization; analysis and synthesis; scientific abstraction; statistical method of data collection and analysis; graphical; induction and deduction. The article has provided an overview of higher education functioning in the conditions of war state, identified key threats, and assessed the impact of innovative activities in overcoming them. Approaches to ensuring the effectiveness of innovative activities in higher education institutions during the military aggression were proposed, and the key directions of their implementation have been identified and characterized.

КАЛІНІЧЕНКО Олег,
магістр, аспірант кафедри менеджменту
Державного торговельно-економічного
університету
вул. Кіото, 19, м. Київ, 02156, Україна

ORCID: 0000-0002-3716-3706
o.kalinichenko@knu.edu.ua

ВИЩА ОСВІТА В УМОВАХ ВІЙНИ: НАПРЯМИ ІННОВАЦІЙНОГО РОЗВИТКУ

Вища освіта – ключова сфера, яка формує стійкість та забезпечує економічне зростання країни. Що далі розвивалась українська вища освіта, тим яскравішою поставала проблема впровадження сучасних інноваційних підходів та технологій в освітній процес. А інноваційна діяльність стала чи не найважливішою сферою діяльності закладів вищої освіти, адже саме вона дає змогу досягнути максимальної адаптивності системи до зовнішніх факторів. Мета статті полягає у визначенні особливостей інноваційної діяльності закладів вищої освіти в умовах воєнної агресії РФ та підходів до забезпечення її ефективності. В рамках дослідження використано такі загальнонаукові методи: теоретичне узагальнення, групування та систематизація; аналізу та синтезу; наукового абстрагування; статистичний метод збору й аналізу інформації; графічний; індукції та дедукції. Надано характеристику функціонування сфери вищої освіти в умовах воєнного стану, ідентифіковано основні загрози та визначено вплив інноваційної діяльності на їх подолання. Запропоновано підходи до забезпечення ефективності інноваційної діяльності закладів вищої освіти в умовах воєнної агресії РФ, визначено та охарактеризовано ключові напрями їх реалізації.



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Keywords: innovative activities, higher education institution, higher education, digital transformation, military aggression, martial law.

Ключові слова: інноваційна діяльність, заклад вищої освіти, вища освіта, цифрова трансформація, воєнна агресія, воєнний стан.

JEL Classification: I 20, O 31, O 32.

Introduction

Higher education (HE) is a key sector that builds sustainability and ensures economic growth. It is here that professional staff is trained and research is carried out, which activates the innovation process. This sphere shapes the future of Ukraine, influences its social and economic processes, and at the same time requires constant development and modernization to meet the requirements of the modern world and respond effectively to changes.

The transformation of HE in Ukraine is a phenomenon that has been going on with varying intensity since 1991, but over the past decade, a number of events have taken place that have become decisive and paved the way for further development of the sector, namely: the adoption of the new Law of Ukraine "On Higher Education" (2014), granting greater autonomy to higher education institutions (HEIs), the global COVID-19 pandemic, and the outbreak of a full-scale war. All these factors made adjustments to the genesis and conceptual framework for the further development of education.

The further the Ukrainian higher education system developed, the more vividly the problem of introducing modern innovative approaches and technologies into the educational process became. And innovation has become one of the most important areas of HEI activity, as it allows for maximum adaptability of the system to external factors.

In general, Ukrainian legislation interprets innovation activity as "aimed at the use and commercialization of research and development results and leading to the launch of new competitive goods and services" (Law of Ukraine "On Innovation Activity", 2002). In the scientific literature, innovation activity is defined as "all scientific, technological, organizational, financial and commercial activities that actually lead to innovation or are conceived for this purpose" (Mazur, Sulima, 2020).

The issue of innovation activities of higher education institutions is quite popular among scientists and is actively studied by domestic and foreign authors. For example, Boltyanska N. and Boltyansky O. (2020) in their work characterize an innovative university and define its role in Ukraine's integration into the European educational and scientific space. In turn, the team of scientists Prokopova O., Lyaska O. and Holinei V. (2023) analyze in detail the innovative component of higher education and propose a set of innovative approaches to the functioning of higher education institutions.

