LUTSK NATIONAL TECHNICAL UNIVERSITY

ECONOMIC FORUM

Volume 15, No. 3, 2025

Year of foundation: 2011
Frequency: 4 issues per year

Lutsk
2025

ISSN 2308-8559
e-ISSN 2415-8224

Publisher:
Lutsk National Technical University

Year of foundation: 2011

Recommended for printing and distribution
via the Internet by the Academic Council
of Lutsk National Technical University

State registration:
Decision of the National Council of Television
and Radio Broadcasting of Ukraine No. 40 of 11.01.2024
Media identifier – R30-02529.

The scientific journal is included in category "B" of the List of scientific specialised publications of Ukraine, in which can be published the results of dissertations for obtaining the scientific degrees of doctor and candidate of sciences in specialties: 0311 – Economics; 0411 – Accounting and Taxation; 0412 – Finance, Banking, and Insurance; 0414 – Marketing and Advertising; 0413 – Management and Administration; 0416 – Wholesale and Retail Sales
(Order of the Ministry of Education and Science of Ukraine No. 627 dated 14.05.2020)

The journal is presented international scientometric databases, repositories and scientific systems: Vernadsky National Library of Ukraine, Dimensions, Ulrichsweb Global Serials Directory, University of Oslo Library, University of Hull Library, Polska Bibliografia Naukowa, OUCI (Open Ukrainian Citation Index), Sherpa/Romeo, EuroPub, Litmaps, J-Gate, EconStor, ERIH PLUS (European Reference Index for the Humanities)

Address for contacts:
Lutsk National Technical University
43018, 75 Lvivska Str., Lutsk, Ukraine
E-mail: info@e-forum.com.ua
https://e-forum.com.ua/en

ЛУЦЬКИЙ
НАЦІОНАЛЬНИЙ
ТЕХНІЧНИЙ
УНІВЕРСИТЕТ

ЕКОНОМІЧНИЙ ФОРУМ

Том 15, № 3, 2025

Заснований у 2011 році
Видається чотири рази на рік

Луцьк
2025

ISSN 2308-8559
e-ISSN 2415-8224

Видавець:
Луцький національний технічний університет

Рік заснування: 2011

Рекомендовано до друку та поширення
через мережу Інтернет Вченою радою
Луцького національного технічного університету

Державна реєстрація:
Рішення Національної ради України
з питань телебачення і радіомовлення № 40 від 11.01.2024
Ідентифікатор медіа – R30-02529.

Науковий журнал включено до категорії «Б» Переліку наукових фахових видань України,
у яких можуть публікуватися результати дисертаційних робіт на здобуття наукових ступенів
доктора та кандидата наук зі спеціальностей: 051 – Економіка; 071 – Облік і оподаткування;
072 – Фінанси, банківська справа та страхування; 073 – Менеджмент; 075 – Маркетинг;
076 – Підприємництво, торгівля та біржова діяльність; 292 – Міжнародні економічні відносини
(наказ Міністерства освіти і науки України № 627 від 14.05.2020 р.)

Журнал представлено у міжнародних наукометричних базах даних,
репозитаріях та пошукових системах: Національна бібліотека України імені В. І. Вернадського,
Dimensions, Ulrichsweb Global Serials Directory, University of Oslo Library,
University of Hull Library, Polska Bibliografia Naukowa, OUCI (Open Ukrainian Citation Index),
Sherpa/Romeo, EuroPub, Litmaps, J-Gate, EconStor,
ERIH PLUS (European Reference Index for the Humanities)

Контактна адреса:
Луцький національний технічний університет
43018, вул. Львівська, 75, м. Луцьк, Україна
E-mail: info@e-forum.com.ua
https://e-forum.com.ua/uk

ЕКОНОМІЧНИЙ ФОРУМ

Journal homepage: https://e-forum.com.ua/en

Том 15, № 3, 2025

Редакційна колегія

ECONOMIC FORUM

Journal homepage: https://e-forum.com.ua/en
Vol. 15, No. 3, 2025

Editorial Board

ЗМІСТ/ CONTENTS

ECONOMIC FORUM
Journal homepage: https://e-forum.com.ua/en
Vol. 15, No. 3, 2025, 8-17
Article's History: Received: 07.05.2025 Revised: 08.08.2025 Accepted: 08.09.2025

UDC 338.48:303.725(477) Doi: 10.62763/ef/3.2025.08

Development of tourist destinations in Ukraine during the war on the basis of glocalisation

Liudmyla Matviichuk*
Doctor of Economic Sciences, Professor
Lutsk National Technical University
43018, 75 Lvivska Str., Lutsk, Ukraine
https://orcid.org/0000-0003-1694-6178

Larysa Chepurda
Doctor of Economic Sciences, Professor
Cherkasy State Technological University
18006, 460 Shevchenko Blvd., Cherkasy, Ukraine
https://orcid.org/0000-0002-8941-9427

Tetiana Zubekhina
PhD in Pedagogical Sciences, Associate Professor
Lutsk National Technical University
43018, 75 Lvivska Str., Lutsk, Ukraine
https://orcid.org/0000-0001-9929-4405

Abstract. The relevance of the study was determined by the fact that, in the context of a full-scale war from 2022, the development of Ukraine's tourist destinations required the application of glocalisation principles that combined global trends of sustainable development and security with local resources, cultural identity, and community needs. The aim of the article was to justify conceptual approaches and practical directions for the development of Ukraine's tourist destinations during wartime based on glocalisation principles, taking into account security challenges, local specificities, internal tourism needs, and the potential for post-war recovery. A review of modern scholarly sources was conducted, addressing issues of innovative destination management, government support for the tourism industry, marketing strategies, and post-war recovery. A typology of tourist destinations was systematised according to levels of safety and operational suitability. The data on Ukraine's export and import of tourism services, their share in global indicators, as well as the dynamics of investments in the tourism sector and the level of safety of tourist destinations were analysed. It was revealed that Ukraine's share in global tourism service exports increased to 0.06% in 2023, while imports significantly exceeded exports (2.01% of the global indicator in 2022). Also, it was established the tourism sector suffers from underfunding in the state's investment policy, there were regional differences in the accessibility of tourist destinations. The article proposed glocalisation-based development directions for tourist destinations in Ukraine, including the creation of safe micro-destinations, support for local entrepreneurship, digital transformation of tourism products, internal tourism development, implementation of war and memorial tourism, and strategic planning for the revitalisation of temporarily inaccessible territories. The practical recommendations may serve as a foundation for shaping adaptive tourism development policies in Ukraine, improving destination management strategies, and incorporating the glocalisation approach into the decision-making processes of state authorities, local governments, and tourism businesses during the war and post-war recovery

Keywords: tourist territories; digitalisation; competitiveness; European integration; cultural tourism; sustainable development

Suggested Citation:
Matviichuk, L., Chepurda, L., & Zubekhina, T. (2025). Development of tourist destinations in Ukraine during the war on the basis of glocalisation. *Economic Forum*, 15(3), 8-17. doi: 10.62763/ef/3.2025.08.

*Corresponding author

Introduction

Russia's military aggression against Ukraine had transformed the operating conditions of tourist destinations, creating challenges for infrastructure, logistics, security, and public demand. The search for new models for managing the development of destinations had become important, in terms of internal stability and in the context of post-war recovery. One of the concepts that can ensure the sustainable development of tourist destinations was glocalisation – an approach that synthesised global trends in sustainable development, security, digitalisation with local cultural, natural and social features of territories. In the conditions of war, glocalisation opened up new opportunities for the formation of safe microdestinations, the activation of local entrepreneurship, the development of digital tourism, and reorientation to the internal consumer. So, it was relevant to study the directions of development of Ukrainian tourist destinations through the prism of the glocalisation approach in the context of russian-Ukrainian war from 2022.

In the work of K. Tomej & I. Bilynets (2024) attention was paid to large-scale transformations of tourism in Ukraine, in particular through the prism of the regenerative approach and the concept of "living systems". The authors proved that tourism in wartime conditions had the ability to adapt flexibly, form new business models and use local resources to restore economic activity. Scientists emphasised the need for synergy between global trends in sustainable development and local cultural and social characteristics. J. Tan & M. Cheng (2024) explored the role of media in shaping narratives about war and their impact on tourism perceptions. The authors analysed how information flows and media coverage of the war between Ukraine and russia affect the international image of the country and the trust of tourists. The article highlighted that an effective communication strategy can reduce the negative impact of the crisis image and contribute to the restoration of tourist flows to safe regions of Ukraine.

T. Napierała & A. Pawlicz (2025) focused on analysing the impact of the war on the hotel sector of Poland, Romania and Slovakia. The authors proved that the military conflict created a new dynamic of demand, led to a shift in tourist flows and the formation of new tourist routes. This research was valuable in the context of understanding the mechanisms of redistribution of tourist resources and the formation of competitive advantages for tourist destinations that remained safe. Scientist V. Antonenko (2025) analysed the intangible cultural heritage of Ukraine as a basis for the formation of an ethnocultural brand of a tourist destination. It was proven that such elements as traditional crafts, folklore, rituals, gastronomy and local dialects served as powerful tools for creating competitive advantages in the global tourism market. By integrating intangible cultural heritage into the destination development strategy, regions can increase their uniqueness and attractiveness, offering visitors an authentic experience that cannot be replicated in other regions.

Researchers V. Yermachenko *et al.* (2023) substantiated effective management approaches to the economic, environmental and social development of sustainable tourism, as one of the directions of the restoration of territorial communities in the post-war period. Scientists O. Bordun *et al.* (2022) studied the economic losses of the tourism business during the war and offered tools to support tourism, in particular, through state intervention, fiscal easing and renewal of tourist infrastructure. The authors analysed the financial losses of enterprises in the industry caused by hostilities, a decrease in demand and restrictions on the mobility of the population. Researchers emphasised the importance of introducing targeted compensation programmes, creating preferential lending conditions for tourism small and medium-sized businesses, as well as the need for prompt restoration of damaged tourist infrastructure facilities in safe regions.

V. Buhas & E. Kovalchuk (2024) focused on the integration processes of Ukraine into the world market of tourist services, pointing to the need to promote the national tourism product through digital platforms and interstate initiatives. The authors emphasised that effective participation in the global tourism environment was possible only if it adapted to the new requirements of the digital age, in particular through the creation of competitive online content, integration into international travel marketplaces and online booking tools. Researchers considered glocalisation as a strategic approach that allows combining global technologies and standards with unique local resources, traditions and cultural heritage of Ukraine, contributing to integration into the world tourism space. I. Tsurkan & R. Kryvenkova (2023) outlined the priorities of the tourism industry during the war, highlighting the importance of regional planning and security management. Scientists focused on the need to create adaptive strategies for tourism development, taking into account the differentiated security situation in different regions of Ukraine. The authors emphasised the need for continuous risk monitoring, the integration of early warning systems, the development of specialised routes that provided safe conditions for the movement of tourists.

The work of T. Tymoshenko *et al.* (2023) highlighted the experience of Sweden in involving stakeholders in the project activities of destination management organisations, focusing on the importance of intersectoral cooperation, transparency of processes and participation of local communities in decision-making. The authors explored the Scandinavian model of multi-level management, where tourist destinations were developed through strategic partnerships between municipalities, businesses, cultural institutions and public organisations. Researchers substantiated the feasibility of introducing elements of the Swedish model for the formation

of glocalised approaches to the management of Ukrainian destinations, taking into account both global management standards and local characteristics, resources and social structure of regions. The purpose of the study was to shape a scientifically grounded vision for the development of Ukraine's tourist destinations in wartime through the application of glocalisation principles, which made it possible to combine global trends of sustainability and security with local resources, cultural identity, and the needs of internal tourism.

Materials and Methods

The study of the directions of development of tourist destinations in Ukraine during the war from 2022 on the basis of glocalisation was based on the study of a wide range of scientific sources, analytical reports, official statistics, as well as strategic documents of state and international institutions that regulated tourism activities and contribute to its adaptation to crisis conditions. The method of systematic analysis made it possible to investigate the structural relationships between the level of security, the accessibility of tourist destinations and the formation of management decisions. A classification and analytical approach have been applied to divide tourist destinations in Ukraine into three types on the basis of accessibility and infrastructural suitability, which became the basis for further recommendations. To determine the practical guidelines for the development of destinations, a glocalisation approach was used, combining the methods of territorial branding, destination management and institutional development.

The analytical part of the study was based on the use of data from: State Agency for Tourism Development (n.d.), which made it possible to determine Ukraine's position in the global tourism services market; State Statistics Service of Ukraine (n.d.) for analysing the dynamics of tourism development; as well as reports of the World Tourism Organization for identifying the place of internal tourism in the investment processes of Ukraine and the world (Tourism Statistics Database, n.d.). In the empirical part of the study, a graphical interpretation of the dynamics of investments in the tourism sector of Ukraine and its share in the global investment environment was carried out, which made it possible to identify the structural marginalisation of the tourism industry at the level of state policy. The security map of tourist regions was also analysed, taking into account the degree of risk for internal tourism (Yermachenko *et al.*, 2023). The methodological basis of the study was supplemented by general scientific methods – analysis, synthesis, generalisation and abstraction. A scenario approach was also used to model strategic directions for the development of tourist destinations in conditions of uncertainty, which made it possible to form realistic and flexible management guidelines for the development of the tourism sector in Ukraine in wartime and at the stage of post-war reconstruction.

Results and Discussion

Tourist destinations, as attractive territories, act as centers of economic activity, cultural exchange and social interaction, forming unique experiences for visitors and stimulating the development of local communities. Their successful functioning depended on a holistic combination of natural, cultural, historical potential with high-quality infrastructure, services, a secure environment and effective management (Barvinok, 2022). In the context of modern challenges, in particular, the military threat, there was a growing need for adaptive destination management models that can ensure their viability, maintain competitive advantages and promote sustainable development even in conditions of instability. In the modern conditions of global transformations and challenges, caused in particular by russia's war against Ukraine, managing the development of tourist destinations required new approaches that simultaneously ensured adaptation to global trends and preservation of local identity. L. Matviichuk *et al.* (2025) noted that one of these conceptual approaches was glocalisation – the synergy of global and local vectors of development, which became an important tool for the formation of sustainable, attractive and competitive tourist territories. The application of the principle of glocalisation in tourism was especially relevant in the context of European integration, as it allowed harmonising European standards with the unique resources and cultural heritage of the regions.

The term "glocalisation" first appeared in the 1980s in Japan as a combination of the words "globalisation" and "localisation", and was used in the corporate environment to describe the adaptation of global goods to local markets. This term was introduced into scientific circulation by sociologist R. Robertson (1995), who in the 1990s proposed it to explain the process of interaction between the global and the local, where global processes acquired a specific local colour, in particular, in the field of managing the development of territories, including tourist destinations of the territory. Glocalisation was interpreted as a strategy that combined global trends of sustainable development, digitalisation, security, taking into account unique features, cultural heritage, resource potential and social practices of a specific country. This approach allowed to effectively introduce innovations, form an attractive tourist image and ensure adaptability in crisis conditions, in particular, in wartime. The application of the principle of glocalisation in tourism management made it possible to adapt global trends to specific territorial conditions, increase the competitiveness of destinations, activate local communities and preserve cultural heritage. An explanation of the consequence of applying the principle of glocalisation in the management of the development of tourist destinations was presented in Figure 1.

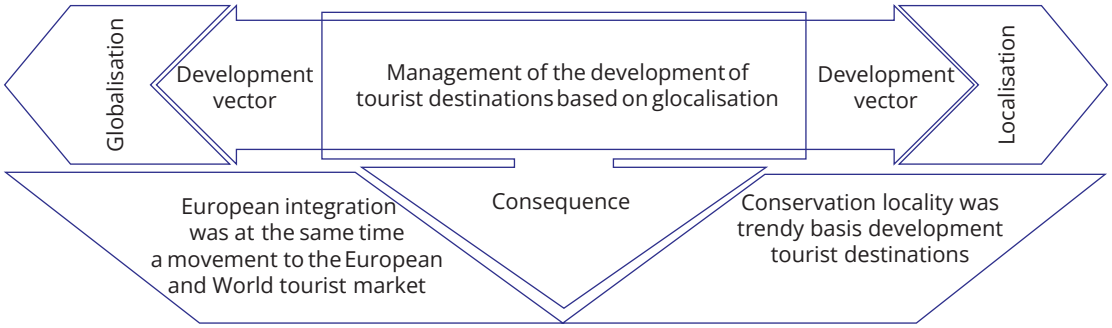

Figure 1. *Consequence of applying the principle of glocalisation in the management of the development of tourist destinations*

Source: *developed by the authors*

Management of the development of tourist destinations based on the principle of glocalisation involved a combination of two complementary vectors of development – globalisation and localisation. I. Vakhovych *et al.* (2021) emphasised that globalisation determined the vector of movement towards integration into the world and European tourist space, which involved the implementation of international standards, access to new markets, improving the quality of services and attracting a wider range of tourists. In this context, European integration was an important factor contributing to the modernisation of tourism infrastructure, digitalisation of services and the development of cross-border cooperation. On the other hand, localisation in destination management acted as a strategic direction for preserving local identity, cultural traditions, natural uniqueness and authentic tourist experience. In the context of modern challenges and turbulence, the preservation of locality was becoming a trend in the sustainable development of tourist areas, forming their unique competitive advantage. Effective management of tourist destinations in the conditions of war, European integration and globalisation pressure was possible only if there was a synergistic combination of global opportunities with local resources, which was the essence of the glocalisation approach. The global tourism market was constantly changing under the influence of new challenges, including the COVID-19 pandemic, increased military conflicts, geopolitical instability, and russia's full-scale war against Ukraine. So, it was analysed the position of Ukraine in the global tourism market, to assess the dynamics of exports and imports of tourist services (Table 1), as well as to identify trends that determined the prospects for further development of tourist destinations in Ukraine.

Table 1. *Ukraine's position in the world market of tourist services*

		2018	2019	2020	2021	2022	2023
Export	The whole world, USD	146,608,239.8	151,295,809.8	584,905,319	645,141,069	109,230,535.0	138,223,625
	Ukraine, USD	298,855	334,953	263,446	343,483	774,000	857,000
	Share of Ukraine, %	0.02	0.02	0.05	0.05	0.07	0.06
Import	The whole world, USD	141,315,019.0	142,185,826.4	596,459,327	645,030,497	984,162,285	129,859,144.8
	Ukraine, USD	990,393	1,299,288	702,922	1,598,762	197,360.00	175,360.00
	Share of Ukraine, %	0.07	0.09	0.12	0.25	2.01	1.35

Source: *based on State Agency for Tourism Development (n.d.), Tourism Statistics Database (n.d.), State Statistics Service of Ukraine (n.d.)*

The export of tourist services from Ukraine (i.e. the provision of services to foreign tourists) during 2018-2023 ranged from USD 298,855 million to USD 857 million. In 2020, there was a significant drop due to the COVID-19 pandemic, but in 2022-2023 there was a gradual recovery. Ukraine's share in the world export of tourist services increased from 0.02% in 2018-2019 to 0.06% in 2023, which indicated a moderate, but steady growth of its role in the global tourism market. Imports of tourist services were significantly higher than exports. Import figures peaked in 2022 at USD 197,360.00 million. At the same time, Ukraine's share in world imports of tourist services increased from 0.07% in 2018 to 2.01% in 2022, which may be due to the large-scale departure of Ukrainians abroad as a result of the full-scale war, probably due to the adaptation and stabilisation of flows. The general trend of Ukraine's positions in the world market of tourist services indicated a gradual increase in the importance of Ukraine as a consumer of tourist services in the global market, while its export potential remained limited. Such a structure indicated the need to stimulate inbound tourism and the development of internal tourist destinations.

The investment attractiveness of the tourism sector was the main indicator of its ability to develop tourist destinations, modernised and integrated into global economic processes. In the modern conditions of

structural transformation of the Ukrainian economy, caused by both internal reforms and external challenges, it was especially important to study the dynamics of investments in tourism as one of the promising areas. Analysis of the share of tourism in capital investments in Ukraine and the country's place in the global investment environment allowed to assess the real level of attention paid to this sector, as well as identify potential areas for its activation. In this context, it was important to trace investment trends in 2010-2023, in particular during the crisis, pandemic and war, which significantly affected tourism activity. The place of internal tourism in the investment processes of Ukraine and the world in dynamics for 2010-2023 was shown in Figure 2.

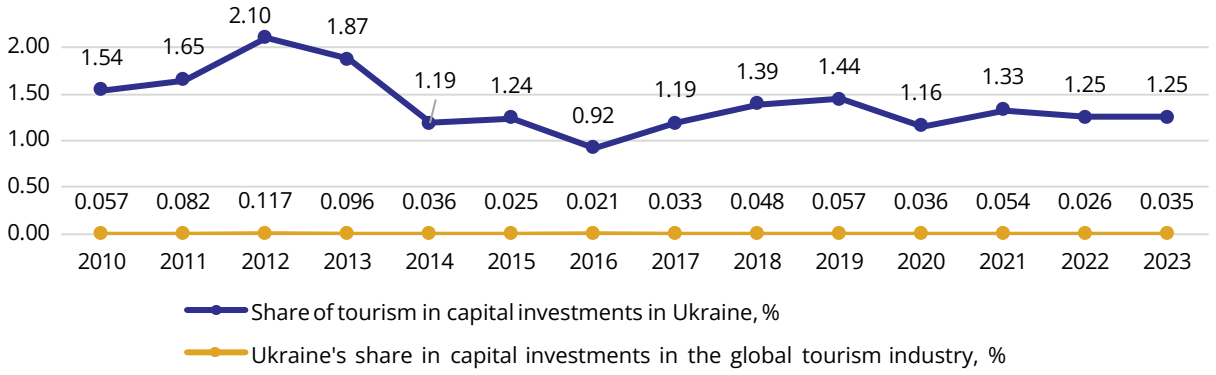

Figure 2. *The place of internal tourism in investment processes Ukraine and the world in dynamics for 2010-2023*
Source: *SATD publishes large-scale tourism research (n.d.)*

In the dynamics of 2010-2023, there was an unstable, but generally low share of tourism in the total volume of capital investments in Ukraine. This indicator reached its peak value in 2012 – 2.10%, which was associated with the country's preparation for international events, in particular the Euro 2012 championship. However, since 2013, there had been a sharp decline in investment processes, in 2015 the studied indicator was 0.92%, which was the minimum value for the entire analysed period. Since 2016, the share of tourism in capital investment had fluctuated between 1.16-1.44%, showing a weak trend towards recovery, but without significant changes. In general, in 2020-2023 (in the context of the COVID-19 pandemic and the full-scale war in Ukraine), the indicator ranged from 1.16% in 2020 to 1.25% in 2023, which indicated a somewhat slowed down development of the tourism sector due to the priority of other sectors of the economy. Ukraine's share in the global volume of investment in the tourism industry was consistently low in 2012, at 0.117%, and in 2016 – 0.021%. The highest value was observed in 2012 (0.117%), which again confirmed a one-time impulse of investment activity. Since 2015, this indicator had fluctuated between 0.021-0.057%, which indicated a negligible global impact of Ukraine on the investment landscape of the tourism industry. Thus, the analysis indicated the structural marginalisation of tourism in the general investment policy of the state, as well as the limited participation of Ukraine in global tourist investment flows, which indicated the need to revise the strategic priorities of tourism management with a focus on sustainable development and international integration.

Given the significant destruction of tourist infrastructure as a result of russia's armed aggression, in many regions of Ukraine there was a critical decrease in the functionality of tourist facilities. Many destinations have become temporarily inaccessible or do not meet the minimum safety and comfort requirements for receiving visitors. This situation necessitated a rethinking of the spatial organisation of tourism, shifting the emphasis in tourism development to safe areas, adapting existing resources to new conditions and intensifying investments in the restoration and modernisation of destinations, taking into account the principles of glocalisation and sustainable development. Taking into account the state of security in the regions of Ukraine, the scientific literature systematised urban tourist destinations on the basis of accessibility and suitability, in particular, 3 groups of them were defined: accessible and usable, accessible and conditionally usable, and inaccessible or unusable tourist destinations (Matviichuk *et al.*, 2025).

The first group included destinations located in relatively safe regions of Western and partially Central Ukraine, which have not suffered significant destruction and have proper infrastructure for receiving tourists. For example, Lutsk, Lviv, Uzhgorod, Ternopil, Ivano-Frankivsk, Chernivtsi actively function as tourist centers, maintaining cultural attractiveness and offering a wide range of services. The second group included cities that were formally safe, but had limited infrastructure capacity or need to be restored and adapted to new conditions. Such destinations included Kyiv, Odesa, Poltava, and others, where tourist activity was possible, but limited due to a decrease in the level of service, personnel shortage or psychological security barriers. The third group consisted of destinations that, due to hostilities, temporary occupation or mass destruction, were

inaccessible or completely unsuitable for tourist use. Such destinations included Mariupol, Severodonetsk, Kherson, Bakhmut, Berdyansk, as well as other cities in the Southern and Eastern regions. Tourism in these destinations in 2025 is impossible and will require a large-scale recovery after the end of hostilities. This approach was important for the formation of an adaptive tourism policy, in particular in terms of investment planning, regional branding, as well as the development of programmes for the recovery and promotion of internal tourism. In the context of the war, tourism in Ukraine has faced challenges of unprecedented scale – the destruction of infrastructure, reduced mobility of the population, the loss of part of the territories and the threat to security, which have significantly complicated the functioning of traditional destinations. However, tourism, as a multifunctional sphere, remained an important tool for economic support of regions, preservation of cultural heritage, improving the quality of life of communities and strengthening national identity. Rethinking models of tourism development management, in particular with the involvement of the principles of glocalisation, which combined global trends of sustainable development, security and innovation, taking into account the local potential and identity of territories presented in Table 2.

Table 2. *Directions for the development of tourist destinations in Ukraine on the basis of glocalisation*

Development direction	Characteristics
Formation of safe microdestinations	Development of tourism clusters in safe regions with local cultural and natural potential
Digitalisation of tourism products	Implementation of online tours, mobile applications for remote travel experience
Reorientation to local markets	Development of short-term travel for local residents and internally displaced persons
Support for local entrepreneurship	Integration of small businesses and manufacturers in the creation of an authentic tourist product
Branding territories through sustainability and solidarity	Shaping the image of destinations through narratives of resistance, volunteering, and historical memory
Development of humanitarian and memorial tourism	Creation of routes and locations related to war, national identity and memory
Preparing for the restoration of inaccessible destinations	Revitalisation planning, potential assessment, investment and staffing
International integration through local initiatives	Cooperation with international partners, grant support, promotion of Ukrainian destinations

Source: *developed by the authors*

Based on the analysis of the modern state of the tourism industry, a number of main directions for the development of tourist destinations in Ukraine in the conditions of war, corresponding to the glocalisation approach, have been identified. First of all, it was the formation of safe micro-destinations – local tourist centers in regions with a relatively stable situation, which can quickly mobilise the available resources for the reception of internal tourists, digitalisation of tourism products, which provided access to tourist experience without physical presence (through online tours, digital platforms). An important direction was also the reorientation to local markets – the development of short-term holidays for internally displaced persons and the local population.

One of the tools for activating tourist destinations was the support of local entrepreneurship – the integration of small businesses, artisans and manufacturers into the tourism ecosystem, which contributed to the creation of an authentic product and the strengthening of the community economy, and humanitarian and memorial tourism, which became an instrument of national identification and historical consciousness. It was necessary to prepare in advance for the restoration of temporarily inaccessible destinations, through strategic planning, infrastructure revitalisation, personnel training and attracting investments. One of the important directions for the development of tourist destinations was international integration through local initiatives – attracting foreign experience, supporting partnerships and communication about Ukraine's destinations in the world. The totality of the proposed directions created the basis for a flexible, adaptive and innovative policy for the development of tourism in Ukraine, which was able to ensure its viability even in crisis conditions, laying the prerequisites for a sustainable post-war revival. In the context of the development of tourist destinations in the conditions of war on the basis of glocalisation, the tourism industry appeared as an important tool for the socio-economic growth of territories, the formation of a positive image of Ukraine in the international arena and the sustainable development of regions. Therefore, the discussion on the directions for the development of tourist destinations in the conditions of war was extremely relevant. It covered the restoration of infrastructure and the problems of adapting the tourism industry to multi-vector challenges, including security, demographic, communication and resource challenges (Norik & Skliar, 2024).

The application of the principles of glocalisation made it possible to find a balance between global standards of quality, safety, sustainability and local unique

resources that formed the identity of each destination. For example, in safe regions of Western Ukraine, tourism initiatives can develop by reorienting to the internal consumer, developing micro-destinations, local gastronomy, cultural heritage, outdoor activities, which at the same time correspond to international trends in slow tourism, green mobility and local authenticity. In destinations that have experienced a temporary loss of accessibility, strategic planning of revitalisation, taking into account the experience of countries that have gone through armed conflicts, becomes relevant. This approach allowed combining the prospects of economic recovery with the formation of a new historical and cultural narrative that strengthened national identity and increased the attractiveness of territories for future tourist flows. In addition, an important part of the discussion was the involvement of local communities and entrepreneurs in destination management processes. In wartime, it was local initiatives that showed the highest level of flexibility, solidarity and mobilisation. The formation of tourism products based on the local context, with the support of international partners, digital platforms and grant programmes, allowed to consider tourism as a mechanism for restoring trust, social cohesion and territorial development.

In general, most experts agreed that the tools for the development of tourist destinations should not be universal, but flexible and adaptive, taking into account local specifics, the needs of target groups and the pace of recovery. For example, Yu. Holovchuk *et al.* (2022) focused on the importance of applying innovative marketing approaches in the strategic management of tourist destinations. The authors substantiated the need for digitalisation of communications, the introduction of emotional branding, and the development of products that meet the new needs of internal and external target audiences. Within the framework of war restrictions, destination marketing should attract tourists and create elements of trust, security, and solidarity, which opened up space for globalised promotion strategies. Yu. Perehuda & M. Kryvoberets (2022) analysed state support for tourism enterprises under martial law. Scientists emphasised the importance of developing special financial mechanisms, grant programmes and preferential lending that would allow entrepreneurs to survive and reorient business models to new conditions. The researchers also emphasised the need to strengthen the role of the state as a coordinator of regional initiatives and an investor in infrastructure restoration, which was critical for preserving tourism potential in the long term.

A. Kiziun *et al.* (2023) proved that the war had led to a profound transformation of the tourism market of Ukraine (decrease in international flow, growth of the role of internal tourism, rethinking consumer demands). The author's research indicated the need for a new segmentation of destinations depending on the degree of security, resource potential and mobilisation of local communities. This approach corresponded to the paradigm of glocalisation, which involved the adaptation of global models to local conditions. S. Gryshchenko (2023) analysed the role of tourism in the post-war recovery of the economy and territories and considered tourism as a multifunctional tool for socio-economic growth, which can generate employment, activate small businesses and contribute to the restoration of the regional image. The author also pointed out the need for an integrated approach to tourism management, which took into account both security challenges and cultural and psychological aspects.

The authors S. Bazhenova *et al.* (2022) analysed in detail the modern realities of the functioning of the tourism market, in particular, noting the uneven development between regions, fragmentation of state policy and weak integration into international tourism networks. Researchers seen potential in the decentralisation of management, the development of local initiatives and the deepening of interaction between the state, communities and business. E. Sira *et al.* (2022) proved the importance of a strategic vision for the post-war recovery of tourism, in which infrastructure, branding, cultural heritage and security should be considered as interrelated elements. Scientist's approach was based on the idea of institutional resilience and planning of recovery scenarios, which was consistent with the international practice of post-conflict recovery of tourist destinations.

So, development of tourist destinations was increasingly viewed as an adaptive, sustainable, and multi-level system capable of functioning under conditions of high uncertainty and security risks. All researchers emphasised the importance of taking into account local specifics, mobilisation of internal resources, state support and integration of innovative approaches to management. Such a convergence of positions highlighted the need for a comprehensive vision of tourism as a strategic factor in regional development, the restoration of social cohesion, and the formation of a new national identity. All researchers noted about the importance of considering local specifics, mobilising internal resources, ensuring state support, and integrating innovative management approaches. Such a convergence of positions highlighted the need for a comprehensive vision of tourism as a strategic factor in regional development, the restoration of social cohesion, and the formation of a new national identity.

Conclusions

The application of the principle of glocalisation in the management of the development of tourist destinations in Ukraine allowed to achieve a strategic balance between integration into the global tourist space and the preservation of local identity, which was especially important in the conditions of war and European integration processes. This approach ensured the sustainability, adaptability and competitiveness of destinations,

contributing to their harmonious development at the intersection of global trends and local values. Analytical studies had shown that Ukraine's export of tourist services in 2018-2023 ranged from USD 298,855 million to USD 857 million. After a sharp decline in 2020 due to the COVID-19 pandemic, there was a partial recovery in 2022-2023. Ukraine's share in the global export of tourist services increased from 0.02% in 2018-2019 to 0.06% in 2023. The import of tourist services significantly exceeded exports: in 2022, this figure reached USD 197,360.00 million, accounting for 2.01% of global imports. Such a disproportion indicated the need to stimulate inbound tourism and develop internal destinations. The results of the study showed that tourist destinations in Ukraine, despite their significant potential, remained unattractive for capital investments both at the national and global levels. Despite some positive impulses caused by significant events, the general trend indicated a chronic underfunding of the research subject, which limited its potential as a driver of economic growth. Ukraine's consistently low share in the global investment space of the tourism industry also signaled the need to form a targeted policy to stimulate investments, modernised infrastructure and more actively integrated into international tourism markets. Promising direction of the study include the analysis of formation of safe micro-destinations, the digitalisation of tourism products (online tours, mobile applications), reorientation to the internal market, and support for small businesses. An important role will also be played by the development of humanitarian and memorial tourism, which will contribute to the formation of new cultural meanings and the preservation of historical memory.

Acknowledgements

None.

Funding

None.

Conflict of Interest

None.

References

[1] Antonenko, V. (2025). Development of tourist destinations based on the use of the intangible cultural heritage of Ukraine as a tool for creating a unique ethnocultural brand. *Socio-Cultural Management Journal*, 7(2), 65-90. doi: 10.31866/2709-846X.2.2024.335862.

[2] Barvinok, N. (2022). Prospects for the development of military tourism on the territory of Ukraine after the end of the Russian-Ukrainian war. *The Actual Problems of Regional Economy Development*, 2(18), 206-217. doi: 10.15330/apred.2.18.206-217.

[3] Bazhenova, S., Pologovska, Iu., & Bykova, M. (2022). Realities of tourism development in Ukraine at the present stage. *Scientific Perspectives*, 5, 168-180. doi: 10.52058/2708-7530-2022-5(23)-168-180.

[4] Bordun, O., Shevchuk, V., Monastyrskyy, V., & Luchka, O. (2022). Losses and rescue areas of tourism business under the war in Ukraine. *Visnyk of the Lviv University. Series Economics*, 62, 178-196. doi: 10.30970/ves.2022.62.0.6214.

[5] Buhas, V., & Kovalchuk, E. (2024). Integration of Ukraine into the global market of tourist services. *European Scientific Journal of Economic and Financial Innovation*, 2(14), 76-85. doi: 10.32750/2024-0208.

[6] Gryshchenko, S. (2023). The tourism industry of Ukraine: Analysis of trends and development factors in the coordinates of post-war recovery. *Economy and Society*, 52. doi: 10.32782/2524-0072/2023-52-29.

[7] Holovchuk, Yu., Moroz, S., & Tseststiv, D. (2022). Management of tourism destinations: Innovative marketing approaches. *Problems of Modern Transformations. Series: Economics and Management*, 5. doi: 10.54929/2786-5738-2022-5-12-02.

[8] Kiziun, A., Hutsal, L., & Tsurkan, I. (2023). Analysis of the development of the tourism industry in Ukraine under the conditions of the Russian-Ukrainian war. *Tourism and Hospitality Industry in Central and Eastern Europe*, 8, 79-87. doi: 10.32782/tourismhospcee-8-11.

[9] Matviichuk, L., Zhadko, O., & Shtanko, O. (2025). Features of the application of innovative tools in the strategic management of regional tourist destinations. *Acta Academiae Beregsasiensis. Economics*, 8, 137-150. doi: 10.58423/2786-6742/2025-8-137-150.

[10] Napierała, T., & Pawlicz, A. (2025). War beyond national borders: Impact of the Russian-Ukrainian war on hotel performances in neighbouring countries. *Tourism Management*, 111, article number 105235. doi: 10.1016/j.tourman.2025.105235.

[11] Norik, L., & Skliar, T. (2024). Analysis of the structure of export-import activity of Ukraine. *University Economic Bulletin*, 19(2), 22-35. doi: 10.69587/ueb/2.2024.22.

[12] Perehuda, Yu., & Kryvoberets, M. (2022). State support of enterprises in the tourist industry in the conditions of maritime and post-war reconstruction. *Entrepreneurship and Innovation*, 23, 16-20. doi: 10.37320/2415-3583/23.3.

[13] Robertson, R. (1995). Glocalization: Time–space and homogeneity–heterogeneity. In M. Featherstone, S. Lash & R. Robertson (Eds.), *Global modernities* (pp. 25-44). London: Sage Publoications.

[14] SATD publishes large-scale tourism research. (n.d.). *SATD*. Retrieved from https://www.tourism.gov.ua/blog/dart-oprilyudnyuie-masshtabni-turistichni-doslidzhennya.
[15] Sira, E., Holubets, I., & Bezruchenkov, Yu. (2022). Post-war recovery of tourism in Ukraine. *Market Infrastructure*, 68, 155-158. doi: 10.32782/infrastruct68-27.
[16] State Agency for Tourism Development. (n.d.). Retrieved from https://www.tourism.gov.ua/statistic.
[17] State Statistics Service of Ukraine. (n.d.). Retrieved from https://www.ukrstat.gov.ua/.
[18] Tan, J., & Cheng, M. (2024). Tourism, war, and media: The Russia-Ukraine war narrative. *Journal of Travel Research*, 64(5), 1031-1044. doi: 10.1177/00472875241245047.
[19] Tomej, K., & Bilynets, I. (2024). Large-scale tourism transformations through regeneration: A living systems perspective on tourism developments in Ukraine during the war. *Annals of Tourism Research*, 109, article number 103856. doi: 10.1016/j.annals.2024.103856.
[20] Tourism Statistics Database. (n.d.). *UN Tourism*. Retrieved from https://www.untourism.int/tourism-statistics/tourism-statistics-database.
[21] Tsurkan, I., & Kryvenkova, R. (2023). Priorities of tourism industry functioning during the war in Ukraine. *Black Sea Economic Studies*, 79, 247-250. doi: 10.32782/bses.79-38.
[22] Tymoshenko, T., Bogoslavets, O., & Shevchuk, O. (2023). European experience of involving interested parties in project activities of tourist destination management organizations: The example of Sweden for Ukraine. *Economy and Society*, 51. doi: 10.32782/2524-0072/2023-51-59.
[23] Vakhovych, I., Matviichuk, L., & Smal, B. (2021). Development of the hospitality industry in modern conditions: Trends and measures to strengthen competitive advantages. *Financial and Credit Activity: Problems of Theory and Practice*, 6(41), 494-502. doi: 10.18371/fcaptp.v6i41.251512.
[24] Yermachenko, V., Melnychenko, S., Sidak, M., Dupliak, T., & Lositska, T. (2023). Sustainable tourism in the post-war reconstruction of territorial communities in Ukraine. *Access to Science, Business, Innovation in the Digital Economy*, 5(1), 34-57. doi: 10.46656/access.2024.5.1(3).