Among the foreign scholars dealing with similar issues, we can highlight the work of Ocampo, L., Aro, J.L. and others (2022), in which they study the factors that influence the productivity of research and innovation potential of higher education institutions and identify the key ones based on matrix analysis. In addition, Li, Chen, and Alrasheedi (2023) studied collaborative innovation systems in educational institutions, which are created by integrating numerous elements in a certain order.

At the same time, the specific issue of innovative development of higher education institutions in wartime remains underdeveloped, and most publications are presentations at forums, conferences, etc. One of the few scientific articles that examine this issue is the work of Horash K. (2023), in which the author characterized the innovations of modernization and transformation in HEIs and justified the feasibility of their application. In addition, it was determined that innovation is a priority area for ensuring the competitiveness of the institution in the postwar period. Given the lack of sufficient scientific publications on this issue and its relevance, it requires more active scientific discourse and new developments.

The aim of the article is to determine the peculiarities of the innovative activity of higher education institutions in the context of the military aggression of the Russian Federation and the directions for improving its efficiency.

The following general scientific methods were used in the study such as: theoretical generalization, grouping and systematization; analysis and synthesis, to form directions for ensuring the effectiveness of innovation activities of higher education institutions; scientific abstraction, to determine the key measures for implementing the proposed directions; statistical method of collecting and analyzing information, to study the performance indicators of certain aspects of innovation activities of higher education institutions, graphical method, to visualize the trends and dynamics of the analyzed indicators.

In the article it was proposed a hypothesis about the possibility of increasing the effectiveness of innovative activities of institutions in the context of military aggression of the Russian Federation through comprehensive digitalization of the educational process and administration, while strengthening international cooperation and intensifying research work, which is focused on the post-war reconstruction of the country and integration into the EU.

The information base of the research was based on the scientific works of Ukrainian and foreign scholars, analytical materials of Ukrainian and international organizations and institutions, open access electronic databases, etc.

The main part of the article consists of two sections. The first section describes the functioning of the higher education sector under martial law, identifies the main threats and determines the impact of innovation on overcoming them. The second section proposes directions for improving the

efficiency of innovation activities of higher education institutions in the context of military aggression of the Russian Federation, identifies and characterizes the key measures for their implementation.

1. Functioning of higher education in the conditions of war

The military invasion of Russia in February 2022 shifted the focus in all areas of the country's economy and the lives of its citizens. As of June 2023, according to a study by the Kyiv School of Economics, the amount of direct damage caused to the Ukrainian economy amounted to USD 150.5 billion, while indirect losses (loss of income in various sectors during the war and in the future) reached USD 265.6 billion. The country's education sector lost USD 9.7 billion and USD 2.1 billion, respectively (Kyiv School of Economics, 2023). However, despite this, with the help of international partners, the Ukrainian economy continues to struggle and, according to the World Bank, in 2023, it reached GDP growth of 3.5%, and in 2024 this figure will be 4% (World Bank, 2023).

Higher education in the context of military aggression in Russia has faced new challenges and problems, namely

- destruction of infrastructure as a result of hostilities and missile attacks;
- the outflow of intellectual resources abroad, some of which have returned and some have remained in other countries;
- disruption of partnerships between educational institutions, businesses, and research institutions due to the occupation of certain parts of the country;
- energy crisis caused by massive rocket attacks on the country's critical infrastructure;
- lack of opportunities for full-time education due to the threat to the life and health of participants in the educational process;
- financial crisis caused by the conversion of the economy to martial law and the allocation of state funding to the defense sector.

Each of the above challenges had a significant impact on the functioning of higher education institutions under martial law and required strategic and operational solutions. At the same time, at the time of the outbreak of full-scale war, Ukrainian HEIs were already in the process of profound transformation caused by the global trend toward digitalization and the effects of the COVID-19 pandemic. Most higher education institutions were able to set up their work remotely, and this became a kind of "airbag" during the first months of the war and the energy terror in the winter of 2023.

At present, higher education institutions are operating in experimental conditions, as it is difficult to predict what will happen in the near future. At the same time, they face a number of priorities, namely

- ensuring safety conditions for staff and applicants;
- filling the contingent of applicants;

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- support for the human and intellectual potential of the institution;
- rethinking the areas of training taking into account changes in priority sectors of the economy;
- development and updating of the institution's development strategies taking into account the wartime and post-war periods, etc.