Розвиток туристичних дестинацій України в умовах війни на засадах глокалізації

Людмила Матвійчук

Доктор економічних наук, професор
Луцький національний технічний університет
43018, вул. Львівська, 75, м. Луцьк, Україна
https://orcid.org/0000-0003-1694-6178

Лариса Чепурда

Доктор економічних наук, професор
Черкаський державний технологічний університет
18006, бульв. Шевченка, 460, м. Черкаси, Україна
https://orcid.org/0000-0002-8941-9427

Тетяна Зубехіна

Кандидат педагогічних наук, доцент
Луцький національний технічний університет
43018, вул. Львівська, 75, м. Луцьк, Україна
https://orcid.org/0000-0001-9929-4405

Анотація. Актуальність дослідження зумовлена тим, що в умовах повномасштабної війни з 2022 року розвиток туристичних дестинацій України потребує застосування принципів глокалізації, які поєднують глобальні тренди сталого розвитку та безпеки з локальними ресурсами, культурною ідентичністю та потребами громад. Метою статті було обґрунтувати концептуальні підходи та практичні напрями розвитку туристичних дестинацій України в умовах воєнного часу на основі принципів глокалізації, з урахуванням викликів безпеки, локальної специфіки, потреб внутрішнього туризму та потенціалу післявоєнного відновлення. Проведено огляд сучасних наукових джерел, присвячених питанням інноваційного управління дестинаціями, державної підтримки туристичної галузі, маркетингових стратегій та післявоєнного відновлення. Систематизовано типологію туристичних дестинацій за рівнями безпеки та операційної придатності. Проаналізовано дані щодо експорту й імпорту туристичних послуг України, їхньої частки у світових показниках, а також динаміку інвестицій у туристичний сектор та рівень безпеки туристичних дестинацій. Встановлено, що частка України у світовому експорті туристичних послуг зросла до 0,06 % у 2023 році, тоді як імпорт значно перевищив експорт (2,01 % від світового показника у 2022 році). Також визначено, що туристичний сектор страждав від недостатнього фінансування у державній інвестиційній політиці, існували регіональні відмінності у доступності туристичних дестинацій. У статті запропоновано напрями розвитку туристичних дестинацій України на основі глокалізації, зокрема створення безпечних мікродестинацій, підтримку місцевого підприємництва, цифрову трансформацію туристичних продуктів, розвиток внутрішнього туризму, впровадження воєнного та меморіального туризму, стратегічне планування відновлення тимчасово недоступних територій. Практичні рекомендації можуть стати підґрунтям для формування адаптивної політики розвитку туризму в Україні, вдосконалення стратегій управління дестинаціями та інтеграції підходу глокалізації у процеси прийняття рішень органами державної влади, місцевого самоврядування та туристичними підприємствами під час війни та післявоєнного відновлення

Ключові слова: туристичні території; цифровізація; конкурентоспроможність; європейська інтеграція; культурний туризм; сталий розвиток

ECONOMIC FORUM
Journal homepage: https://e-forum.com.ua/en
Vol. 15, No. 3, 2025, 18-29
Article's History: Received: 30.04.2025 Revised: 12.08.2025 Accepted: 08.09.2025

UDC 368.1:339.92 DOI: 10.62763/ef/3.2025.18

Identification of key challenges of insurance market regulation in the context of globalisation and integration into the European market

Illia Bulantsov*
Postraduate Student
Kyiv National University of Technology and Design
01011, 2 Mala Shyianovska Str., Kyiv, Ukraine
https://orcid.org/0009-0006-7487-1601

Abstract. The purpose of this study was to identify the factors that shaped the development of the Ukrainian insurance segment in the context of globalisation and determined its integration into the European market. The study used SWOT analysis of the insurance market of Ukraine, comparative analysis of Ukrainian and European insurance legislation, and case analysis of Poland's integration into the European insurance market as an example of the gradual implementation of European standards in national regulation. It was determined that the development of the national insurance market took place in unstable and unfavourable conditions, as a result of which, in 2022-2023, there was a reduction in registered insurers from 128 to 101, and the number of concluded insurance contracts – by 25,755. The Ukrainian insurance market also demonstrated a low level of insurance penetration – 2% of gross domestic product, while the European average was 7-10%. The analysis of the Polish experience proved that the implementation of European Solvency II standards and cooperation with the European Insurance and Occupational Pensions Authority contributed to the sustainable development of the national insurance segment. Between 2016 and 2022, Solvency Capital Requirement coverage increased from 266% to 272%, considering the minimum recommended level of 130%. This growth meant that the Polish insurance market not only adapted to European standards, but also demonstrated the potential for Sustainable Development. The results of the comparative analysis indicated that the Ukrainian insurance segment demonstrated resilience to crises, and its potential for sustainable development can be enhanced by adapting the experience of other countries and integrating into the pan-European insurance space. The date of this study can be used to enhance the stability of the Ukrainian insurance market in uncertain conditions, and to promote its further sustainable development within the context of globalisation and European integration

Keywords: financial sustainability; risk management; supervisory authority; international regulators; legislative harmonisation

Introduction

The importance of the insurance market lies in the fact that it is a guarantor of national financial security. Timely planning, quick response, and diversification help companies maintain sustainability by adapting to changing environments. The insurance market itself also functions in the context of uncertainty, which may affect its further growth and development. Understanding the challenges, including regulation in the context of globalisation and integration into the European market, contributes to planning strategies for further development of the national insurance market.

In their paper, O. Dluhopolskyi *et al.* (2025) highlighted the dynamic development of the global insurance market. According to their forecasts, the volume of the European insurance segment will reach USD 1.65 trillion by 2029. Based on the comparative analysis, the

Suggested Citation:

Bulantsov, I. (2025). Identification of key challenges of insurance market regulation in the context of globalisation and integration into the European market. *Economic Forum*, 15(3), 18-29. doi: 10.62763/ef/3.2025.18.

*Corresponding author

authors also drew attention to differences in the level of insurance penetration, which depend on the economic level of development: in countries such as France, Great Britain, Luxembourg, and the United States, the share of insurance premiums in the structure of gross domestic product (GDP) substantially exceeds the corresponding indicators of less developed economies, in particular, Turkey and Romania. O. Kneysler *et al.* (2024) suggested that the degree of insurance penetration depended on a number of external factors, including global transformations in society, rapid development of information technology, systematic financial shocks, and escalation of military conflicts. According to the researchers, understanding the challenges helps to plan the development of global and national insurance markets, including in the context of optimising business processes in the InsurTech digital environment.

In a comparative analysis of the insurance market of Ukraine and the European Union (EU), A. Cherep & Yu. Kishko (2024) noted the variety of services provided by Ukrainian insurance companies. According to the authors, a wide range of services guarantees Ukrainian consumers comprehensive financial protection in the event of an insured event. F. Palmisano & A. Sacchi (2024) emphasised that in comparison with EU citizens, the level of interest of Ukrainian consumers in insurance services was lower. One of the reasons for the low involvement of national consumers was that the Ukrainian insurance market was forced to develop in conditions of wartime uncertainty. Having traced the dynamics of the development of the national insurance market, S. Kachula & K. Bieliakova (2024) found evidence of the negative impact of full-scale military operations: while in 2022 there were 128 registered insurers, by 2023 this number had fallen to 101, and the number of insurance contracts concluded had decreased by 25,755. According to I. Nalyvaichuk & O. Panukhnyk (2024), the reduction in the volume of the national insurance market was the result of systemic problems that began back in 2019, during the coronavirus pandemic. The problems got worse, when the russian federation started a full-scale military invasion in February 2022, when the Ukrainian insurance market got hit by a drop in insurance premiums, property damage, and trouble getting to where payments were due.

A. Shirinian & T. Tatarina (2024) stressed that despite the challenges, the Ukrainian insurance market was adapting to changed realities and was focused on Sustainable Development. According to the authors, the Sustainable Development Strategy provided for a reorientation to certain types of insurance, including operations with securities and life insurance. Sustainable development, according to a by statement I. López Domínguez (2023) and T.T.L. Hien *et al.* (2024), also included legislative changes and the implementation of international directives. A similar opinion was stated by O. Nepochatenko *et al.* (2024), who underlined the importance of an ecosystem approach to the development of the national insurance market and improving the regulatory framework. According to these experts, the improvement of the regulatory framework implies the approximation of Ukrainian legislation to the standards of Solvency II – a comprehensive system for regulating the activities of insurance companies in the EU, which entered into force on January 1, 2016. Based on the results of the SWOT analysis of the insurance market of Ukraine, O. Levchenko *et al.* (2024) underscored the critical role of the development of the regulatory environment, in particular, as a factor of increasing confidence and active participation of the population in the insurance system. The researchers saw the development of the regulatory environment in international cooperation and further harmonisation of legislation in the field of insurance services.

The analysis of the cited studies determined that the subject of strategies for harmonising Ukrainian legislation to integrate it into the pan-European insurance space has not been fully examined. The identified gaps in academic discourse pointed to the need to investigate the challenges of regulating the insurance market in the context of international integration. This study aimed to establish the modern problems of regulating the insurance market of Ukraine in the context of globalisation and adaptation to European requirements. The objectives of this paper were to identify and analyse the factors that determined the development and integration into the international context of the national insurance market; conduct a comparative analysis of Ukrainian and European legislation in the field of insurance, and develop recommendations for the integration of the national insurance market into the international insurance community.

Materials and Methods

A set of methods was used during the study – SWOT analysis, comparative analysis of the legislative framework for regulating the insurance market, and the case method. SWOT analysis was used to clarify the strengths and weaknesses of the Ukrainian regulatory system and consider external opportunities and threats in connection with globalisation and integration into the European market. It was based on data from academic sources published between 2020 and 2025: B.D.S. Ghaleb (2024) and T. Kryvoshlyk *et al.* (2024) – to explore the strengths of the national insurance market; I. Lashchyk *et al.* (2020) and O. Nepochatenko *et al.* (2024) – to analyse segment weaknesses. Also, it was important the studies by I. Rud & D. Agarkov (2024) – to determine the modern opportunities of the Ukrainian insurance sector; O. Skydan *et al.* (2023) – to identify threats to market development in the context of globalisation and European integration. The sample included sources that met the criteria of relevance, scientific reliability, and content relevance for the analysis of the insurance market.

A comparative analysis of the legal norms regulating the insurance market in Ukraine and European countries was conducted to assess the compliance of national legislation with EU directives. In the process of comparative analysis, such documents and regulatory legal acts as the Law of Ukraine No. 1909-IX (2021) and the Law of Ukraine No. 1953-IX (2021). Directive 2009/138/EC of the European Parliament and of the Council (2009), Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part (2014), and Directive (EU) 2016/97 of the European Parliament and of the Council (2016) were also considered. The listed regulations were included in the sample based on the relevance criterion and compared in terms of such aspects as supervisory authority, capital requirements, risk management and internal control, disclosure of reporting information, consumer protection, insurance mediation, availability of special legislation on Solvency II, insurance abroad, and digitalisation of supervision.

The case method was also used for a detailed analysis of the process of integration of the insurance market of Ukraine into the international space. As a case study, the implementation of Solvency II in Poland in 2012-2016 was reviewed – a process described in detail by M. Papiernik-Wojdera & A. Misztal (2024). When selecting the case study, consideration was given to the fact that Poland had a historical and legal context similar to that of Ukraine, meaning that the results obtained can be used for the reform, development, and European integration of the Ukrainian insurance market. When analysing the case, attention was paid to the role of the National Bank of Poland and its cooperation with the European Insurance and Occupational Pensions Authority (EIOPA) as a source of information on effective strategies for integrating the national insurance market into the International Space. The Polish experience was used to develop recommendations for integrating the Ukrainian insurance market into the pan-European insurance segment.

Results

In the context of globalisation and strengthening integration processes in Europe, the regulation of the insurance market was becoming important as a tool for ensuring financial stability, protecting consumer rights, and increasing the competitiveness of national insurance companies. However, for countries with economies in transition, such as Ukraine, the regulation of the insurance market was associated with a number of challenges. Challenges included the need to adapt to European directives, specifically, Solvency II and Insurance Distribution Directive (IDD), ensuring transparency of reporting, improving financial literacy of the population, improving supervision, and implementing digital solutions. The issue of trust in insurance companies also remained relevant, the decline of which was due to historical abuse and the general level of uncertainty, especially in wartime. In this context, a systematic analysis of the strengths and weaknesses of the Ukrainian insurance market, and opportunities and threats in the context of globalisation and European integration, helped assess the situation and formulate sound development strategies (Table 1).

Table 1. *Factors of development of the Ukrainian market in the context of globalisation and European integration*

Strengths: ▣ Gradual harmonisation of legislation with EU directives (Solvency II, IDD). ▣ The presence of a powerful regulator – the National Bank of Ukraine – capable of reforms. ▣ Joining the association agreement with the EU, which sets a clear vector for European integration. ▣ Growing interest in e-insurance, digitalisation of reporting. ▣ Growth potential – a large segment of the uninsured population and property	**Weaknesses:** ▣ Partial implementation of EU standards (no complete SCR, ORSA system). ▣ Low level of insurance penetration (penetration rate <2% of GDP). ▣ Lack of a special law on insurance intermediaries (IDD mismatch). ▣ Low public confidence in insurance companies due to historical abuses. ▣ Lack of qualified personnel in the field of risk management and compliance with standards
Opportunities: ▣ Integration into the single European financial space – simplification of cross-border insurance. ▣ Technical and advisory assistance from the EU (Twinning projects, EIOPA technical missions). ▣ Implementation of the electronic surveillance platform (RegTech, SupTech). ▣ Increasing the role of Ukraine in the format of regional cooperation (for example, CESEE). ▣ Training of personnel according to European standards (advanced training, certification)	**Threats:** ▣ Increased competition from major European insurers. ▣ Geopolitical instability, war-reduced investment attractiveness and demand. ▣ Slow implementation of reforms due to institutional inertia. ▣ Possible legislative conflicts between Ukrainian law and EU law during the transition period. ▣ Low level of financial literacy of the population, which hinders the development of the insurance market

Note: *EIOPA – European Insurance and Occupational Pensions Authority; CESEE – Central, Eastern and South-Eastern Europe; ORSA – Own Risk and Solvency Assessment; SCR – Solvency Capital Requirement*

Source: *based on I. Lashchyk et al. (2020), O. Skydan et al. (2023), B.D.S. Ghaleb (2024), T. Kryvoshlyk et al. (2024), O. Nepochatenko et al. (2024), I. Rud & D. Agarkov (2024)*

Based on the analysis, the Ukrainian insurance market had high potential for integration into the European space, but needs to actively overcome structural weaknesses, in particular, the implementation of a full package of EU directives, the development of market culture and trust in institutions. The conditions of globalisation created both opportunities, such as new technologies, international partnerships, and threats, including competition and instability, that required proactive government regulation. Ukraine was gradually harmonising its insurance legislation with EU requirements, for example, by adapting the Solvency I and Solvency II directives in accordance with Annex VII-2 of the Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part (2014), which, as noted by Yu. Tiulenieva & T. Antoshko (2019), was a necessary step to ensure compatibility in approaches to assessing the solvency of insurers. An example of the harmonisation of legislation was the adoption of the Resolution of the National Bank of Ukraine No. 153 (2021), which was close to European conditions in terms of minimum capital requirements and ownership structure. The strong point of the Ukrainian insurance market was also the functioning of the National Bank of Ukraine (NBU) as the main supervisory authority for insurance companies, credit unions, leasing companies, pawnshops, and financial companies. Starting from 1 July 2020, the NBU was implementing the "SPLIT" reform with the aim of ensuring transparency, reliability, and efficiency of Ukraine's non-banking financial sector. Reporting on the results of the "SPLIT" reform, Serhii Savchuk, Deputy Director of the NBU's Department of Methodology for Regulating Non-Bank Financial Institutions, noted that in 2020-2021 32 legal acts were created to regulate the non-banking services sector, and in 2021, more than 4,200 applications from citizens regarding the activities of insurance companies were considered (National Bank of Ukraine, 2024).

Digitalisation of supervision, in particular, was manifested in the introduction of the policyholder's electronic cabinet – an online portal for reporting, viewing information about insurance policies, and interacting with the regulator in real time. Although the functionality of the system as of 2025 was limited to basic accounting and reporting tools, it demonstrated the potential to expand and automate control procedures. In its logic and structure, the electronic office partially replicated the principles of supervisory technology (SupTech) applied in the EU, primarily in the use of digital tools for monitoring, risk analysis, and supervisory decision-making. That was, even at the initial stage, the digital infrastructure of Ukraine created prerequisites for the development of a modern regulatory system adapted to European standards of insurance supervision.

The weaknesses of the national insurance market included partial implementation of Solvency II – the European SCR and ORSA systems have not yet been implemented. The lack of full integration of SCR and ORSA can be explained by the fact that the NBU had prepared methodological recommendations that were not mandatory for all insurance companies in Ukraine. Another drawback was the low penetration rate of insurance services, which, according to Insurance Europe (n.d.), was around 1.5%; for comparison, the insurance penetration rate in the EU was 7-10%, depending on the country. The insufficient level of penetration of insurance services in Ukraine may indicate a low level of public trust and support for reform processes in the national insurance market. The vulnerability of the Ukrainian insurance market was the lack of regulation of insurance intermediaries, since the IDD directive, which regulated the work of brokers, agents and bank intermediaries, had not yet been implemented at the legislative level. Based on the report of Insurance Europe (n.d.), it can be argued that the beginning of full-scale military operations in February 2022 led to an aggravation of certain problems of the national insurance market, as there was an outflow of customers, and the implementation of new reforms was suspended in conditions of uncertainty.

Further development of the national insurance market provided for the implementation of existing opportunities, in particular, integration into the EU single market. Following the adaptation of Solvency II and IDD standards, Ukraine's insurance market may join the single market for insurance services, as happened in Poland. The integration of Ukraine's insurance market into the European market was strategic for access to the EU financial space, increasing investment potential, and using the latest technologies to develop competitiveness. The development of RegTech/SupTech and the creation of electronic control systems to automate risk detection among insurers were also promising. A report by the European Banking Authority (2023) indicated that France, Italy, and Lithuania have already applied such systems, increasing the sustainability of national credit markets and increasing the penetration of individual insurance services.

When planning the integration of the Ukrainian insurance market into the international community, it was necessary to account for the existing threats from European insurance companies. Integration processes will be accompanied by the emergence of European insurance companies in Ukraine, for example, Allianz, AXA, or Zurich Insurance Group, which, having the best business models and risk management strategies, will pose a competitive danger for Ukrainian insurance companies. Another challenge was protracted military action, which made certain offerings, such as property insurance, unprofitable. The report of the National Bank of Ukraine (2024) highlighted the lack of substantial growth of the national insurance market in the fourth quarter of 2024 – the volume of assets of risk insurers remained

unchanged, and during 2023 it increased by only 1%. Although risk insurers remained operationally profitable in 2023, their return on capital was 1.5 times lower than in 2022. In addition to the instability of wartime, the national insurance market also reacted to the slowness of reform processes, which, due to the advisory nature of the NBU, may stop at the company level. Although the requirements for risk management were put forward back in 2021, Ukrainian insurance companies do not comply with them because of the lack of a compliance department in their structure.

Based on the results of the SWOT analysis, it was established that despite the challenges of wartime, the Ukrainian insurance market retained its potential for Sustainable Development. One of the key prerequisites for this was gradual integration into the pan-European insurance space, which provided, in particular, for the harmonisation of national legislation with the norms of the European Union. A comparative analysis of the Ukrainian and European regulatory framework in the insurance sector (Table 2) was conducted to identify the factors that contributed to or hinder this process.

Table 2. *Comparative characteristics of regulatory aspects of the insurance market in Ukraine and the EU*

Criterion	Ukraine (2024-2025)	EU (Solvency II, IDD)	Compliance conclusions/ challenges
Supervisory authority	NBU (insurance market regulator since 2020)	National regulators + EIOPA	Compliance with the structure, but limited practical application of the EIOPA recommendations
Capital requirements	The minimum amount of authorised capital is set, but without full implementation of the SCR/MCR system	Solvency II: risk and capital assessment system (SCR, MCR)	Partial approximation; SCR/MCR is not yet fully implemented
Risk management and internal control	Basic requirements implemented due to NBU regulations	Solvency II: mandatory availability of the ORSA system, independent control functions	Limited implementation, no ORSA system
Disclosure and reporting	Financial statements and a report on the ownership structure are provided	Full transparency, risk-based reporting (SFCR, RSR)	Partial implementation, no complete set of Solvency II reports
Consumer protection	General provisions in the Law No. 1953-IX	IDD: special rules of conduct, proper informing of consumers	Low level of harmonisation, requires a separate law on insurance mediation
Insurance mediation	There is no separate regulation of brokers/agents' activities	IDD: licensing, minimum knowledge requirements, codes of conduct	Non-compliance, regulation only at the general level
Availability of special legislation on Solvency II	The association agreement provides for the gradual introduction of Solvency II	Solvency II is mandatory for all EU companies	Transition process; the regulatory framework of Ukraine is still being adapted
Insurance abroad/ passport of insurance services	Limited, only within individual agreements	Full-fledged provision of services within the EU single market	Absence of an "insurance passport" mechanism, barriers to integration
Digitalisation of supervision	Initial steps: NBU platforms, electronic reporting	Solvency II focuses on automated risk analysis	Requires strengthening the technical infrastructure of supervision

Note: *MCR – Minimum Capital Requirement; RSR – Regular Supervisory Report; SFCR – Solvency and Financial Condition Report*

Source: *based on Directive 2009/138/EC of the European Parliament and of the Council (2009), Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part (2014), Directive (EU) 2016/97 of the European Parliament and of the Council (2016), International Monetary Fund (2019), Law of Ukraine No. 1953-IX (2021)*

Based on Table 2, Ukraine had demonstrated substantial efforts in formally approaching the EU regulatory model, especially in terms of institutional structure and basic capital requirements. However, key elements – risk management, insurance mediation, consumer protection, and digital surveillance – remain at the initial or mid-stage of harmonisation. The comparative analysis also provided for specifying the main challenges facing the Ukrainian insurance market in the context of globalisation and integration into the European regulatory space. Specifically, insufficient harmonisation of the national regulatory framework with Solvency II and IDD was noted, which would ensure transparency, accountability, and efficiency of the Ukrainian insurance market. As a result of the analysis, it was determined that although Ukraine, in the context of the association agreement, undertook to adapt the Solvency II and IDD directives, full implementation has not been achieved; there was no legally established SCR/MCR, ORSA, or SFCR system.

The absence of an insurance passport mechanism in the Ukrainian regulatory and legal space was seen as

another obstacle to the integration of the national insurance market into the European insurance space. According to the European Passport Rights for Insurance and Reinsurance Undertakings (Amendment) Regulations (2021), an insurance passport was a legal instrument that allowed insurance companies registered in an EU member state to provide insurance services in any other country without the need for a separate license in each state. The lack of such a mechanism in Ukraine meant that insurance companies cannot enter the EU market without individual agreements or special permits. The need to obtain such agreements and permits reduced the competitiveness of Ukrainian companies in the international insurance market.

Another challenge was the insufficient transparency and accountability in the Ukrainian insurance system compared to its European counterpart. According to the Directive 2009/138/EC of the European Parliament and of the Council (2009), European insurance companies submit SFCR – an annual public report with a detailed assessment of the capital position, description of the risk management system, qualitative and quantitative analysis of insurance, market, and operational risks, examination of the ownership structure and corporate governance, and presentation of corporate policy. Insurance companies operating in the EU were also required to submit an annual non-public report (RSR) to the supervisory authority, specifying their capital model, scenario analysis, and assessment of the adequacy of premiums and technical provisions. In Ukraine, the submission of an ORSA was advisory in nature, thereby reducing the ability of insurance companies to objectively assess their solvency in the context of stress scenarios. The annual report that Ukrainian insurance companies submit to the NBU included a calculation of reserve adequacy, which, however, was not related to risk assessment, and an analysis of the asset structure, but without reference to risk-based capital requirements. The absence of a public SFCR analytical section in the annual reports of Ukrainian insurance companies meant that risks remain hidden from the market and customers, comparisons between companies in terms of sustainability were difficult, and foreign investors do not have a reliable regulatory framework for the activities of insurers.

Another roadblock that Ukrainian insurance companies faced on the way to integration into the European community was the lack of special regulation of insurance intermediaries. According to the Directive (EU) 2016/97 of the European Parliament and of the Council (2016), the existence of the intermediary institute was regulated by strict licensing, training, and ethical standards. In Ukraine, there was no specialised law that would regulate the activities of insurance brokers and agents, so this area was regulated only by generalised norms. The absence of a specialised law can provoke a number of systemic negative consequences, such as the low level of professional competence of insurance workers, the lack of proper supervision and control over insurance operations, a decrease in consumer protection and public confidence in the insurance segment, unequal conditions of competition between market participants, and the inability to integrate into the European insurance market.

In addition to these risks, the challenge to integration into the European community was the fragmentation of the legislative framework, which was the result of the fact that the process of forming the regulatory framework took place unevenly and without a single roadmap with clear deadlines for implementation. As a result, the Law of Ukraine No. 1909-IX (2021) has been in a state of change since 2023, which may cause temporary legal conflicts. From the point of view of integration into the European community, the fragmentation of the framework for regulating the national insurance market may hinder the implementation of the Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part (2014), reduce the attractiveness of the Ukrainian market for European insurance companies and investors, and make it impossible to join the pan-European insurance market, losing confidence on the part of the European Central Bank, EIOPA, and other international regulators.

Some ideas on the integration of the Ukrainian insurance market into the international insurance community were obtained from the analysis of the case study of the implementation of Solvency II standards, starting in 2013 (Papiernik-Wojdera & Misztal, 2024). After determining the Polish supervisory committee (KNF), which had been integrated within the National Bank of Poland since 2013, close work began with EIOPA. Professional exchanges – discussions on SCR and ORSA – enabled the formalisation of a new risk management culture. Numerous training sessions were held for actuaries and chief actuaries of insurance companies, which facilitated the adoption of new methods of risk assessment and reporting. In the medium term, the reform of the Polish insurance market had led to changes in the financial indicators and sustainability of the segment, as indicated in the International Monetary Fund (2019) report. According to this document, prior to the introduction of Solvency II at the end of 2015, the average CSR equity coverage was 328%. After the entry into force of the Solvency II directive on January 1, 2016, there was a regrouping of capital and a decrease in the overall coverage rate to 266%, which pointed to the adaptation of the Polish insurance market to pan-European realities. Thereby, the strategies of life insurance companies and non-life insurance companies differed, as the former optimised their reserves, while the latter revised their capital requirements. Already at the end of 2017, the CSR coverage level was 256%, which exceeded the minimum requirements and indicated progress towards integration into the pan-European insurance market (International Monetary Fund, 2019). The European Commission report (2025)

indicated that positive trends continued in 2022, when CSR coverage for life companies was 272% and for the non-life segment – 228%; the recommended coverage threshold was 130%. Thus, it was concluded that the Polish insurance market not only meets the basic EU standards for conducting professional activities, but also increases its own stability in the face of market fluctuations. Such sustainability was ensured, among other things, through changes in the organisational structure, which provided for tougher requirements for internal control, revision of actuaries' functions and implementation of the risk management system – risk governance (International Monetary Fund, 2019). There were also changes in the work of non-life insurance companies, which began to use reinsurance more often and expand asset diversification. Despite stable financial indicators, the level of insurance penetration in the Polish market remained at 2.3% – an indicator that was closer to the Ukrainian than the pan-European level (European Commission, 2025). The low level of insurance penetration meant that the implementation of Solvency II standards was only one aspect of the medium-term development of the insurance market. The long-term effect, in turn, was due to a combination of factors, including demand, innovation, financial literacy of the population, and public confidence in the national insurance market.

Thus, the analysis of the experience of European countries, in particular, Poland, can be implemented in the strategic planning of the Ukrainian insurance market. The relevance of the Polish case lain in the fact that this country had passed similar stages of reforming the insurance sector to Ukraine in the context of integration into the European regulatory field. A thorough analysis of the Polish experience had identified a number of key lessons and practices that covered both regulatory and institutional aspects of development. The functioning of key aspects and practices in the Ukrainian-Polish context was discussed in Table 3.

Table 3. *Adaptation of the Polish experience in the Ukrainian insurance context*

Element	Polish context	Application in the Ukrainian context
Role of the regulator	Active KNF/NBP + EIOPA coordination	Establish a structure for regular consultations with EIOPA, launch ORSA training
Revaluation of capital	SCR indicators with a view of reserves and capital	Conduct a phased audit of reserves and implement stress tests
Institutional support	Training, consultations, "soft" start	Attract consultants, conduct workshops for insurers
Structural changes	Attract consultants, conduct workshops for insurers	Integrate internal control, risk governance, and audit risk assessment procedures
Market culture	Trust through transparent SFCR reporting	Provide public reports to increase market confidence

Note: *KNF – Komisja Nadzoru Finansowego; NBP – National Bank of Poland*
Source: *based on International Monetary Fund (2019), I. Laskowska (2024), T. Cicirko & M. Cicirko (2024), European Commission (2025)*

Based on the table above, it was concluded that Poland's case is an example of successful Solvency II integration, which was only possible with a comprehensive approach: from the regulator (e.g. KNF/NBP + EIOPA), the market (insurers), and technological and educational support. Financial sustainability was improved through capital audits and risk management, while market penetration required proactive policies and spatial incentives. Ukraine can adapt this experience: a gradual start with pilot audits, exercises, partnership with EIOPA and a gradual increase in market maturity and trust.

After analysing the Polish experience, recommendations were created for the integration of the Ukrainian insurance segment into the pan-European market. In particular, it was proposed to increase the institutional consolidation and regulatory stability of the Ukrainian insurance market by creating a single centre of responsibility for regulating the insurance market. The strategy was based on an analysis of the work of the Polish KNF, which coordinated not only supervision, but also provided methodological, analytical, and educational support. In view of the Polish experience, it was proposed to provide the NBU with strategic and methodological functions for the development of the national insurance market and introduced a regular dialogue with the EIOPA, which would include technical consultations, participation in working groups and data exchanges.

Another proposal was to gradually adapt Solvency II through pilot programmes. When planning such an implementation, Ukraine may consider the example of Poland, where in 2013-2015 the largest insurance companies, including PZU S.A., Warta S.A., and Allianz Polska, were involved in pilot projects, which allowed testing the new system without the risk of systemic imbalance in the market. Insurance companies that participated in the pilot programmes were selected based on the presence of large insurance portfolios, the functioning of actuarial and risk management departments, and readiness to implement internal risk assessment models (International Monetary Fund, 2019). Ukrainian insurance companies should consider the Polish experience in applying ORSA requirements, including, when conducting risk and solvency assessments. It was also necessary to use the stress test of the insurance market by creating

analogues of quality reporting templates (QRT) – a template for quality assessment reports. As part of the gradual adaptation of Solvency II to the Ukrainian insurance market, it was also proposed to allow a transition period for the introduction of capital and risk management requirements.

In addition to the already mentioned proposals, it was also recommended to introduce an educational and methodological component in planning the adaptation of the Ukrainian insurance market to European standards. In the context of this recommendation, the experience of Poland was relevant, where, since 2012, educational courses for actuaries, advanced training programmes for auditors, and experience exchange have been introduced. An example was the implementation in 2015 in Krakow of the Certified Programme "Audit Readiness under Solvency II", together with EIOPA, which aimed to train and improve the skills of Auditors of large insurance companies, in particular, Warta and Allianz Polska (International Monetary Fund, 2019). According to the Polish experience and the specific features of the Ukrainian insurance context, it was considered appropriate to introduce training in ORSA, SCR, SFCR, and resource and personnel management systems. Integration processes will also be facilitated by cooperation with Polish institutions, in particular Szkola Glowna Handlowa and the Polish Actuarial Association, and the translation and adaptation of key EIOPA documents. Despite the challenges of wartime, the Ukrainian insurance market demonstrated sustainability, the ability for Sustainable Development and readiness for integration into the pan-European insurance community. The analysis of the Polish experience had identified effective integration strategies that can be partially or fully adapted to the Ukrainian context.

Discussion

One of the key ideas of the presented work was that the development of the insurance market was influenced by a combination of internal and external factors, understanding of which helped to plan sustainable development. In the study, this idea took the form of SWOT analysis, the results of which were partially consistent with the conclusions presented in scientific papers, in particular, E. Siopi & T. Poufinas (2023), which analysed the profitability and financial stability of EU insurance groups in the context of the European sovereign debt crisis and the implementation of Solvency II. According to the cited researchers, the European sovereign debt crisis had a statistically substantial negative impact on profitability and a minor positive impact on financial stability, while Solvency II had no statistically substantial impact on either profitability or financial stability. The cited data were consistent with the results of a study, in which geopolitical instability and the associated decline in investment attractiveness were considered as a threat to the development of the Ukrainian insurance market. The analysis of the Polish experience conducted in this paper also confirmed the view that the implementation of Solvency II was only one of the conditions for integration into the European space, but does not guarantee the sustainable and stable development of the national insurance segment. M.G. Zare *et al.* (2024) analysed the influence of internal organisational factors in terms of structural vector autoregression. According to the results obtained, profitability was the most substantial factor in changes in the insurance segment, which explained 71% of fluctuations in the short term and 53% of fluctuations in the long term. With this in mind, the authors recommended that insurance companies use advanced risk analysis tools and set stricter standards in their ranking process. Such conclusions were consistent with the recommendation presented in the paper for applying ORSA requirements for risk assessment and solvency in the Ukrainian insurance context.

An analysis of internal factors was also presented by J. Park *et al.* (2021), who conducted a longitudinal study of 11,894 companies between 2001 and 2009 and established that reinsurance received from affiliated companies has a positive impact on the profitability of insurance companies, confirming the existence of internal markets in the insurance industry. The cited results partially coincide with the idea presented in this paper about the importance of integration processes for improving the sustainability and ensuring the sustainable development of the insurance segment. The difference, however, was that J. Park *et al.* (2021) viewed integration processes in the context of the single national insurance market, and the presented study – in the pan-European context. The results obtained were also partially consistent with the work of N. Sallemi & G. Zouari (2024), according to which external audit allowed insurance companies to better understand the needs of insured persons, identify risks, and ensure higher efficiency of insurance contracts. The authors also focused on the insurance segment of the South Asian region, while this study focused on the pan-European insurance segment, the origin and existence of which was determined by national characteristics.

The paper also examined the opinion that, in addition to prospects, the integration of the national insurance segment into the pan-European market involved overcoming certain obstacles. This idea was reflected in the analysis of the Polish insurance market and in the evaluation of the relevance of the Polish experience to Ukrainian realities. The idea of heterogeneity of the European insurance market was also confirmed in the work of A. Vintilă & M.D. Roman (2024), who analysed development trends in 2017-2023, that was, before and after the coronavirus pandemic, which came as a shock to the insurance segment of the economy. Based on the results of cluster analysis, A. Vintilă & M.D. Roman (2024) classified EU countries according to the stability of their insurance segments' responses to foreign economic

challenges. The results obtained were partially consistent with the approach to integration proposed in this paper, which was based on an analysis of the experience of countries with similar historical and legal contexts. However, unlike the study by A. Vintilă & M.D. Roman (2024), which analysed many diverse insurance segments, this work focused on comparing the Ukrainian-Polish context.

G. Bernardino (2020) suggested that the existence of a single regulator, such as the EIOPA, would allow for a harmonised national regulatory framework to create a pan-European insurance environment. This approach was consistent with the recommendation presented in this paper to establish a national structure for regular consultations with the EIOPA. The difference, however, was that G. Bernardino (2020) considered countries with an already functioning EIOPA, while Ukraine has not yet introduced this or a similar regulatory body. Based on the analysis of the Polish experience, M. Cicirko (2025) argued that the challenge to the existence of a single regulatory body in the insurance segment was the lack of universal standards in certain industries, especially in matters of sustainable development. According to the cited researcher, the lack of universal approaches and standards reduced the investment attractiveness of the insurance market and hinders its integration in the context of globalisation. This opinion confirmed the expediency of the comparative analysis of the regulatory framework for regulating the Ukrainian insurance market and the EU insurance market, and proposals for their harmonisation.

In this paper, individual strategies for integrating the Ukrainian insurance market into the pan-European insurance segment were also considered. One of the recommendations proposed in this paper was to introduce an educational and methodological component in planning the development of the Ukrainian insurance market in the context of globalisation. The educational and methodological components, in turn, provided for the priority of information in the strategic planning of the insurance market. The idea of the key role of information was partially consistent with the data from the study by W. Standaert & S. Muylle (2022), which was based on the results of an interview with 30 insurance experts from different European countries. According to the cited experts, the use of the open insurance strategy, which involved the use of publicly available sources, digital ecosystems, and application programming interfaces, was a prerequisite for the development of the national insurance market. C.P. Holland & A.S. Kavuri (2024) presented a theoretical model of the use of digital technologies in the strategic development of insurance companies, including maintaining their competitiveness in the context of globalisation. The recommendations of the experts partially coincided with the ideas presented in this paper, including the use of a variety of information as a source of sustainable development of insurance companies. However, in contrast to the presented study, the publication of C.P. Holland & A.S. Kavuri (2024) was more focused on digital tools for obtaining and processing information for further planning of the insurance company's work. The analysis of the presented work from the standpoint of the developed research provided an understanding of digital transformation strategies in the context of integration and increasing the competitiveness of the national insurance market. The ideas proposed in this paper for the development of the insurance market in the context of globalisation and its integration into the pan-European segment were partially confirmed in analysed studies. Due to its focus on the Ukrainian insurance market, the analysis can be interpreted as a contribution to the existing academic discourse. The intellectual heritage of the presented work was the development of strategies to increase competitiveness and promote the integration of the national insurance market in conditions of uncertainty.

Conclusions

The conducted study allowed identifying key challenges and opportunities for the development of the insurance market of Ukraine in the context of globalisation and the implementation of European standards. As a result of a comparative analysis of legislation and practices of the EU and Ukraine, it was established that Ukraine has reached a substantial formal approximation to Solvency II and IDD standards, but key elements such as SCR, ORSA, and SFCR systems have not yet been fully implemented. SWOT analysis showed that among the strengths of the Ukrainian insurance market were the functioning of a powerful regulator – the NBU, gradual harmonisation with EU legislation, and growing interest in digitalisation. Weaknesses included low insurance penetration – less than 2% of GDP compared to 7-10% at the European level, partial implementation of EU standards, and a shortage of qualified personnel. The main challenges to integration included fragmented legislation, the absence of specific regulations governing insurance intermediation, a lack of transparent reporting and recommendations, and the non-mandatory nature of ORSA in Ukraine. The full-scale military aggression of the russian federation and its associated restrictions and uncertainty also affected the sustainability and development of the Ukrainian insurance market: in 2022-2023, the number of registered insurers decreased from 128 to 101, and the number of concluded contracts decreased by more than 25,755 units.

The return on capital of Ukrainian risk insurers in 2023 decreased by 1.5 times compared to 2022. Based on the results of a comparative analysis of national and European legislation, it was determined that Ukraine adopted basic laws, and the NBU switched to risk-based supervision. In its strategic efforts, Ukraine can consider the Polish experience, where the pilot implementation of Solvency II in 2013-2016 was accompanied by close cooperation with EIOPA, step-by-step adaptation of

standards, staff training, and changes in internal management. The Polish insurance market showed an improvement in financial stability indicators: the level of SCR coverage increased from 266% in 2016 to 272% in 2022, exceeding the minimum recommended level of 130%. In view of the Polish experience, the following recommendations were offered to the Ukrainian insurance segment: creation of a centralised body for coordination with EIOPA, launch of pilot projects for the implementation of Solvency II, organisation of training programmes for actuaries and audits, development of electronic regulation, and harmonisation of the regulatory framework for insurance intermediaries. The limitations of the study were the limited time coverage of statistical data and the focus of the analysis primarily on the Polish case as a model for Ukraine. Prospects for further research are related to the analysis of digital ecosystems in insurance and the assessment of the impact of open insurance on integration processes in the Ukrainian context.

Acknowledgements

None.

Funding

None.

Conflict of Interest

None.

References

[1] Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part. (2014, May). Retrieved from https://eur-lex.europa.eu/eli/agree_internation/2014/295/oj/eng.

[2] Bernardino, G. (2020). Challenges and opportunities for the insurance sector in Europe. *Annals of Mines – Industrial Realities*, 1, 99-102. doi: 10.3917/rindu1.201.0099.

[3] Cherep, A., & Kishko, Yu. (2024). Prospects for the development of the insurance market of Ukraine in the context of European integration processes. *State and Regions. Series: Economics and Business*, 2, 78-83. doi: 10.32782/1814-1161/2024-2-13.

[4] Cicirko, M. (2025). Sustainable investment challenges from the perspective of insurance companies in the European and Polish market. In J. Bataller-Grau, M. Kawinski & P. Marano (Eds.), *Sustainability and the insurance market* (Vol. 10, pp. 115-138). Cham: Springer. doi: 10.1007/978-3-031-72186-1_6.

[5] Cicirko, T., & Cicirko, M. (2024). Insurance sector challenges in the light of ESG. The case of Poland. *Journal of Management and Financial Sciences*, 16(51), 59-79. doi: 10.33119/jmfs.2024.51.3.