Despite all the negative and destructive factors caused by the aggression of the Russian Federation, Ukrainian higher education institutions must continue their transformation in order to achieve European standards of higher education and full integration into the European educational area. A positive achievement is that in 2023, one of the world's most famous university rankings, the Times Higher Education World University Rankings (THE WUR), published annually by the British magazine Times Higher Education, included 14 Ukrainian PDJs for the first time (*Figure 1*), which is 4 more than in 2021 and 2022. The increase in the presence of Ukrainian institutions in this ranking is due to the existing positive trends in higher education, despite the negative impact of the war, such as digitalization of education, intensification of research activities, strengthening of international cooperation, etc.

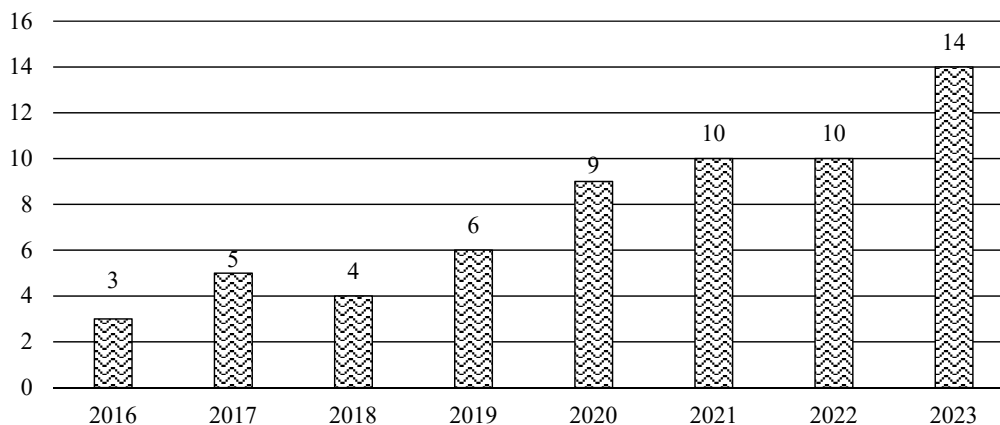


Figure 1. Presence of Ukrainian higher education institutions in the Times Higher Education World University Rankings for 2016–2023

Source: Times Higher Education, 2023a.

The Times Higher Education World University Rankings methodology is based on five main criteria:

- educational environment (weight of 29.5%): assesses the quality of education and the educational environment, including the reputational capital of the educational process, the ratio of teachers to students, the percentage of graduates with doctoral degrees, and the financial condition of the institution;
- research environment (weight of the criterion – 29%): takes into account the reputational capital in the field of research, income from research activities and their productivity;

- research quality (weight of the criterion – 30%): includes the level of citation, quality of research results and their impact on the economy;
- international activities (weight of the criterion – 7.5%): assesses the global integration of the university through the share of international students and faculty, as well as international cooperation;
- industrial impact (weight of the criterion – 4%): measures the university's interaction with industry, including commercialization revenues and the number of patents (6). These criteria allow us to evaluate universities on various aspects of their activities, from the quality of education to research capacity and international cooperation (Times Higher Education, 2023b).

Having analyzed the above ranking methodology, we can see that each criterion is directly related to the innovation activities of the HEI, because in the modern world, universities are the main providers of innovation through educational and research activities. Thus, institutions engaged in advanced research and development of new technologies actively cooperate with the private sector, attracting investment in research and development, participate in international grant programs and research projects, introduce innovative approaches to the educational process, have more opportunities for development (Marmaza, 2019) and, accordingly, better results in international ranking assessment. What will ensure the further development of higher education and increase the presence of Ukrainian higher education institutions in international rankings? The answer is obvious to increase innovation and further digital transformation of institutions.

2. Key areas for improving the efficiency of innovation activities

Currently, Ukrainian HEIs are in an extremely volatile environment. The defining aspect of the functioning of higher education institutions is their innovativeness. This is due not only to the global movement towards Industry X.0 (Kraus, Kraus & Stepa, 2021), but also to the need to adapt quickly to changes, which is possible through the introduction of innovative technologies and methods. In order to ensure maximum sustainability in such conditions, higher education institutions should implement a set of measures.

Comprehensive digitalization of the educational process and administration. Digital platforms used for distance learning are especially important in wartime. Students and teachers can continue the educational process regardless of their physical location. In turn, digital educational platforms can easily adapt to changes in curricula, teaching methods, and assessment, which allows for a quick response to the demands of time and the economy. The digitalization of administrative processes can simplify university management, optimize communication between structural units, and reduce the time spent on bureaucratic procedures;

Strengthening international cooperation. International partners can provide financial, technical, and educational support to Ukrainian higher education institutions to help them continue their educational activities

during the war. Such cooperation can provide access to advanced online learning platforms and research resources, which is especially important in wartime, and will play a key role in the post-war reconstruction and modernization of the infrastructure of higher education institutions;

Intensification of research activities. Active research and development activities can attract funding from public, private and international sources, especially in areas that are important for solving contemporary problems, including those arising from the war, and lead to the development of new technologies and innovations in these areas. In addition, the integration of research into the educational process ensures the relevance and practical significance of education, and students have the opportunity to engage in real research, which improves its quality.

2.1. Comprehensive digitalization of the educational process and administration

As part of the implementation of the direction "Comprehensive digitalization of the educational process and administration", the HEI should ensure systematic work on the formation and development of information and communication networks and the integration of various technological tools (*Figure 2*).

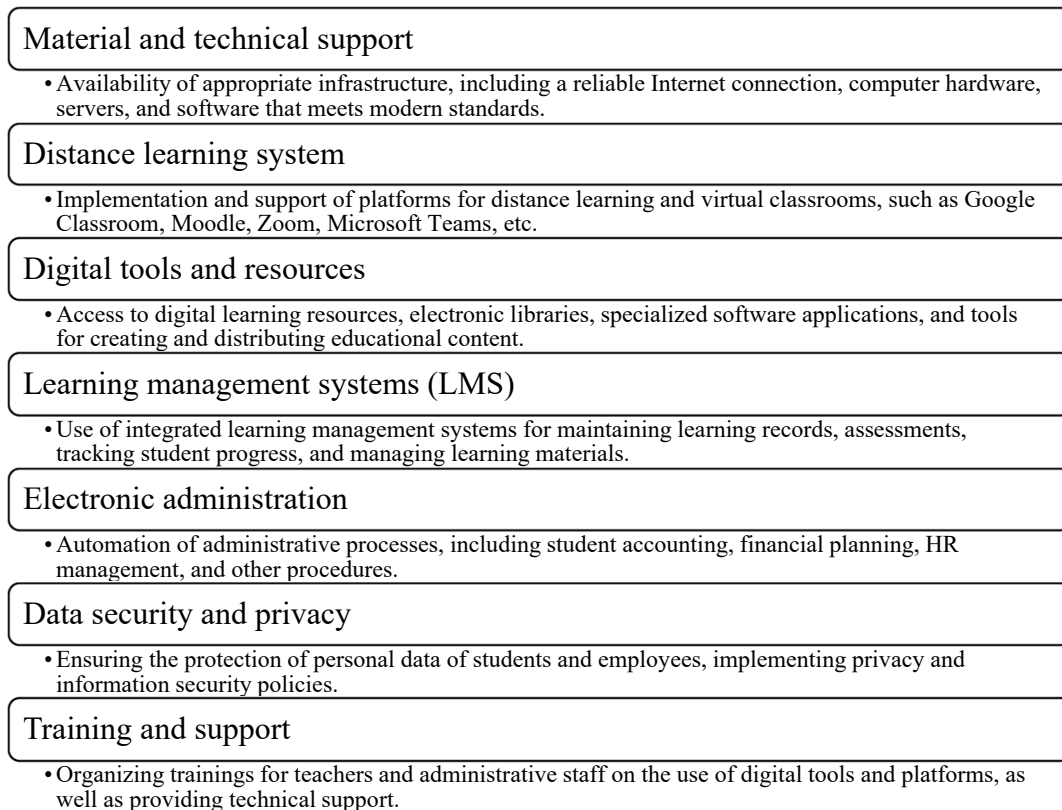


Figure 2. Components of comprehensive digitalization of the educational process and administration of higher education institutions

Source: author's development.