[6] Directive (EU) 2016/97 of the European Parliament and of the Council "On Insurance Distribution". (2016, January). Retrieved from https://eur-lex.europa.eu/eli/dir/2016/97/oj/eng.

[7] Directive 2009/138/EC of the European Parliament and of the Council "On the Taking-Up and Pursuit of the Business of Insurance and Reinsurance (Solvency II)". (2009, November). Retrieved from https://eur-lex.europa.eu/eli/dir/2009/138/oj/eng.

[8] Dluhopolskyi, O., Ivashuk, Yu., & Herasymets, A. (2025). Trends in the development of the global insurance market under conditions of uncertainty. *World of Finance*, 1, 147-163. doi: 10.35774/sf2025.01.147.

[9] European Banking Authority. (2023). *European Banking Authority single programming document years 2024-2026 – final*. Retrieved from https://surl.lt/pxrzns.

[10] European Commission. (2025). *2025 Environmental implementation review country report – Poland*. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025SC0320.

[11] European Passport Rights for Insurance and Reinsurance Undertakings (Amendment) Regulations. (2021, July). Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:72019L2177MLT_202104913.

[12] Ghaleb, B.D.S. (2024). The importance of using SWOT analysis in business success. *International Journal of Asian Business and Management*, 3(4), 557-564. doi: 10.55927/ijabm.v3i4.10857.

[13] Hien, T.T.L., Tri, H.T., & Van, P.T.T. (2024). Role of insurance in promoting sustainable development in OECD countries: Mediation analysis. *WSB Journal of Business and Finance*, 58(1), 151-166. doi: 10.2478/wsbjbf-2024-0014.

[14] Holland, C.P., & Kavuri, A.S. (2025). Insurtech strategies: A comparison of incumbent insurance firms with new entrants. *The Geneva Papers on Risk and Insurance – Issues and Practice*, 50, 78-105. doi: 10.1057/s41288-024-00341-0.

[15] Insurance Europe. (n.d.). *Annual report 2024-2025*. Retrieved from https://surl.li/plhgax.

[16] International Monetary Fund. (2019). Republic of Poland: Financial sector assessment program-technical note-insurance sector regulation and supervision, *Country Report No. 2019/121*, 2019(121). doi: 10.5089/9781498313209.002.

[17] Kachula, S., & Bieliakova, K. (2024). Development of Ukraine's insurance market under martial law. *Investment: Practice and Experience*, 20, 59-64. doi: 10.32702/2306-6814.2024.20.59.

[18] Kneysler, O., Kulyna, H., & Fedorovych, I. (2024). Transformation of the global insurance market in the context of the introduction of new business models and modern insurance technologies. *World of Finance*, 2, 41-54. doi: 10.35774/sf2024.02.041.

[19] Kryvoshlyk, T., Dymnich, O., Stetsyuk, T., Baranov, A., Britchenko, I., & Trynchuk, V. (2024). Financial capacity of insurance companies as a factor of stable development of the Ukrainian insurance market. *Studies at the University of "Vasile Goldis" Arad – Economics Series*, 34(2), 57-85. doi: 10.2478/sues-2024-0008.
[20] Lashchyk, I., Kondrat, I., Viblyi, P., & Bilets, V. (2020). Ukrainian insurance market: Current state and development prospects. *Galician Economic Journal*, 66(5), 105-112. doi: 10.33108/galicianvisnyk_tntu2020.05.105.
[21] Laskowska, I. (2024). The development of the life insurance market in Central and Eastern European countries. *Economics and Law*, 23(3), 477-492. doi: 10.12775/eip.2024.024.
[22] Law of Ukraine No. 1909-IX "On Insurance". (2021, November). Retrieved from https://zakon.rada.gov.ua/laws/show/1909-20#Text.
[23] Law of Ukraine No. 1953-IX "On Financial Services and Financial Companies". (2021, December). Retrieved from https://zakon.rada.gov.ua/laws/show/1953-20#Text.
[24] Levchenko, O., Dovhenko, Y., & Yaremenko, L. (2024). Insurance in Ukraine: Analysis of dynamics, risks and opportunities. *Change Management and Innovations*, 12, 32-39. doi: 10.32782/CMI/2024-12-5.
[25] López Domínguez, I. (2023). Insurance companies in the European Union: General criteria affecting investment policies. *Journal of Governance and Regulation*, 12(2), 77-83. doi: 10.22495/jgrv12i2art7.
[26] Nalyvaichuk, I., & Panukhnyk, O. (2024). Ukrainian insurance market during the war. In *Proceedings of the 12th International scientific-practical conference "Formation of the mechanism of national economic systems competitive positions strengthening in global, regional and local dimensions"* (pp. 74-75). Ternopil: Ternopil Ivan Puluj National Technical University.
[27] National Bank of Ukraine. (2024). *Services provided by life insurers and loans issued by finance companies grow in volume – Q4 non-bank financial sector review*. Retrieved from https://surl.li/fejljn.
[28] Nepochatenko, O., Prokopchuk, O., & Malyovanyi, M. (2024). Development of the insurance market of Ukraine in the context of modern challenges. *Collected Works of Uman National University*, 105, 7-16. doi: 10.32782/2415-8240-2024-105-2-7-16.
[29] Palmisano, F., & Sacchi, A. (2024). Trust in public institutions, inequality, and digital interaction: Empirical evidence from European Union countries. *Journal of Macroeconomics*, 79, article number 103582. doi: 10.1016/j.jmacro.2023.103582.
[30] Papiernik-Wojdera, M., & Misztal, A. (2024). Long-term solvency and sustainable development of logistics sector – evidence from Poland. *Scientific Papers of Silesian University of Technology. Organization and Management Series*, 204, 477-490. doi: 10.29119/1641-3466.2024.204.28.
[31] Park, J., Choi, B.P., & Ho, C.-L. (2021). The impact of internal and external reinsurance on insurers' performance and price. *Managerial Finance*, 47(7), 937-950. doi: 10.1108/mf-12-2019-0619.
[32] Resolution of the National Bank of Ukraine No. 153 "On Approval of the Regulation on Licensing and Registration of Financial Service Providers and the Conditions for their Activities in the Provision of Financial Services". (2021, December). Retrieved from https://zakon.rada.gov.ua/laws/show/v0153500-21#Text.
[33] Rud, I., & Agarkov, D. (2024). Directions of the development of the insurance market of Ukraine in the conditions of war. *International Science Journal of Management, Economics & Finance*, 3(3), 10-18. doi: 10.46299/j.isjmef.20240303.02.
[34] Sallemi, N., & Zouari, G. (2024). Effect of external corporate factors on takaful performance. *Asian Journal of Accounting Research*, 9(3), 217-228. doi: 10.1108/ajar-10-2023-0336.
[35] Shirinian, A., & Tatarina, T. (2024). Economic characteristics of the insurance market in Ukraine at the current stage of development. *Economy and Society*, 68. doi: 10.32782/2524-0072/2024-68-33.
[36] Siopi, E., & Poufinas, T. (2023). Impact of internal and external factors on the profitability and financial strength of insurance groups. *International Advances in Economic Research*, 29, 129-149. doi: 10.1007/s11294-023-09873-y.
[37] Skydan, O., Vilenchuk, O., Pyvovar, P., Topolnytskyi, P., & Shubenko, I. (2023). Identification and interpretation of internal factors influencing the agricultural insurance market in Ukraine. *Scientific Horizons*, 26(10), 150-162. doi: 10.48077/scihor10.2023.150.
[38] Standaert, W., & Muylle, S. (2022). Framework for open insurance strategy: Insights from a European study. *The Geneva Papers on Risk and Insurance – Issues and Practice*, 47, 643-668. doi: 10.1057/s41288-022-00264-8.
[39] Tiulenieva, Yu., & Antoshko, T. (2019). Evaluation of the capacity of insurance companies in Ukraine: Solvency or Solvency II? *Current Economic Problems and Entrepreneurship*, 23, 41-48.
[40] Vintilă, A., & Roman, M.D. (2024). Resilience analysis of the European insurance industry. *Journal of Social and Economic Statistics*, 13(2), 58-81. doi: 10.2478/jses-2024-0009.
[41] Zare, M.G., Tehranchian, A.M., Samimi, A.J., Motamenii, M., & Rudari, S. (2024). The impact of internal organizational factors on the performance of the insurance industry: Using the SVAR approach. *Pakistan Journal of Life and Social Sciences*, 22(2), 11308-11317. doi: 10.57239/pjlss-2024-22.2.00854.

Визначення ключових викликів регулювання страхового ринку в контексті глобалізації та інтеграції до європейського ринку

Ілля Буланцов
Аспірант
Київський національний університет технологій та дизайну
01011, вул. Мала Шияновська, 2, м. Київ, Україна
https://orcid.org/0009-0006-7487-1601

Анотація. Метою даної роботи було виявлення факторів, які формують розвиток українського страхового сегменту в контексті глобалізації та обумовлюють його інтеграцію до європейського ринку. У дослідженні було застосовано SWOT-аналіз страхового ринку України, порівняльний аналіз українського та європейського страхового законодавства, а також кейс-аналіз інтеграції Польщі до європейського страхового ринку як приклад поетапного впровадження європейських стандартів у національне регулювання. В результаті проведеного аналізу було виявлено, що розвиток національного страхового ринку відбувався в нестабільних та несприятливих умовах, в результаті чого у 2022-2023 роках відбулося скорочення зареєстрованих страховиків із 128 до 101, а також кількості укладених страховий договорів – на 25 755 одиниць. Український страховий ринок також продемонстрував низький рівень проникнення страхових послуг – 2 % від валового внутрішнього продукту, в той час як загальноєвропейські показники проникнення склали 7-10 %. Аналіз польського досвіду довів, що впровадження європейських стандартів Solvency II та співпраця з European Insurance and Occupational Pensions Authority сприяла сталому розвитку національного страхового сегменту. У період з 2016 по 2022 рік рівень покриття Solvency Capital Requirement збільшився з 266 % до 272 %, враховуючи мінімально рекомендований рівень у 130 %. Таке зростання означало, що польський страховий ринок не тільки адаптувався до європейських норм, але й продемонстрував потенціал до сталого розвитку. Результати порівняльного аналізу виявили, що український страховий сегмент продемонстрував стійкість до криз, а його потенціал до сталого розвитку може бути підсилений шляхом адаптації досвіду інших країн та інтеграції до загальноєвропейського страхового простору. Дані дослідження можуть бути використані для підвищення стійкості українського страхового ринку в умовах невизначеності, а також сприяння його подальшого сталого розвитку в контексті глобалізації та євроінтеграції

Ключові слова: фінансова стійкість; ризик-менеджмент; наглядовий орган; міжнародні регулятори; законодавча гармонізація

ECONOMIC FORUM
Journal homepage: https://e-forum.com.ua/en
Vol. 15, No. 3, 2025, 30-40
Article's History: Received: 05.05.2025 Revised: 01.08.2025 Accepted: 08.09.2025

UDC 005.94 *DOI: 10.62763/ef/3.2025.30*

Artificial intelligence in recruitment: Challenges, opportunities and prospects for use in Ukraine

Iryna Kinash*
Doctor of Economic Sciences, Professor
Ivano-Frankivsk National Technical University of Oil and Gas
76019, 15 Karpatska Str., Ivano-Frankivsk, Ukraine
https://orcid.org/0000-0002-5391-6560

Volodymyr Romanovych
Postgraduate Student
Ivano-Frankivsk National Technical University of Oil and Gas
76019, 15 Karpatska Str., Ivano-Frankivsk, Ukraine
https://orcid.org/0000-0003-1577-2081

Abstract. The purpose of the study was to analyse contemporary practices of using artificial intelligence in recruitment and to assess the effectiveness of these tools for future applications. It was substantiated that under the influence of digital technologies, activities related to the search and selection of personnel were being transformed. Artificial intelligence demonstrated the greatest efficiency in the processes of candidate screening, automated planning, interviewing, and collecting analytical personnel data. Ethical and legal aspects of using artificial intelligence were analysed, the distinctive features of traditional and artificial intelligence methods used at different stages of recruitment were summarised, the challenges of using artificial intelligence in recruitment were identified and solutions were proposed. The problems that occurred in companies that used AI in recruitment and the management decisions that helped to improve results were investigated. Results have demonstrated the following benefits of using artificial intelligence: saving time, improving candidate experience, and increasing overall recruiting efficiency. The study was conducted on the effectiveness of using various artificial intelligence tools for candidate assessment for the position of business analyst compared to human experts. It showed that advanced artificial intelligence tools (Claude, Grok, ChatGPT, Gemini) evaluated candidate profiles with a high level of agreement with human assessments (all $p > 0.05$), while screening more than 8 times faster – taking only 10 seconds compared to 2 minutes for a human. The potential of artificial intelligence for optimising hiring processes was confirmed. It was found that Ukraine was actively joining the global trends of HR digitisation. The share of Ukrainian companies that already used artificial intelligence recruitment reached 50.4%. The most popular were chatbots for the initial interview, candidate tracking systems with artificial intelligence elements, and tools for automatic skills testing. HR specialists in Ukraine considered the main challenges of artificial intelligence implementation to be the insufficient level of knowledge and expertise. The practical significance of the research lies in the possibility of its results being used by HR professionals, recruitment agencies, and company managers to improve the efficiency of hiring processes

Keywords: selection of personnel; recruiting; HR automation; digitalisation of hiring; efficiency

Introduction

From 2017, the labour market was highly dynamic and competitive for talented specialists, encouraging companies to look for different tools, which can help with optimisation of the recruitment process. Given the global dynamics of the development of digital technologies, the labour market is being transformed because of the in-

Suggested Citation:
Kinash, I., & Romanovych, V. (2025). Artificial intelligence in recruitment: Challenges, opportunities and prospects for use in Ukraine. *Economic Forum*, 15(3), 30-40. doi: 10.62763/ef/3.2025.30.

*Corresponding author

fluence of innovations, in particular, artificial intelligence (AI) tools. In conditions of high competition for talented specialists, conventional recruitment methods often turn out to be ineffective in terms of speed, objectivity, and costs. The use of AI in recruitment opens up new opportunities for automating routine processes, improving the quality of candidates selection, and personalising communication with candidates. As noted by S.S. Ebrahim & H.A. Rajab (2025), artificial intelligence is becoming a key factor in the formation of a modern workforce, allowing organisations to significantly increase the efficiency of recruitment processes. However, limitations of using AI tools were also noted, as they may not fully understand the main complexities of human communication and cultural context. This gap can lead to misinterpretations, biases in candidate profiling, or miscommunication during the assessment process. Meantime, the integration of AI into the field of personnel selection created new challenges related to ethics, fairness and legal regulation. M. Soleimani *et al*. (2022) emphasised the importance of understanding cognitive biases, when developing artificial intelligence systems for recruitment, given that these biases may foster discriminatory behaviour against certain groups of candidates. The researchers noted that biases can arise at different stages of using the AI, from the development of a dataset for training algorithms to the interpretation of the results. Researchers proposed a comprehensive approach to minimising these biases, including diversifying development teams and implementing mechanisms for auditing algorithms. C. Zhang *et al*. (2025) pointed out the need for a balance between efficiency and fairness, when using AI in recruitment processes. The advantages of using AI tools in recruitment at the organisational level were highlighted. These benefits included optimising overall outcomes, improving perceptions of fairness, ensuring strict compliance with legal requirements, and promoting responsible and ethical decision-making. However, attention was also drawn to the need for proper protection of the confidential data of potential job candidates.

The results of the study by P. Horodyski (2023a) showed that candidates perceive AI technology positively in hiring processes and consider it useful and easy to use. The reduced response time was recognised as the most important advantage. The lack of nuance in human judgment, low accuracy and reliability, and the immaturity of the technology, were identified as the main drawbacks of AI in recruitment. Ukrainian researchers V. Hoichuk & N. Lyubomudrova (2023) examined how and with which technologies artificial intelligence is being implemented in Ukrainian companies. They found that companies use chatbots, integrated mobile applications, augmented reality technologies, and cloud services. The identified risks included staff reductions, high capital investment required for software installation and maintenance, and the need for staff retraining. A. Sichkar (2025) suggested that a strategic framework for AI regulation has been established in Ukraine, as opposed to just legislative measures, and that the state was demonstrating determination in developing approaches to artificial intelligence – considering both European standards and national characteristics. K. Skibska (2023) argued that advanced technologies and the information environment stimulated the process of learning and acquiring new knowledge, skills, and abilities. Scenarios were considered in which the role of humans in this process could be replaced. The researcher concluded that soon artificial intelligence will transform from an innovative solution into a widely accepted tool in the recruiter's workflow. This was especially relevant for Ukraine, where the level of technological maturity of the HR sector was uneven, and the legislative field was still being formed. As noted by O. Kravchuk *et al*. (2023), Ukrainian companies demonstrated a growing interest in the digitalisation of recruitment, but faced a number of barriers, including a lack of experts and technical difficulties in integration. The purpose of the study was to investigate contemporary practices of using artificial intelligence in recruitment and evaluate the effectiveness of tools for application prospects.

Literature Review

The study of the use of artificial intelligence in the field of recruitment attracted the attention of many researchers due to the rapid development of digital technologies and their impact on human resource management processes. An analysis of the scientific literature demonstrated a variety of approaches to the investigation of this issue, covering technological, organisational, ethical, and legal aspects. O. El Ouakili (2025) analysed the impact of artificial intelligence on different stages of the hiring process, from the search for candidates to making hiring decisions. The researcher emphasised that AI can not only automate routine tasks, but also provide a more objective approach to candidate assessment and minimising human bias.

P. Horodyski (2023b) extended the Unified Adoption and Use of Technologies (UTAUT) theory to include the frequency of AI use. According to the researcher, AI is an important factor, in addition, the study showed that recruiters, who interacted with AI tools more often demonstrated a higher level of adoption of these technologies in their professional activities. This finding was supported by O. Ali & L. Kallach (2024), who in their systematic review demonstrated that AI technologies can significantly improve the efficiency of recruitment processes through automated candidate screening, intelligent talent search, and predictive analytics. T. Szandała (2025) conducted a comparative study of the effectiveness of large language models (ChatGPT, Mistral, Google Gemini) and human experts in the context of IT recruitment. The results showed that some AI models demonstrated higher consistency of assessments compared to human experts, which indicated the possibility of utilising these

technologies for standardisation candidate assessment processes. These findings were consistent with research by N. Tusquellas *et al*. (2024), who found that AI was being used to improve recruitment processes, identify individual learning and skill development needs, develop personalised learning paths, and predict employee turnover. N. Bennett & C.L. Martin (2025) examined the challenges organisational leaders face due to the growing role of AI as a talent management tool. The researchers noted that AI has already become an important element in customer-facing platforms, such as Amazon and Netflix. Companies were rapidly implementing AI to improve talent management practices, including recruiting, screening, and performance appraisal. O. Allal-Chérif *et al*. (2021) examined the application of artificial intelligence in recruitment processes, focusing on its impact on the efficiency and quality of candidate selection. The researchers emphasised that AI allowed for a significant reduction in the time required to search and assess candidates, which was especially important in conditions of high competition for talent. P. Gupta *et al*. (2024) complemented this understanding by investigating the impact of artificial intelligence on employee productivity in the digital age and analysing how AI technologies affect different aspects of work activities.

A comprehensive review of the literature on fairness in the use of AI for recruitment and selection purposes was provided by C. Rigotti & E. Fosch-Villaronga (2024). The researchers focused on a critical analysis of how the concept of fairness was interpreted and implemented in AI systems for recruitment. E.S. Tenakwah & C. Watson (2025) highlighted the important role of strategic human resource management and leadership in developing workforce capabilities for the AI-driven automation age. The researchers analysed the existing literature, the findings of sector specialists, and practical case studies to create a structure for educating and assisting employees in the artificial intelligence age. K. Dai & Q. Liu (2024) examined the use of AI in an educational context, which has important implications for the development of the skills of the future workforce. Although their focus was on learning English as a foreign language, the results of the study have broader application to understanding, how AI can transform the processes of personnel learning and development in companies. Moreover, the study conducted by S. Bankins *et al*. (2024) substantiated the next step after education – career. The researchers proved that AI affected the career trajectories of people at different stages of professional development. Using the theory of career stages, researchers considered the consequences of AI for careers, identified key barriers and enabling factors for the use of AI in this area, and also revealed how the use of AI affects people's career competencies. Thus, the review of scholarly works illustrated the diverse nature of research concerning AI implementation in hiring processes, covering technological, organisational, ethical, and legal issues. However, there was a need for a more in-depth study of the specifics of implementing AI in recruiting processes, which confirmed the importance of this investigation.

Materials and Methods

To accomplish the research objective, a combination of general scientific and specialised research methods was employed. The methodological basis of the study was a systemic approach, which allowed considering artificial intelligence in recruiting as a complex system of interconnected elements that function in a certain environment. To analyse the state of the use of artificial intelligence in recruiting, methods of theoretical generalisation, systematisation and classification were used. This allowed for the systematic arrangement of data on the key areas, where AI was applied in recruitment processes, to identify key trends and development prospects. Statistical analysis and forecasting methods were used to analyse statistical trends in the global AI-recruitment market. In particular, data on the volume of the global market for AI-recruitment solutions for the period 2020-2023 and forecasts of its development until 2030 were analysed (AI recruitment market..., 2023; Kumar, 2025). Data from LinkedIn surveys on the share of companies using AI tools in recruitment processes were also processed (Lobosco, 2024). To explore specific cases of AI integration in international enterprises, the case study technique was applied, which enabled a thorough investigation of the experience of companies such as Brother International Corporation, Electrolux Group, LinkedIn (Thomas, 2020; Electrolux Group digitalizes..., 2023; David, 2025). This allowed identifying specific advantages and challenges that companies faced, when implementing AI in recruitment processes. An experimental method was used to empirically study the effectiveness of various AI tools for assessing candidates compared to human experts. The experiment was conducted in two stages. The first stage analysed the results of the study by T. Szandała (2025), which evaluated the reliability of evaluations of candidates for the DevOps position performed by three experienced human experts and three large language models (ChatGPT, Mistral, Google Gemini). The Fleiss' Kappa index was used to assess the consistency between the evaluators. It indicated the degree of agreement above chance (ranging from -1 to 1, where 1 represented perfect agreement, 0 indicated chance-level agreement, and negative values were worse than chance). Higher index values indicated greater stability and reliability of the assessments.

The second stage included empirical study, which compared the effectiveness of assessments of AI tools (Claude, Grok and Google Gemini) with human experts in assessing candidates for the position of Business Analyst. For this purpose, 3 LinkedIn profiles of Kvitoslava Maksymiv (n.d.), Mariana Beznosova (n.d.), Sophia Ishchiv (n.d.) and 3 experts were selected, who evaluated them according to five criteria: education, technical skills, work experience, certificates, and project complexity.

The experts evaluated using a 5-point scale, where 5 – the highest value and 1 – the lowest. The Student's t-test was used for statistical analysis of the results. To analyse the state and prospects of artificial intelligence recruitment evolution in Ukraine, documentary analysis and secondary data assessment methods were utilised. In particular, the research outcomes of the portal Robota.ua (2024) on the use of AI tools in recruitment processes by Ukrainian companies, along with regulatory framework governing artificial intelligence implementation in Ukraine, for example, Order of the Cabinet of Ministers of Ukraine No. 1556-r (2020), were analysed. The comprehensive use of these methods facilitated a comprehensive analysis of the issues of using artificial intelligence in recruitment and helped to achieve the set goal of the study.

Results and Discussion

The contemporary labour market is characterised by high dynamism and competition for talented specialists, which encourages companies to look for effective tools to optimise the recruitment process. Artificial intelligence is becoming one of the promising areas of development of recruitment services, as it offers innovative solutions for automating and improving personnel selection processes. The introduction of artificial intelligence technologies in recruitment allowed companies not only to speed up the hiring process, but also to increase its quality, objectivity, and efficiency. Although AI can help managers to make decisions, it can also create problems, such as bias in data sets and algorithms. The implementation of AI in human resources recruitment demonstrated a steady growth trend worldwide. As can be seen from Figure 1, the global AI recruiting solutions market grew from USD 380.6 million in 2020 to USD 661.56 million in 2023 and is projected to reach over USD 1,119.8 billion by 2030. This corresponded to a CAGR of about 6.7% and reflected the rapid adoption of such technologies in business processes.

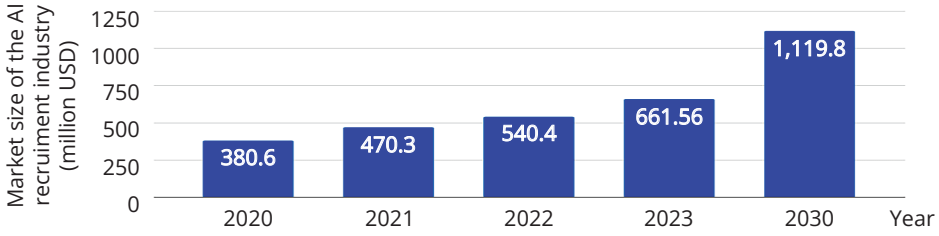

Figure 1. *Global AI recruitment market (estimated volume), 2020-2030*
Source: *AI recruitment market: Global industry analysis and forecast (2024-2030) (2023)*

In addition to financial indicators, the share of companies using AI-based recruitment tools was also growing. The results of a survey by Waytogo Consultants showed that in 2023, 44% of employers involved AI at various stages of recruitment, while in 2019 there were significantly fewer of them (March 2025 recruitment insights..., 2025). A. Rukadikar *et al*. (2025) suggested that the integration of artificial intelligence into the recruitment process had become widespread, as it helped organisations to align recruitment strategies with overall business goals. AI has effectively revolutionised the way organisations and industries conduct recruitment. O. El Ouakili (2025) found that companies using AI in recruitment achieved a 50% reduction in time to hire and significant cost savings. Artificial intelligence was utilised at different points in the recruitment process, encompassing activities such as sourcing and engaging candidates, screening resumes, conducting interviews, evaluating applicants, and making final hiring decisions. AI-driven candidate sourcing and screening utilised sophisticated natural language processing technologies to efficiently examine and interpret vast numbers of resumes in just a few minutes. In addition, the researcher noted that AI systems can evaluate resumes according to predetermined parameters like competencies, experience, and education. The use of this technology dramatically shortens the time recruiters typically devote to manual candidate screening – often reducing a process that could take weeks and accelerating the initial stages of selection. Organisations depended on recruitment agencies to reach passive candidates, but this approach was limited by the agencies' own networks and databases, resulting in high costs. Consequently, only a small number of organisations adopted this method, which kept competition for passive candidates low. AI-powered recruitment solutions addressed these challenges by enabling companies to avoid agency fees and directly access millions of passive candidates through platforms like Facebook and LinkedIn, making the process more affordable. The integration of virtual reality into interviews helped to minimise bias and enhanced the efficiency of the interview process. Additionally, real-time feedback and sentiment analysis offerred immediate responses to candidates during the application stage, ensuring a smooth and engaging experience. Scheduling was another vital aspect of recruitment that can be greatly improved with AI. Automated scheduling tools streamline the coordination of interviews among various stakeholders, minimising the back-and-forth communication that often caused delays and scheduling issues. A comparison of conventional and AI methods used for different stages of the recruitment process was presented in Table 1.

Table 1. *Comparison of conventional and AI recruitment methods*

Recruitment stage	Conventional methods	AI-based methods
Candidate search	Posting job advertisements, using contact networks, working through agencies	Social media analysis, predictive analytics, targeted passive candidate acquisition
CV screening	Manual review of resumes, basic keyword screening	Natural language processing, semantic analysis, machine learning-based fit assessment
Interviewing	Phone, video or in-person interviews	Automated video interviews with facial expression and speech analysis, chatbots for initial interviews
Candidate assessment	Subjective assessment of interviewers, skills testing	Intensive data analysis from multiple sources, performance prediction
Decision making	Based on personal preferences and intuition. Depends on the experience and skills of the recruiter	Data-driven and algorithmic best fit analysis
Adaptation	Standardised onboarding programmes	Personalised adaptation programmes based on candidate profile

Source: *based on O. El Ouakili (2025), C. Zhang et al. (2025), S.S. Ebrahim & H.A. Rajab (2025)*

The biggest advantage of using AI in recruitment is the increased efficiency and accuracy of processes. A. Rukadikar *et al*. (2025) proved that organisations using AI-based recruitment solutions saw a 25% reduction in average time to fill vacancies compared to those relying on traditional methods. Ultimately, this leads to better job outcomes. However, despite the benefits of using AI tools, there were also certain risks, especially the risk of bias and discrimination. While AI was capable of successfully completing tasks such as resume screening and interview analysis, the underlying model may not accurately assess candidates' abilities or job suitability because of its limitations. Therefore, some qualified candidates may be unfairly rejected, while others, who were poorly suited for the role may be selected, which undermined fairness. An unbalanced training dataset that over-represents certain groups or minorities may introduce various biases.

C. Zhang *et al*. (2025) argued that historical bias reinforced existing inequalities by continuing discrimination against certain groups within the hiring process. Aggregation bias occurs, when a single model fails to accurately represent the diversity of different groups, thereby disadvantageous to some candidates during selection. For instance, an algorithm trained on data reflecting male dominance in technical or engineering roles may overlook qualified female candidates for these positions. Algorithmic decisions can also provoke negative emotional responses, such as anger, among applicants or employees. To encourage acceptance of these systems, a balanced approach was implemented, where algorithms generate recommendations, but humans conduct the final review and make the ultimate decisions. While this hybrid method promoted fairness, it also introduced human involvement that can reduce the efficiency of fully automated decision-making. While AI tools in recruitment can efficiently process applications for large numbers of candidates, they often fail to ensure fair participation for underrepresented groups, revealing a trade-off between efficiency and fairness. The challenges of using artificial intelligence in recruitment and possible solutions were presented in Table 2.

Table 2. *Challenges of using AI in recruitment and solutions*

Challenge	Description	Solutions
Algorithmic bias	AI can adopt and reinforce existing biases in the training data	Application of diverse and balanced datasets; implementation of routine algorithmic fairness evaluations
Limited data sets	Insufficient data to train AI on certain groups of candidates	Enrichment of data; engagement of experts from different industries to validate models
Data privacy	Collection and use of candidates' personal data	Transparent data policies; obtain explicit consent; comply with GDPR and other regulatory requirements
Technical complexities	Complexity of implementing and maintaining AI systems	Gradual implementation; collaboration with technical experts; regularly train staff
Human oversight	Definition of the role of humans in decision-making	Hybrid approach, where AI provides recommendations and humans make the final decision
Ethical considerations	Issues of fairness, transparency and accountability	Development of ethical principles for the use of AI, engagement of ethics committees

Source: *based on O. El Ouakili (2025), C. Zhang et al. (2025), N. Kumar (2025)*

Thus, algorithmic bias was determined by the fact that AI can reflect and even reinforce biases that already existed in the training data. This meant that algorithms may unjustly assess candidates based on gender, ethnicity, or other characteristics. To minimise this risk, it was important to use diverse, balanced datasets and to regularly evaluate the fairness of algorithms. Limited data sets – for certain professions or groups of

candidates, there may be a lack of sufficient quality data. This reduced the effectiveness and accuracy of AI-driven decisions. One way to address this was by expanding data sets and involving experts from various industries to review the models. In addition, processing of candidates' personal data required clear and transparent data protection policies, obtaining users' consent, and full compliance with GDPR and other relevant privacy regulations. Implementation and maintainance of AI systems in recruitment was a complex process that required resources and expertise. This included integrating new technologies, training personnel, and providing ongoing system support. Human oversight – it was crucial to clearly define the role of humans in decision-making about candidates. The most effective approach was usually a hybrid one, where AI assisted, but final decisions were made by humans. The use of AI should be based on ethical principles – ensuring transparency, explainability, and accountability of decisions. It was advisable to involve ethics committees and to develop relevant internal organisational policies. Minimising these challenges will largely depend on the professional approach of recruiters to the hiring process, adherence to regulatory requirements, and compliance with ethical principles. To understand the practical value of using AI in recruiting, Table 3 had been created.

Table 3. *Example of companies using AI in recruitment*

Company	Problem	Solutions	Results
Brother International Corporation	The company needed to improve its employer brand and enhance candidate engagement, while maintaining high recruitment quality standards	Brother International implemented an AI-powered platform that included personalised job recommendations, interactive chatbots for candidate engagement, an enhanced AI-integrated career site, and automated candidate screening tools	1) Increase in completed applications by 140% in three weeks. 2) Significantly improve employer brand visibility. 3) Optimise talent acquisition and candidate engagement
Electrolux Group	Electrolux Group was experiencing inefficiencies in its recruitment process due to lengthy manual interview scheduling and a high rate of incomplete applications	The company implemented the Phenom Intelligent Talent Experience platform. It includes AI-driven role matching, video assessments, automated interview scheduling, and comprehensive candidate engagement tools	1) 84% increase in application conversion. 2) 51% reduction in open applications. 3) 9% reduction in time to hire. 4) 78% reduction in time to coordinate recruitment
LinkedIn	LinkedIn sought to streamline the hiring process, automate routine tasks, and improve the quality of candidate interactions	LinkedIn launched Hiring Assistant, an AI-powered agent that automates up to 80% of the offer process. The assistant integrates into LinkedIn's workflow, leveraging candidate profile analysis, recruiter experience memory, and personalised recommendations	1) Reduce candidate search time from 15 minutes to 30 seconds. 2) Increase recruiter productivity and candidate quality. 3) Improve candidate experience by automating routine tasks

Source: *based on J. Thomas (2020), Electrolux Group digitalizes key HR processes for distinct hiring edge (2023), M. Lobosco (2024), LinkedIn enters AI agent race with linkedin hiring assistant (2024), M. David (2025)*

These cases demonstrated significant benefits of using AI to optimise the recruitment process, including time savings, improved candidate experience, and increased efficiency. During 2020-2023, companies have increasingly implemented new AI tools in their work to perform various tasks. The most time-consuming task for recruiting teams was screening (reviewing) a candidate's profile, evaluating it, and making a decision to understand whether to invite the candidate to the next recruitment stage – an interview or a test task. T. Szandała (2025) presented the consistency of assessments of candidates for a DevOps position performed by three experienced human experts and three large language models (ChatGPT, Mistral, Google Gemini). To assess the agreement between raters, the Fleiss' Kappa index was used, which showed the degree of agreement above chance (from -1 to 1, where 1 – perfect agreement, 0 – chance, and negative values – worse than chance). Higher index values indicated greater stability and reliability of the ratings (Table 4).

Table 4. *Comparison of the values of the ratings of human experts and AI tools*

Indicator	Human experts	ChatGPT	Mistral	Google Gemini
Average criterion score	0.582	0.432	0.790	0.824
Average assessment time (minutes)	2.5-3.7	~0.17 (10 seconds)	~0.17 (10 seconds)	~0.17 (10 seconds)
Reliability of assessments	Moderate, depends on the expert	Moderate	High	High

Source: *based on T. Szandała (2025)*

The Fleiss' Kappa index for human experts averages 0.582, indicating moderate agreement between ratings. ChatGPT has an average of 0.432, which was below human levels. Mistral and Google Gemini models showed higher agreement, 0.790 and 0.824, respectively, exceeding human levels. AI assessment times were approximately 15 times faster than humans, making them attractive for improving recruitment efficiency. Therefore, the findings indicated that Mistral and Google Gemini models significantly exceed the agreement of human experts, while ChatGPT has moderate agreement, but lower than other AI. This illustrated the capability of contemporary LLMs in assessment standardisation, while also emphasising the variations in model behaviour. However, despite better agreement, AI does not always replace the human factor, especially on complex or subjective questions. This data indicated that a balanced approach combining the use of AI with human experience and expertise was appropriate. A study was conducted using Student's t-test to compare the effectiveness of the assessments of AI tools Claude, Grok, and Google Gemini with human experts. The evaluation of applicants was conducted for the position of Business Analyst, based on the candidates' LinkedIn profiles. To do this, first of all, the criteria for assessing candidates were defined: 1) education – correspondence of the speciality (e.g., IT, economics, MBA); 2) technical skills – mastery of tools (SQL, Python, Tableau, Jira, BPMN); 3) work experience – number of years in business analysis, correspondence of the industry (IT, finance); 4) certificates – availability of certificates (CBAP, PMI-PBA, Scrum Master, TOGAF, PMP); 5) project complexity – management of complex projects (e.g., systems integration, large-scale changes). For the reliability of the study, 3 LinkedIn profiles by Kvitoslava Maksymiv (n.d.), Mariana Beznosova (n.d.), and Sophia Ishchiv (n.d.) of candidates for the position of Business Analyst and 3 experts, who will evaluate them were selected. The average score of the experts' evaluation and the evaluation of the AI tools were presented in Table 5.

Table 5. *Evaluations of the candidates of human experts and AI tools*

Candidate	Criterion	Human expert	ChatGPT	Claude	Grok	Gemini
1	Education	4	5	4	4	5
1	Technical skills	3	4	3	4	5
1	Work experience	4	4	5	5	5
1	Certificates	2	3	2	2	3
1	Project complexity	5	5	4	4	5
2	Education	3	4	3	3	5
2	Technical skills	4	5	4	5	4
2	Work experience	2	3	2	2	3
2	Certificates	1	2	1	1	2
2	Project complexity	3	4	3	3	4
3	Education	5	5	5	5	5
3	Technical skills	5	5	5	5	5
3	Work experience	5	5	5	5	5
3	Certificates	4	4	4	4	4
3	Project complexity	5	5	5	5	5

Source: *based on Kvitoslava Maksymiv (n.d.), Mariana Beznosova (n.d.), Sophia Ishchiv (n.d.)*

According to the results of the study, the AI tool Google Gemini received the highest expert ratings for the criteria of "education" and "project complexity". The criterion of "certificates" was found to be the most challenging in terms of considering candidate requirements. The results of the t-test comparing the estimates of human experts with AI tools were presented in Table 6.

Table 6. *Results of the Student's t-test*

Criterion	Human experts vs ChatGPT (t/p)	Human experts vs Claude (t/p)	Human experts vs Grok (t/p)	Human experts vs Gemini (t/p)
Education	-2.00/0.184	NaN/NaN	NaN/NaN	-2.00/0.184
Technical skills	-2.00/0.184	NaN/NaN	-2.00/0.184	-1.73/0.225
Work experience	-1.00/0.423	-1.00/0.423	-1.00/0.423	-2.00/0.184
Certificates	-2.00/0.184	NaN/NaN	NaN/NaN	-2.00/0.184
Project complexity	-1.00/0.423	1.00/0.423	1.00/0.423	-1.00/0.423

Note: *NaN – the values in the two compared groups are completely identical, so the difference between them cannot be calculated, (t/p) – for each criterion, the table shows the t-statistic and p-value in the (t/p) format, based on a paired t-test for human experts compared to each AI tool*
Source: *developed by the authors*

It was important to note that NaN values arose due to the same scores for all candidates in the respective comparisons (standard deviation = 0), so the t-test cannot be calculated. It was proven that none of the AI tools (ChatGPT, Claude, Grok, Gemini) showed statistically significant differences compared to human scores for any criterion (all p-values > 0.05). This indicated that AIs can effectively imitate the human approach to assessing business analyst profiles. Thus, it was found that Claude and Grok demonstrated the greatest similarity to human scores, especially for the criteria "Education" and "Work experience". However, Gemini tends to overestimate scores in "Technical skills" and "Certificates" – its results require additional verification. The least reliable tool was ChatGPT, which showed stability, but it should be utilised alongside additional tools to decrease the potential for biased errors. The central aspect that revealed the success of implementing AI tools in screening candidate profiles was the time spent. After all, reducing costs was equal to reducing the cost of hiring a candidate. According to the study, AI tools evaluated a candidate more than 8 times faster than experts from Sourcing. The average time for evaluating a candidate according to the specified criteria was presented in Table 7.