It is clear that the implementation of modern technological solutions in the educational process may require significant financial resources. This is especially true when it comes to updating material and technological support, and given the realities of today, despite the declared financial autonomy of higher education institutions, there are significant barriers in procurement processes, which have only intensified with the economic crisis caused by the full-scale invasion of Russia.

On the other hand, such financial investments have a significant impact on improving the quality of education in the institution and create additional advantages for it in the market of educational services (Rapanta, Botturi, Goodyear, 2020). In addition, the introduction of innovative technologies in the educational process will allow higher education institutions to move to a qualitatively new level, creating a new educational model that, unlike the traditional one, will allow solving a much wider range of tasks and achieving new results (Escorcia Guzman, Zuluaga-Ortiz, Barrios-Miranda & Delahoz-Dominguez, 2022).

International grant programs and projects that are actively working in the field of digital transformation of educational spaces and provide financial and advisory support for transformations can be an effective mechanism in the face of significant limitations in their own financial resources.

2.2. Strengthening international cooperation

Strengthening international cooperation is extremely important for ensuring the innovation activities of higher education institutions in the context of military aggression by the Russian Federation. International partners can provide the necessary support and resources, such as funding, knowledge exchange, access to scientific equipment and technologies, etc.

Over the last decade, the trend of creating university alliances, associations of higher education institutions, has been actively implemented in the world. International university alliances consist of different countries based on active international cooperation and unification of research and educational activities. This form of international cooperation allows achieving leadership positions by attracting foreign students and researchers, joint projects, and international educational programs (Artemov, 2021). Such alliances can be formed on the basis of different organizational and legal forms.

An example of such integration is The European University Association (EUA), which unites more than 850 higher education institutions from 49 European countries. The members of the association exchange best practices participate in joint projects and events to strengthen international cooperation and develop the European Education Area (European University Association, 2023). Some Ukrainian HEIs are also members of this international association at different levels of membership and receive

additional opportunities to establish international cooperation.

While international university alliances are more of a long-term game, international grant programs and projects are more effective in terms of the speed of results. In the HE field, one of the most well-known is the Erasmus+ grant program. It has a wide range of areas from academic mobility to infrastructure projects to modernize the educational environment. For example, during 2015–2022, in the KA2: Capacity Building in the Field of Higher Education, Ukrainian grantees have implemented or are implementing more than 80 infrastructure projects worth more than €50 million (National Erasmus+ Network, 2023). Given the intensification of international partners with the beginning of the full-scale invasion of Russia and the priority of the Ukrainian economy's recovery, new support and recovery grant programs are emerging that can be used by HEIs on a project basis.

In general, strengthening the international activities of higher education institutions in the context of Russia's military aggression in any form (through grants, international mobility of students and teachers, joint research projects) allows the institution to attract more financial, intellectual or information resources, strengthen innovation, ensure effective development and improve the quality of education.

2.3. Intensification of research and development activities

The intensification of research activities of higher education institutions is a process that has a number of components, as shown in *Figure 3*.



Figure 3. Components of intensification of research activities of higher education institutions

Source: author's development.

The interdisciplinary approach is quite actively used in Europe, as it allows combining the best practices of several different scientific fields and creating a new innovative product. For example, the European Commission’s document "Commission Communication on a European strategy for universities" (2022) defines the interdisciplinary approach as one of the key ones in the development of higher education institutions within the European Education Area. The modern world requires modern solutions. Many global challenges (such as climate change, health, economic development, defense technologies) require an integrated approach, and interdisciplinary allows for more effective development of comprehensive solutions to these challenges.

Increased publication activity stimulates research activities through the exchange of knowledge and ideas in the scientific community. In addition, publications in journals indexed by international scientometric databases provide visibility of research at the global level, open up new opportunities for international cooperation, and have a positive impact on the presence of higher education institutions in international rankings. If we analyze the publication activity of Ukrainian scientific and educational institutions since 2016 (Figure 4), we can see a significant increase in the number of publications (by 34 %) in 2019. After that, there was a slowdown in publication activity, but the trend remained positive until 2022. With the beginning of the full-scale aggression of the Russian Federation, the publication activity of Ukrainian scientists fell sharply in 2022 (by 10.3 %). At the beginning of 2022, the indicators of publication activity do not reflect the full picture, as indexing of individual sources may still be ongoing, although the downward trend in performance is evident.