Table 7. *Average time for evaluating a candidate according to the specified criteria*

Appraiser	Average time (minutes)
Human experts	2
ChatGPT	0.167 (~10 seconds)
Claude	0.167 (~10 seconds)
Grok	0.167 (~10 seconds)
Gemini	0.167 (~10 seconds)

Source: *developed by the authors*

Therefore, based on the research, it is possible to enhance the performance of recruiting teams by using tools such as Claude and Grok, as they showed the greatest similarity in assessment. Advanced AI tools can efficiently and rapidly conduct initial screening of candidates, as demonstrated in the example of the Business Analyst position, but for the final selection of a candidate, human expertise remained critically important. During 2020-2025 Ukraine was actively joining the global trends of HR digitalisation, although the level of AI implementation in recruitment still lags behind leading economies. According to the results of a study by the portal Robota.ua (2024), half of Ukrainian companies (50.4%) were already using AI tools in recruitment processes. Most often, Ukrainian employers used AI for searching and pre-selection of candidates (54% of respondents), assessing candidates (46%), and for automating interview planning and HR analytics (38%). Among the specific solutions that have gained popularity in Ukraine were chatbots for initial interviews, applicant tracking systems (ATS) with AI elements, and tools for automatic skills testing. These technologies were especially in demand in the IT sector and large outsourcing companies that process a large number of applications and resumes every month. Moreover, there was a significant share of Ukrainian businesses that were only looking at the possibilities of AI.

Aproximately 49.6% of companies have not yet decided on plans for implementing AI in the 2026-2027. Among those who have a vision, almost a third (32.2%) plan to actively implement new AI tools, 15.7% have limited use for individual tasks, and only ~2.5% deliberately refuse to use AI. This indicated that the potential for growth of AI recruiting in Ukraine is very large, provided that certain barriers are overcome. Ukrainian HR specialists call the main challenges of AI implementation an insufficient level of knowledge and expertise (this factor was noted by 63% of respondents), concerns about information security and data confidentiality (46%), technical difficulties in integrating with existing systems (35%). There were also institutional barriers – resistance from staff or management (22%), who may be afraid of automation, and the high cost of implementing AI solutions (21%). It is positive that 21% of respondents do not see any obstacles and are ready to experiment with AI, but for the technology to spread widely, these problems need to be addressed. The future potential of AI recruitment development in Ukraine was connected, on one side, to internal factors (business demand for HR optimisation, the availability of IT talents, who can develop such solutions), and on the other side, to external factors, including European integration. Ukraine was already adapting its legislation to EU data protection requirements (Complete guide to GDPR..., n.d.), which created a regulatory framework for the responsible use of AI in HR. The government has also endorsed the Order of the Cabinet of Ministers of Ukraine No. 1556-r (2020), which defined priorities for supporting AI technologies, including in the field of employment and personnel management. In the post-war period, an active economic recovery is expected, accompanied by growth in the labour market – at this time, AI recruitment can become one of the drivers of effective recruitment for the reconstruction of the country. Ukrainian HR platforms (e.g. Robota.ua, Work.ua) were already implementing AI elements in their services – from smart resume search to job recommendations – and this trend will only grow.

Conclusions

The use of AI in recruitment demonstrated a steady global growth trend. According to forecasts, the global AI recruitment solutions market will exceed USD 1,119.8 billion by 2030. This will impact human resource management processes, particularly by accelerating the adoption of artificial intelligence in recruitment. The study analysed the practices in the use of AI in recruitment and evaluated the effectiveness of these tools. A comparison between conventional and AI-based recruitment methods was presented. It has been established that AI recruitment offerred numerous advantages, such as increased efficiency, reduced bias, and improved candidate experience. AI algorithms enabled faster and more accurate candidate selection, saving recruiters' time and resources. This also contributed to expanding the pool of relevant candidates and improving hiring quality through data-driven analytics.

However, the implementation of AI in recruitment was not without challenges. These included ethical concerns, algorithmic bias, the risk of depersonalising the hiring process, limited data sets, technical complexities, and the need for ongoing oversight. These challenges can be addressed through a balanced approach that combined AI with human expertise and experience. The study found that AI tools such as Claude, Grok, ChatGPT, and Gemini assessed candidate profiles with a level of consistency comparable to human reviewers (all $p > 0.05$), but complete the screening process more than eight times faster – taking only 10 seconds, compared to 2 minutes for a human. This confirmed the potential of artificial intelligence to optimise hiring processes. To achieve successful outcomes, organisations should integrate AI into their recruitment strategies, taking ethical considerations into account and ensuring continuous monitoring. This will not only increase the efficiency and objectivity of the process, but also foster the development of these approaches in recruitment and improve the overall candidate experience. In Ukraine, AI recruitment has significant prospects. To realise this potential, it is necessary to invest in training HR professionals to work with AI, develop local solutions tailored to the specifics of the Ukrainian labour market, and build candidate trust. Addressing concerns and resolving ethical issues will be critical – only with responsible implementation can AI bring maximum benefit to Ukrainian companies and job seekers, accelerating and improving the quality of hiring processes. Further research should focus on assessing the readiness for AI recruitment adoption in the Ukrainian labour market.

Acknowledgements

None.

Funding

None.

Conflict of Interest

None.

References

[1] AI recruitment market: Global industry analysis and forecast (2024-2030). (2023). *Maximize Market Research*. Retrieved from https://www.maximizemarketresearch.com/market-report/global-ai-recruitment-market/63261/.

[2] Ali, O., & Kallach, L. (2024). Artificial intelligence enabled human resources recruitment functionalities: A scoping review. *Procedia Computer Science*, 232, 3268-3277. doi: 10.1016/j.procs.2024.02.142.

[3] Allal-Chérif, O., Aránega, A.Y., & Sánchez, R.C. (2021). Intelligent recruitment: How to identify, select, and retain talents from around the world using artificial intelligence. *Technological Forecasting and Social Change*, 169, article number 120822. doi: 10.1016/j.techfore.2021.120822.

[4] Bankins, S., Jooss, S., Restubog, S.L.D., Marrone, M., Ocampo, A.C., & Shoss, M. (2024). Navigating career stages in the age of artificial intelligence: A systematic interdisciplinary review and agenda for future research. *Journal of Vocational Behavior*, 153, article number 104011. doi: 10.1016/j.jvb.2024.104011.

[5] Bennett, N., & Martin, C.L. (2025). AI as a talent management tool: An organizational justice perspective. *Business Horizons*, 68(3), 215-226. doi: 10.1016/j.bushor.2025.03.005.

[6] Complete guide to GDPR compliance. (n.d.). *GDPR.EU*. Retrieved from https://gdpr.eu/.

[7] Dai, K., & Liu, Q. (2024). Leveraging artificial intelligence (AI) in English as a foreign language (EFL) classes: Challenges and opportunities in the spotlight. *Computers in Human Behavior*, 159, article number 108354. doi: 10.1016/j.chb.2024.108354.

[8] David, M. (2025). Real-life examples of AI-driven candidate screening. *MiHCM*. Retrieved from https://mihcm.com/resources/blog/real-life-examples-of-ai-driven-candidate-screening/.

[9] Ebrahim, S.S., & Rajab, H.A. (2025). The future of HR: The role of AI-powered recruitment in shaping the modern workforce. *Open Access Library Journal*, 12, article number e12770. doi: 10.4236/oalib.1112770.

[10] El Ouakili, O. (2025). The impact of artificial intelligence (AI) on recruitment process. *Open Journal of Business and Management*, 13(2), 749-762. doi: 10.4236/ojbm.2025.132039.

[11] Electrolux Group digitalizes key HR processes for distinct hiring edge. (2023). *Phenom People, Inc*. Retrieved from https://assets.phenom.com/hubfs/02_Assets/casestudy/230502_EN-CS_Electrolux_PhenomSuccess.pdf.

[12] Gupta, P., Lakhera, G., & Sharma, M. (2024). Examining the impact of artificial intelligence on employee performance in the digital era: An analysis and future research direction. *The Journal of High Technology Management Research*, 35(2), article number 100520. doi: 10.1016/j.hitech.2024.100520.
[13] Hoichuk, V., & Lyubomudrova, N. (2023). Application of artificial intelligence for the development of the human capital of the organization. *Digital Economy and Economic Security*, 8, 67-73. doi: 10.32782/dees.8-12.
[14] Horodyski, P. (2023a). Applicants' perception of artificial intelligence in the recruitment process. *Computers in Human Behavior Reports*, 11, article number 100303. doi: 10.1016/j.chbr.2023.100303.
[15] Horodyski, P. (2023b). Recruiter's perception of artificial intelligence (AI)-based tools in recruitment. *Computers in Human Behavior Reports*, 10, article number 100298. doi: 10.1016/j.chbr.2023.100298.
[16] Kravchuk, O., Varis, I., & Pierkova, M. (2023). Modern practices of using artificial intelligence for digitalization of recruitment. *Problems of Modern Transformations. Series: Economics and Management*, 8. doi: 10.54929/2786-5738-2023-8-04-06.
[17] Kumar, N. (2025). AI recruitment statistics 2025 (Worldwide data & insights). *DemandSage*. Retrieved from https://www.demandsage.com/ai-recruitment-statistics/.
[18] Kvitoslava Maksymiv. (n.d.). *LinkedIn*. Retrieved from https://www.linkedin.com/in/kvitoslava-maksymiv/.
[19] LinkedIn enters AI agent race with LinkedIn hiring assistant. (2024). *Josh Bersin*. Retrieved from https://joshbersin.com/2024/10/linkedin-enters-ai-agent-race-with-linkedin-hiring-assistant/.
[20] Lobosco, M. (2024). See the early impact of LinkedIn's AI tools for recruiters. *LinkedIn*. Retrieved from https://www.linkedin.com/business/talent/blog/talent-acquisition/early-impact-of-linkedin-ai-tools-for-recruiters.
[21] March 2025 recruitment insights: AI, hiring trends & career growth. (2025). *Waytogo Consultants*. Retrieved from https://www.linkedin.com/pulse/march-2025-recruitment-insights-ai-hiring-trends-career-2mbjf.
[22] Mariana Beznosova. (n.d.). *LinkedIn*. Retrieved from https://www.linkedin.com/in/mariana-beznosova-638a9081/.
[23] Order of the Cabinet of Ministers of Ukraine No. 1556-r "On Approval of the Concept of Artificial Intelligence Development in Ukraine". (2020, December). Retrieved from https://zakon.rada.gov.ua/laws/show/1556-2020-%D1%80#Text.
[24] Rigotti, C., & Fosch-Villaronga, E. (2024). Fairness, AI & recruitment. *Computer Law & Security Review*, 53, article number 105966. doi: 10.1016/j.clsr.2024.105966.
[25] Rukadikar, A., Khandelwal, K., & Warrier, U. (2025). Reimagining recruitment: Traditional methods meet AI interventions – a 20-year assessment (2003-2023). *Cogent Business & Management*, 12(1), article number 2454319. doi: 10.1080/23311975.2025.2454319.
[26] Sichkar, A. (2025). Is Ukraine ready for full-fledged regulation of artificial intelligence? Under what conditions is this possible? *Mind.ua*. Retrieved from https://mind.ua/openmind/20287391-chi-gotova-ukrayina-do-povnocinnogo-regulyuvannya-shi.
[27] Skibska, K. (2023). The use of artificial intelligence tools in recruitment. *Galician Economic Journal*, 83(4), 114-121. doi: 10.33108/galicianvisnyk_tntu2023.04.114.
[28] Soleimani, M., Intezari, A., & Pauleen, D.J. (2022). Mitigating cognitive biases in developing AI-assisted recruitment systems: A knowledge-sharing approach. *International Journal of Knowledge Management*, 18(1), 1-18. doi: 10.4018/IJKM.290022.
[29] Sophia Ishchiv. (n.d.). *LinkedIn*. Retrieved from https://www.linkedin.com/in/sophiaishchiv/.
[30] Szandała, T. (2025). ChatGPT vs human expertise in the context of IT recruitment. *Expert Systems with Applications*, 264, article number 125868. doi: 10.1016/j.eswa.2024.125868.
[31] Tenakwah, E.S., & Watson, C. (2025). Embracing the AI/automation age: Preparing your workforce for humans and machines working together. *Strategy & Leadership*, 53(1), 32-48. doi: 10.1108/SL-05-2024-0040.
[32] Thomas, J. (2020). How Brother International Corporation reinvented its employer brand with phenom career site, CMS & hosted apply. *Phenom*. Retrieved from https://www.phenom.com/blog/how-brother-international-corporation-reinvented-its-employer-brand.
[33] Tusquellas, N., Palau, R., & Santiago, R. (2024). Analysis of the potential of artificial intelligence for professional development and talent management: A systematic literature review. *International Journal of Information Management Data Insights*, 4(2), article number 100288. doi: 10.1016/j.jjimei.2024.100288.
[34] Zhang, C., Li, S., Liu, Y., Li, Y., & Zhu, J. (2025). Artificial intelligence recruitment – a literature review based on equity and efficiency perspectives. *Journal of Human Resource Development*, 7(1), 15-21. doi: 10.23977/jhrd.2025.070103.

Штучний інтелект у рекрутингу: виклики, можливості та перспективи використання в Україні

Ірина Кінаш
Доктор економічних наук, професор
Івано-Франківський національний технічний університет нафти і газу
76019, вул. Карпатська, 15, м. Івано-Франківськ, Україна
https://orcid.org/0000-0002-5391-6560

Володимир Романович
Аспірант
Івано-Франківський національний технічний університет нафти і газу
76019, вул. Карпатська, 15, м. Івано-Франківськ, Україна
https://orcid.org/0000-0003-1577-2081

Анотація. Метою дослідження було проаналізувати сучасні практики використання штучного інтелекту в рекрутингу та оцінити ефективність цих інструментів для майбутнього застосування. Було обґрунтовано, що під впливом цифрових технологій трансформуються види діяльності, пов'язані з пошуком і відбором персоналу. Штучний інтелект продемонстрував найбільшу ефективність у процесах відбору кандидатів, автоматизованого планування, проведення інтерв'ю та збору аналітичних даних про персонал. Проаналізовано етичні й правові аспекти використання штучного інтелекту, узагальнено відмінності між традиційними та інтелектуальними методами, що застосовуються на різних етапах рекрутингу, визначено проблеми використання штучного інтелекту у відборі персоналу та запропоновано шляхи їх вирішення. Досліджено проблеми, що виникали у компаніях, які застосовували штучний інтелект в рекрутингу, та управлінські рішення, які допомогли покращити результати. Результати продемонстрували такі переваги використання штучного інтелекту: економія часу, покращення досвіду кандидатів та підвищення загальної ефективності рекрутингу. Дослідження проводилося щодо ефективності використання різних інструментів штучного інтелекту для оцінки кандидатів на посаду бізнес-аналітика порівняно з оцінками людей-експертів. Показано, що сучасні інструменти штучного інтелекту (Claude, Grok, ChatGPT, Gemini) оцінювали профілі кандидатів із високим рівнем узгодженості з людськими оцінками (усі $p > 0,05$), водночас проводячи відбір більш ніж у 8 разів швидше – лише за 10 секунд проти 2 хвилин у людини. Підтверджено потенціал штучного інтелекту для оптимізації процесів найму. Встановлено, що Україна активно долучається до світових трендів цифровізації HR. Частка українських компаній, які вже застосовували штучний інтелект у рекрутингу, досягла 50,4 %. Найпопулярнішими були чат-боти для початкового інтерв'ю, системи відстеження кандидатів з елементами штучного інтелекту та інструменти автоматичного тестування навичок. Основними викликами впровадження штучного інтелекту HR-фахівці в Україні вважали недостатній рівень знань і компетентності. Практичне значення дослідження полягає у можливості використання його результатів HR-фахівцями, рекрутинговими агентствами та менеджерами компаній для підвищення ефективності процесів найму

Ключові слова: добір персоналу; рекрутинг; HR-автоматизація; цифровізація найму; ефективність

ECONOMIC FORUM
Journal homepage: https://e-forum.com.ua/en
Vol. 15, No. 3, 2025, 41-55
Article's History: Received: 28.03.2025 Revised: 31.07.2025 Accepted: 08.09.2025

UDC 711.58:728.1 *DOI: 10.62763/ef/3.2025.41*

Integration of joint consumption mechanisms as a factor in the transformation of housing policy in the reconstruction period

Serhii Bobko*
Postgraduate Student
Academician Yuriy Bugay International Scientific and Technical University
02094, 3 Khersonsky Ln., Kyiv, Ukraine
https://orcid.org/0009-0008-4129-0266

Oleksandr Hutsaliuk
Postgraduate Student
Dmytro Motornyi Tavria State Agrotechnological University
69063, 66 Universytetska (Zhukovskyi) Str., Zaporizhzhia, Ukraine
https://orcid.org/0009-0006-8693-8084

Maksym Koliada
Postgraduate Student
Academician Yuriy Bugay International Scientific and Technical University
02094, 3 Khersonsky Ln., Kyiv, Ukraine
https://orcid.org/0009-0006-5448-4057

Abstract. The post-war reconstruction of the housing stock required the search for innovative approaches to providing the population with affordable housing through alternative consumption models. The study aimed to substantiate the possibilities of integrating global practices of collective housing consumption into post-war development strategies. The study was based on a comparative analysis of international cases, systematisation of theoretical foundations and development of conceptual models of adaptation. The main types of collaborative housing business models were classified, and their regional peculiarities of functioning in Germany, France, Denmark, Sweden (Europe), the USA and Canada (North America) and China (Asia) were identified. The theoretical analysis shown that the least regulated Asian markets shown the highest returns of up to 30%, while the tightly controlled European markets demonstrated 12-15% profitability. A review of Danish, Swedish, and Norwegian collective housing projects presented the potential to reduce household expenses by up to 45% and cut social spending by a fifth. A systematic analysis of Ukrainian market trends in 2020-2024 indicated a nearly 70% increase in housing construction, which created favourable conditions for diversifying housing supply models. Key groups of potential consumers of new housing services were identified, including a third of a million internally displaced persons in Lviv, Ivano-Frankivsk and Zakarpattia regions. Recommendations for creating regulatory sandboxes within the framework of the Diia City initiatives and launching municipal programmes to support social entrepreneurship in the housing sector were developed. The readiness of the Ukrainian digital infrastructure for the functioning of residential sharing platforms was determined, incorporating the high level of digitalisation of the population. A multi-component system for adapting foreign experience to national cultural, economic and legal conditions was developed. The practical results can be used by local authorities to develop effective housing innovation programmes and create a favourable environment for the operation of collective consumption platforms

Keywords: cohousing; circular economy; energy efficiency; trust; internally displaced persons; business models

Suggested Citation:

Bobko, S., Hutsaliuk, O., & Koliada, M. (2025). Integration of joint consumption mechanisms as a factor in the transformation of housing policy in the reconstruction period. *Economic Forum*, 15(3), 41-55. doi: 10.62763/ef/3.2025.41.

*Corresponding author

Introduction

Modern global challenges have highlighted the need for a radical rethinking of traditional approaches to housing construction and urban regeneration. In the context of limited resources, sharing mechanisms were gaining in importance as an alternative tool for economic development. This issue was particularly acute in the context of Ukraine, where large-scale infrastructure destruction required the development of adaptive housing strategies. J.B. Schor & S.P. Vallas (2021) revealed the evolution of the conceptual foundations of the sharing economy, establishing the transformation from the initial utopian ideas to modern commercialised forms. The results of the study demonstrated the existence of internal contradictions between the declared environmental and social benefits of sharing and the real consequences for different population groups. The study determined an increase in social stratification as a result of the development of sharing platforms, which contradicted the initial expectations of democratising access to resources.

A comprehensive analysis of distributional effects in housing systems was conducted by S. Calder-Wang (2021), developing an integrated market equilibrium model that incorporated the interaction of long-term and short-term rental segments. The results of the econometric modelling showed a USD 2.4 billion loss in tenant welfare in New York City. The study determined that the increased rent burden had the greatest impact on tenants with high incomes, educated and white residents. The regulatory issues of the sharing economy from the perspective of the theory of organisational fields were studied by S. Kirchner & E. Schüßler (2020), identifying key challenges for traditional mechanisms of state regulation. The conceptual analysis showed that digitalisation was undermining established regulation through organisational shifts in spatial, labour and responsibility aspects. The study substantiated the need to revise approaches to coordination between various state and non-state actors in the context of the digital transformation of economic relations.

The spatial effects of the sharing economy on related sectors of the economy were analysed by M. Alyakoob & M.S. Rahman (2022), using data on employment in the restaurant industry in different boroughs of New York City. The empirical study determined that a 1% point increase in Airbnb activity led to an increase in restaurant employment of about 1.7%. At the same time, the study found an uneven distribution of economic benefits, with restaurants in predominantly white neighbourhoods disproportionately benefiting from the activity of the sharing platforms compared to predominantly black neighbourhoods. The conceptualisation of the processes of value creation and destruction in sharing ecosystems was proposed by D. Buhalis *et al.* (2020) developed a theoretical framework for analysing the interaction of different groups of stakeholders. The results of a netnographic study and case study analysis showed the dominance of destructive tendencies over positive effects in the context of uncontrolled scaling of platforms. The study determined that value co-destruction often prevailed due to the maximisation of self-interest by individual stakeholders at the expense of other ecosystem participants.

The microeconomic foundations of the functioning of sharing economy markets were studied by A. Filippas *et al.* (2020), creating theoretical models of short-term and long-term equilibrium, incorporating ownership decisions. The mathematical modelling demonstrated the universality of the effects of expanding consumption and increasing overall welfare, regardless of the specific market. The study determined that the impact on the level of ownership depended on the transaction costs of bringing assets to the market, with ownership being separated from individual preferences in the long run. The strategic directions of environmentally oriented reconstruction of Ukraine in the context of intensifying business initiatives were systematised by O. Panukhnyk *et al.* (2024), who substantiated the priority of green consumption for small and medium-sized enterprises. The study identified key vectors of sustainable development, including stimulating environmental investments and building appropriate infrastructure. The study determined that boosting green consumption among small and medium-sized enterprises can significantly increase the chances of achieving economic prosperity in the context of the country's recovery.

A systematic approach to the integration of financial and demographic determinants of economic planning in the context of structural transformations was developed by N. Kryshtal (2024), which emphasised the significance of demographic changes for the formation of effective development strategies. The conceptual analysis substantiated the need for an integrated approach to the modernisation of labour potential and financial policy in the context of post-conflict recovery. The study emphasised that for Ukraine, which was amid a war and mass migration, the integration of financial and demographic factors has become critical to ensure sustainable economic development. The results of the interdisciplinary review revealed a fragmentation of research on the integration of sharing economy principles into housing policy during the reconstruction period. Most studies prioritise the analysis of individual digital platforms, while systematic research on the transformational potential of collaborative models remained underrepresented. Particularly relevant was the lack of theoretical developments on the adaptation of collaborative consumption mechanisms to the conditions of post-conflict recovery.

The study aimed to develop the theoretical foundations for integrating sharing economy mechanisms into the housing policy system as a factor in transforming approaches to housing construction during the reconstruction period. To achieve this goal, the following tasks were identified: to systematise international experience in

integrating the principles of sharing economy into housing policy and identify best practices for sustainable development; to analyse the dynamics of the housing market in Ukraine in 2020-2025 and assess the potential for introducing sharing economy mechanisms in the context of reconstruction; to substantiate the theoretical principles of integrating international experience of sharing economy into the housing policy of Ukraine, incorporating economic patterns and institutional features.

Materials and Methods

The theoretical study was conducted in March-June, 2025. The timeframe of the analysis covered the period of 2020-2025 for the dynamics of the Ukrainian housing market and global sharing economy practices. The research was conducted in three consecutive stages, each of which had a methodological function to achieve the main objective of the study. The material base of the study was formed on the principle of comprehensiveness to ensure a comprehensive theoretical analysis of the mechanisms of joint consumption in the housing sector. At the first stage of systematisation of the world practices of Germany, France, Denmark and Sweden, the USA, Canada and China as representatives of the Asian model, official reports of the Oxford Economics (2022), European Environment Agency (2024), the Organisation for Economic Co-operation and Development (2024) were used, which were processed by comparative analysis and systematisation. Corporate data from DiDi Global Inc. (n.d.), Free2Move (n.d.), NetJets (n.d.), CASEKA (n.d.), Houseful (n.d.) project documentation also was investigated. The case of industrial symbiosis Kalundborg (Jacobsen, 2006) and the logistics platform Cargomatic (Schor & Vallas, 2021; Khalek & Chakraborty, 2023) were studied using the case-study method. The theoretical works of S. Calder-Wang (2021) on the distributional effects of residential platforms, Q. Liu *et al.* (2022) on the Impact Canvas for assessing economic impacts, and S. Brysch *et al.* (2023) on the cost-effectiveness analysis of Scandinavian co-housing were used for conceptual modelling. This stage provided a conceptual framework for sharing mechanisms through the systematisation of international experience and the identification of theoretical foundations for further analysis.

At the second stage of the analysis of the Ukrainian context, the systematisation was used to process statistical data on housing construction in Ukraine for 2020-2024 based on materials from the State Statistics Service of Ukraine (n.d.), the LUN (n.d.) and the MinFin (2021). Also, to characterise the population structure by analysing materials from DOU (IT labour market..., 2024) and the International Organization for Migration (2024) to identify target segments of consumers of alternative housing services. Institutional analysis was used to study the legal environment through the study of national legislation (Civil Code of..., 2003; Law of Ukraine No. 2189-VIII, 2017), state support mechanisms through the analysis of materials from the Diia City and eUkraine initiatives, and an assessment of the digital readiness of society based on IREX. USAID (2024) reports. This stage created the basis for the study through the analysis of national specifics and the formation of a factual basis for conceptual modelling.

At the third stage of the conceptual substantiation of adaptation, structural-functional analysis was used to develop a conceptual model of adaptation of international practices to the national context by systematising adaptation factors by spheres of influence, identifying national specifics, conceptual solutions and expected adaptation effects for each sphere. The final stage provided a theoretical synthesis of the previous stages through the development of a conceptual model for adapting international practices to the national context. Corporate data was selected based on the principles of market leadership and public availability of reporting.

Results

Conceptual foundations and global models for integrating shared consumption into housing policy for sustainable development

The conceptual framework of the sharing economy was based on the principle of collective use of goods and services through barter and rent instead of traditional ownership. The analysis of international practices shown the systemic nature of the transformation of consumer practices in the housing sector, demonstrating the possibility of reducing housing costs by 20-35% compared to traditional forms of ownership. Trust was identified as a central element in the functioning of collaborative consumption platforms, determining the economic viability of business models (Khalek & Chakraborty, 2023). Trust in the online environment was formed in stages based on the principle of a hierarchical structure that directly correlated with the level of transaction costs. The first level was trust in the basic idea of the platform, the second was trust in the technology platform and its functionality, and the third was trust between members of the consumer community. An analysis of corporate data from the Chinese platform DiDi Global Inc (n.d.) shown that it served 11 million users daily with an average saving of 40% on transport costs compared to traditional taxis.

The evolutionary development of trust was characterised by the transition from local to institutional and then to fragmented trust, which directly affected the formation of housing policy and changes in economic models of regulation. Local trust was formed within geographically limited communities with high coordination costs, while institutional trust was based on formal rules and regulatory mechanisms with additional compliance costs. Fragmented trust occurs in decentralised networks, was characterised by minimal regulatory costs and maximum pricing flexibility and created the basis for innovative housing models. The practical implementation of the principles of trust in a networked

environment was reflected in a variety of sharing economy business models that were transforming traditional approaches to housing policy. A typology of international sharing business models had identified six main categories of application with different cost-effectiveness and specific impacts on the housing sector. A review of industrial symbiosis practices shown the interaction between industries through the exchange of services, utilities and by-products. An analysis of the Danish case of Kalundborg demonstrated the potential for operating cost savings of 15-25% with a return on investment (ROI) of 18% and a payback period of 6 years, where the residual products of one enterprise were transformed into resources for another (Jacobsen, 2006).

By extending the concept of industrial symbiosis to the level of consumer practices, the commodity exchange model demonstrated an alternative approach to traditional housing ownership. The analysis of the consumer goods exchange model shown that it was possible to achieve an asset utilisation rate of 65-85%. The German case of Free2Move (n.d.) demonstrated an average revenue of EUR 0.35 per minute of use and an annual turnover of EUR 150 million in Europe. Partial ownership shares assets of a certain class among a group of owners, as demonstrated by the U.S. company NetJets (n.d.) through the sale of aircraft "shares" with savings of 40-60% compared to full ownership. Developing the concept of resource optimisation, the consumer resource exchange model focused on inter-family interaction to minimise household waste and reduce household costs by 25-40%. Norway's Restado has developed a digital platform with an 8% commission that processed over 2 million transactions annually in the building materials segment. An extended ownership chain involved consumers in optimising value creation processes, reducing logistics costs by 30-45%, as the German company DHL's practice of including citizens in the delivery system shows. Repurposing excess capacity mobilised underutilised resources through new sales channels, increasing asset utilisation to 90-95%. The U.S.-based Cargomatic platform had demonstrated a 35% increase in participants' profitability by optimising routes and reducing vehicle downtime (Schor & Vallas, 2021; Khalek & Chakraborty, 2023).

A review of the application of the Sustainable Business Model Canvas in European countries indicated the economic benefits of integrating sustainability principles into the business planning of housing projects (CASE-KA, n.d.). The analysis of the model shown that project risks can be reduced by 20-30% by systematising the factors of influence and can be used to forecast ROI with an accuracy of 85-90%. The speed of business model development was reduced by 40% compared to traditional planning methods, while maintaining full analysis functionality. Impact analysis through Impact Canvas, according to Q. Liu *et al.* (2022), quantified the effects of sharing by three levels of economic impact. These studies emphasised that direct first-order effects provided resource savings of 15-20% and waste reduction of 25-30% in the residential sector. Second-order indirect effects included the substitution of traditional resources with savings of 10-15% and the induction of additional investments of EUR 1.2-1.5 billion annually in the EU. The third-order systemic effects generated a multiplier economic effect of 1:3.2 through stimulation of related industries. The application of sustainable SWOT analysis had created opportunities to optimise investment decisions and reduce operating costs by identifying synergies and minimising risks. A systematic SWOT analysis of the potential for introducing sharing economy mechanisms into Ukrainian housing policy was presented in Table 1.

Table 1. *SWOT analysis of the introduction of sharing mechanisms in the housing policy of Ukraine*

	Positive factors	**Negative factors**
Internal factors	**Strengths:** A developed network of condominiums with experience in collective decision-making and management of common property. Concentration of the solvent population in innovative sectors of the economy. Availability of technological infrastructure for the operation of digital platforms. The flexibility of the architectural and planning structure of cities to adapt to cycling projects. Motivation for resource efficiency through energy challenges.	**Weaknesses:** Psychological resistance to cohabitation due to negative historical associations. Fragmented legal framework for regulating digital housing platforms. Territorial unevenness of economic development and consumer readiness. Insufficient institutional support for alternative housing models. Limited culture of trust in the digital environment among older age groups
External factors	**Opportunities:** Creation of special economic zones for housing innovations. Attracting international expertise and grant funding. Integration of circular economy principles into urban planning policy. Development of social entrepreneurship in the housing sector. Developing new models of municipal and private partnerships	**Threats:** Further social stratification through the platformisation of housing services. The risk of gentrification of historic districts due to the development of coliving projects. Potential increase in housing inequality between platform participants and non-participants. Dependence on external technological solutions and international platforms. The risk of monopolisation of the housing market by transnational platforms

Source: *based on IT labour market results for the year: +31% vacancies, product IT is growing, but not without layoffs (2024), International Organization for Migration (2024), IREX. USAID (2024), State Statistics Service of Ukraine (n.d.)*

The SWOT analysis of the introduction of joint consumption mechanisms in the housing policy of Ukraine determined that the strategic potential for the successful implementation of such initiatives lies in the combination of strengths and opportunities. The developed network of condominiums, which already had experience in collective decision-making, alongside the concentration of the solvent population in innovative sectors of the economy, created a favourable basis for the creation of special economic zones for housing innovations. Attraction of international experience and grant funding can be used to utilise the practices, providing an innovative approach to the development of new housing models such as coliving. However, to overcome existing weaknesses, such as psychological resistance to cohousing, it was necessary to develop institutional support and improve the legal and regulatory framework to effectively realise the potential of international cooperation.

Research on the impact of home-sharing platforms shown a significant impact on housing markets (Calder-Wang, 2021). The economic effects were concentrated mainly in historic city centres with short-term rental yields of 15-25%, but extend to peripheral areas with rates of 8-12%. The transformation of the legal status in Amsterdam had increased the city's tax revenues by EUR 35 million annually, while regulatory costs had increased by EUR 8 million. Regulatory changes at the EU level culminated in February 2024 with the adoption of harmonised requirements with an expected economic impact of EUR 2.5 billion from increased market transparency (Regulation of the..., 2024). The vote in the European Parliament showed a consensus on the balance between regulation and economic efficiency in a sector that generated EUR 40 billion in tax revenues annually. The circular economy had been integrated into EU policy priorities through the European Green Deal, reaching a circularity rate of 11.8% with an economic potential of EUR 1.8 trillion by 2030 (European Environment Agency, 2024). The cost-effectiveness of the circular approach in the housing sector was confirmed by a 15-20% reduction in operating costs and a 25-30% increase in the life cycle of housing compared to linear models (Liu *et al.*, 2022). The Houseful (n.d.) project demonstrated 11 solutions with an average energy savings of 35% and an ROI of 14% over 8 years in four demonstration buildings. A study by Oxford Economics (2022) for the period 2022-2023 quantified the economic recovery of the sector after the pandemic downturn: EUR 149 billion in direct economic benefits, support for 2.1 million jobs with an average salary of EUR 28,000, and the generation of EUR 40 billion in tax revenues. Structural changes in the geography of demand had resulted in rural regions receiving 55% of the economic benefits, with local incomes increasing by 18-25%, compared to 35% before 2020.

In parallel with pan-European trends in the platformisation of housing services, Scandinavian co-housing practices had demonstrated an alternative model for integrating shared consumption into national housing policy through the institutionalisation of collective forms of living. The international experience of the Scandinavian countries shown that cohousing projects have revealed resilience to the pandemic challenges of 2020-2022, while maintaining economic efficiency through the diversification of the functions of living spaces. According to Danish studies of 110 intergenerational cohousing communities from 2020 to 2024, there were savings on utilities of 35-45% and a 20% reduction in social spending by the state due to improved quality of life for residents. The Realdania 2023 study showed an increase in market demand: 90,000 potential consumers with only 6,200 housing units, creating a potential market of EUR 3.2 billion (Brysch *et al.*, 2023). An analysis of the Swedish housing regime shown that 20% of the population in municipal housing achieves self-sufficiency through cross-subsidisation between different categories of residents, demonstrating the successful integration of the principles of shared consumption into public housing policy. The Norwegian co-operative model with 80% ownership provided an average saving of 25% on household housing costs through collective resource management. The Finnish practice of permanent supportive housing demonstrated the cost-effectiveness of socially oriented sharing: lower costs per person annually compared to sheltered housing (Brysch *et al.*, 2023)

The study of transformation processes suggested an acceleration of the transition of Danish cohousing from a resident-driven to a developer-driven model under the influence of the 2020-2022 pandemic, when the need for a rapid housing response stimulated the professionalisation of the sector and the strengthening of the role of government regulation (Dolnicar & Zare, 2020). The new model had demonstrated the economic benefits of professional management of housing projects: a 35% reduction in implementation time (compared to 30% before 2020), 30% reduction in project risks, and an increase in return on investment to 15-18%. Post-construction adaptation ensured standardisation of processes with administrative cost savings of 25-30%, when integrating hybrid workspaces, which met the new requirements of the digital age housing policy. A regional comparative analysis of global practices of sharing economy integration, based on the Organisation for Economic Co-operation and Development (2024) methodology, demonstrated the differentiation of economic indicators by key parameters (Table 2). The European region with a high level of regulation achieves a stable profitability of 12-15% with a payback period of 8-10 years. The North American model with market-based pricing provided a higher profitability of 18-22% due to regulatory flexibility. The Asian approach demonstrated the highest performance: an ROI of 25-30% and a payback period of 4-6 years due to minimal regulatory restrictions.

Table 2. *Comparative characteristics of global practices of integrating joint consumption into housing policy*

Region	Dominant platforms	Regulatory mechanisms	Financial instruments	Economic metrics
Europe (EU-27)	Airbnb, BlaBlaCar, Car2Go, Houseful	Harmonised registration, rental limits, mandatory disclosure	Commissions of 10-15%, circular economy subsidies, and tax benefits	ROI of 12-15%, payback period of 8-10 years, housing price growth of +7-12%
North America	Airbnb, Uber, WeWork, Zillow Flex	Local regulation, zoning, licensing	Market-based pricing, venture capital investment, and municipal bonds	ROI 18-22%, payback period 5-7 years, gentrification of city centres
Asia Pacific	Didi Chuxing, Tujia, Xiaozhu, Oyo	Minimal intervention, recommended standards	Commissions 5-10%, government development grants, innovation funds	ROI 25-30%, payback period 4-6 years, tourism increase +15-25%

Note: *data was presented for the period 2020-2024, economic indicators covered post-COVID structural changes and the new regulatory framework*

Source: *based on S. Dolnicar & S. Zare (2020), Oxford Economics (2022), Regulation of the European Parliament and of the Council No. 2023/988 (2023), European Environment Agency (2024), Organisation for Economic Co-operation and Development (2024)*

The analysis of the table data shown an inverse correlation between the level of regulation and the economic efficiency of sharing economy platforms in the housing sector, which has direct implications for the development of national housing policies. The European model with the highest regulatory costs demonstrated the lowest profitability, while the Asian approach with minimal intervention achieves maximum economic efficiency, while maintaining social stability of housing markets. A review of conceptual frameworks and global models demonstrated the economic feasibility of integrating the sharing economy into housing policy through achieving a synergistic effect between private initiative, technological innovation and government regulation of the housing sector. The analysis confirmed the transformational potential of the sharing economy to optimise housing costs, increased the efficiency of housing stock use, and created new models of affordable housing sustainably.

Dynamics of the Ukrainian housing construction market in 2020-2025 and assessment of the potential for the introduction of joint consumption mechanisms

Structural transformations in the Ukrainian housing market had created a favourable environment for the integration of alternative housing models through shared consumption mechanisms. Changes in the demographic structure of demand have led to new market segments, where traditional forms of ownership have proved inaccessible due to financial constraints. Institutional changes in the sector had created opportunities for the introduction of innovative approaches to the organisation of living space. The comprehensive dynamics of key housing sector indicators characterised structural changes and identify potential niches for alternative housing models (Table 3). The cyclical nature of the sector's recovery from crisis periods created opportunities for the integration of innovative approaches to the organisation of living space.

Table 3. *Dynamics of housing commissioning in Ukraine in 2020-2024*

Metric	2020	2021	2022	2023	2024	Change for 2024/2020, %
Total housing starts, million m^2	5.75	7.11	7.38	8.13	9.76	69.7
Share of single-family houses, %	53.8	39.1	47.2	49	51	-2.8 pp.
Share of residential buildings, %	46.1	60.7	52.6	51	49	+2.9 pp.
Number of commissioned apartments, thousand	65	92.5	89.3	102.7	118.4	+82.2

Note: pp. – percentage points

Source: *based on MinFin (2021), International Organization for Migration (2024), LUN (n.d.), State Statistics Service of Ukraine (n.d.)*

Structural fluctuations in the ratio of housing types reflected the market's adaptation to changes in the level of risks and consumer preferences of the population. The industry's recovery trajectory was creating market niches for alternative forms of housing provision in the face of limited availability of traditional financing. The cyclical nature of the industry's development created windows of opportunity for the introduction of innovative approaches to housing provision. The stabilisation of indicators after the crisis period created preconditions for the diversification of housing models. The financial conditions for access to housing were characterised by limited traditional lending mechanisms due to high interest rates and tight bank financing. This situation had stimulated the development of alternative housing finance models, including collective investment and co-operative ownership of real estate. The limited availability of mortgage products has created a demand for

flexible forms of housing finance with distributed financial obligations.

The economic base for the development of housing sharing mechanisms consisted primarily of high-tech sectors of the economy with a concentration in regional centres. An analysis of data from the DOU portal (IT labour market..., 2024) shown that 59.6 thousand vacancies in the field of information technology were published in 2024, which was 31% more than in the previous year. The median income of a technical specialist, according to the source, was USD 2,590, which was higher than average salaries in other sectors of the economy. This economic capacity provided a solvent segment for innovative housing solutions with elements of shared consumption. The professional structure of the high-tech sector was characterised by mobility and openness to innovation among employees. DOU statistics shown that 15% of professionals were actively preparing to emigrate, which generated demand for flexible housing solutions without long-term commitments. At the same time, 44% do not plan to leave the country, establishing a stable base for long-term co-operative housing projects. The 40% increase in the share of non-technical specialisations demonstrated the diversification of the industry and the expansion of the potential audience for alternative housing models.