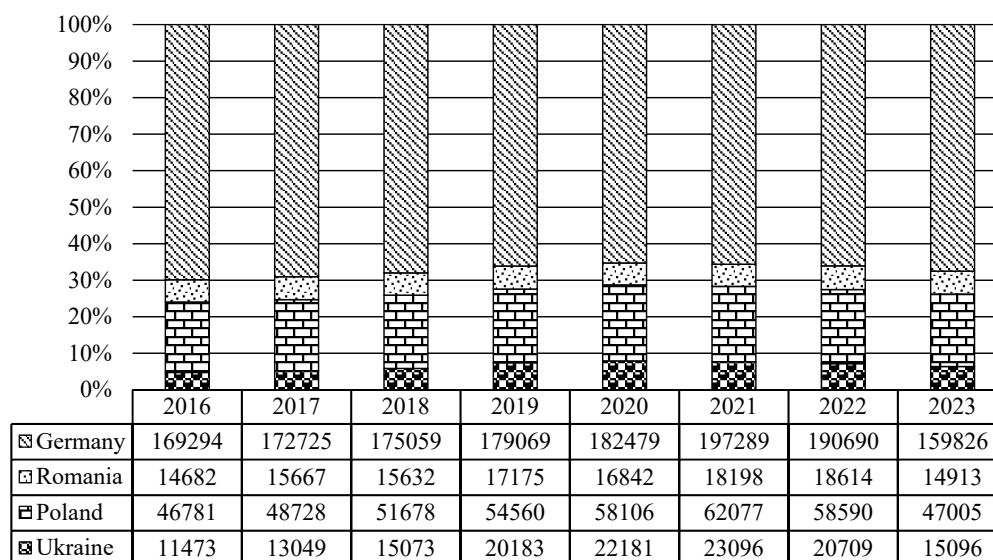


Figure 4. Publication activity in Scopus of scientific and educational institutions in 2016–2023

Source: author’s development based on (Scopus, n. d.).

HIGHER EDUCATION

Having analyzed the publication activity of Ukrainian institutions and a number of European countries (Poland, Romania, and Germany), we can see that we are currently on a par with Romanian scientific and educational institutions, while the results of Poland are almost three times higher. This indicates that there is a significant potential for growth and development in the field of research and increased publication activity in Ukraine. It is important to consider this problem comprehensively and systematically, because the number and, most importantly, the quality of scientific publications depend on the level and scope of research and the availability of material and technical resources. Therefore, it is worth noting that increased publication activity is rather a consequence of effective research and development.

Patenting the results of research activities in higher education institutions contributes to the commercialization of an innovative product, which not only provides additional financial resources for universities but also stimulates the innovative development of the institution as a whole. Protection of intellectual property is an important aspect in the context of global competition. In addition, active patenting enhances the university's reputation globally, attracts talented researchers and students who want to work in an innovative environment where their intellectual property rights to inventions or ideas are fully protected. It also motivates researchers and students to engage in practice-oriented research, as they have a clear understanding of the potential commercial value of their work.

As for the patent activity of higher education institutions, according to the UANIPIO (SIS) Special Information System (SIS), there was a positive trend in the number of registered titles of protection for inventions and utility models in 2016–2019. But in 2019, there was a sharp drop (by 29.4 %), after which patent activity hit a "peak" with an annual decrease of more than 25 % (*Figure 5*).