According to a report by the International Organization for Migration (2024), there were approximately 160,000 internally displaced persons in the Lviv region, 98,000 in the Ivano-Frankivsk region, and 72,000 in the Zakarpattia region. This regional concentration of people with different socio-economic statuses created additional demand for housing and promoted the development of co-living models adapted to different segments, ranging from economy to premium. The legal prerequisites for the development of housing sharing mechanisms in the Ukrainian context require the adaptation of existing legislation to new forms of property ownership and management. The Civil Code of Ukraine No. 435-IV (2003) regulated only the basic aspects of joint ownership, omitting the specifics of the platform economy and digital housing services. Law of Ukraine No. 2189-VIII (2017) does not contained provisions on the regulation of short-term rentals through digital platforms, which created legal uncertainty for market participants.

In parallel with legal restrictions, there were cultural peculiarities of the perception of cohousing in Ukrainian society. These peculiarities were characterised by an ambivalence between traditional values of individual property and pragmatic needs to save resources. Cultural attitudes towards cohousing demonstrated ambivalence: younger generations were more open to new forms of housing coexistence, while older age groups remained more cautious due to the influence of past experiences. Overcoming cultural barriers was facilitated by the development of technological prerequisites for the operation of housing sharing platforms. The technological base included the penetration of the Internet and mobile technologies among the urban population. According to reports from the Ministry of Digital Transformation of Ukraine, more than 60% of the population had acquired basic digital skills, which created the basis for the introduction of sharing platforms in the housing services sector. The development of the fintech sector and digital payment systems had established an infrastructure base for servicing financial transactions in the field of housing sharing (IREX. USAID, 2024).

The digital infrastructure interacted with the physical urban structure, which determined the urban planning characteristics of large Ukrainian cities. These characteristics provided specific opportunities for adapting mechanisms for sharing housing. Kyiv, with a housing stock of more than 67 million m^2 and a high population density, formed a critical mass for testing innovative housing models based on shared consumption. Lviv, with its compact historical buildings and the localisation of IT companies, created a favourable environment for coworking projects. Dnipro, as an industrial centre with an active process of renovation of industrial areas, opened up opportunities for the development of innovative residential neighbourhoods with elements of shared use (IT labour market..., 2024; State Statistics Service of Ukraine, n.d.).

The physical characteristics of cities were complemented by energy aspects, which were gaining relevance in the context of the energy crisis. The energy aspects of shared housing were gaining relevance in the context of the energy crisis and the need to improve the energy efficiency of the housing sector. The collective use of energy supply systems in shared spaces contributed to a significant reduction in overall energy consumption, increasing the efficiency of resource use. The integration of renewable energy sources into co-living projects provided additional competitive advantages by reducing operating costs. Energy efficiency affected the economic attractiveness of financial models for shared housing in the Ukrainian context. The shared ownership model distributed initial investments among several participants, lowering the entry barrier for young professionals. The subscription model of access to housing services created predictable cash flows for platform operators and flexibility for users.

Target segments of potential users of housing sharing mechanisms in the Ukrainian context included freelancers and remote workers, students and young professionals, and representatives of creative industries (Krylovskyi, 2024). The growing popularity of hybrid forms of employment had created a demand for living spaces that combined living and working functions. The development of the startup ecosystem in large cities had formed a community of young entrepreneurs, who need flexible and cost-effective housing solutions. The market prospects for the development of housing sharing mechanisms in Ukraine were driven by the

convergence of economic, technological and social factors. The potential for the development of the coliving market in Ukrainian cities was encouraging, given urbanisation trends, population mobility and the transformation of labour formats. The average cost of a place in a coworking space can be 60-80% of the market rent for a separate dwelling of a similar level in the same location (Brysch *et al.*, 2023; IT labour market..., 2024).

Institutional mechanisms to support the development of alternative housing models included the creation of special regulatory regimes for housing innovations under the Diia City project and municipal programmes to support social entrepreneurship. The Kyiv city authorities were considering providing preferential lease terms for municipal real estate for pilot projects in the field of shared housing through the Smart City programme. Cooperation with European urban development programmes provided opportunities to attract grant funding for innovative housing projects. The transformational potential of integrating joint consumption mechanisms into Ukraine's housing policy was determined by the need to respond quickly to new housing needs in the context of post-war reconstruction. Adapting international experience to Ukrainian specifics required consideration of the peculiarities of the legal system, cultural traditions and economic opportunities, while maintaining the innovative nature of alternative housing solutions.

Conceptual justification for adapting global models to Ukrainian realities

The post-conflict transformation of Ukrainian society had created unique preconditions for rethinking traditional approaches to housing provision. The large-scale social changes caused by the hostilities disrupted the established mechanisms of housing consumption and stimulated the search for alternative forms of collective interaction in the housing sector. The destruction of traditional social ties had highlighted the need for new models of trust between participants in housing relations. Ukraine's legal system had shown a systemic lack of readiness to regulate digital housing platforms and new forms of shared ownership. In particular, the Civil Code of Ukraine No. 435-IV (2003) contained only rudimentary norms of collective ownership without incorporating the specifics of the platform economy. Legislative regulation of the housing and communal sector did not provide for mechanisms for short-term rental through digital services, creating a legal vacuum for innovative housing practices (Law of Ukraine No. 2189-VIII, 2017).

The cultural matrix of Ukrainian society has been shaped by the historical experience of collectivisation and communal forms of living in the Soviet era (Ferreri & Vidal, 2021). Older demographic cohorts retained negative associations with sharing housing resources due to the traumatic experience of forced collective living. Younger generations demonstrated greater openness to experimental housing formats, especially among representatives of the creative industries and the technology sector. These cultural characteristics directly influenced mental attitudes towards private property in the Ukrainian context, characterised by an ambivalence between the desire for individual ownership as a symbol of social status and the pragmatic need to save resources. Psychological barriers were reinforced by traditional perceptions of housing as a key marker of economic success and social stability. Overcoming cultural constraints required the gradual introduction of joint consumption mechanisms through prestigious market segments.

Along with psychological factors, the regional stratification of economic capacity had led to an uneven distribution of potential audiences for alternative housing solutions. The concentration of high-tech companies in large cities had formed a segment of workers with sufficient income to participate in cooperative housing projects. Peripheral areas were characterised by limited economic capacity of the population and conservative consumer preferences for housing innovations. The economic differentiation of the regions, complemented by the architectural and planning features of Ukrainian cities, determined specific opportunities for adapting mechanisms for joint housing consumption. The historical development of regional centres created the preconditions for renovation into coliving spaces, while preserving cultural heritage. The Soviet standard building created opportunities for the modernisation of apartment buildings with the integration of common functional areas. The industrial zones of large cities created the potential for the conversion of industrial areas into experimental residential complexes.

The architectural possibilities for adaptation were enhanced by the energy challenges of the modern period, which transformed consumer priorities in favour of resource-efficient housing solutions. Collective life support systems in shared living spaces demonstrated the potential to optimise energy consumption compared to individual systems, similar to the Scandinavian experience of co-housing (Brysch *et al.*, 2023). The integration of renewable energy sources into co-housing projects created additional competitive advantages due to the possibility of minimising operating costs. Energy priorities interacted with society's technological readiness for digital innovation. Ukraine's technological infrastructure had reached a level sufficient for the functioning of housing sharing platforms. The spread of digital competencies among the urban population provided a critical mass of potential users of online housing services. The development of financial technologies had created an operational framework for cashless payments between participants of housing platforms through mobile applications and electronic payment systems. A summary of the identified peculiarities of adapting sharing economy models to the Ukrainian context was presented in Table 4.

Table 4. *Conceptual framework for adapting collaborative consumption models to the Ukrainian context*

The scope of adaptation	National specificity	Conceptual solutions	Adaptation effects
Legal environment	Lack of specialised regulation of the platform economy	Developing regulatory sandboxes for housing innovation	Creating a legal space for experimentation
Cultural matrix	The historical trauma of collective living in the Soviet era	Gradual introduction through prestigious market segments	Gradual transformation of mental attitudes
Economic structure	Regional polarisation of incomes and solvency	Differentiated financial models based on the territorial principle	Adaptation to different levels of economic development
Social practices	Experience of condominiums as a form of collective management	Integration with existing co-ownership mechanisms	Leverage existing collective management skills
Technological potential	High level of digitalisation in urban centres	Integration with local fintech ecosystems	Optimising platform operational processes
Post-conflict reconstruction	Large-scale destruction of the housing stock and the need for rapid reconstruction	Integration of green building and sharing economy	Accelerated recovery with sustainability
Co-operative traditions	The experience of condominiums as a basis for the development of joint housing projects	Adapting the international experience of co-operative housing	Development of democratic forms of housing management

Note: *data demonstrated based on the analysis of post-conflict specifics and adaptive capacity of the Ukrainian housing sector in the context of reconstruction*

Source: *based on S. Kirchner & E. Schüßler (2020), M. Ferreri & L. Vidal (2021), S. Brysch et al. (2023), S. Khalek & A. Chakraborty (2023), O. Panukhnyk et al. (2024)*

Based on the systematisation of the conceptual framework, the multifactorial nature of adaptation processes covering legal, cultural, economic and technological aspects of the Ukrainian housing environment was confirmed. Financial mechanisms of joint consumption of housing have adapted to the conditions of currency instability by creating hybrid pricing instruments. The international experience of co-housing projects demonstrated the effectiveness of combined financial schemes to minimise currency risks. The fractional ownership model ensured the distribution of initial investments among many participants, reducing financial barriers for middle-income groups. The socio-cultural mechanisms of community formation were integrated with authentic practices of neighbourly mutual assistance in the Ukrainian cultural context. The experience of condominiums created an institutional platform for the development of more complex forms of collective management of housing resources. The system of internal conflict resolution was based on mediation principles adapted to the peculiarities of the Ukrainian communication style.

The territorial differentiation of the introduction of joint consumption mechanisms incorporated the variability of the socio-economic potential of the regions and the specifics of local housing traditions. Initial projects under the adaptation model would be concentrated in megacities with a developed innovation ecosystem and a high concentration of progressive-minded people. Scaling up would involve extending the experience to medium-sized cities with the adaptation of organisational models to local cultural characteristics. The institutional architecture to support housing innovation was shaped by special regulatory regimes and municipal programmes to encourage social entrepreneurship. Government digital transformation initiatives created a favourable environment for the development of technological solutions in the housing sector. International cooperation with European urban development programmes provided access to expertise and financial resources for innovative housing initiatives. The conceptual justification for the adaptation of global collaborative consumption models to Ukrainian realities revealed the need for a comprehensive consideration of national institutional, cultural and economic specifics. The developed conceptual framework created a theoretical basis for the practical implementation of alternative housing solutions in the context of post-conflict socio-economic transformation.

Discussion

The results of the study demonstrated the multifactorial nature of the processes of integration of joint consumption mechanisms into the housing policy of the reconstruction period. The study determined that successful adaptation of international experience required consideration of national institutional, cultural and economic peculiarities. The conceptual framework developed in the study provided a methodological platform for the systematic integration of innovative housing models in the post-conflict period, which confirmed the transformational potential of sharing mechanisms for optimising housing costs and creating new models of affordable housing. The study by L. Shen *et al*. (2024) was limited to the identification of 28 critical success factors for residential building renovation through the lens of social media interactions, prioritising the technical aspects of transformation without considering the socio-cultural context. The comprehensive approach to stakeholder

engagement justified in the study included financial and cultural determinants alongside technical factors, which exceeded the scope of Chinese researchers. The phased model of introduction through prestigious market segments ensured overcoming the psychological barriers of Ukrainian society by demonstrating successful cases, while the Chinese model did not accommodate the need for cultural adaptation of sharing mechanisms.

The positive role of diversification of housing models in post-conflict recovery was fundamentally different from the Chinese experience. K. Chen *et al.* (2020) documented the negative impact of land transformations on the integrated development of territories in stable economic conditions, where the dual institution of urban and rural areas distorted positive effects. The specificity of the post-conflict environment, where the destruction of traditional social ties has created space for experimental forms of collective interaction, has led to opposite patterns of success for alternative housing forms. Y. Qu *et al*. (2021) studied the five-stage transformation of rural areas in China from the initial to the stable stage, prioritising the optimisation of agricultural land use through the spatial agglomeration of changes. The territorial differentiation of the introduction of sharing mechanisms in the Ukrainian context was based on the opposite urban-centric approach, with a consistent scaling up from megacities to medium-sized cities. The concentration on the innovation ecosystems of large cities reflected a fundamental difference from the Chinese rural-oriented model, as Ukrainian urban centres concentrated the innovative potential and the population's ability to pay for experimental housing forms.

The contribution to research of technological barriers to adoption included socio-cultural and regulatory aspects alongside technical limitations. Q. Meng *et al.* (2020) systematised the purely technical challenges of BIM applications in the construction cycle. The identification of the lack of specialised legislation for the platform economy and the need for "regulatory sandboxes" contributed to the research on the barriers to housing innovation beyond purely technological solutions. O. Druta *et al*. (2021) addressed the phenomenon of "new lonely people" in the stable urban environment of Western countries, analysing the transformation of social interaction through digital technologies, omitting crisis factors. The uniqueness of the Ukrainian situation was the additional segment of internally displaced persons, which created a specific demand for flexible housing solutions that were not available in stable Western environments. The expanded target audience included not only traditional consumers of shared housing services (freelancers, students, representatives of creative industries) studied by Western authors, but also internally displaced persons with special needs for urgent housing solutions, reflecting the complexity of the post-conflict demographic structure compared to the one-dimensionality of Western studies of cohousing.

The emphasis on consumer models of interaction through the fintech ecosystem differed from the industrial approach of Chinese researchers. C.Z. Li *et al.* (2021) optimised prefabricated construction production processes through blockchain and IoT technologies. The use of the existing Ukrainian digital infrastructure for payment transactions between participants in housing platforms incorporated the high level of digitalisation (over 60% of the population with basic digital skills) and the developed electronic payment system. The integration of renewable energy sources as a competitive advantage of joint housing projects has become strategically significant in the context of the energy crisis. The collective use of life support systems in the Ukrainian context not only optimised costs, but also increased the energy independence of residential complexes through joint investments in renewable technologies. P. Hernandez-Cruz *et al.* (2024) found a 22% error in predicting energy savings in social housing, when omitting actual consumption, limiting to the technical aspects of energy efficiency. Energy efficiency in the Ukrainian context had transformed from a technical characteristic into a factor of national security and economic sustainability of projects, which was not considered by Spanish researchers.

The three-level model of trust building (in the idea of the platform, in the technological functionality, and between community members) addressed the specific challenges of digital interaction in a post-conflict society. K.P. Rahmayanti & D. Rukmana (2024) investigated the barriers to community participation in post-disaster housing reconstruction, focusing on traditional mechanisms of face-to-face interaction. The stages of trust building in the digital environment incorporated the need to overcome distrust of new forms of economic interaction, which exceeded the scope of the usual approaches to community involvement in housing reconstruction. The use of the experience of condominiums as an institutional framework for the development of more complex forms of collective management was based on authentic practices of Ukrainian housing self-government. Adapting the international experience of co-operative housing to the existing mechanisms of HOAs ensured organic implementation using familiar organisational forms and legal procedures. J. Kadi *et al.* (2021) and I. Levin *et al.* (2021) analysed the creation of mixed communities and post-neoliberal housing reforms in New York, Berlin and Vienna, finding improvements in affordability with limited progress in democratising housing systems. The democratic decision-making principles developed in the Ukrainian practice of condominiums created a stronger basis for collective housing management compared to Western models, where democratisation remained a problematic aspect of reforms.

Incorporating currency instability through hybrid financial instruments and fractional ownership addressed the economic realities of the transition period. The creation of adaptive mechanisms for pricing and distributing

investment risks among multiple participants reduced financial barriers for middle-income groups in the face of macroeconomic uncertainty. P. Akbar & S. Hoffmann (2023) developed a universal typology of collaborative consumption through three bipolar dimensions, without addressing the impact of currency fluctuations and inflationary processes on the functioning of platforms. The Ukrainian model required additional risk hedging mechanisms that were absent in standard Western approaches to collaborative consumption. The flexibility of organisational forms and rapid response to changes in consumer preferences considered the lessons of the pandemic and wartime. The adaptability of housing projects to crisis conditions has become a critical factor in the viability of alternative models. P.D. Esposti *et al.* (2021) noted a decrease in the use of shared transport and services due to sanitary restrictions, without suggesting recovery strategies. The professionalisation of Danish cohousing in the post-COVID period confirmed the effectiveness of adaptive management approaches, which justified the feasibility of flexible organisational solutions for the Ukrainian context.

Quantitative indicators of the effectiveness of the integrated approach (reduction of operating costs by 15-20%, increase in the life cycle by 25-30%) confirmed the practical feasibility of integrated planning of housing projects. The synergy of private initiative, technological innovation, and government regulation outperformed the effectiveness of fragmented approaches of previous studies. M. Marchesi & C. Tweed (2021) limited their analysis to social innovations in housing, while N. Winston (2021) addressed the conceptualisation of sustainability through the criterion of sufficiency without addressing economic mechanisms of implementation. The traumatic historical experience of collectivisation created specific cultural barriers to the acceptance of shared housing practices in Ukrainian society. Transforming mental attitudes by demonstrating the prestige and innovation of alternative housing solutions required a delicate balancing act between modernisation goals and cultural sensitivity to the historical context. D. Fischer *et al.* (2021) systematised universal communication approaches to sustainable consumption without national specificity, revealing the dominance of a focus on individual behavioural change over systemic transformation. Culturally contextualised communication strategies required a fundamentally different approach to shaping a positive perception of collective housing practices.

X. Liu *et al*. (2025) identified the "paradox of joint consumption", where financial scarcity increased the need for psychological possession, preventing participation in economically beneficial joint practices. The ambivalence of the Ukrainian consumer between status aspirations and pragmatic economy in the context of financial instability required differentiated persuasion strategies. Emphasising the functional benefits and economic feasibility of sharing addressed the psychological characteristics of consumer behaviour by emphasising product attribution and price advantages depending on the market segment and income level of potential participants. The multifactorial model of adaptation of sharing mechanisms to the Ukrainian context integrated economic, sociocultural and institutional determinants of housing transformation. The study by H. Li *et al.* (2022) was limited to the quantification of the impact of Airbnb on housing rents without addressing contextual factors, while the conceptual framework of the study covered seven areas of adaptation from the legal environment to post-conflict specifics. The Ukrainian situation, with a concentration of 330,000 internally displaced persons, energy challenges and reconstruction, differed from stable U.S. markets. The territorial implementation strategy through an urban-centric approach considered regional differentiation of economic development and readiness for housing innovations.

The creation of a favourable regulatory environment through special economic zones and municipal support programmes provided the institutional framework for housing innovation. Institutional support through Diia City, Smart City initiatives and European urban development programmes created space for experimentation, while maintaining the necessary regulatory oversight. The study by M. Ahsan (2020) was limited to a critical analysis of the ethical problems of the platform economy and deconstructing entrepreneurial rhetoric without offering constructive regulatory alternatives. The proactive approach to shaping the legal framework contrasted with a passive critical stance towards existing practices of the sharing economy. The emphasis on post-conflict specificity, cultural determinants and institutional mechanisms has created a unique theoretical framework for the practical implementation of sharing economy mechanisms in the Ukrainian housing sector. While most previous studies have examined individual aspects of sharing in stable economic conditions, the comprehensive approach to adaptation in post-conflict transformation had expanded the theoretical boundaries of the field and created a basis for further empirical research.

Conclusions

An analysis of conceptual frameworks and global models for integrating co-consumption into housing policy shown an inverse relationship between regulatory burden and profitability of platforms: European models (Germany, France, Denmark, Sweden) were characterised by moderate profitability of 12-15%, while Asian approaches (China) demonstrated higher economic efficiency of 25-30%. Danish, Swedish and Norwegian co-housing practices have shown the potential to reduce utility costs by 35-45% and reduce public social expenditures by 20%. Circular housing principles have demonstrated the potential to reduce operating costs and extend the operational period compared to traditional models. An overview of the dynamics of the Ukrainian

housing market in 2020-2024 shown an increase in total housing commissioning by 69.7% (from 5.75 to 9.76 million m^2) and an increase in the number of newly built apartments by 82.2% (from 65 to 118.4 thousand). The economic capacity for innovative housing solutions was provided by the high-tech sector, with a median income of USD 2,590 and a 31% increase in IT vacancies, while the concentration of 330,000 internally displaced persons in the Lviv region (160,000), the Ivano-Frankivsk region (98,000), and the Zakarpattia region (72,000) created a diversified demand for flexible housing models of different economic levels. The theoretical model of adapting international practices systemised the implementation process through seven areas: legislative support, socio-cultural factors, economic conditions, social customs, technological readiness, specifics of post-war recovery, and cooperative traditions. The mechanism of gradual establishment of trust relations covered three stages of interaction between participants in the digital space of a post-conflict society, considering the phasing from trust in the basic idea of the platform to the formation of interpersonal relations between participants. The financial architecture was based on distributed ownership and adaptive pricing mechanisms to neutralise currency risks through the creation of hybrid instruments and fractional ownership.

The recommendations included the formation of experimental regulatory zones for housing innovations within the framework of the Diia City and Smart City initiatives, the launch of municipal programmes to support social business in the housing sector using European grant programmes, and the application of condominiums' best practices to create more complex collective housing management structures. The implementation of shared consumption mechanisms was recommended to begin with pilot projects in megacities, gradually scaling up to medium-sized cities through adaptation to local economic and cultural conditions. The limitations of the study were the conceptual nature of the proposed model without practical testing in Ukrainian market conditions, as well as the limited timeframe of the study and the focus on urban areas without considering the specifics of rural areas. Future research should focus on the experimental implementation of theoretical developments through piloting in megacities and calculating the economic impact of sharing mechanisms on the Ukrainian housing sector, with further monitoring of the effectiveness of the implemented solutions.

Acknowledgements

None.

Funding

None.

Conflict of Interest

None.

References

[1] Ahsan, M. (2020). Entrepreneurship and ethics in the sharing economy: A critical perspective. *Journal of Business Ethics*, 161, 19-33. doi: 10.1007/s10551-018-3975-2.

[2] Akbar, P., & Hoffmann, S. (2023). Collaborative space: Framework for collaborative consumption and the sharing economy. *Journal of Services Marketing*, 37(4), 496-509. doi: 10.1108/JSM-03-2021-0078.

[3] Alyakoob, M., & Rahman, M.S. (2022). Shared prosperity (or lack thereof) in the sharing economy. *Information Systems Research*, 33(2), 638-658. doi: 10.1287/isre.2021.1076.

[4] Brysch, S., Gruis, V., & Czischke, D. (2023). Sharing is saving? Building costs simulation of collaborative and mainstream housing designs. *Buildings*, 13(3), article number 821. doi: 10.3390/buildings13030821.

[5] Buhalis, D., Andreu, L., & Gnoth, J. (2020). The dark side of the sharing economy: Balancing value co-creation and value co-destruction. *Psychology & Marketing*, 37(5), 689-704. doi: 10.1002/mar.21344.

[6] Calder-Wang, S. (2021). The distributional impact of the sharing economy on the housing market. *SSRN*. doi: 10.2139/ssrn.3908062.

[7] CASE-KA. (n.d.). *Innovation in mobility: The CASE-KA project*. Retrieved from https://www.case-ka.eu/index.html?p=2174.html.

[8] Chen, K., Long, H., Liao, L., Tu, S., & Li, T. (2020). Land use transitions and urban-rural integrated development: Theoretical framework and China's evidence. *Land Use Policy*, 92, article number 104465. doi: 10.1016/j.landusepol.2020.104465.

[9] Civil Code of Ukraine No. 435-IV. (2003, January). Retrieved from https://zakon.rada.gov.ua/laws/show/435-iv#Text.

[10] DiDi Global Inc. (n.d.). *Corporate overview*. Retrieved from https://ir.didiglobal.com/overview/default.aspx.

[11] Dolnicar, S., & Zare, S. (2020). COVID19 and Airbnb – disrupting the disruptor. *Annals of Tourism Research*, 83, article number 102961. doi: 10.1016/j.annals.2020.102961.

[12] Druta, O., Ronald, R., & Heath, S. (2021). Urban singles and shared housing. *Social & Cultural Geography*, 22(9), 1195-1203. doi: 10.1080/14649365.2021.1987507.

[13] Esposti, P.D., Mortara, A., & Roberti, G. (2021). Sharing and sustainable consumption in the era of COVID-19. *Sustainability*, 13(4), article number 1903. doi: 10.3390/su13041903.

[14] European Environment Agency. (2024). *Circular economy*. Retrieved from https://www.eea.europa.eu/en/topics/in-depth/circular-economy.
[15] Ferreri, M., & Vidal, L. (2021). Public-cooperative policy mechanisms for housing commons. *International Journal of Housing Policy*, 22(2), 149-173. doi: 10.1080/19491247.2021.1877888.
[16] Filippas, A., Horton, J.J., & Zeckhauser, R.J. (2020). Owning, using, and renting: Some simple economics of the "sharing economy". *Management Science*, 66(9), 4152-4172. doi: 10.1287/mnsc.2019.3396.
[17] Fischer, D., Reinermann, J.-L., Mandujano, G.G., DesRoches, C.T., Diddi, S., & Vergragt, P.J. (2021). Sustainable consumption communication: A review of an emerging field of research. *Journal of Cleaner Production*, 300, article number 126880. doi: 10.1016/j.jclepro.2021.126880.
[18] Free2Move. (n.d.). *Our press release*. Retrieved from https://www.free2move.com/en-GB/press.
[19] Hernandez-Cruz, P., Hidalgo-Betanzos, J.M., Flores-Abascal, I., Erkoreka-Gonzalez, A., & Fernandez-Luzuriaga, J. (2024). The effect of considering the real consumption on the assessment of the renovation of social housing buildings. *Energy and Buildings*, 319, article number 114535. doi: 10.1016/j.enbuild.2024.114535.
[20] Houseful. (n.d.). *News*. Retrieved from https://houseful.eu/news/.
[21] International Organization for Migration. (2024). *Report on internal displacement of the population in Ukraine survey of the general population. Round 16*. Retrieved from https://dtm.iom.int/sites/g/files/tmzbdl1461/files/reports/IOM_UKR_GPS_Internal%20Displacement%20Report_Round%2016_UA_June%202024.pdf.
[22] IREX. USAID. (2024). *Ukraine. Vibrant information barometer*. Retrieved from https://www.irex.org/sites/default/files/VIBE_2024_Ukraine.pdf.
[23] IT labour market results for the year: +31% vacancies, product IT is growing, but not without layoffs. (2024). *DOU*. Retrieved from https://dou.ua/lenta/articles/jobs-and-trends-2024/.
[24] Jacobsen, N.B. (2006). Industrial symbiosis in Kalundborg, Denmark: A quantitative assessment of economic and environmental aspects. *Journal of Industrial Ecology*, 10(1-2), 239-255. doi: 10.1162/108819806775545411.
[25] Kadi, J., Vollmer, L., & Stein, S. (2021). Post-neoliberal housing policy? Disentangling recent reforms in New York, Berlin and Vienna. *European Urban and Regional Studies*, 28(4), 353-374. doi: 10.1177/09697764211003626.
[26] Khalek, S.A., & Chakraborty, A. (2023). Shared consumption and its determinants: A systematic literature review and future research agenda. *International Journal of Consumer Studies*, 47(3), 888-921. doi: 10.1111/ijcs.12913.
[27] Kirchner, S., & Schüßler, E. (2020). Regulating the sharing economy: A field perspective. In I. Maurer, J. Mair & A. Oberg (Eds.), *Theorizing the sharing economy: Variety and trajectories of new forms of organizing* (Vol. 66). Leeds: Emerald Publishing Limited. doi: 10.1108/S0733-558X20200000066010.
[28] Krylovskyi, V. (2024). Increasing the financial potential of investment activity of business entities. *Economics, Entrepreneurship, Management*, 11(2), 65-76. doi: 10.56318/eem2024.02.065.
[29] Kryshtal, H. (2024). *Integration of financial and demographic factors into strategic planning for sustainable economic development*. Kyiv: Interregional Academy of Personnel Management.
[30] Law of Ukraine No. 2189-VIII "On Housing and Communal Services". (2017, November). Retrieved from https://zakon.rada.gov.ua/laws/show/2189-19#Text.
[31] Levin, I., Santiago, A.M., & Arthurson, K. (2021). Creating mixed communities through housing policies: Global perspectives. *Journal of Urban Affairs*, 44(3), 291-304. doi: 10.1080/07352166.2021.1983442.
[32] Li, C.Z., Chen, Z., Xue, F., Kong, X.T.R., Xiao, B., Lai, X., & Zhao, Y. (2021). A blockchain-and IoT-based smart product-service system for the sustainability of prefabricated housing construction. *Journal of Cleaner Production*, 286, article number 125391. doi: 10.1016/j.jclepro.2020.125391.
[33] Li, H., Kim, Y., & Srinivasan, K. (2022). Market shifts in the sharing economy: The impact of Airbnb on housing rentals. *Management Science*, 68(11), 8015-8044. doi: 10.1287/mnsc.2021.4288.
[34] Liu, Q., Trevisan, A.H., Yang, M., & Mascarenhas, J. (2022). A framework of digital technologies for the circular economy: Digital functions and mechanisms. *Business Strategy and the Environment*, 31(5), 2171-2192. doi: 10.1002/bse.3015.
[35] Liu, X., Wang, X., Xiang, H., Chen, Z., & Su, S. (2025). The shared consumption paradox: Financial scarcity hinders shared consumption. *Acta Psychologica Sinica*, 57(7), 1281-1294. doi: 10.3724/SP.J.1041.2025.1281.
[36] LUN. (n.d.). *2023 real estate market results from LUN*. Retrieved from https://lun.ua/misto/2023.
[37] Marchesi, M., & Tweed, C. (2021). Social innovation for a circular economy in social housing. *Sustainable Cities and Society*, 71, article number 102925. doi: 10.1016/j.scs.2021.102925.
[38] Meng, Q., Zhang, Y., Li, Z., Shi, W., Wang, J., Sun, Y., Xu, L., & Wang, X. (2020). A review of integrated applications of BIM and related technologies in whole building life cycle. *Engineering, Construction and Architectural Management*, 27(8), 1647-1677. doi: 10.1108/ECAM-09-2019-0511.
[39] MinFin. (2021). *Housing commissioning in Ukraine grew by 30% in the first half of the year, according to the State Statistics Service*. Retrieved from https://minfin.com.ua/ua/2021/08/29/70684577/.
[40] NetJets. (n.d.). *NetJets press center*. Retrieved from https://www.netjets.com/en-us/press-center.

[41] Organisation for Economic Co-operation and Development. (2024). *OECD digital economy outlook 2024 (Volume 2): Strengthening connectivity, innovation and trust*. Paris: OECD Publishing. doi: 10.1787/3adf705b-en.
[42] Oxford Economics. (2022). *Key themes 2023 – mild recessions and a cheerless recovery*. Retrieved from https://www.oxfordeconomics.com/resource/key-themes-2023-mild-recessions-and-a-cheerless-recovery/.
[43] Panukhnyk, O., Yanchynskyi, V., & Kurakh, O. (2024). "Green" building of Ukraine: The capacity of domestic business for the restoration and further inclusive development of territories. *Galician Economic Journal*, 87(2), 93-100. doi: 10.33108/galicianvisnyk_tntu2024.02.093.
[44] Qu, Y., Dong, X., Zhan, L., Si, H., Ping, Z., & Zhu, W. (2021). Scale transition and structure-function synergy differentiation of rural residential land: A dimensionality reduction transmission process from macro to micro scale. *Land*, 10(6), article number 647. doi: 10.3390/land10060647.
[45] Rahmayanti, K.P., & Rukmana, D. (2024). Scoping review of the depth of participation and barriers to community participation in post-disaster housing reconstruction. *International Journal of Disaster Risk Reduction*, 104, article number 104375. doi: 10.1016/j.ijdrr.2024.104375.
[46] Regulation of the European Parliament and of the Council No. 2023/988 "On General Product Safety, amending Regulation (EU) No. 1025/2012 of the European Parliament and of the Council and Directive (EU) 2020/1828 of the European Parliament and the Council, and repealing Directive 2001/95/EC of the European Parliament and of the Council and Council Directive 87/357/EEC". (2023, May). Retrieved from https://eur-lex.europa.eu/eli/reg/2023/988/oj/eng.
[47] Schor, J.B., & Vallas, S.P. (2021). The sharing economy: Rhetoric and reality. *Annual Review of Sociology*, 47, 369-389. doi: 10.1146/annurev-soc-082620-031411.
[48] Shen, L., Tang, L., & Mu, Y. (2024). Critical success factors and collaborative governance mechanism for the transformation of existing residential buildings in urban renewal: From a social network perspective. *Heliyon*, 10(6), article number e27672. doi: 10.1016/j.heliyon.2024.e27672.
[49] State Statistics Service of Ukraine. (n.d.). *Economic statistics*. Retrieved from https://www.ukrstat.gov.ua/operativ/menu/menu_u/cit.htm.
[50] Winston, N. (2021). Sustainable community development: Integrating social and environmental sustainability for sustainable housing and communities. *Sustainable Development*, 30(1), 191-202. doi: 10.1002/sd.2238.

Інтеграція механізмів спільного споживання як чинник трансформації політики житлового будівництва в період відбудови

Сергій Бобко

Аспірант
Міжнародний науково-технічний університет імені академіка Юрія Бугая
02094, пров. Херсонський, 3, м. Київ, Україна
https://orcid.org/0009-0008-4129-0266

Олександр Гуцалюк

Аспірант
Таврійський державний агротехнологічний університет імені Дмитра Моторного
69063, вул. Університетська (Жуковського), 66, м. Запоріжжя, Україна
https://orcid.org/0009-0006-8693-8084

Максим Коляда

Аспірант
Міжнародний науково-технічний університет імені академіка Юрія Бугая
02094, пров. Херсонський, 3, м. Київ, Україна
https://orcid.org/0009-0006-5448-4057

Анотація. Післявоєнна відбудова житлового фонду потребує пошуку інноваційних підходів до забезпечення населення доступним житлом через альтернативні моделі споживання. Метою роботи було обґрунтування можливостей інтеграції світових практик колективного житлового споживання в стратегії післявоєнного розвитку. Дослідження базувалося на порівняльному аналізі міжнародних кейсів, систематизації теоретичних засад та розробці концептуальних моделей адаптації. Класифіковано основні типи колаборативних житлових бізнес-моделей та виявлено їх регіональні особливості функціонування у Німеччині, Франції, Данії, Швеції (Європа), США та Канаді (Північна Америка) та Китаї (Азія). Теоретичний аналіз засвідчив, що найменше регульовані азійські ринки продемонстрували найвищу прибутковість до 30 %, тоді як жорстко контрольовані європейські показали 12-15 % рентабельності. Огляд данських, шведських та норвезьких колективних житлових проєктів вказало на потенціал зниження побутових витрат населення до 45 % та скорочення бюджетних соціальних видатків на п'яту частину. Систематизація українських ринкових тенденцій 2020-2024 років засвідчила майже 70 % зростання житлового будівництва, що створило сприятливі умови для диверсифікації моделей забезпечення житлом. Виокремлено ключові групи потенційних споживачів нових житлових послуг, включаючи третину мільйона переселенців у Львівській, Івано-Франківській та Закарпатській областях. Розроблено рекомендації щодо створення регуляторних пісочниць у рамках ініціатив Дія City та запуску муніципальних програм підтримки соціального підприємництва в житловій сфері. Визначено готовність української цифрової інфраструктури до функціонування житлових платформ спільного споживання з урахуванням високого рівня цифровізації населення. Сформовано багатокомпонентну систему адаптації зарубіжного досвіду до національних культурних, економічних та правових умов. Практичне застосування результатів дозволить місцевим органам влади розробляти ефективні програми житлових інновацій та створювати сприятливе середовище для функціонування платформ колективного споживання

Ключові слова: кохаузинг; циркулярна економіка; енергоефективність; довіра; внутрішньо переміщені особи; бізнес-моделі

ECONOMIC FORUM
Journal homepage: https://e-forum.com.ua/en
Vol. 15, No. 3, 2025, 56-72
Article's History: Received: 16.04.2025 Revised: 05.08.2025 Accepted: 08.09.2025

UDC 336.7 DOI: 10.62763/ef/3.2025.56

The essence and modern features of attraction and management of foreign investment in Ukraines

Ihor Yaremko*
Doctor of Economic Sciences, Professor
Lviv Polytechnic National University
79013, 12 Stepan Bandera Str., Lviv, Ukraine
https://orcid.org/0000-0003-3556-0609

Nataliya Dumych
PhD in Economic Sciences, Associate Professor
Institution of Higher Education "Private Joint-Stock Company "Lviv Institute of Management"
79015, 16 Liska Str., Lviv, Ukraine
https://orcid.org/0000-0002-8188-6944

Abstract. The study aimed to address and analyse foreign direct investment and its impact on the national economy. Statistical data were analysed, concluding that a majority of foreign direct investment (37.6-43.7%) was directed to industry, particularly the processing sector (23.7-26.3%), trade (14-15.9%), and financial activities (18.4-19.6%), while the least went to education (0.04-0.08%) and healthcare (0.2-0.3%). Most foreign direct investments inflows came from Cyprus, the Netherlands, Switzerland, Germany, and the United Kingdom. Advantages and disadvantages of attracting foreign direct investment were systematised, and key factors negatively influencing Ukrainian investment market were identified. The study explored the core components that facilitated foreign direct investment inflows as well. A definition of the term "foreign investment" was provided, implemented measures aimed to improve the investment climate, as well as the measures that need to be implemented to promote the attraction of additional foreign investment were analysed. Main statements of legislative and regulatory acts to support strategic foreign investors were systematised. Investment potential of Ukrainian promising sectors was addressed. To trace foreign direct investment dynamics, the volume of foreign direct investment in Ukraine as of 2003-2024 period was considered. Distribution of foreign direct investment by major economic sectors (2007-2024) and by country of origin was analysed. The study explored the correlation between changes in foreign direct investment levels and inflation dynamics in Ukraine using macroeconomic data and the elasticity coefficient for the 2003-2024 period. The influence of internationalisation, globalisation, and transnationalisation on foreign direct investment was addressed. The importance of foreign direct investment as a driver of Ukrainian economic development was substantiated, key challenges in managing foreign direct investment were identified, and recommendations for enhancing investment governance were proposed. The practical significance of the study is determined by the contribution to improvement of the effectiveness of foreign direct investment management and promotion of national economic welfare

Keywords: foreign direct investment; economic activity types; global investment flows; investment attractiveness; investment environment; inflation

Introduction

One of the main sources of long-term sustainable economic growth of any country is investment. Improving the investment environment is one of the main tendencies of state policy. Thus, to form an effective strategy for attracting foreign investment, it is necessary to evaluate the modern state of the Ukrainian

Suggested Citation:
Yaremko, I., & Dumych, N. (2025). The essence and modern features of attraction and management of foreign investment in Ukraine. *Economic Forum*, 15(3), 56-72. doi: 10.62763/ef/3.2025.56.

*Corresponding author

investment environment and assess the value of indicators of its investment attractiveness.

K. Shchur & I. Hrinko (2023) argued that the level of quality-of-life affected population growth, affecting migration and the unemployment rate. The study applied a statistical and analytical methods to trace direct and indirect effects of EU openness on global GDP (gross domestic product), investment flows, and trade balances. Based on the findings, the study proposed policy measures for the EU that can stimulate inclusive and sustainable global growth. M.F. Yücel & M. Çemberci (2024) investigated the impact of FDI (foreign direct investments) on the foreign economic potential, as well as the dynamics of fluctuations in export volumes depending on changes in the amount of external revenues. The study introduced a theoretical framework that integrated national competitiveness as a mediating factor between outward foreign direct investment (OFDI) and economic growth. The proposed model offered a foundation for further quantitative validation across diverse economies and policy environments. N. Kozii & V. Prachuk (2023) presented the interdependence of macro- and micro-level factors influencing the level of investment attractiveness. The study integrated macroeconomic indicators, institutional quality, security risks, and international perception to evaluate investment potential comprehensively. The study highlighted how subjective factors, such as expectations and geopolitical uncertainty, were mostly dominant rather than financial indicators. M. Tvaronavičienė *et al.* (2024) demonstrated that the interlinkages between Lithuanian exports and foreign direct investment originating from various Nordic countries ranged in strength, varying from weak to strong depending on the country and sector involved. The study proposed a unique framework combining quantitative indicators and qualitative criteria to assess both short-term and long-term effects of FDI. Moreover, the study demonstrated how FDI influenced specific sectors and regional development, offering insight into the heterogeneity of FDI outcomes across economic activities.