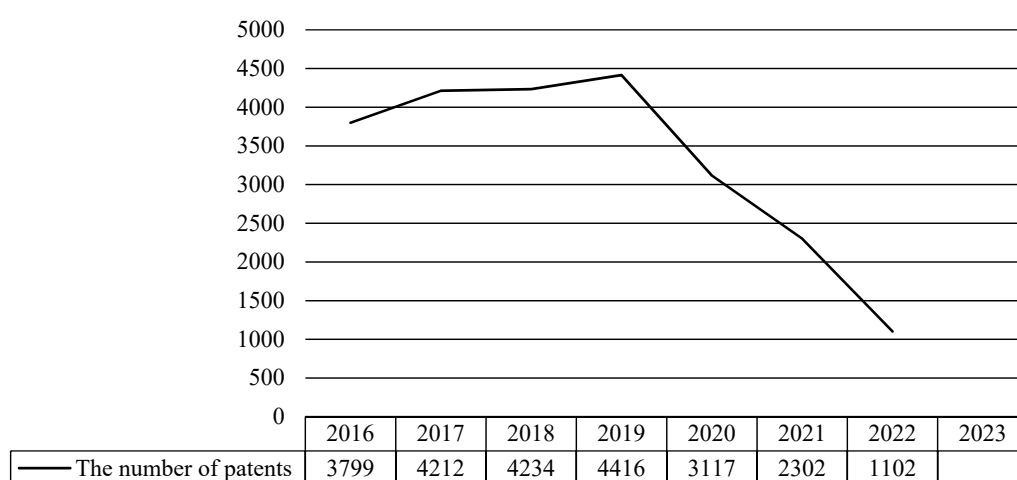


Figure 5. Patent activity of Ukrainian higher education institutions in 2016–2023

Data for 2023 are not available.

Source: author's own elaboration based on (UANIPIO (SIS), n. d.)

In general, the decline in patent activity in 2019 is a global trend caused by the COVID-19 pandemic, but according to a study by the World Intellectual Property Organization (WIPO), it amounted to only 7.2 % globally and was followed in 2020 by an increase in the number of registered titles of protection for inventions and utility models by 8.4 % (WIPO, 2023). At present, global patent activity continues to show positive dynamics, which indicates the need to search for problematic aspects in Ukrainian practice and develop effective approaches to improving the situation.

Intensification of partnership with the business sector in the context of the military aggression of the Russian Federation is another important step to intensify research work in higher education institutions. Such cooperation can provide additional financial and material resources, which is especially critical in times of limited budget funding. Partnerships with businesses allow universities to focus on applied research that meets real market needs, promoting the commercialization of scientific developments and innovations. In particular, such cooperation can contribute to the development of technologies and solutions that will help the country in wartime, for example, in the areas of cybersecurity, defense, medicine, agrotechnology, etc. This not only strengthens the country's defense capabilities, but also stimulates scientific and technological development, increasing the overall level of innovation and competitiveness of the national economy.

The development of research infrastructure in higher education institutions is almost crucial for intensifying research, as it provides researchers with access to modern equipment and technologies that are keys to conducting quality research. The presence of high-tech laboratories and research centers facilitates the performance of complex experiments and the development of innovations that can be used in wartime to develop defense systems, medical innovations, or other critical projects, among other things. Universities with a strong research infrastructure can effectively attract both national and international funding.

Conclusions

Russia's military aggression has shaken all sectors of the country's economy, including higher education. Against the backdrop of recovery from COVID-19, the war had a devastating effect on many aspects of the HEI's activities: staff outflow, destruction of infrastructure facilities, and disruption of partnerships. At the same time, digital transformation, which has only intensified in the post-COVID recovery, has helped to somewhat reduce the destructive impact of the first months of the war and the winter energy terror.

Innovation is becoming a key driver of HEI development in such a changing environment. It opens up additional opportunities for funding and creates prerequisites for improving the quality of education.

In the context of the military aggression of the Russian Federation and the instability of the external environment, the following areas of improving

the efficiency of innovation activities of higher education institutions are proposed: digitalization of the educational process and administration, strengthening of international cooperation, intensification of research activities.

Implementation of the proposed directions will allow the HEI not only to provide opportunities for effective functioning, but also to continue the qualitative transformation in order to achieve the necessary level of development to successfully join the European educational area as a leader, not an outsider. At the same time, the study of the specifics of the innovation activities of higher education institutions in the context of the military aggression of the Russian Federation and in the post-war period is still relevant and requires further scientific discourse. In the framework of future research, it is important to ensure that approaches and practical recommendations are relevant and adequate to the level of challenges that the higher education sector faces as hostilities continue. That is why constant scientific monitoring and analysis of specific development trends should update the conceptual approaches to the implementation of innovative activities of higher education institutions and the functioning of the higher education sector in general. And the results of this scientific discourse should become the basis for the formation or refinement of conceptual development strategies.

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