The authors T. Kovalchuk & D. Vara (2024) argued that attraction of foreign investment can be used to reach progressive changes in the economy. A comprehensive system of innovative mechanisms was developed to stimulate foreign investment. Moreover, the study substantiated the role of digitalisation and environmental sustainability as key factors of investment attractiveness. N. Yevtushenko (2023) identified factors that negatively affected the processes of foreign investment in Ukraine. Key trends, challenges, and barriers to FDI development were systematically synthesised in the context of political and economic instability. A model of adaptive policy was proposed that addresses both external (global economic trends) and internal factors (institutional changes, reforms). M. Yuldashev *et al.* (2023) emphasised the role of human capital in amplifying the positive effects of FDI, suggesting that a combined policy approach targeting both FDI and human capital development was necessary to reduce inequality. The study employed advanced panel data techniques to refine the notion of the relationship between FDI and various forms of income inequality. T. Zatonatska *et al.* (2022) conducted a comprehensive analysis of the main markers of FDI direction. The study assessed how the war affects investment confidence levels and the willingness of capital to enter the market. V. Du & I. Lishchynskyy (2024) determined that the trajectory of Chinese foreign direct investment in agriculture was a compelling narrative of strategic global engagement. The study classified detailed factors influencing Chinese FDI decisions in agriculture, including technological transfer, food security concerns, and geopolitical considerations. The study correlated investment flows to local economic transformation, labour markets, and sustainability outcomes. V. Palekhova (2023) determined that Ukraine needs a course for further development of information services and European integration. The study uniquely combined the analysis of globalisation trends with the specific challenges and opportunities facing Ukrainian economies during post-conflict recovery. The study introduced mechanisms for balancing external openness with FDI in a post-war context. The study aimed to assess and analyse FDI, and their impact on national economy, as well as to highlight the main trends in its formation and use.

Materials and Methods

The study was conducted based on graphical and statistical data analysis, which was used for a comprehensive examination of FDI trends in Ukraine. The methodology employed in the research involved the collection, comparison, and interpretation of official data obtained from national and international statistical agencies. Quantitative methods such as time series analysis, trend modelling, and comparative analysis were applied to assess the volume, structure, and dynamics of FDI over the selected time periods. Additionally, sectoral and geographical breakdowns of FDI inflows were visualised through charts, graphs, and tables to enhance interpretability and facilitate data-driven conclusions. The study also integrated qualitative elements to contextualise the statistical findings within broader economic and political developments. This mixed-methods approach ensured not only the accuracy of the numerical findings, but also further analysis of the underlying factors influencing investment behaviour, including legislative reforms, bilateral agreements, regional conflicts, and macroeconomic stability. The applied methodology provided a solid foundation for identifying key trends, risks, and opportunities associated with foreign investment in Ukraine.

To trace the dynamics of investment inflows into Ukraine, the volume of FDI during the 2003-2024 period was analysed. The sectoral distribution of FDI within the Ukrainian economy from 2007 to 2024 was addressed, highlighting the key industries that attracted the largest

shares of investment. Also, it was used the elasticity coefficient formula:

$$Exy = \left|\frac{dlny}{dlnx}\right| = \left|\frac{dy}{dx} \times \frac{x}{y}\right|, \quad (1)$$

where y – a change in amount of foreign direct investment; x – a change in inflation; Exy – elasticity of y with respect to x; – natural logarithm of the variable y; – natural logarithm of the variable x; $\left|\frac{dlny}{dlnx}\right|$ – relative change in y in response to a relative change in x; $\frac{dy}{dx}$ – derivative of the function y with respect to x; $\frac{x}{y}$ – ratio of the level of variable x to the level of y.

Additionally, the structure of FDI by country of origin was examined, highlighting Ukraine's most significant international investment partners and revealing shifts in geopolitical and economic alignment over time. Statistical data were obtained from Official website of the National Bank of Ukraine (n.d.), Eurostat (n.d.), Official website of the Ministry of Economy, Environment and Agriculture of Ukraine (n.d.), State Statistics Service of Ukraine (2025), National Economic Strategy 2030 (n.d.). The following industries were analysed: agriculture, hunting, forestry, fisheries; industry; wholesale and retail trade; hotel and restaurant activities; transport and communication activities; financial and insurance activities; real estate transactions; public administration; education, professional, scientific and technical activities; healthcare and social assistance; utility and individual services as well as activities in culture and sports were analysed. The analysis covered both the quantitative and qualitative changes in investment behaviour, influenced by internal reforms, integration processes with the European Union, as well as external shocks such as the global financial crisis of 2008, the russian invasion in 2014, and the full-scale russian war since 2022.

Results and Discussion

Investments are the driver of economic development and the possibility of structural restructuring of the national economy depends on the effectiveness of methods of attracting and mobilising foreign investment resources. To assess the modern state of foreign investment in Ukraine, a comprehensive comparative analysis of foreign direct investment movement in Ukraine was conducted. A definition of the term "foreign investment" is to be provided – a long-term investment of securities, property and property rights, results of intellectual activity by non-resident companies, with the aim of obtaining a direct impact on economic activity, investor control over the enterprise and entrepreneurial profit or achieving a social effect, through investor control over the investment object (management of the enterprise and control over its activities), as well as the organisation and construction of enterprises, which is possible if the foreign owner owns at least 25% of the authorised capital of the joint-stock company, which in turn contributed to the development and implementation of large-scale projects and the use of the latest technologies. While lasting interest between the investor and the enterprise may exist if the direct investor owns 10% or more of the voting rights on the board of directors (Law of Ukraine No. 93/96-VR, 1996).

Notably, direct investments can be made in the following forms: acquisition of non-controlling and controlling stakes; licensing agreements with firms in recipient countries; strategic alliances and joint ventures; as well as owned subsidiaries and branches. Ukraine has several key advantages that contributed to attractiveness for foreign direct investment (FDI), which provided almost 1% of global FDI for Ukraine (Eurostat, n.d.). These included a strong scientific and industrial base, high innovation potential, and a cost-effective yet skilled labour force. Ukraine also benefited from a large internal consumer market and a strategically favourable geographical position. Additional incentives included relatively low business establishment costs, a legislative framework designed to support foreign investors and streamlined legal procedures for business operations. Further factors enhancing Ukrainian investment appeal were state guarantees for investment protection, the candidate status for European Union accession, the removal of export duties and quotas for Ukrainian goods, visa-free travel arrangements, and the integration of Ukrainian transport corridors into the indicative maps of the Trans-European Transport Network (TEN-T). Improvements in the overall business climate and the introduction of targeted government investment incentives also contributed to the Ukraine's investment potential.

Since Ukraine became independent in 1991, investment has begun to flow into economy. Over more than 30 years, Ukraine attracted approximately USD 50 billion of FDI. The decrease in foreign investment during 2002-2024 had several reasons: investor distrust due to the high level of corruption, doubts about the fairness of the judicial system, markets monopolisation, instability of the national currency. Before 2015, there was a slight annual growth in FDI, and since 2015 there has been a moderate annual decline. In 2019 and 2022, the net outflow of FDI became positive. A gradually increasing trend in investment was observed in 1992-2004, when internal resources were invested in the development of the industrial and information potential. The next substantial increase in the volume of investment inflows occurred in 2005 after the Orange Revolution. The largest volumes of investment funds were observed in the following 2007-2008 (in 2008 – period of global financial and economic crisis), foreign investors invested USD 10 billion 913 million into Ukrainian economy (Official website of the Ministry of Economy..., n.d.). The securities market at that time was characterised by high profitability due to such issuers as: "Azovstal", "Mariupol Metallurgical Plant named after Ilyich", "Northern Mining and Processing Plant", "Arcelor Mitall Kryvyi Rih", "Raiffeisen Bank Aval". The positive dynamics were changed by the decline in

2009 due to global economic crisis. From 2010 to 2012 the volume of investments gradually increased, and in 2012 amounted to more than USD 8 billion. Decline in investments in the Ukrainian economy has caused increased dependence on imports of industrial goods in light industry, mechanical engineering, and automotive manufacturing; a decrease in GDP; and an increase in the vulnerability to currency and financial crises (Official website of the National Bank..., n.d.).

However, in 2013 FDI amounted to USD 4 billion 499 million, which was a record low in 19 years due to the decline in demand for Ukrainian exports. An unprecedented reduction in FDI occurred in 2014, in more than 10 times. The reason for such a sharp decline was the war started by russia. The net outflow of FDI decreased most significantly in 2015 compared to 2014 (by 1342%). The volume of FDI in Ukraine had been gradually increasing, in particular, in 2017, compared to 2016, there was a significant increase in investments from Luxembourg – from USD 36.9 million to USD 94.3 million – as a result of the conclusion of the Convention Between the Government of Ukraine and the Government of the Grand Duchy of Luxembourg on the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income and on Capital (2017) in 2016. In 2019 it reached USD 5 billion 860 million, while in 2020 it decreased by USD -868 million compared to 2019 due to pandemic. In 2021, positive dynamics in the inflow of direct investment into Ukraine resumed up to USD 6 billion 687 million. Between 2020 and 2021, there was positive momentum – USD 7 billion 555 million was invested. The full-scale war of 2022 caused the 8 times reduction in investment volumes. the decrease in net FDI inflows to Ukraine in 2009 and 2020 was influenced by external crisis phenomena, and in 2006, 2015, and 2022 by internal ones. Meanwhile, certain countries increased its financing to Ukraine – Austria (by 65.63%), Finland (by 28.85%), Poland (by 28.07%), Italy (by 23.2%), France (by 20.9%), Denmark (by 15.30%). In 2023, there was a restoration of investment activity of foreign investors (due to the adoption by the Ukrainian government of a number of measures to stimulate investment inflows), and in 2024, FDI decreased by 19% (FDI covered a quarter of the current account deficit, and a larger share of FDI was reinvested earnings) (Official website of the National Bank..., n.d.). Dynamics of FDI Inflows to Ukraine from 2003 to 2024 was introduced in Figure 1.

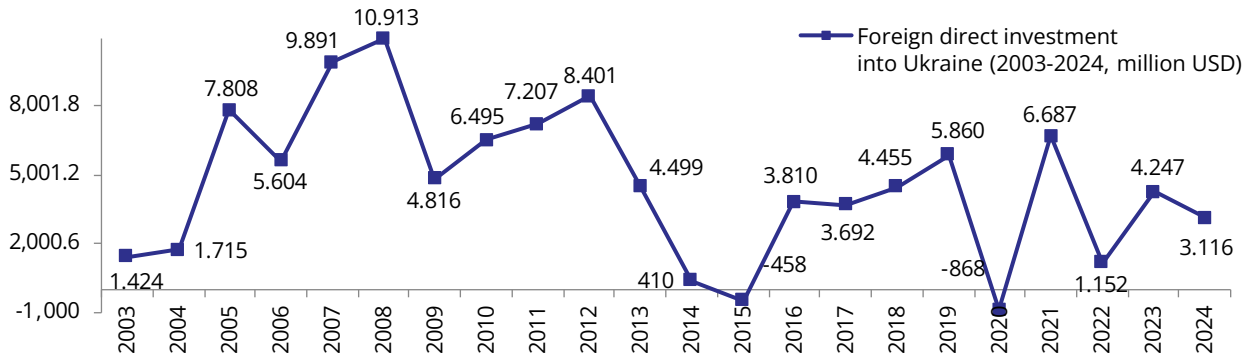

Figure 1. *Dynamics of FDI inflows into Ukraine between 2003 and 2024*
Source: *based on Official website of the National Bank of Ukraine (n.d.), State Statistics Service of Ukraine (2025), Official website of the Ministry of Economy, Environment and Agriculture of Ukraine (n.d.)*

Analysing foreign investments by type of activity, it is worth noting that investments were directed to developed, and simultaneously less technology- and science-intensive, areas of economic activity, where new products appear quickly, the assortment changes, costs were quickly compensated and commercial risks were low. The leaders in attracting foreign direct investment were industry as a leader in foreign investment (37.6-43.7%), in particular in processing industry (23.7-26.3%), wholesale and retail trade and repair of motor vehicles and motorcycles (14-15.9%), real estate transactions (7.7-10.5%), financial and insurance activities (18.4-19.6%), and it does not require long-term investments and the development of new technologies, mining industry and quarrying (7.3-13.1%). The least FDI was allocated to healthcare and social assistance (0.2-0.3%), education (0.04-0.08%), construction (0.7-2%), administrative and support services (0.7-3.4%), agriculture, forestry and fisheries (2.7-4.6%), professional, scientific and technical activities (1.5-3.56%), communications and telecommunications, transport, warehousing, postal and courier activities (3.54-4.61%), art, sports, entertainment and recreation (0.32-2%), water supply; sewage, waste management (0.1%). The low investment attractiveness of these industries can be explained by high-risk for investment, as they involve long-term investments, implementation and development of new technologies, as well as innovations and management practices (Official website of the National Bank..., n.d.). Figure 2 presented changes in the composition of foreign direct investment in Ukraine by economic sector from 2007 to 2024.

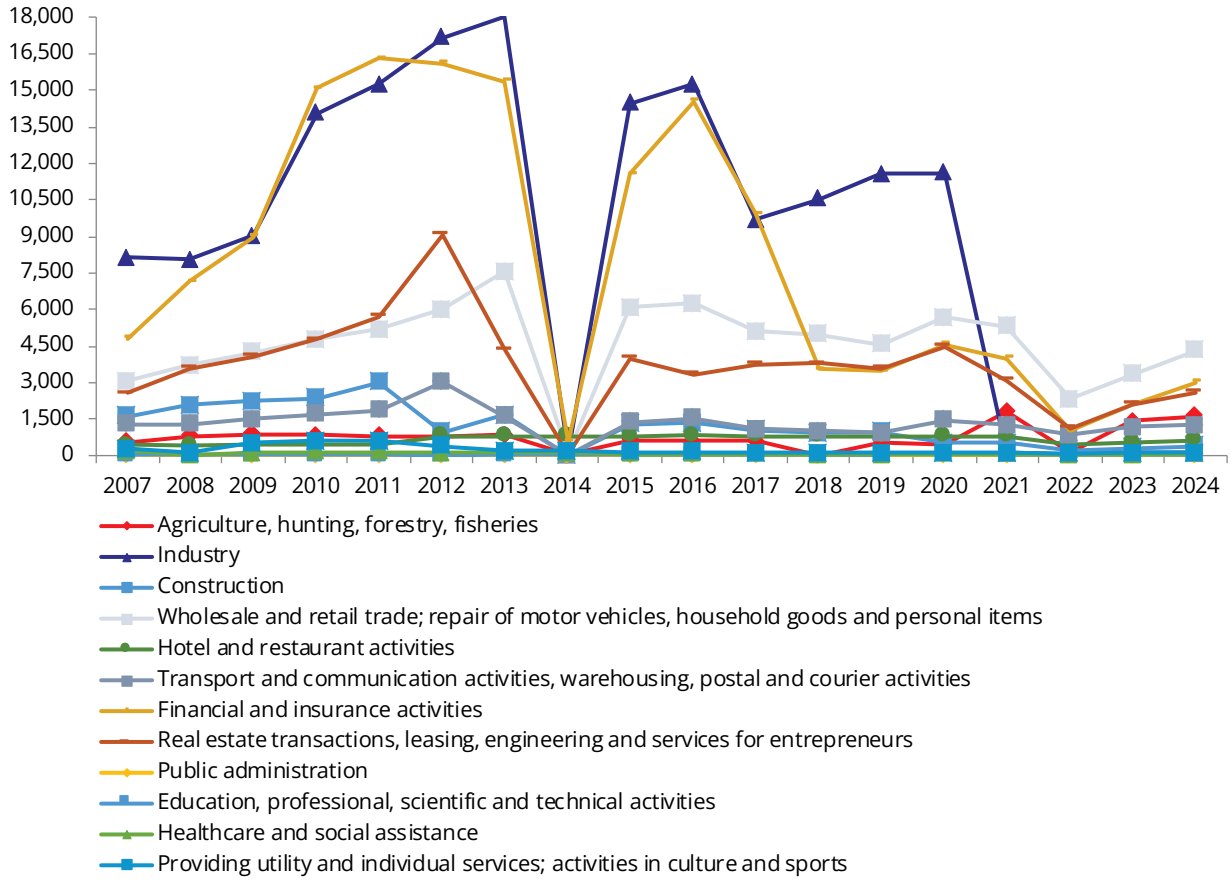

Figure 2. *Dynamics of the structure of FDI into Ukraine by type of economic activity as of 2007-2024 period (USD million)*
Source: *based on Official website of the National Bank of Ukraine (n.d.), State Statistics Service of Ukraine (2025), Official website of the Ministry of Economy, Environment and Agriculture of Ukraine (n.d.)*

FDI in the Ukrainian economy is based on more than 100 countries, but the majority of the inflows came from Cyprus, but its equity capital continues to displace the capital of developed countries from the Ukrainian economy, the Netherlands, Switzerland, Germany, the United Kingdom. In Ukraine, there were insignificant volumes of foreign investments made by "newly industrialised countries" – Taiwan, Hong Kong, Singapore, also it was Austria, Luxembourg, and France (Official website of the National Bank..., n.d.). FDI was one of the key factors in Ukraine's integration into EU. Cooperation with the EU, which had been ongoing since 1993 (Resolution of the Verkhovna Rada of Ukraine No. 3360-XII, 1993), involved the exchange of experience, technologies and investments, visa-free travel. Since 2017, Ukrainians travelled without a visa or obtain a visa on the spot to 144 countries. Also, it was accepted Association Agreement between European Union and European Atomic Energy Community and their Member States, of one part, and Ukraine, of other part (2017) and EU candidate status (June 23, 2022) were received. Given that rising global inflation can lead to a decline in investment activity, the study examined the relationship between changes in inflation and fluctuations in the level of foreign direct investment (FDI) in Ukraine. Accordingly, economic data related to FDI and inflation were analysed as of 2003-2024 period using the elasticity coefficient formula had been analysed:

$$Exy = \left|\frac{dlny}{dlnx}\right| = \left|\frac{dy}{dx} \times \frac{x}{y}\right|. \quad (2)$$

A positive elasticity coefficient indicated that FDI increased as inflation rises, which may suggest that investors expect higher returns in an inflationary environment (e.g., due to currency depreciation or asset revaluation). A negative coefficient implied that higher inflation discouraged investment, possibly due to increased uncertainty and cost pressures. The analysis employed the elasticity coefficient, which measured the percentage change in FDI in response to a 1% change in inflation. This identified how inflation affected FDI inflow. This approach demonstrated how sensitive Ukrainian investment climate was to inflationary shocks and provided a basis for forming anti-inflationary and investment-stimulating policy measures. Figure 3 shown how changes in inflation influence FDI dynamics, specifically whether inflationary shocks constrain investment or, conversely, re accompanied by its growth.

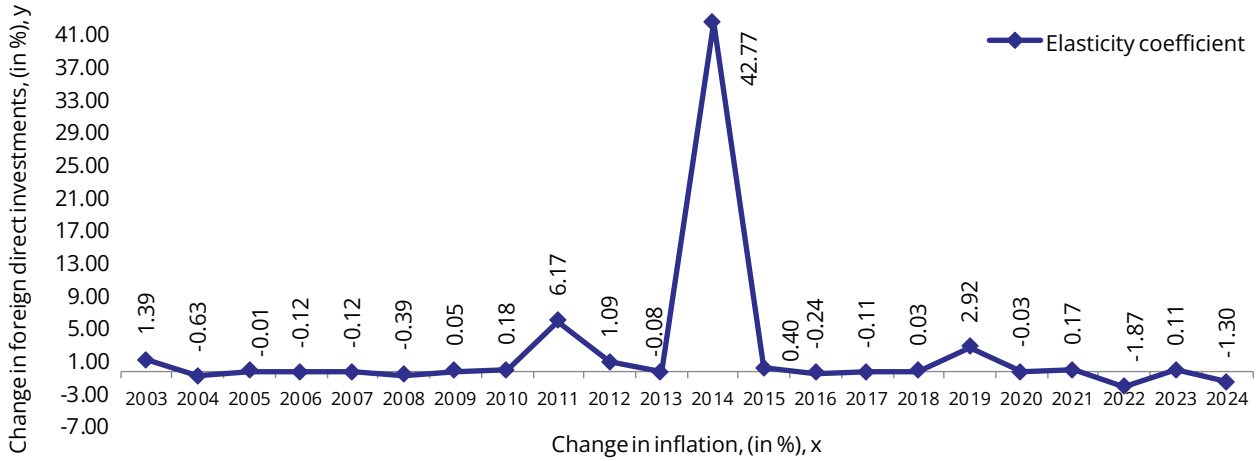

Figure 3. *Elasticity coefficient of FDI relative to inflation trends in Ukraine from 2003 to 2024*
Source: *based on Official website of the National Bank of Ukraine (n.d.), State Statistics Service of Ukraine (2025), Official website of the Ministry of Economy, Environment and Agriculture of Ukraine (n.d.)*

Figure 3 demonstrated a high degree of variability in the indicator, with elasticity alternating between positive and negative values, often showing considerable fluctuations. Periods of weak sensitivity (values close to zero) indicated years, when inflation was almost unrelated to changes in FDI, while periods of heightened sensitivity (|E|>1) reflected cases, when investment responded sharply to inflationary shifts. Distinct peaks included positive ones in 2003 (~1.39), 2011 (~6.17), 2012 (~1.09), 2019 (~2.92), and especially 2014 (~42.77), as well as negative ones in 2022 (-1.87) and 2024 (-1.30). Thus, before and after the global financial crisis, as well as during period of military shocks, the response of FDI to inflation could change both in sign and magnitude (Table 1).

Table 1. *Elasticity coefficient between changes in FDI and inflation*

Year	Change in FDI, (in %), y	Change in inflation, (in %), x	Elasticity coefficient
2002	10.1	0.6	
2003	102.1	8.2	1.39
2004	21.3	12.3	-0.63
2005	304.3	10.3	-0.01
2006	-23.8	11.6	-0.12
2007	60.7	16.6	-0.12
2008	7.4	22.3	-0.39
2009	-53	12.3	0.05
2010	23.7	9.1	0.18
2011	21.8	4.6	6.17
2012	2.6	0.2	1.09
2013	-43.3	0.5	-0.08
2014	-92.7	24.9	42.77
2015	-263.1	43.3	0.40
2016	-1032.2	12.4	-0.24
2017	-2.9	13.7	-0.11
2018	21.1	9.8	0.03
2019	16.9	4.1	2.92
2020	-118.2	5	-0.03
2021	-824.7	10	0.17
2022	-91	26.6	-1.87
2023	575	5.1	0.11
2024	-23.3	12	-1.30

Source: *based on Official website of the National Bank of Ukraine (n.d.), State Statistics Service of Ukraine (2025), Official website of the Ministry of Economy, Environment and Agriculture of Ukraine (n.d.)*

Table 1 confirmed that elasticity values frequently shifted. Negative coefficients (indicating a restraining effect of inflation on FDI) were recorded in 2004, 2005 (almost zero), 2006, 2007, 2008, 2013, 2016, 2017, 2020, 2022, and 2024. Positive coefficients (indicating a concurrent increase in FDI with inflation) were observed

in 2003, 2009, 2010, 2011, 2012, 2018, 2019, 2021, and 2023. Small absolute values (close to zero) highlighted weak or unstable short-term reactions of FDI to inflation, for example in 2005 (-0.01), 2009 (0.05), 2010 (0.18), 2018 (0.03), 2020 (-0.03), 2021 (0.17), and 2023 (0.11). Major positive spikes were recorded in 2011 (6.17, strong positive sensitivity), 2014 (42.77, an exceptionally high value), and 2019 (2.92, notable positive elasticity). Such jumps typically signal conditions (structural shifts, shocks, or changes in the sign or scale of base values), when even minor relative changes in one variable were accompanied by very large relative changes in the other. Large negative coefficients were found in 2022 (-1.87) and 2024 (-1.30), years in which inflation coincided with a significant reduction in FDI, supporting the hypothesis of a repelling effect of inflationary uncertainty during shocks. "Change in FDI" column also revealed substantial percentage shifts in some years (e.g., -1032.2% in 2016, -824.7% in 2021, +575% in 2023). This occurred when net FDI, which can change sign or approach zero, was measured; in such cases, relative changes became explosive, leading to sharp fluctuations in elasticity.

Overall, the analysis revealed a long period of high volatility in elasticity. Some reactions shown nearly neutral, others exhibit strongly positive (2011, 2014, 2019), and still others markedly negative (2022, 2024) sensitivity. Thus, both the graph and the table illustrated the degree and direction of FDI responsiveness to inflationary changes across different periods. This approach demonstrated the investment climate under inflationary pressures, identifying, when inflation stimulated FDI (positive elasticity) and when it restrained it (negative elasticity). Based on this dynamic, the authors concluded that there was a need for anti-inflationary and investment-stimulating policies aimed to reduce uncertainty, mitigate risks, and sustain investment even during periods of economic shocks.

The processes of internationalisation and globalisation contributed to increase in employment, stabilisation of currency circulation and exchange rates, strengthening of the interdependence of national economies, stability and uniformity of economic growth, increase in welfare and improvement of the quality of life, as well as opening the way to global markets for goods, capital and technologies. The main part of FDI was transferred by transnational corporations (TNCs), as well as large state corporations, national welfare funds and private foundations. Transnationalisation of Ukrainian enterprises in modern realities can be an economic tool that shapes new directions of social development. Transnational corporations possessed significant resources, technologies, and experience in doing business in the global market, which can be a substantial factor in increasing the competitiveness of the national economy, stimulating economic growth, attracting foreign investment, introducing innovative management practices, as well as creating new jobs in Ukraine. However, TNCs can influence the political decisions of recipient countries by interfering in internal affairs, engaging in corruption, and lobbying for personal interests through local government officials. TNCs can also try to force local producers out of the market by monopolisation and high prices. To implement economic transformations, FDI must come in the form of new equipment, technologies, know-how, and patents. The advantages and disadvantages of FDI attraction, as well as factors with negative effect on the functioning of the investment market in Ukraine, were analysed and systematised (Table 2).

Table 2. *Characteristics of FDI*

Advantages of FDI attraction	Disadvantages of FDI attraction
FDI is a fundamental parameter of the reproduction process, which determines the possibilities of renewing fixed capital, conducting structural reforms, and sustainable long-term economic and social development of the country	Exploitation of the natural resource base of investments recipient. Negative impact on the natural environment. Increasing dependence on foreign capital
FDI is a main lever for activating and sustainable investment processes at the regional level	Factors (risks) that have a negative impact on investment market in Ukraine: 1) Economic risks (global economic recession, economic crises, financial turbulence, high inflation, national currency devaluation, rising unemployment, falling GDP). 2) Political risks (political instability, low level of public trust in authorities, coups). 3) Security risks (security issues for businesses and investors, threats of terrorism and crime, geopolitical and military conflicts). 4) Foreign exchange market risks (currency crises, national currency instability – significant fluctuations in the national currency on the foreign exchange market). 5) Imperfection of the tax, financial, customs and investment insurance systems. 6) High level of monopolisation of certain sectors.
FDI contribute to the implementation of structural reforms and restructuring; as well as the development of scientific and technical potential	
FDI affect scientific and technological progress, improving the standard of living of the population, and changing the quantitative and qualitative indicators of internal economic activity	
FDI contribute to the diversification of the industrial base. Industrial and export potential is increasing on a new scientific and technical basis, and opportunities are created for accelerating the pace of economic growth	
FDI can address the problems of technological renewal of fixed assets of the enterprise	
FDI contribute to an increase; in the income level and purchasing power, in social payments, and in budget revenues	
FDI are one of the key indicators of the ability of industrial enterprises to market transformations through new technological processes and innovative methods of organising industrial production	

Table 2, Continued

Advantages of FDI attraction	Disadvantages of FDI attraction
FDI contribute to the introduction of modern progressive types of equipment, as well as managerial, experience and practical skills; comprehensive use of resources; reduction of dependence on imports; achievement of socio-economic effect (through improving internal economy, social standards, welfare, the effectiveness of market transformations and stable economic development)	7) High level of dependence of the national economy on a limited circle of foreign investors. 8) Offshore zones cause significant outflow of capital, which reduces tax revenues to the budget. 9) High level of corruption. 10) Shadow economy. 11) Impoverishment, which harms national reputation. 12) Distrust in the protection of investor interests. 13) Bureaucracy (excessive bureaucracy in the processing of investment contracts). 14) Deficiencies of the tax system and the system of investment insurance (lack of an effective system of foreign investment insurance). 15) Limited channels of profit repatriation (mainly by exporting manufactured products of the extractive and raw materials industries that are in demand on global markets). 16) Deficiencies in the legislative framework (inconsistency of current regulatory documents regulating investment activities, as well as imperfection, inconsistency and instability of regulatory support). 17) High tax pressure on enterprises capital and unfavourable tax climate for investors. 18) Different business conditions for internal and foreign investors. 19) Low level of national investment management. 20) Low efficiency of national stock market. 21) Lack of guarantees for securing the property rights of foreign investors. 22) Low international competitiveness rating. 23) Low level of savings and lack of effective mechanisms for transforming these savings into investments. 24) russian-Ukrainian war
FDI provide an opportunity to stimulate priority sectors, in which there is a lack of available free resources	
FDI can help Ukrainian companies gain access to new markets and resources, as they contribute to the creation of mutually beneficial economic ties between Ukraine and other countries, increase the competitiveness of national companies, as well as transfer the latest technologies and know-how	
FDI promote new progressive methods of work and means of production	
FDI is part of globalisation, internationalisation of production processes, transnationalisation of the international finance system, and intensification of global trade cooperation	
FDI form support for small and medium-sized enterprises. FDI stimulate the development of infrastructure	
FDI optimise the use of internal resources	
FDI contribute to the establishment of market mechanisms and the integration into global economy	
FDI contribute to the launch of new investment projects	
FDI can compensate for the deficit of internal investment resources, open the way to global markets of goods, capital and technologies	
FDI are an indicator of the international attractiveness of the recipient country, a sign of the quality of the investment climate and a key indicator of the country's competitiveness in the international capital market	
FDI are substantial in creating conditions for overcoming the economic crisis	
FDI are crucial in supporting the national economies, especially developing countries, to participate in international trade by facilitating the flow of capital, labour and technology (knowledge). Attracting investment contributes to the creation of a positive investment image, ensures the fastest and most powerful development	

Source: *based on N. Kozii & V. Prachuk (2023), V. Palekhova (2023), K. Shchur & I. Hrinko (2023), R. Bansal & D. Maiti (2024), T. Kovalchuk & D. Vara (2024), Eurostat (n.d.)*

FDI was relevant for Ukrainian enterprises with a high level of depreciation of fixed assets, i.e., it affected the process of production technical modernisation and restructuring of enterprises. Investments improved working conditions; increased the number of workplaces, improved employment and production efficiency (growth and development of production, increase in its capacity, technological level, development and release of new, high-tech products), re-equipped enterprises, which increased the competitiveness of internal products and services in internal and foreign markets (accordingly, the volume of exported goods will increase). Moreover, it ensured GDP growth, reduction of unemployment and a positive impact on balance of payments, which appeared as an increase in exports of internal products and a decrease in imports due to investment in industries, where the volume of production was small, and demand was satisfied through imports.

Moreover, the study analysed two main indicators related to FDI. Ukraine ranked 104th out of 180 countries, receiving 36 points out of 100 possible in the Corruption Perceptions Index (CPI) for 2023. Meanwhile, Ukraine ranks 60th among the 133 economies featured (34th among the 39 economies in Europe and 4th among the 38 lower-middle-income group economies) in GII 2024 (State Statistics Service of Ukraine, 2025). Despite the ongoing war initiated by russia, which caused suspension of thermal power plants, nuclear power plants, hydroelectric power plants, blocking of ports, interruption of logistics routes, destruction of highways, Ukraine continued to present a promising and dynamic market for foreign investors. Moreover, the prospect of European integration significantly expanded the scope for future investment opportunities. Furthermore, measures to improve the investment climate, as well as the measures required to promote the attraction of additional foreign investment, were analysed (Table 3).

Table 3. *FDI measures*

Implemented measures aimed to improve the investment climate	Measures to be taken to promote the attraction of additional foreign investments
Some administrative procedures were simplified in favour of deregulation of economic activity	1) Increase of competitiveness and therefore ensuring sustainable socio-economic development to increase economic prosperity. 2) Ensuring of transparency in state financial support for investment projects aimed to solve priority tasks of socio-economic policy. 3) Reduction of bureaucracy. 4) Strengthening of the anti-corruption policy. 5) Reforming foreign economic, tax and social legislation. 6) Creating of conditions for the transition to an investment and innovation model of economic development. 7) Improving of methodology for developing, evaluating and selecting investment projects. 8) Defining the principles and mechanisms of public investment for the implementation of projects that require state financial support. 9) Monitoring the effective use of budget funds provided for investment projects. 10) Implementation of state monitoring on investment activities. 11) Creating conditions for attracting investments in international capital markets. 12) Promoting of efficiency and transparency in public-private partnership mechanisms. 13) Increasing of banking system stability by stimulating the inflow of foreign capital into the banking sector. 14) Stabilisation of national currency exchange. 15) Strengthening of a control over currency transfers to offshore zones. 16) Increasing the solvency of national consumers to contribute into internal market development. 17) Intensification of transport and market infrastructure development. 18) Activation of free economic zones following innovative global experience. 19) To increase investment in education for the purpose of preparation qualified and competitive specialists. 20) Stimulating the development of energy-saving technologies and a green economy. 21) Ensuring administrative, legal and judicial protection of the rights and legitimate interests of investors. 22) Strengthening investment protection through the foreign investment insurance mechanism. 23) Optimisation of the taxation system for foreign investors. 24) Stimulating the simplified taxation mechanism. 25) Improvement of the mechanism of codification of legislation in the investment sphere. 26) Development of promising sectors (industry, IT hubs, laboratory research). 27) Creation of new and renewal of existing enterprises whose activities are related to critical infrastructure. 28) Sectoral deregulation of administrative services. 29) Reduction of foreign exchange risks. 30) Transparent privatisation. 31) Improvement of concession legislation. 32) Simplification of business opening and closing processes. 33) Improving of mechanisms for protecting property rights. 34) Adoption of customs, investment, credit and depreciation policies in accordance with international standards. 35) Creation of institutions that would be involved into mobilising investment resources for specific investment projects and programmes
Corporate legislation has been improved by strengthening the protection of participants in business partnerships	
Control over currency transactions has been reduced	
Some issues of accounting for the foreign investors rights and protecting their rights have been resolved	
Administrative procedures and deregulation of economic activity have been simplified	
Corporate legislation has been improved	
Control over currency transactions has been reduced	
The issue of accounting of foreign investors rights has been resolved	

Source: *based on R. Bilyk et al. (2023), K. Shchur & I. Hrinko (2023), V. Du & I. Lishchynskyy (2024), A. Katitas & S. Pandya (2024)*

A prerequisite for attracting foreign investment was a legal and economic climate in the country, which created a positive image and favourable conditions for business development. Thus, state must ensure a stable legal framework for doing business. Therefore, a substantial task of state investment policy was to implement effective state regulation of investment processes through the optimal combination of state and market levers through legislative and regulatory acts, which will increase the investment attractiveness of Ukraine, stimulate the attraction of strategic foreign investors to the economy, as well as make a contribution to the growth of the competitiveness of the Ukrainian economy. Therefore, Ukraine adopted several modern legislative and regulatory acts to support strategic foreign investors, the main provisions of which were analysed and systematised in Table 4.

Table 4. *Characteristics of FDI legislation*

Law, year of adoption	**Main statements**
Law of Ukraine No. 1560-XII (1991)	Governing investment activity in Ukraine is designed to support the implementation of economic, scientific, technological, and social policy objectives. It operates in alignment with national and regional economic development programmes, state and local budgets, and predetermined economic and social development indicators. Law ensures the effective operation and enforcement of the investment regulatory framework
Law of Ukraine No. 5080-VI (2012)	Provides thorough descriptions of the following meanings: corporate and unit funds; assets, securities, entities, disclosure of information as well as regulation of collective investment activities
Law of Ukraine No. 1540a-XII (1991)	Foreign investors must comply with the laws and regulations of Ukraine. Foreign investors may reinvest profits in Ukraine. Foreign investors must pay taxes established by the laws and regulations of Ukraine
Law of Ukraine No. 93/96-VR (1996)	Establishes the legal framework governing the foreign investment regime in Ukraine. It regulates the execution of foreign investments through concession agreements, contracts for production cooperation, joint ventures, and other forms of collaborative investment activities
Law of Ukraine No. 1390-VIII (2016)	The objective of this Law is to streamline the process of attracting foreign investments while minimising opportunities for corruption during their official registration
Law of Ukraine No. 2058-VIII (2017)	This Law regulates the basic aspects of obtaining a permit for the employment of foreigners and a temporary residence permit. It also grants the right to obtain a temporary residence permit in Ukraine to foreign investors, who have a significant stake in Ukrainian enterprises, but are not employed at the enterprise
Law of Ukraine No. 5018-VI (2012)	Regulates issues related to: the right to create industrial parks; it selection, use and arrangement; procedure and conditions for creating; agreement on the creation and functioning; rights and obligations of the initiator of creation, the managing company, powers of the authorised state body; economic activity within the industrial park; its state stimulation and liquidation
Law of Ukraine No. 1116-IX (2020)	Formalises the concept and legal framework of the special investment agreement and outlines guarantees for the rights of investors engaged in such projects. It defines the mechanisms of state support available to these projects. As part of its institutional support, the government has established the state body "Office for Investment Attraction and Support" to facilitate and coordinate efforts in this area
Resolution of the Board of the National Bank of Ukraine No. 280 (2005)	The purpose of this resolution is to regulate the procedure for implementing foreign investments in Ukraine and return of investment, as well as the return of profits, income received from investment activities in Ukraine
Law of Ukraine No. 1710-IX (2021)	Approves state administration of creation and operation of industrial parks in Ukraine as well as restrictions on the creation of industrial parks
Resolution of the Verkhovna Rada of Ukraine No. 2648-IX (2022)	Aims to enhance the mechanism for attracting private investment through public-private partnerships, with the goal of expediting the reconstruction of war-damaged infrastructure and supporting the development of new facilities essential to Ukraine's post-war economic restructuring
Law of Ukraine No. 3497-IX (2023)	The Law seeks to broaden the mandate of the Export Credit Agency by enabling it to provide investment insurance to both foreign and Ukrainian investors, including coverage against war-related risks. This insurance is available exclusively for investments directed toward the establishment of facilities and infrastructure that support the development of the processing industry and the export of Ukrainian goods, services, or works

Source: *developed by the authors*

In 2022, an investment initiative – electronic platform to attract potential foreign investors Advantage Ukraine (n.d.) – was developed by WPP group with the support of the President of Ukraine. In addition to innovative technologies, the initiative covered: electric power, defence logistics and infrastructure, agriculture, construction, pharmaceuticals, natural resources, metallurgy and metalworking, furniture and woodworking industries (Ukraine offered potential opportunities worth over USD 400 billion). Similarly, increase of FDI in the economic, social and environmental spheres to ensure the stability of Ukraine will lead to an improvement in the well-being of citizens. The post-war recovery system should ensure the stability and security of investments – protecting investors, businesses and infrastructure from possible threats, providing guarantees of investment security. Furthermore, FDIs contribute to the creation of a positive investment climate – improvement of the legal system, simplification of administrative procedures, guarantees of property rights and protection of investments. The use of flexible state financial instruments, such as tax breaks, grants, loans to support and stimulate investments in central sectors of the economy, was effective in activating investment policy in the conditions of war and post-war recovery. Thus, within the framework of the project "Affordable loans 5-7-9%", a programme

was being implemented, according to which the state compensated business entities for part of the credit burden, and loans can be issued for investment purposes.

The Partnership for sustainability award (2025) programme provided the mobilisation of additional financial resources based on investment incentives. Investments for Ukraine were a key tool for achieving sustainable development goals by 2030. Ukraine's strategic document on attracting FDIs – the National Economic Strategy 2030 (n.d.) – defined that achieving investment attractiveness was one of the main directions of the state's strategic course to ensure an appropriate level of well-being and self-realisation of every citizen of Ukraine. Thus, Ukraine should become a competitive environment with highly profitable, diversified and sustainable investment opportunities. The government of Ukraine had developed and implemented several measures and programmes aimed to assist businesses during this difficult period. One of the key instruments was the state programme "Affordable loans 5-7-9%" and the USAID project "Financial sector reform" created to provide comprehensive support to enterprises in Ukraine, promote the restoration of economic activity in the de-occupied territories, and stimulate the development of priority industries. Similarly, a substantial vector for attracting investors was tax policy following the principles of taxation in the system of taxes and fees, their establishment and introduction, fulfilment of tax obligations, the legal status of participants in tax legal relations, the mechanism of tax control and liability, appeals, which were implemented on the basis of equality, transparency and simplicity, and stability of tax support (Official website of the Ministry of Economy..., n.d.).

A substantial prerequisite for improving the investment environment in Ukraine was the insurance of FDI. The use of insurance mechanisms will make it possible to support investment activity by sharing risks between investors and the state or international donors. In addition, war risk insurance was one of the main prerequisites for attracting FDIs and mobilising financial instruments. The EU, alongside international partners, introduced war risk insurance to create the necessary conditions for attracting private investments and business to the post-war reconstruction of Ukraine. Thereafter, it was necessary to involve insurance companies in the establishment of investment activity. Accordingly, the Ministry of Economy of Ukraine reached an agreement with the Multilateral Investment Guarantee Agency (MIGA), institution of the World Bank Group for research, collection, and dissemination information to facilitate investment promotion to launch a mechanism for insurance of investments during hostilities. MIGA had proposed a pilot project for Ukraine worth USD 30 million to provide guarantees for foreign investors. The instrument for implementing the pilot project was MIGA instrument – Political Risk Insurance with the developed insurance product War Risk Insurance. The presence of such an insurance mechanism will create the possibility of returning investors' funds in the event of partial or full loss. MIGA provided guarantees for insurance of war risks in Ukraine from the Support for Ukraine's Reconstruction and Economy Trust Fund. For example, in 2023, Japan provided a contribution of USD 23 million to cover military risks, which was directed to MIGA. Also in 2023, the Ukrainian DFI G7 Investment Platform was created in Japan under the leadership of the EBRD (European Bank for Reconstruction and Development) (Eurostat, n.d.).

Export Credit Agencies (ECAs) of the G7 countries provided support to export-oriented enterprises of the respective countries in a way that reduced the risks associated with investing in foreign markets, in particular, through insurance coverage against risks associated with military conflicts. The American Development Finance Corporation (DFC) provided support to companies doing business in low- and middle-income countries. The corporation was created to attract foreign investment in infrastructure, energy, and agricultural development projects. DFC was considering the possibility of insuring projects initiated by Ukrainian investors (Eurostat, n.d.). The idea of creating investment funds to invest exclusively in Ukraine had been presented in Britain. The UK's National Export Credit Agency had pledged to allocate up to UAH 200 million to insure political and military risks for British investors considering investment opportunities in Ukraine. Approximately 10 potential strategic investors from the UK were considering projects in the defence-industrial complex, shipbuilding, IT, energy, and infrastructure. The German Ministry of Economics provided risk coverage for its investors through the Investment Guarantee Scheme, for the purpose of investing by German companies in Ukraine. Due to this instrument, the government protected German investors against political risks. The governments of the G19 countries, the European Commission, and the World Bank were also ready to provide support in insurance of investments field against war risks in Ukraine (Eurostat, n.d.).

Aon, a global insurance and reinsurance broker, and the EBRD had announced the launch of the EUR 110 million Ukraine Recovery Guarantee Facility (URGF). The initiative aimed to support reinsurance for international reinsurers and Ukrainian insurance companies covering risks related to the war in Ukraine. The US Development Finance Corporation (DFC) announced new USD 357 million political risk insurance in Ukraine. Fujikura (Japan) and Nexans (France) were developing industrial production in the Lviv region, Biocodex (France) was investing in the pharmaceutical market, Austrian investments were coming into the banking and insurance sectors, Switzerland was investing in industry, Polish investments were allocated to the agricultural sector, infrastructure, and the transport sector (Eurostat, n.d.). Moreover, in the context of full-scale russian military aggression against Ukraine and the introduction of martial law, the restoration and further innovative development of the

Ukrainian economy required a constant increase of investment potential. Similarly, the restoration of Ukrainian enterprises affected by the war is central for ensuring jobs, tax revenues, and GDP growth, and one of the sources of Ukraine's recovery should be foreign investment. National Council of Ukraine has developed a reconstruction and recovery plan, which envisaged attracting USD 750 billion in investment over 10 years (Official website of the Ministry of Economy..., n.d.).

Ukraine should introduce domestic military and technology developments, Ukrainian government was also considering providing military insurance services, i.e., insurance against military risks. Military-tech market depended on developments in the fields of artificial intelligence, robotics, drones, cloud computing and cybersecurity and on attracting investments that contributed to the establishment of industrial production. In addition, Ukraine possessed substantial investment potential and maintains significant prospects for attracting foreign investment despite the ongoing devastating russian war. In the context of substantial challenges, most enterprises had successfully adapted, ensuring operational continuity, profitability, and development, thereby contributing to the preservation and growth of the country's investment potential (Herus, 2024). The high degree of resilience and adaptability demonstrated by Ukrainian enterprises under wartime conditions was a key factor supporting the sustained formation of this investment capacity.

Therefore, state policy should include the provision of tax and credit benefits, grant programmes, and financing for strategically relevant wartime sectors. Investments in scientific research and development should be combined. Subsequently, Ukraine should prioritise the development and support of strategically critical sectors during wartime, including the defence-industrial complex, energy, logistics and infrastructure, agro-industrial complex, industrial manufacturing, innovative technologies, metallurgy and metalworking, pharmaceuticals, natural resource extraction, as well as woodworking and furniture production. Ukrainian IT, agriculture, the financial sector, infrastructure, logistics, alternative energy, minerals, and the defence industry are most popular among foreign investors. Furthermore, several sectors are promising for investment: agricultural sector (Ukraine is a large producer of grain, vegetables, and fruits, thus, investments can provide positive results, given the high global demand for agricultural products), IT sector (Ukrainian IT industry is highly developed and has notable investment opportunities, thus IT startups investments will attract financing for businesses in the high-tech sector), real estate, processing industry, essential products – in war time, sales of essential products (light industry, food, medical supplies, infrastructure, export-oriented industries) were stable.

Furthermore, investment potential of Ukrainian promising sectors should be considered. Construction – investments into infrastructure will be in high demand after the war, about three million Ukrainians lost their homes, and a third of the infrastructure was damaged. It is estimated that USD 486 billion was needed to restore the country (Official website of the Ministry of Economy..., n.d.). Military-industrial complex – investments in Ukrainian defence industry will strengthen European continent's security and deter russian aggression. Information technology – as of 2024, Ukraine ranks global fourth in terms of exports of IT products and services, as well as the volume of financial transactions using mobile devices. In 2024, the share of the IT sector in GDP was 4.4%. Renewable energy – geographical conditions, potential for electricity production from biogas, intense solar radiation, high wind speed created a green tariff and made investments in this sector attractive. Ukraine had set a goal to increase the share of renewable energy in electricity production to 25% by 2035. Wind Energy – before the full-scale invasion, there were 34 wind farms operating in Ukraine, about 80% of the wind generation was temporary occupied or damaged. Bioenergy – development of investments in bioenergy reduced greenhouse gas emissions and traditional fossil fuels dependency, created new jobs in rural areas (State Statistics Service of Ukraine, 2025).

Hydropower – Ukrainian hydropower sector had suffered significant losses due to russian invasion, approximately 45% of hydroelectric power capacity was destroyed. The development of hydropower in Ukraine can be strengthened by investing in construction of new facilities as well as the restoration of damaged and destroyed stations. Nuclear energy – Ukraine is one of the leaders in the field of electricity production in Europe and has prospects for the development of small modular nuclear reactors. Natural resources – more than 20 thousand deposits of 117 types of mineral raw materials were discovered in Ukrainian soil. Logistics and infrastructure – Ukraine has a well-developed and extensive transportation infrastructure, comprising a wide network of railways, highways, seaports, river ports, and airports. Agriculture is the engine of the Ukrainian economy. Due to its potential, Ukrainian primary agricultural export crops included grain and fodder crops, particularly wheat, corn, and barley, as well as sunflower, sugar beet, tobacco, legumes, fruits, and vegetables. Therefore, agriculture is a key sector for investment (State Statistics Service of Ukraine, 2025). Moreover, Ukraine is global largest exporter of sunflower oil and the third largest global exporter of grain (annual export amounts to 50-60 million tons). Hence, the government had developed Order of the Cabinet of Ministers of Ukraine No. 1163-r (2024), which was a continuation of the previous agricultural strategy, defined in Order of the Cabinet of Ministers of Ukraine No. 595-r (2019). Nevertheless, foreign investment will give an opportunity to develop agricultural clusters that would contribute to the design, development, and manufacture of agricultural

machinery, which will make it possible to increase the export of agricultural products (Decree of the Cabinet of Ministers of Ukraine No. 260-r, 2019).

The research relevance is determined by the critical role of foreign direct investment in financing economic growth and supporting social development. Scientific studies underscored the multifaceted effects of FDI across various domains. For instance, M. Uddin *et al.* (2024) demonstrated the positive influence of FDI on financial technology and environmental efficiency within G20 countries. The study advocated for targeted tax incentives, such as credits or deductions, for companies investing in technologies that reduced environmental impact or enhance energy efficiency, particularly in the green finance sector. J.K. Novák *et al.* (2024) explored the relationship between trade liberalisation and FDI inflows using a mixed-methods approach. A significant positive correlation was identified between trade openness and foreign direct investment inflows: 1% increase in trade openness leads to a 0.5% increase in FDI inflows. Based on structural equation modelling, the study demonstrated that a 1% increase in FDI results in: a 0.3% increase in GDP growth a 0.2% increase in employment levels. Thus, an increase in FDI directly stimulated economic development. In Ukrainian context, T. Cherkashyna & K. Zahoruiko (2024) assessed investment attractiveness using the multidimensional average method. A five-component evaluation model was proposed, which the investment attractiveness was divided into five components: natural-resource, scientific-technological, economic, social, and political-institutional. The weight and significance of each component within the overall structure of investment attractiveness were assessed. W. Cheng *et al*. (2024) applied input-output analysis to show, that increased foreign shareholding across supply chains was positively associated with innovation, as indicated by quality-adjusted patent output. This study was the first to analyse foreignisation at the supply chain level using input-output tables; distinguish between different types of foreign ownership (OF vs. HMT) in the context of innovation; reveal the asymmetric impact of foreignisation on innovation in domestically owned enterprises (DOEs) versus foreign-owned enterprises (FOEs); compare the effectiveness of different innovation support mechanisms (institutions vs. subsidies). A. Katitas & S. Pandya (2024) used a multinomial logit model to classify FDI status across counties and validate this classification using historical indicators while also noting a lack of geographic expansion in internal investment. This study demonstrated the effectiveness of real government incentives (e.g., infrastructure spendings and training programmes) in attracting foreign manufacturing investment; employed an exogenous budgetary shock (ARRA Medicaid funding) as an instrument to establish a causal relationship between incentives and FDI; showed the geographic expansion of FDI into previously untouched counties; highlighted the political motivations behind the allocation of incentives, such as electoral competition, swing counties, and the availability of idle industrial capacity; compared the effectiveness of different types of incentives – tax-based versus real (expenditure-based) incentives. R. Bansal & D. Maiti (2024) revealed a positive association between formal employment, foreign technology. The study employed innovative approach to the analysis of impact of capital inflows on formal employment through subcontracting networks; develop formal model of interaction between foreign investors, main contractors, and subcontractors; made empirical verification based on data from the Indian manufacturing sector. Moreover, the study revealed the role of strategic subcontracting as a mechanism to maximise investment benefits and dynamics within the informal sector. M. Kohut (2024) substantiated the feasibility of implementing the investment risk management process. The study provided the first comprehensive examination in Ukrainian economic literature of both positive and negative effects of TNCs on local development, considering current transformations in the global economy. The study highlighted how automation and digital technologies used by TNCs created new barriers to local labour force engagement, an issue not previously systematically analysed. O. Zhurba & Yu. Yasko (2024) determined a tendency to stimulate the growth of capital flows, and to increase inequality due to capital flows. A comprehensive methodology was proposed for assessing capital concentration, covering global financial flows and capital market integration. K. Ziatyna & N. Kushnir (2023) noted that global FDI flows tended to increase worldwide. The research provided new insights into the evolving patterns of FDI amid contemporary economic globalisation, highlighting the influence of geopolitical and economic factors on the redistribution of investment flows worldwide. The study proposed an updated conceptual framework for research of the changing geography and sectoral distribution of FDI, which enhanced the existing theoretical approaches by incorporating the impact of digitalisation and emerging markets. Ukrainian investment policy has developed unevenly, influenced by internal changes and external challenges. Capital mostly flowed into sectors with quick returns, while relevant but high-risk industries remained less attractive to investors. To ensure stable inflows, it is necessary to create a transparent and predictable environment, promote innovation and digital technologies, and implement reforms that strengthen investor confidence and support economic recovery.

Conclusions

To secure a future characterised by innovation-driven foreign investments, it is necessary to implement comprehensive economic policies, prioritising national attractiveness to foreign direct investment. The issue of investment remained a strategic priority of the state

investment policy. The main principles of the restoration of investment policy were implementation of transparent and effective long-term reconstruction programmes. The study determined that to increase investment attractiveness, it is necessary to ensure judicial and anti-corruption reforms, the introduction of foreign investment insurance mechanisms, control over the level of investment risks, openness and transparency of the tax legislative framework, support for innovation and digital transformation, as well as increasing the competitiveness of industries. Thus, over the period 1991-2024, Ukraine attracted around USD 50 billion in FDI. FDI dynamics were marked by periods of both growth and decline. Peaks occurred in 2005, 2008, and 2012; sharp declines were recorded in 2014, 2015, and especially in 2022 due to full-scale war. Moderate recovery began in 2017 and continued in 2023 due to government incentives, though in 2024 FDI dropped by 19%. Meanwhile, FDI in Ukraine was mainly directed to low-risk, fast-return sectors: industry (37.6-43.7%), especially processing (23.7-26.3%), finance (18.4-19.6%), trade and vehicle repair (14-15.9%), real estate (7.7-10.5%), and mining (7.3-13.1%). Least attractive sectors included healthcare (0.2-0.3%), education (0.04-0.08%), construction (0.7-2%), agriculture (2.7-4.6%), and science (1.5-3.56%). FDI in Ukraine came from over 100 countries, with the largest shares from Cyprus, the Netherlands, Switzerland, Germany, and the UK. Investments from newly industrialised countries were minimal.

Therefore, investment activity requires taking measures that would accelerate the inflow of internal and foreign capital into the economy of Ukraine, which contributed to the successful recovery of the economy, sustainable economic growth and welfare improvement. To achieve these goals, it is necessary to develop an effective investment strategy for reconstruction will help develop an optimal strategy for recovery by attracting foreign investors. Comparatively, the management decisions formulated in these areas were critical in shaping and executing Ukrainian investment policy. The state, which must create all the conditions for stimulating foreign investment, is central. The prospects for further research include the study of factors and instruments, the consideration of which can increase the effectiveness of foreign investment for the economy of Ukraine.

Acknowledgements

None.

Funding

None.

Conflict of Interest

None.

References

[1] Advantage Ukraine. (n.d.). Retrieved from https://advantageukraine.com/.
[2] Association Agreement between European Union and European Atomic Energy Community and their Member States, of one part, and Ukraine, of other part. (2017, September). Retrieved from https://www.consilium.europa.eu/en/documents/treaties-agreements/agreement/?id=2014045.
[3] Bansal, R., & Maiti, D. (2024). Capital inflow, strategic subcontracting, and formal employment. *Working papers 348*. Retrieved from https://ideas.repec.org/p/cde/cdewps/348.html.
[4] Bilyk, R., Bilyk, D., & Havrylyuk, O. (2023). The influence of transnational corporations on the Ukrainian economy development in the post-war period. *Ukrainian Journal of Applied Economics and Technology*, 4, 150-155. doi: 10.36887/2415-8453-2023-4-23.
[5] Cheng, W., Pan, X., & Meng, B. (2024). Foreignization and innovation: Insights from heterogenous supply chains. *IDE Discussion Papers 938*. Retrieved from https://ideas.repec.org/p/jet/dpaper/dpaper938.html.
[6] Cherkashyna, T., & Zahoruiko, K. (2024). Assessment of the level of investment attractiveness of Ukrainian economy using multidimensional average method. *Galician Economic Journal*, 86(1), 44-54.
[7] Convention Between the Government of Ukraine and the Government of the Grand Duchy of Luxembourg on the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income and on Capital. (2017, April). Retrieved from https://zakon.rada.gov.ua/laws/main/en/442_002?lang=en#Text.
[8] Decree of the Cabinet of Ministers of Ukraine No. 260-r "Issues of Implementing the Joint Systemic Project with the International Bank for Reconstruction and Development "Programme "Acceleration of Private Investment in Agriculture of Ukraine". (2019, April). Retrieved from https://zakon.rada.gov.ua/laws/show/260-2019-%D1%80#Text.
[9] Du, V., & Lishchynskyy, I. (2024). China's foreign direct investment in the agricultural sector: Trends and prospects. *Journal of European Economy*, 23(1), 72-88.
[10] Eurostat. (n.d.). Retrieved from https://ec.europa.eu/eurostat.
[11] Herus, O. (2024). Peculiarities of investment support for industries in the current environment. *Economics, Entrepreneurship, Management*, 11(1), 57-66. doi: 10.56318/eem2024.01.057.
[12] Katitas, A., & Pandya, S. (2024). Investment incentives attract foreign direct investment: Evidence from the great recession. *Public Choice*, 200, 323-245. doi: 10.1007/s11127-024-01158-0.
[13] Kohut, M. (2024). The influence of TNC's on the globalization of markets: Opportunities and challenges for local development. *Ukrainian Economic Journal*, 4, 20-24. doi: 10.32782/2786-8273/2024-4-4.

[14] Kovalchuk, T., & Vara, D. (2024). Innovative mechanisms for stimulating foreign investment in the economy of Ukraine. In *5th ISPC "Concepts for the development of society's scientific potential"* (No. 40, pp. 50-67). Prague, Czech Republic. doi: 10.51582/interconf.19-20.01.2024.005.
[15] Kozii, N., & Prachuk, V. (2023). Analysis of the current state of investment attractions of Ukraine. *Economic Analysis*, 33(4), 150-155. doi: 10.35774/econa2023.04.150.
[16] Law of Ukraine No. 1116-IX "On State Support for Investment Projects with Significant Investments in Ukraine". (2020, December). Retrieved from https://zakon.rada.gov.ua/laws/show/1116-20#Text.
[17] Law of Ukraine No. 1390-VIII "On Amendments to Certain Legislative Acts of Ukraine Regarding the Cancellation of Mandatory State Registration of Foreign Investments". (2016, May). Retrieved from https://zakon.rada.gov.ua/laws/show/1390-19#Text.
[18] Law of Ukraine No. 1540a-XII "On Protection of Foreign Investment in Ukraine". (1991, September). Retrieved from https://zakon.rada.gov.ua/laws/show/1540%D0%B0-12?lang=en#Text.
[19] Law of Ukraine No. 1560-XII "On Investment Activities". (1991, September). Retrieved from https://zakon.rada.gov.ua/laws/show/1560-12?lang=en#Text.
[20] Law of Ukraine No. 1710-IX "On Amendments to the Law of Ukraine "On Industrial Parks" and Certain Other Legislative Acts of Ukraine on Attracting Investments in the Industrial Sector of the Economy by Stimulating the Creation of Industrial Parks". (2021, September). Retrieved from https://zakon.rada.gov.ua/laws/show/1710-20#n5.
[21] Law of Ukraine No. 2058-VIII "On Amendments to Certain Legislative Acts of Ukraine on Removing Barriers to Attracting Foreign Investment". (2017, May). Retrieved from https://zakon.rada.gov.ua/laws/show/2058-19#Text.
[22] Law of Ukraine No. 3497-IX "On Amendments to the Law of Ukraine "On Financial Mechanisms for Stimulating Export Activities" Regarding Insurance of Investments in Ukraine against Military Risks". (2023, November). Retrieved from https://zakon.rada.gov.ua/laws/show/3497-20#Text.
[23] Law of Ukraine No. 5018-VI "On Industrial Parks". (2012, June). Retrieved from https://zakon.rada.gov.ua/laws/show/5018-17.
[24] Law of Ukraine No. 5080-VI "On Collective Investment Institutions". (2012, July). Retrieved from https://zakon.rada.gov.ua/laws/show/5080-17?lang=en#Text.
[25] Law of Ukraine No. 93/96-VR "On Foreign Investment Regime". (1996, March). Retrieved from https://zakon.rada.gov.ua/laws/show/93/96-%D0%B2%D1%80#Text.
[26] National Economic Strategy 2030. (n.d.). Retrieved from https://nes2030.org.ua/.
[27] Novák, J.K., Král, J.K., & Dvořák. P.T. (2024). The impact of trade liberalization on FDI inflows and economic development. *Law and Economy*, 3(5), 9-23. doi:10.56397/LE.2024.05.02.
[28] Official website of the Ministry of Economy, Environment and Agriculture of Ukraine. (n.d.). Retrieved from https://www.me.gov.ua.
[29] Official website of the National Bank of Ukraine. (n.d.). Retrieved from https://bank.gov.ua/en/.
[30] Order of the Cabinet of Ministers of Ukraine No. 1163-r "On Approval of the Strategy for the Development of Agriculture and Rural Areas in Ukraine for the period until 2030 and Approval of the Operational Plan of Measures for its Implementation in 2025-2027". (2024, November). Retrieved from https://zakon.rada.gov.ua/laws/show/1163-2024-%D1%80#Text.
[31] Order of the Cabinet of Ministers of Ukraine No. 595-r "On Approval of the Strategy for Promoting Private Investment in Agriculture for the Period Until 2023". (2019, July). Retrieved from https://zakon.rada.gov.ua/laws/show/595-2019-%D1%80#Tex.
[32] Palekhova, V. (2023). Foreign economic activity in the context of the current stage of globalization and post-war reconstruction of the domestic economy. *Mechanism of an Economic Regulation*, 2, 49-56. doi: 10.32782/mer.2023.100.08.
[33] Partnership for sustainability award. (2025). *Global Compact. Network Ukraine*. Retrieved from https://globalcompact.org.ua/projects/kampanija-partnerstvo-zaradi-stalogo-rozvitku/.
[34] Resolution of the Board of the National Bank of Ukraine No. 280 "On the Regulation of Foreign Investment in Ukraine". (2005, August). Retrieved from https://zakon.rada.gov.ua/laws/show/z0947-05#Text.
[35] Resolution of the Verkhovna Rada of Ukraine No. 2648-IX "On Adoption as a Basis the Draft Law of Ukraine on Amendments to Certain Legislative Acts of Ukraine on Improving the Mechanism for Attracting Private Investments Using the Mechanism of Public-Private Partnership to Accelerate the Restoration of War-Destroyed Facilities and the Construction of New Facilities Related to the Post-War Restructuring of the Economy of Ukraine". (2022, October). Retrieved from https://zakon.rada.gov.ua/laws/show/2648-IX#Text\.

[36] Resolution of the Verkhovna Rada of Ukraine No. 3360-XII "On the Main Directions of Ukraine's Foreign Policy". (1993, July). Retrieved from https://earchive.mfa.gov.ua/catalog/postanova-verhovno-radi-ukra-ni-pro-osnovn-napryami-zovn-shno-pol-tiki-ukra-ni.
[37] Shchur, K., & Hrinko, I. (2023). The impact of the EU's economic openness on the development of the global economy. *Transformational Economy*, 5, 122-127. doi: 10.32782/2786-8141/2023-5-21.
[38] State Statistics Service of Ukraine. (2025). Retrieved from https://www.ukrstat.gov.ua/.
[39] Tvaronavičienė, M., Šimelytė, A., Burinskienė, A., Raudeliūnienė, J., & Stirblytė, G. (2024). Impact of foreign direct investment on host country's development: A case study. *Business, Management and Economics Engineering*, 22(1), 193-213. doi: 10.3846/bmee.2024.20495.
[40] Uddin, M., Siddik, A.B., Yuhuan, Z., & Naeem, M.A. (2024). Fintech and environmental efficiency: The dual role of foreign direct investment in G20 nations. *Journal of Environmental Management*, 360, article number 121211. doi: 10.1016/j.jenvman.2024.121211.
[41] Yevtushenko, N. (2023). Foreign direct investment: Status and development prospects. *Economic Space*, 188, 83-88. doi: 10.32782/2224-6282/188-14.
[42] Yücel, M.F., & Çemberci, M. (2024). The role of competitiveness in the effect of outward foreign direct investments on GDP per capita: A conceptual model proposal. *Journal of International Trade, Logistics and Law*, 10(1), 295-303.
[43] Yuldashev, M., Khalikov, U., Nasriddinov, F., Ismailova, N., Kuldasheva, Z., & Ahmad, M. (2023). Impact of foreign direct investment on income inequality: Evidence from selected Asian economies. *Plos One*, 18(2), article number e0281870. doi: 10.1371/journal.pone.0281870.
[44] Zatonatska, T., Anisimova, O., & Zatonatskyy, D. (2022). Global trends in foreign direct investment and changes in markers under the influence of russian-Ukrainian war. In *Innovation and investment mechanism for ensuring the country's competitiveness* (pp. 158-176). Lviv-Toruń: Liga-Press. doi: 10.36059/978-966-397-255-8-9.
[45] Zhurba, O., & Yasko, Yu. (2024). Concentration of capital in the context of financial globalisation. *Economy and Society*, 60. doi: 10.32782/2524-0072/2024-60-43.
[46] Ziatyna, K., & Kushnir, N. (2023). Dynamics and structure of global foreign direct investment flows. *Scientific Bulletin of Uzhgorod National University. Series: International Economic Relations and World Economy*, 49, 45-50. doi: 10.32782/2413-9971/2023-49-8.

Суть та сучасні особливості залучення та управління іноземними інвестиціями в Україні

Ігор Яремко

Доктор економічних наук, професор
Національний університет «Львівська політехніка»
79013, вул. Степана Бандери, 12, м. Львів, Україна
https://orcid.org/0000-0003-3556-0609

Наталія Думич

Кандидат економічних наук, доцент
Вищий навчальний заклад «Приватне акціонерне товариство «Львівський інститут менеджменту»
79015, вул. Ліська, 16, м. Львів, Україна
https://orcid.org/0000-0002-8188-6944

Анотація. Метою дослідження було проаналізувати прямі іноземні інвестиції та їхній вплив на національну економіку. Було здійснено аналіз статистичних даних, у результаті якого встановлено, що більшість прямих іноземних інвестицій (37,6-43,7 %) спрямовувалися в промисловість, зокрема у переробний сектор (23,7-26,3 %), торгівлю (14-15,9 %) та фінансову діяльність (18,4-19,6 %), тоді як найменша частка припадала на освіту (0,04-0,08 %) та охорону здоров'я (0,2-0,3 %). Основними країнами-донорами іноземних інвестицій були Кіпр, Нідерланди, Швейцарія, Німеччина та Сполучене Королівство. Систематизовано переваги та недоліки залучення іноземних інвестицій, визначено ключові чинники, що негативно впливають на інвестиційний ринок України. Досліджено основні компоненти, які сприяли притоку прямих іноземних інвестицій. Надано визначення терміна «іноземні інвестиції», проаналізовано вже реалізовані заходи щодо покращення інвестиційного клімату, а також заходи, необхідні для стимулювання додаткового залучення іноземних інвестицій. Систематизовано основні положення законодавчих та нормативних актів, спрямованих на підтримку стратегічних іноземних інвесторів. Розглянуто інвестиційний потенціал перспективних секторів економіки України. Для відстеження динаміки прямих іноземних інвестицій було проаналізовано їхній обсяг в Україні у 2003-2024 роках. Розглянуто розподіл прямих іноземних інвестицій за основними видами економічної діяльності (2007-2024 роки) та за країнами походження. Досліджено кореляцію між змінами рівня прямих іноземних інвестицій та динамікою інфляції в Україні з використанням макроекономічних даних і коефіцієнта еластичності за період 2003-2024 років. Окрему увагу приділено впливу інтернаціоналізації, глобалізації та транснаціоналізації на прямі іноземні інвестиції. Обґрунтовано значення прямих іноземних інвестицій як рушія економічного розвитку України, визначено ключові виклики у сфері їх управління та подано рекомендації щодо вдосконалення інвестиційного менеджменту. Практична значущість дослідження полягає у внеску в підвищення ефективності управління прямими іноземними інвестиціями та сприянні зростанню національного добробуту

Ключові слова: прямі іноземні інвестиції; види економічної діяльності; глобальні інвестиційні потоки; інвестиційна привабливість; інвестиційне середовище; інфляція

ECONOMIC FORUM
Journal homepage: https://e-forum.com.ua/en
Vol. 15, No. 3, 2025, 73-86
Article's History: Received: 20.03.2025 Revised: 30.07.2025 Accepted: 08.09.2025

UDC 657.012.1:614.2 *DOI: 10.62763/ef/3.2025.73*

The role of the entrepreneurial approach in the development of medical services within the healthcare services market

Maysa Durdykulyyeva*
Physician
Bogomolets National Medical University
01601, 13 Taras Shevchenko Blvd., Kyiv, Ukraine
https://orcid.org/0009-0005-8568-6244

Abstract. The purpose of this study was to examine the impact of the entrepreneurial approach on the development of efficient and competitive medical services in the context of market transformations. The methodology was based on an analytical and theoretical approach, which included an analysis of the dynamics of state and local budgets, healthcare guarantee programmes, international financial assistance, and a review of practical case studies of selected healthcare institutions. The main findings indicated that in 2023, state expenditure on healthcare amounted to UAH 207 billion, increased to UAH 238.7 billion in 2024, but declined to UAH 217 billion in 2025. In turn, funding for the healthcare guarantee programme rose from UAH 142.7 billion in 2023 to UAH 175.5 billion in 2025. Local budgets provided UAH 441.9 billion in 2023, with projected growth of 15% by 2025. Despite this, around 46% of healthcare expenses were covered directly by patients, and the average payment for an outpatient visit in 2024 reached UAH 600. Voluntary health insurance generated UAH 1.5 billion in premiums in the first quarter of 2024, with a pay-out ratio of 56.8%, reflecting the growing role of the private sector. International support also played an important role: between 2023 and 2025, Ukraine received over USD 1.2 billion in grants, including the Transforming Health Systems for Resilience and Improved Efficiency project with a budget of USD 454 million. This funding facilitated the modernisation of hospitals, procurement of medical equipment, and development of telemedicine, which was projected to cover 80% of healthcare facilities by 2025. The study analysed the operations of several medical centres, including the National Specialised Children's Hospital "Ohmatdyt", the Municipal Non-Profit Enterprise "Uman Central City Hospital", and the Medical Centre "AILAZ". The practical value of this study lies in the possibility of using its findings to develop strategies aimed at improving the financial sustainability and competitiveness of healthcare institutions through the implementation of entrepreneurial approaches, digital innovations, and diversification of funding sources

Keywords: strategies; patient; financing; competitiveness; marketing

Introduction

Rising competition and the dynamics of change in the healthcare sector necessitate the adoption of new approaches to the organisation and management of medical services. The transition to market-based regulatory mechanisms requires medical institutions to enhance the efficiency of resource utilisation, implement innovative technologies, and establish flexible development strategies. Under these conditions, the entrepreneurial approach becomes a crucial instrument for improving service quality, expanding the range of services, and meeting patient needs.

The insufficient elaboration of conceptual approaches for the development of effective marketing strategies in the medical services sector creates the need to refine methods and tools capable of ensuring the sustainable development of this market. In the study by O. Zghurska *et al.* (2023), a comprehensive analysis of trends in the development of the medical services market in

Suggested Citation:
Durdykulyyeva, M. (2025). The role of the entrepreneurial approach in the development of medical services within the healthcare services market. *Economic Forum*, 15(3), 73-86. doi: 10.62763/ef/3.2025.73.

*Corresponding author

Ukraine was conducted, the characteristics of medical marketing were examined, and the advantages of private healthcare were identified. The study refined the methodology for developing the sequence of stages in marketing strategy construction, emphasising the use of unconventional innovative tools that enable greater effectiveness in promoting medical services. The results indicated that the implementation of such strategies can influence the competitiveness of medical institutions and the quality-of-service provision. The low efficiency of private medical institutions in the context of increasing competition requires the improvement of approaches to service management and development. The study by Y. Volkova *et al.* (2024) examined the organisation of operations in a private multidisciplinary clinic, the service delivery system, and patient satisfaction, and evaluated the efficiency of internal business processes and the application of innovative management solutions. The study identified key areas for optimising the operations of the institution, including enhancing marketing policies and staff qualifications, and introducing digital technologies to automate processes and improve communication with patients.

The limited efficiency in resource management and the absence of a comprehensive approach to the strategic development of medical institutions necessitate the search for innovative solutions to improve operational outcomes. In the study by I. Khomenko *et al.* (2022), the organisational and economic principles of healthcare institutions' functioning were analysed, factors affecting service quality were identified, and opportunities for implementing strategic management tools were considered. The authors proposed a model for developing strategies for medical institutions, focused on rational resource utilisation, enhancing competitiveness, and improving service provision. The insufficient level of financial stability and resource use efficiency in the healthcare system created a need for new mechanisms for management and service development. In the study by V. Shevchuk *et al.* (2021), the financial and economic aspects of the activities of medical institutions were considered, and sources of funding, their diversification, and impact on service quality were analysed. The authors developed recommendations for optimising financial flows, improving the efficiency of resource expenditure, and attracting investment into medical infrastructure.

Inefficient management of financial flows and insufficient economic incentives for participants in the medical services market hinder the development of competitive services. In the study by I. Levchenko & N. Solopun (2021), the economic principles underlying the functioning of the medical insurance system were examined, and the impact of different financing models on accessibility and quality of services was analysed. Researchers highlighted the need for reform of resource allocation mechanisms, enhancement of insurance programmes, and strengthening of the role of the private sector in healthcare financing. Low innovation activity and limited financial resources in the medical services sector reduce opportunities for implementing effective managerial solutions. In the study by V. Valakh *et al.* (2024), mechanisms for improving the performance of medical institutions through the introduction of innovative technologies and investment instruments were considered, and their impact on service quality and financial stability was assessed. Scientists emphasised the importance of a comprehensive approach to modernising the material and technical base, developing human resources, and attracting private capital.

The scarcity of resources and the need to improve the efficiency of medical service organisation necessitate the search for new management approaches. In the study by A. Baitsurenko & O. Krupskyi (2023), factors influencing the performance of medical institutions were analysed, including the introduction of innovations, optimisation of internal processes, and the development of partnerships with the private sector. The authors underlined the importance of developing strategies aimed at improving service quality and competitiveness. Effective development of medical services in the modern context required the combination of innovative entrepreneurial approaches, integration of digital technologies, and the implementation of flexible management strategies capable of adapting to rapid changes in the market environment. In the study by T. Kaminska *et al.* (2024), the importance of using modern marketing tools, implementing personalised approaches to patients, and enhancing the professional competence of medical staff was examined as key factors in creating competitive advantages in medical services. Scientists stressed the necessity of adapting best international management practices that demonstrated effectiveness in the healthcare systems of countries such as Canada, Singapore, and Japan to the specific characteristics of the national market, considering its institutional, economic, and social conditions.

There remained a need for further research on the impact of entrepreneurial approaches and digital transformation on the competitiveness and financial stability of medical services, including the assessment of long-term economic efficiency of proposed strategies, integration of innovative solutions into the medical insurance system, adaptation of successful practices to national conditions, and design of mechanisms for adjusting development models to the dynamics of the market environment. The purpose of the study was to examine the impact of the entrepreneurial approach on improving the efficiency and competitiveness of medical services in a transforming market environment. The objectives of the study were to analyse current trends in the development of medical services, focusing on entrepreneurial strategies and innovative approaches, and to assess how the entrepreneurial approach, alongside the integration of digital technologies and strategic management tools, can enhance the efficiency, quality, and

accessibility of medical services in a transforming market environment.

Materials and Methods

This study was comprehensive and analytical-theoretical, covering the period 2023-2025, with a focus on identifying the influence of the entrepreneurial approach on the development of medical services in Ukraine. The essence of the entrepreneurial approach as an economic category was defined first. Methods of comparative analysis and systematisation of academic sources were applied. For example, the study of W.J. Glover *et al.* (2024) developed an integrative framework of entrepreneurship in the healthcare sector, which allowed a systematic interpretation of entrepreneurship as both an economic and social phenomenon. M. Paul *et al.* (2023) concentrated on digitalisation and security in healthcare, which hold critical value for entrepreneurial decision-making in medical institutions. E. Ciobanu & O. Bărbulescu (2025) emphasised the role of personal characteristics and leadership in the success of medical entrepreneurship, adding a behavioural dimension to the analysis. This combination of theoretical perspectives defined entrepreneurship in medicine as a complex economic category encompassing innovation, rationality, and social responsibility. The subsequent analysis was directed towards identifying theoretical approaches to the development of competitive advantages in the field of medical services. Methods of content analysis and synthesis of conceptual works by S.F. Dieffenbacher (2024), D. Mailani *et al*. (2024) and M. Zade *et al*. (2024) were employed. Their inclusion helped to identify practical instruments for enhancing competitiveness. This enabled the consolidation of a comprehensive toolkit for the development of strategies in medical institutions and the evaluation of their economic efficiency.

Financial and economic mechanisms of the development of medical services were investigated using quantitative analysis of budgetary indicators. The analysis was based on official sources, including data on the state budget of Ukraine in 2023 (Budget-2023..., 2023), indicators of healthcare financing in 2024 (MinFin: In 2024, healthcare..., 2025), and the allocations set in the "State budget-2025: Health care" (2025). The analysis of local budget revenues in 2023-2025 was conducted using data presented by N. Vinnychuk (2024), which enabled the assessment of their role in ensuring the financial stability of medical institutions. Structural-functional analysis of international programmes and projects was used to examine external sources of support, particularly the The World Bank in Ukraine (n.d.), United States Agency for International Development (USAID) (n.d.), and the EU4Health: Response to the COVID-19 pandemic and preparedness for crisis situations in the EU (n.d.). Specialised projects were also reviewed, including Transforming Health Systems for Resilience and Improved Efficiency (THRIVE) (Ukraine's healthcare sector..., 2024) and the grant fund Ukraine Relief, Recovery, Reconstruction and Reform Trust Fund (URTF) (Financing mobilized for Ukraine..., 2025). These sources provided insight into external support as an additional factor of modernisation.

For further specification of results, the case study method was applied. The analysis was based on the source "A new nephrology and dialysis department was opened at the Ohmatdyt Polyclinic with funding from the German government" (2025), which contained information on the National Children's Specialised Hospital Ohmatdyt, which received financial aid following russian shelling. The source "Medical support for hospitals in Ukraine in 2024-2026: What it will be like and what will change for patients" (2024) was also used, describing the implementation of the e-Stock system (Electronic system for inventory management..., 2024) for medicine control. In addition, the activities of the municipal non-commercial enterprise Uman Central City Hospital, which introduced the Helsi system, were considered, based on the "Report on the work of the hospital for 2024" (2025). The experience of the "AILAZ" (n.d.) medical centre and its cross-border initiative (Ukrainian ophthalmologists presented..., 2025) was examined separately.

Results

Economic foundations of the entrepreneurial approach in medical services

The entrepreneurial approach in healthcare emerged at the intersection of economic rationality, innovation, and social responsibility. Its essence lain in the application of entrepreneurial methods and principles to improve the efficiency of medical services, ensure their financial sustainability, and create additional value for patients. Unlike conventional management models, which were oriented primarily towards administrative control and regulatory compliance, the entrepreneurial approach was based on flexibility, the search for new solutions, rapid adaptation to market changes, and a strategic vision of future development. From an economic perspective, the entrepreneurial approach in healthcare can be interpreted as the integration of market economy instruments into the system of medical service provision. This included identifying and analysing demand for services, segmenting the market, building competitive advantages, employing modern marketing strategies, and attracting investment. One of the key objectives of this approach was the optimisation of resources – financial, material-technical, and human. Under conditions of limited public healthcare funding, entrepreneurial strategies enabled the identification of new income sources, ensure the stability of institutions, and improve service quality (Glover *et al*., 2024).

The entrepreneurial approach was also considered a driver of innovative development. The use of digital technologies, telemedicine, automated management systems, and electronic medical records created opportunities for reducing costs and increasing convenience

for patients. The economic effect was reflected in higher labour productivity, lower maintenance costs, and increased revenues through the expansion of the range of services. In this context, entrepreneurship became not only an economic category, but also an instrument of strategic modernisation of the entire healthcare system. Another important characteristic was the development of market-oriented behaviour of medical institutions. They begin to act as full participants in the competitive environment: analysing the positions of competitors, developing unique offered, building branding systems, and establishing long-term relationships with patients. This contributed to strengthening trust in medical services and fosters economic motivation for continuous improvement of service delivery (Paul *et al*., 2023).

Entrepreneurial thinking in medical services was an important factor in rationalising resource use and creating competitive advantages for healthcare institutions. It involved the search for new sources of financing, optimisation of costs, active adoption of innovations, and a focus on strategic results. Such an approach enabled medical institutions not only to maintain financial stability, but also to enhance the quality of patient care under conditions of limited resources. The economic effect of entrepreneurial thinking was illustrated by the modernisation of the material and technical base (Ciobanu & Bărbulescu, 2025). According to data from 2023-2024, Ukraine was upgrading medical equipment: during this period, hospital modernisation was planned in different regions with more than UAH 2.6 billion allocated for the procurement of high-cost devices, including computed tomography scanners, magnetic resonance imaging systems, angiographs, X-ray, and mammographic systems. However, due to the absence of prepared facilities, delays in repairs, and bureaucratic obstacles, about 27% of tomography scanners purchased in 2023-2024 (16 out of 62) were not put into operation (Balandyukh, 2024). This indicated that financial investments without proper management do not deliver the expected results, whereas the entrepreneurial approach, with its focused on efficiency and effectiveness, could minimise such losses. Financial calculations also highlighted the scale of investments, while underlining the need for their rational use. In 2024, the state allocated around UAH 5.6 billion for the modernisation of medical institutions, which averaged approximately UAH 35,000 per doctor (with about 160,000 doctors) and around UAH 150 per patient (with a population of about 37 million) (Kovalenko & Mosorko, 2024). These indicators reflected average capital investment, yet their economic effectiveness depends on the ability of institutional managers to allocate resources optimally and implement innovations.

An equally important aspect was the effective management of existing capacities. The greatest pressure on hospitals was observed in Vinnytsia, Odesa, and Kyiv regions, where the high level of workload was reflected both in the use of bed capacity and in the strain on staff. The hospital network reform in Ukraine represented a systemic transformation of the healthcare sector, which began in 2018 and continues to 2025 (Ustinov, 2025). Its primary aim was the creation of a capable and efficient network of medical institutions able to provide high-quality, modern, and accessible care. It envisaged the rejection of the outdated Soviet model of financing, the introduction of "money follows the patient" principle through the National Health Service of Ukraine (NHSU), and the development of a network of hospitals of different levels: general hospitals (one per 50,000-80,000 residents), cluster hospitals (one per 150,000), and supra-cluster hospitals as highly specialised centres (Kyrey, 2023). Within the framework of this reform, 106 hospital clusters were established, comprising more than 2,500 primary healthcare centres, 282 general hospitals, 166 cluster hospitals, 135 supra-cluster hospitals, and 25 emergency care centres. Furthermore, the reform included the optimisation of resource distribution, modernisation of infrastructure, introduction of new treatment standards, and active support from international partners. Its purpose was to ensure that patients receive care, where qualified specialists and modern equipment were available, while the system itself remained flexible and capable of adapting to new challenges, including the pandemic and military actions (The National Forum on..., 2025). However, only an entrepreneurial approach focused on strategic planning and the management of patient flows was able to make such optimisation effective.

The development of competitive advantages in medical services was examined through the lens of different scientific approaches, the most widespread of which are Porter's concept, the resource-based approach, the innovation-based approach, the marketing approach, and the institutional approach. Each highlighted its own mechanisms for ensuring the competitiveness of medical institutions, ranging from cost optimisation and differentiation to the adoption of innovations, a focus on patient needs, and consideration of institutional factors. The main principles of these approaches and the possibilities of their application in the sphere of medical services were summarised in Table 1.

Table 1. *Theoretical approaches to the development of competitive advantages in medical services*

Approach	Key provisions	Application in medical services
M. Porter (competition strategies)	Competitive advantage is achieved through cost leadership or differentiation	Reduction of service costs through resource optimisation; creation of unique service packages and personalised approaches
Resource-based view	Unique resources and competences generate long-term advantages	Use of modern equipment, highly qualified staff, clinic brand, and patient trust

Table 1, Continued

Approach	Key provisions	Application in medical services
Innovation approach	Competitiveness depends on the ability to implement new technologies and methods	Use of telemedicine, digital records, patient mobile applications, and modernisation of treatment methods
Marketing approach	Competitive advantage is based on client orientation	Market segmentation, development of a clinic brand, long-term relationships with patients, transparency, and quality of care
Institutional approach	Competitive opportunities are determined by the regulatory environment and state standards	Use of public-private partnership mechanisms, participation in funding programmes, compliance of medical services with the standards of the Ministry of Health of Ukraine and international norms

Source: *based on N. Tyukhtenko et al. (2021), S.F. Dieffenbacher (2024), D. Mailani et al. (2024), M. Zade et al. (2024)*

None of the approaches on their own can ensure sustainable competitive advantages for medical services. Their effectiveness increased only through comprehensive integration, where innovation was reinforced by specific resources, and marketing orientation towards the patient aligns with the requirements of the institutional environment. In this context, entrepreneurial thinking functions as an integrating factor that transformed individual theoretical models into practical management instruments. Such a combination enabled healthcare institutions to strengthen their competitiveness, maintain stable positions in the market, and build patient trust. In the long term, this created conditions for the sustainable development of medical services, their financial stability, and effective integration into the global space of medical innovation.

Financial and economic mechanisms of medical service development

Healthcare financing is a key element in the functioning of the national system of medical services, determining the level of their accessibility, quality, and resilience. Under market conditions, with growing competition among medical institutions and the increasing influence of the private sector, the search for and optimal use of financial resources becomes particularly important. In Ukraine, the healthcare financing structure in 2023-2025 consisted of four key sources: the state budget, local budgets, private household expenditure, and international support. Each of these has its own specific features, influencing the financial sustainability and development of medical services (Resolution of the Cabinet of Ministers of Ukraine No. 120, 2025).

The largest share of resources for healthcare was provided by the state budget (Kanecki, 2024). In 2023, approximately UAH 207 billion was allocated to the sector, of which UAH 142.7 billion was directed to the Medical Guarantees Programme (MGP), UAH 10 billion to centralised procurement of medicines and equipment, and UAH 3.8 billion to epidemiological surveillance (Budget-2023..., 2023). Expenditure increased in 2024 to UAH 238.7 billion, including UAH 157.3 billion for the MGP, of which UAH 10.5 billion was allocated to emergency care, UAH 23.5 billion to primary care, and UAH 99.6 billion to specialised care (MinFin: In 2024, healthcare..., 2025). The budget for 2025 provided 217 billion UAH, including UAH 175.5 billion for the MGP, UAH 11.8 billion for centralised procurement, and UAH 5.6 billion for the modernisation of medical institutions (State budget-2025..., 2025). Figure 1 illustrated the dynamics of the overall state budget for healthcare and the financing of the Medical Guarantees Programme in 2023-2025.

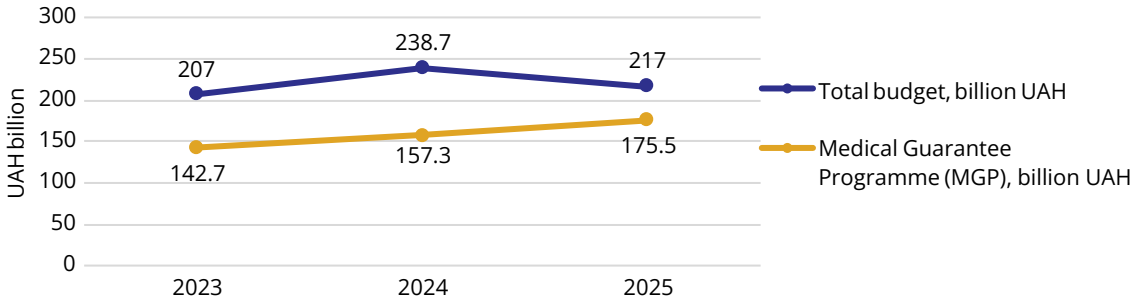

Figure 1. *Dynamics of the state budget of Ukraine and financing of the medical guarantees programme in 2023-2025*
Source: *based on Budget-2023: UAH 207 billion is provided for financing healthcare (2023), State budget-2025: Health care (2025), MinFin: In 2024, healthcare expenditures amounted to UAH 238.7 billion (2025)*

The figure illustrated that the total expenditure on healthcare increased in 2024 compared with 2023, while a reduction in funding was observed in 2025. Expenditure under the Medical Guarantees Programme demonstrated a consistently positive trend, indicating the prioritisation of this area within the structure of budgetary allocations. This trend underscored the intent of the state to ensure the sustainability of financing for

essential medical services even under challenging economic conditions. Despite fluctuations in overall budget volumes, funding for the MGP continued to grow, representing a key factor in maintaining accessibility to medical services for the population. This indicated a gradual reallocation of resources towards guaranteed service packages, forming the basis for improving the efficiency of the healthcare system. A fundamental element of state financing was the operation of the National Health Service of Ukraine (n.d.), which functions as the sole purchaser of medical services. Its mechanism was based on the principle of "money follows the patient". Healthcare institutions entered into contracts with the NHSU and received financing in proportion to the services actually provided. Primary care was funded on a capitation basis, while specialised and inpatient care was financed through "payment per case" tariffs. This system created incentives to improve the quality of medical care and ensured transparency in the use of funds (Healthcare financing in Ukraine..., 2024).

Local budgets played an important role in ensuring the operation of medical institutions. In 2023, local budgets generated UAH 441.9 billion in own-source revenue, representing an 11% increase compared with 2022 (Analysis of local budgets..., 2024). By 2025, resources increased to UAH 327.7 billion, a 15% rise relative to 2024. A portion of these funds was allocated to healthcare, covering primary care, material and technical support of hospitals, remuneration of medical personnel, and capital expenditure. In addition to own-source revenue, local budgets received intergovernmental transfers from the state to finance social sectors, including healthcare (Vinnychuk, 2024). This system enabled consideration of regional specificities and the adaptation of expenditure to local conditions. Despite increasing state support, patients in Ukraine continue to bear part of the costs themselves. Out-of-pocket expenditure accounts for 46% of total healthcare spending, indicating that nearly half of the financial burden falls on households. Major expenses included the purchase of medicines, inpatient treatment, and informal payments (Can people afford to pay..., 2023). The issue of so-called "catastrophic expenditures", when healthcare costs exceed 40% of a household budget, remains critical. This most frequently affects low-income groups, pensioners, and rural populations. The average official payment for an outpatient visit was approximately UAH 600, with charitable contributions remaining an additional source of financing. Despite the operation of the Medical Guarantees Programme, a portion of the population does not receive the full range of free services (Andreytsiv, 2024).

In the first quarter of 2024, medical insurance generated UAH 1.505 billion in premiums, representing approximately 17% of insurers' portfolios. Payments under voluntary health insurance (VHI) amounted to UAH 855 million, with a pay-out ratio of 56.8% (Results of the insurance..., n.d.). Corporate health insurance continued to develop, ensuring coverage of employees even under conditions of war. This indicated a gradual strengthening of the role of the private sector in healthcare financing. International assistance constituted an important source of financing. In 2023-2025, Ukraine received substantial support from The World Bank in Ukraine (n.d.) and USAID (n.d.). The largest package of financial support from the World Bank – the "Transformation of Healthcare through Reform and Investment in Efficiency" (THRIVE) project (Ukraine's healthcare sector..., 2024) – amounted to USD 454 million, including USD 249 million from the ADVANCE Ukraine Trust Fund (supported by the government of Japan) and USD 5 million from a URTF grant (Financial support mobilized for Ukraine since..., 2025). A further USD 220 million was mobilised in 2024 and USD 200 million in 2025 (Ukraine and the World Bank..., 2024).

The World Bank also financed emergency response projects for COVID-19 and other initiatives, with a total exceeding USD 330 million. Overall, Ukraine received more than USD 1.2 billion in grant support for healthcare in 2023-2025. The EU4Health programme (EU4Health: Response..., n.d.) of the European Union allocated over EUR 4.6 million to Ukraine in 2023 for nine projects related to the prevention of non-communicable diseases, adoption of European diagnostic standards, and integration of an electronic healthcare system (European Union allocates more than..., 2023). USAID supported the digitalisation of medical services, strengthening of primary care, development of rehabilitation and psychological assistance, and integration projects aimed at aligning European standards with the healthcare system of Ukraine.

Healthcare financing in Ukraine in 2023-2025 exhibited a multi-channel structure. State resources remained the principal source, accumulated and distributed by the National Health Service of Ukraine. Local budgets played an important role, addressing regional needs and providing hospitals with material and technical resources. High levels of out-of-pocket expenditure indicated limited financial protection for the population, which was partially offset by the development of voluntary health insurance. International assistance complemented national sources, supporting infrastructure modernisation, digitalisation, and improvements in service quality. Together, these sources form the basis for the gradual transformation of the healthcare system, although their effectiveness depended on transparent governance, coordination between levels of authority, and the creation of conditions to reduce private expenditure by the population.

Prospects and strategic areas for improving the economic model of medical services

Economic stability of medical institutions in Ukraine in 2023-2025 remained one of the key challenges for the development of the healthcare system. Despite an increase in state budget financing, problems related to resource deficits, debt obligations, and inefficient

management affected the financial condition of hospitals. State funding provided the basis for operations, yet it does not always cover the growing needs of the system. The situation in rural district hospitals was characterised by low staff workload and insufficient patient numbers, resulting in underfunding from NHSU. This created a risk of optimisation or closure of individual departments.

In 2024-2025, NHSU suspended financing for dozens of medical institutions due to contract breaches, inadequate drug accounting, or inefficient use of funds. The suspension of such payments immediately threatened hospital operations, as they lost their main source of financing (Kravchenko, 2025). Population migration during the war further reduced patient numbers and hospital revenues, while mismanagement and abuse continued to contribute to financial instability. Nevertheless, Ukraine already demonstrated examples of overcoming financial crises. State investment and international support played a crucial role. In 2024-2025, the Ministry of Health of Ukraine allocated over UAH 2.6 billion for the modernisation of 15 hospitals in 12 regions, equipping them with advanced technology, from magnetic resonance imaging scanners to angiographs and endoscopes. This reduced maintenance costs for obsolete equipment and improved the quality of services. State-private partnership projects also proved successful. For example, the diagnostic centre in Vinnytsia, established with private investment, enabled equipment modernisation and increased service accessibility without additional pressure on the local budget. The Ukrainian Centre of Tomotherapy in Kirovohrad provided an example of investment in high-tech oncology treatment. Such initiatives ensured financial stability for hospitals and reduced dependence on state funding (Ustinov, 2024).

Grants and charitable support constituted another important instrument. The National Children's Specialised Hospital Ohmatdyt received over UAH 6.3 million from the government of Germany in 2024 for post-conflict restoration. These funds were used for building repairs and equipment procurement, including six modern haemodialysis machines. International grants enabled the institution not only to restore operations, but also to improve the quality of medical care (A new nephrology and..., 2025). The impact of centralised procurement was also notable. According to the Ministry of Health, in 2024 alone, optimisation of procurement procedures through Prozorro and Prozorro Market saved over UAH 1.9 billion. The introduction of the e-Stock system allowed hospitals to monitor medicine stocks and avoid surpluses, further reducing financial risks (Electronic system for inventory management..., 2024; Medical support for..., 2024).

Entrepreneurial approaches in the management of medical institutions became a key factor in developing competitive advantages and improving the quality of services. Such approaches involved the active implementation of innovations, diversification of financing sources, development of international partnerships, and orientation towards patient needs. An example of effective implementation of entrepreneurial strategies was the activity of Uman Central City Hospital, which in 2024 expanded the range of paid service packages and introduced electronic appointment booking through the Helsi system. This enabled optimisation of patient flows, reduction of staff workload, and improvement in service quality. Such practices demonstrated that applying business models within the healthcare sector promoted financial independence and enhances patient trust (Report on the work..., 2025).

International cooperation also influenced competitiveness. Within the framework of the initiatives of the First Lady of Ukraine, Olena Zelenska, over 66 memoranda have already been signed with clinics in 24 countries. Programmes such as the Medical Exchange Program (2025) and the International Medical Partnerships Initiative (International medical partnership..., 2024) allowed Ukrainian doctors to undertake internships in leading medical centres in Germany, Canada, France, and other countries. The outcome of these programmes included the introduction of modern treatment methodologies in Ukrainian hospitals. International partnerships also created opportunities for telemedicine consultations, knowledge exchange, and collaborative research, supporting Ukraine's integration into the global medical community (Ministry of Health of Ukraine strengthens..., 2025).

Innovative strategies were also being implemented at the regional level to enhance competitiveness. The establishment of a medical cluster in the Rivne region, which joined the European Health Alliance, enabled participation in the personalised medicine project Personalised Medicine Empowerment Connecting Innovation Ecosystems Across Europe (PRECISEU, n.d.) with a budget of EUR 23 million in 2024. This initiative increased the innovation potential of the region, facilitated the adoption of personalised treatment approaches, and created conditions for the integration of Ukrainian hospitals into international research programmes. Such initiatives strengthen both the medical and economic potential of the regions (Innovation and international partnership..., 2024).

Cross-border initiatives also have practical value for the development of competitive advantages in Ukrainian medical institutions. Ukrainian-Polish projects in ophthalmology demonstrated the effectiveness of collaboration in the shared use of technology, staff training, and the expansion of service offerings. These efforts not only improved patient care, but also strengthened the position of institutions in the regional medical services market. Medical centres, such as the Ukrainian Medical Centre "AILAZ" (n.d.), actively participated in international conferences and symposia, including the European Society of Ophthalmology (n.d.) Congress (SOE) held in Lisbon in 2025. Ukrainian specialists presented

innovative treatment methods, share their own developments already applied in clinical practice, and learn new technologies alongside European colleagues (Ukrainian ophthalmologists presented..., 2025).

The development of telemedicine remained a key area, creating equal opportunities for access to medical care for residents of remote settlements. Digital solutions enabled remote consultations, diagnostics, and patient monitoring. This reduced the burden on large urban hospitals, ensured a more efficient allocation of resources, and simultaneously formed an additional competitive advantage for institutions that actively invested in digital transformation. In 2025, telemedicine consultations account for up to 10% of all medical consultations, with plans to implement telemedicine in 80% of healthcare institutions (Order of the Cabinet of Ministers of Ukraine No. 625-r, 2023). Thus, strategies aimed at enhancing the competitiveness of medical institutions within the framework of an entrepreneurial approach encompass a comprehensive set of measures. These included the development of new business models based on service packages, telemedicine, and digital services, active engagement of investments and grants, expansion of international partnerships and knowledge exchange, and optimisation of financial and administrative processes. The combination of these instruments enabled the development of sustainable competitive advantages, improvement of service quality, and provision of long-term economic stability for Ukrainian medical institutions.

Discussion

Healthcare in different countries has developed under the influence of varied economic, social, and political conditions, shaping diverse models of transformation. Contemporary challenges, ranging from rising healthcare costs and staff shortages to the rapid adoption of digital technologies, amplified the need for innovative solutions. In this context, analysing the experience of different countries provided insight into how the integration of innovation, financing, and managerial strategies has influenced the resilience and competitiveness of healthcare systems.

I. Iglesias *et al*. (2025) focused on the transformation of medical affairs departments in pharmaceutical companies in Spain, highlighting their evolution from an informational function to a strategic partner within the healthcare system, along with stakeholder management, digitalisation, and new organisational models. The study emphasised the importance of innovation, digital tools, and patient-centric approaches. In contrast, this study examined financial and economic mechanisms and practical cases from Ukrainian medical institutions, while I. Iglesias *et al*. (2025) analysed the strategic role of medical affairs departments in the pharmaceutical sector. A similar logic was observed in comparison with J. Kehr (2023). While this study highlighted economic and entrepreneurial instruments for development, J. Kehr (2023) examined healthcare as a socio-political phenomenon, emphasising inequality and societal expectations. Despite differences in focus, both approaches underlined the necessity for healthcare systems to remain flexible and capable of adapting to change.

Research by N.C. Monteagudo *et al*. (2025) and this study converged in recognising the importance of innovation, digital technologies, and patient-centred approaches as key factors in the development of medical services. This study, however, emphasised financial and economic mechanisms alongside entrepreneurial strategies, while N.C. Monteagudo *et al*. (2025) focused on the development of value-based healthcare models, where the principal objective was the creation of treatment outcomes significant for patients, alongside the integration of multidisciplinary approaches, cross-sector collaboration, and novel methods for evaluating treatment effectiveness. P. Aceituno-Aceituno *et al*. (2021) examined entrepreneurship in a global context, highlighting the integration of innovative business models, strategic management tools, and long-term economic efficiency. Both studies agreed that an entrepreneurial approach functions as a key driver of medical development, enhancing the efficiency, financial sustainability, and competitiveness of healthcare institutions. Both also emphasised the role of digital technologies, innovation, and the pursuit of new funding sources as central to the transformation of healthcare systems. Differences emerged in scale and contextual focus. The authors R. Pagan & D. Horsfall (2020) analysed entrepreneurship in healthcare as a socio-political phenomenon, emphasising inequalities in access, the consequences of neoliberal reforms, and the relationship between the market and social justice. This study, in contrast, focused on financial and economic mechanisms for the development of medical services in Ukraine, examining the role of budgets, international assistance, and hospital modernisation. Shared recognition existed regarding the necessity of innovation, digital technologies, and flexible management strategies, while divergence lay in perspective: one adopted a socio-political lens, the other an economic-practical lens.

A. Sánchez-Bayón *et al*. (2022) demonstrated similarities with the Ukrainian analysis in recognising the importance of digitalisation and novel business models, albeit in a global socio-economic context. Similarly, I. Paunović *et al*. (2024) proposed an educational and scientific perspective on entrepreneurship, which, combined with the Ukrainian financial approach, outlined diverse yet complementary development trajectories. Issues of staffing and financial sustainability highlighted by K. Dubas-Jakóbczyk *et al*. (2024) in the context of Central and Eastern Europe corresponded with these challenges, although on a different scale. In the same context, W. Yao (2022) illustrated the Chinese experience of integrating medical industries into economic development strategies. Despite differences in context, Spanish,

Chinese, and Ukrainian examples supported the shared conclusion that entrepreneurship and innovation constituted universal conditions for the competitiveness of healthcare systems. X. Nie (2022) examined the issue of medical deserts in China, focusing on inequalities in access to healthcare, particularly in rural areas. Key barriers included shortages of medical personnel, inadequate funding, and weak infrastructure, resulting in significant urban-rural disparities in the quality and accessibility of care. Both studies agreed that financial insufficiency, workforce deficits, and regional imbalances were principal factors in the development of medical deserts. Both recognised the need for comprehensive reforms, integration of public and private resources, and the development of new funding models and innovative management solutions.

This study and M. You *et al*. (2025) converged in acknowledging that entrepreneurial approaches, digitalisation, and innovative technologies were critical for enhancing efficiency and competitiveness in healthcare. M. You *et al*. (2025) emphasised the integration of digital platforms, big data, and artificial intelligence within the Chinese healthcare system, whereas this study focused on Ukrainian realities, financial and economic mechanisms, and practical cases of hospital modernisation. Similar conclusions were drawn by S.O. Babatunde (2024), who stressed the importance of entrepreneurial approaches and public-private partnerships. Contextual differences existed: for Africa, key issues included inequalities in access, lack of insurance coverage, and workforce shortages, while this study concentrated on budgetary financing instruments and hospital digitalisation.

Whereas previous studies emphasised internal system transformations, B. Salter *et al*. (2022) examined the impact of political and global factors on the integration of biomedical innovations. Scientists argued that entrepreneurial development cannot occur outside institutional frameworks and regulatory policies. This expanded the analytical perspective, but differed from the Ukrainian context, where the focus remained on budgetary mechanisms and practical reform examples. Similarly, H. Liu *et al*. (2024) highlighted technological breakthroughs in the Chinese healthcare system, including telemedicine and big data. This study confirmed the importance of digitalisation, though it approached the topic through financial and managerial mechanisms. O.E. Ibikunle *et al*. (2024) focused on African contexts, where the combination of public and private resources alongside international support was crucial. This perspective resonated with the Ukrainian experience, though the challenges differ: for Africa, the primary issues were inequality and donor dependence, whereas for Ukraine, they were efficiency of budgets and telemedicine. Similar conclusions were evident in the study by E. Javanmardi *et al*. (2024), which examined entrepreneurship in a global dimension, emphasising transnational practices. While this study remained local, both approaches converged on the importance of telemedicine, digital platforms, and patient-centred care.

Researchers S.N. Weimar *et al*. (2025) examined entrepreneurial models in healthcare from the perspective of their influence on system resilience during periods of uncertainty. The authors emphasised the importance of adaptive business strategies, digital solutions, and patient-centred approaches for overcoming challenges faced by medical institutions. This study aligned with the work of S.N. Weimar *et al*. (2025) in recognising the role of entrepreneurial approaches and innovation in enhancing the efficiency of healthcare services. Both approaches highlighted the significance of telemedicine, electronic management systems, and the integration of private capital through public-private partnerships. Differences emerged in context: S.N. Weimar *et al*. (2025) analysed global business models and uncertainty management mechanisms, whereas this study focused on the Ukrainian market, emphasising budgetary financing, international assistance, and practical cases of hospital modernisation. The work of C.G. Bocean & A.A. Vărzaru (2025) and this study converged in recognising the key role of entrepreneurship, digitalisation, and innovation for improving healthcare efficiency, as well as the importance of combining public and private financing. The first study examined digital transformation in a European context and proposed conceptual models of strategic management, whereas this study concentrated on Ukrainian financial and economic mechanisms and practical modernisation cases. Comparison demonstrated that studies across different countries concurred on the universal importance of innovation, digital technologies, and entrepreneurial strategies for enhancing healthcare efficiency. Key differences lain in scale and emphasis: some authors focused on global trends and political conditions, while others concentrated on local financing mechanisms and practical case studies. Findings indicated that successful transformation required adaptation of universal strategies to specific national contexts.

Conclusions

The study demonstrated that the entrepreneurial approach in medical services, combining innovation, rationality, and social responsibility, created conditions for more efficient resource management, the strengthening of competitive advantages, and the improvement of service quality. The analysis showed that in 2023-2024, more than UAH 2.6 billion were allocated in Ukraine for the modernisation of medical institutions. However, about 27% of purchased tomographs were never put into operation due to the lack of appropriate infrastructure. This confirmed that without strategic management, investments did not generate the expected effect, whereas entrepreneurial thinking, with its emphasis on efficiency, could minimise such losses. In 2024, the state allocated UAH 5.6 billion for the modernisation of

medical infrastructure, which amounted on average to UAH 35,000 per doctor and only UAH 150 per patient, indicating an insufficient level of funding, when calculated per end-user of services.

Healthcare financing in 2023-2025 retained a multi-channel structure, in which the state budget remained the main source. In 2023, expenditures amounted to UAH 207 billion, in 2024 to UAH 238.7 billion, yet in 2025 they decreased to UAH 217 billion. In turn, funding for the medical guarantees programme increased from UAH 142.7 billion in 2023 to UAH 175.5 billion in 2025, indicating its prioritisation. Local budgets also played a substantial role, providing more than UAH 441.9 billion of their own revenues in 2023 with a projected growth trend of 15% by 2025. Despite this, almost 46% of healthcare expenditures were covered directly by patients, which created risks of "catastrophic expenditures", particularly for socially vulnerable groups. The average payment for an outpatient visit in 2024 was UAH 600. Meanwhile, voluntary health insurance showed positive dynamics: in the first quarter of 2024, premiums reached UAH 1.5 billion with a pay-out ratio of 56.8%, reflecting the gradual strengthening of the role of the private sector.

International assistance became an important factor of financial resilience: in 2023-2025, Ukraine received more than USD 1.2 billion in grants from the World Bank, USAID, and the EU, including the THRIVE project of USD 454 million, which contributed to hospital modernisation and the development of telemedicine. An example of the effective use of resources was National Children's Specialised Hospital "Ohmatdyt", which, thanks to a grant of UAH 6.3 million from the German government, restored its infrastructure and purchased dialysis equipment. Successful public-private projects, such as the diagnostic centre in Vinnytsia and the Tomotherapy Centre in Kirovohrad, confirmed the effectiveness of funding diversification. The development of partnerships, participation in the PRECISEU programme, and presentations at the SOE Congress in 2025 integrated Ukrainian healthcare into the global sphere. By 2025, telemedicine was expected to cover 80% of institutions, with its share increasing to 10%, providing an additional competitive advantage. The limitation of this study was that it relied primarily on statistical data from 2023-2025, which did not fully reflected long-term trends. Prospects for future research include an in-depth analysis of the effectiveness of implemented entrepreneurial strategies in medical institutions and their impact on financial stability and service quality.

Acknowledgements

None.

Funding

None.

Conflict of Interest

None.

References

[1] A new nephrology and dialysis department was opened at the Ohmatdyt Polyclinic with funding from the German government. (2025). *Rubryka*. Retrieved from https://rubryka.com/2025/04/30/u-poliklinitsi-ohmatdytu-vidkryly-nove-viddilennya-nefrologiyi-ta-dializu-za-finansuvannya-uryadu-nimechchyny/.

[2] Aceituno-Aceituno, P., Danvila-del-Valle, J., González García, A., & Bousoño-Calzón, C. (2021). Scientific mobility, training and entrepreneurial skills in health sciences: The Spanish case. *International Journal of Environmental Research and Public Health*, 18(4), article number 2195. doi: 10.3390/ijerph18042195.

[3] AILAZ. (n.d.). Retrieved from https://www.ailas.com.ua/index.html.

[4] Analysis of local budgets for 2023. (2024). *All-Ukrainian Association of Local Governments "Association of Amalgamated Territorial Communities"*. Retrieved from https://surl.li/iaaymf.

[5] Andreytsiv, I. (2024). How much do Ukrainians pay out of pocket for medical care – figures from a new study. *LB.ua*. Retrieved from https://lb.ua/health/2024/11/28/647487_skilki_platyat_ukraintsi_z_kishen.html.

[6] Babatunde, S.O. (2024). Business model innovation in healthcare: A theoretical review of entrepreneurial strategies in the medical sector. *International Journal of Biological and Pharmaceutical Sciences Archive*, 7(1), 148-157. doi: 10.53771/ijbpsa.2024.7.1.0032.

[7] Baitsurenko, A., & Krupskyi, O. (2023). The peculiarities of medical management development in Ukraine. *Challenges and Issues of Modern Science*, 1, 350-355. doi: 10.6084/m9.figshare.22886720.

[8] Balandyukh, O. (2024). The Ministry of Health will modernise 15 hospitals in 12 regions for UAH 2.6 billion. *Zaxid.net*. Retrieved from https://zaxid.net/15_likaren_otrimayut_nove_obladnannya_u_2025_rotsi_vid_derzhavi_perelik_n1600151.

[9] Bocean, C.G., & Vărzaru, A.A. (2025). Health status in the era of digital transformation and sustainable economic development. *BMC Health Services Research*, 25, article number 343. doi: 10.1186/s12913-025-12498-y.

[10] Budget-2023: UAH 207 billion is provided for financing healthcare. (2023). *Yurydychna Gazeta*. Retrieved from https://surl.lu/zyzooc.

[11] Can people afford to pay for health care? New data on financial protection in Ukraine. (2023). *World Health Organization*. Retrieved from https://iris.who.int/bitstream/handle/10665/374836/WHO-EURO-2023-8922-48694-72368-ukr.pdf?sequence=1&isAllowed=y.

[12] Ciobanu, E., & Bărbulescu, O. (2025). Beyond the bottom line: The role of personal characteristics in healthcare entrepreneurship. *Administrative Sciences*, 15(1), article number 28. doi: 10.3390/admsci15010028.
[13] Dieffenbacher, S.F. (2024). Porter's generic strategies tips for business competitive strategy. *Digital Leadership*. Retrieved from https://digitalleadership.com/blog/porters-generic-strategies/.
[14] Dubas-Jakóbczyk, K., *et al.* (2024). Medical deserts in Spain – insights from an international project. *The International Journal of Health Planning and Management*, 39(3), 708-721. doi: 10.1002/hpm.3782.
[15] Electronic system for inventory management of medicines and medical devices eStock. (2024). *Ministry of Health of Ukraine*. Retrieved from https://moz.gov.ua/uk/elektronna-sistema-upravlinnya-zapasami-likarskih-zasobiv-ta-medichnih-virobiv-estock.
[16] EU4Health: Response to the COVID-19 pandemic and preparedness for crisis situations in the EU. (n.d.). *Center for Public Health of the Ministry of Health of Ukraine*. Retrieved from https://phc.org.ua/eu4health#:~:text=%.
[17] European Society of Ophthalmology. (n.d.). Retrieved from https://soevision.org/.
[18] European Union allocates more than EUR 4.6 million to Ukraine for healthcare projects within the framework of the EU4Health programme. (2023). *Center for Public Health of the Ministry of Health of Ukraine.* Retrieved from https://www.phc.org.ua/news/evrosoyuz-vidilyae-ukraini-ponad-46-mln-evro-na-proekti-u-sferi-okhoroni-zdorovya-v-ramkakh.
[19] Financing mobilized for Ukraine since February 24, 2022. (2025). *World Bank Group*. Retrieved from https://www.worldbank.org/en/country/ukraine/brief/world-bank-emergency-financing-package-for-ukraine.
[20] Glover, W.J., Crocker, A., & Brush, C.G. (2024). Healthcare entrepreneurship: An integrative framework for future research. *Journal of Business Venturing Insights*, 22, article number e00476. doi: 10.1016/j.jbvi.2024.e00476.
[21] Healthcare financing in Ukraine: Reform, sustainability and recovery. (2024). *World Health Organization*. Retrieved from https://www.who.int/ukraine/uk/publications/WHO-EURO-2024-10570-50342-75964.
[22] Ibikunle, O.E., Usuemerai, P.A., Abass, L.A., Alemede, V., Nwankwo, E.I., & Mbata, A.O. (2024). Healthcare entrepreneurship as a catalyst for economic development. *International Journal of Engineering Research and Advanced Development*, 20(11), 411-428.
[23] Iglesias, I., Marinich, J.A., Anechina, L.R., Cortés, M., & Domínguez, A.P. (2025). Understanding the national healthcare ecosystem to position medical affairs as a strategic element: Lessons learned from AstraZeneca Spain. *Pharmaceutical Medicine*, 39, 39-50. doi: 10.1007/s40290-024-00542-x.
[24] Innovation and international partnership: How medical clusters are changing healthcare in Rivne region. (2024). *Ukrainian Cluster Alliance*. Retrieved from https://www.clusters.org.ua/success-stories/rivne-regional-mediacal-cluster-istoria-uspihu/.
[25] International medical partnership: More than 130 Ukrainian doctors trained abroad in February. (2024). *Ministry of Health of Ukraine*. Retrieved from https://surl.li/ltvpqk.
[26] Javanmardi, E., Maresova, P., Xie, N., & Mierzwiak, R. (2024). Exploring business models for managing uncertainty in healthcare, medical devices, and biotechnology industries. *Heliyon*, 10(4), article number e25962. doi: 10.1016/j.heliyon.2024.e25962.
[27] Kaminska, T., Oleksiuk, O., Komorovsky, R., & Hladykh, F. (2024). The role of Ukrainian healthcare in the global market of medical services: Growth factors in the context of globalization. *The Journal of V.N. Karazin Kharkiv National University. Series Medicine*, 32(3), 440-450. doi: 10.26565/2313-6693-2024-50-11.
[28] Kanecki, P. (2024). The impact of focus group opinions on market competitiveness and economic success in film production: Analysis of sociological and marketing aspects in the context of efficient resource utilisation and budget optimisation. *Economics, Entrepreneurship, Management*, 11(1), 80-91. doi: 10.56318/eem2024.01.080.
[29] Kehr, J. (2023). The moral economy of universal public healthcare. On healthcare activism in austerity Spain. *Social Science & Medicine*, 319, article number 115363. doi: 10.1016/j.socscimed.2022.115363.
[30] Khomenko, I., Ivakhno, O., Pershehuba, Ya., & Zakladna, N. (2022). Strategy for the development of the public health system of Ukraine in line with modern changes in society. *Medical Perspectives*, 27(2), 168-174. doi: 10.26641/2307-0404.2022.2.260296.
[31] Kovalenko, A., & Mosorko, A. (2024). Procurement of medicines, cryopreservation of military biomaterial: What will healthcare spending be in 2025. *Ukrainska Pravda*. Retrieved from https://life.pravda.com.ua/society/derzhbyudzhet-na-2025-rik-yak-vitrachatimut-koshti-u-sferi-ohoroni-zdorov-ya-304944/.
[32] Kravchenko, O. (2025). NSZU suspends payments to 36 medical institutions (list). *LB.ua*. Retrieved from https://lb.ua/health/2025/05/13/676201_nszu_prizupinyaie_oplati_36_medichnim.html.
[33] Kyrey, R. (2023). Isn't one hospital enough for 35 thousand inhabitants? *Uryadovy Kuryer*. Retrieved from https://ukurier.gov.ua/uk/articles/chi-ne-zamalo-odniyeyi-likarni-na-35-tisyach-zhite/.
[34] Levchenko, I., & Solopun, N. (2021). Research of the role of investment and innovative activities in the process of management of medical institutions. *Technology Audit and Production Reserves*, 2(4), 16-19. doi: 10.15587/2706-5448.2021.229778.

[35] Liu, H., Jiang, Z., Deng, J., & Li, D. (2024). Analysis of the coupling coordination between traditional Chinese medicine medical services and economy and its influencing factors in China. *Frontiers in Public Health*, 12, article number 1320262. doi: 10.3389/fpubh.2024.1320262.
[36] Mailani, D., Hulu, M.Z.T., Simamora, M.R., & Kesuma, S.A. (2024). Resource-based view theory to achieve a sustainable competitive advantage of the firm: Systematic literature review. *International Journal of Entrepreneurship and Sustainability Studies*, 4(1), 1-15. doi: 10.31098/ijeass.v4i1.2002.
[37] Medical Exchange Program. (2025). *United Help Ukraine*. Retrieved from https://unitedhelpukraine.org/reports/medical-exchange-program/?utm_source.
[38] Medical support for hospitals in Ukraine in 2024-2026: What it will be like and what will change for patients. (2024). *Forbes Ukraine*. Retrieved from https://forbes.ua/ru/lifestyle/medichne-zabezpechennya-likaren-ukraini-u-20242026-rokakh-yakim-vono-bude-ta-shcho-zminitsya-dlya-patsientiv-30082024-23281.
[39] MinFin: In 2024, healthcare expenditures amounted to UAH 238.7 billion. (2025). *Ministry of Finance of Ukraine*. Retrieved from https://mof.gov.ua/uk/news/minfin_u_2024_rotsi_vidatki_na_okhoronu_zdorovia_stanovili_2387_mlrd_griven-4999.
[40] Ministry of Health of Ukraine strengthens international partnership in wartime conditions. (2025). *Shupyk National Healthcare University of Ukraine*. Retrieved from https://www.nuozu.edu.ua/n/p/13321-moz-ukrainy-zmitsniuie-mizhnarodne-partnerstvo-v-umovakh-viiny#gsc.tab=0.
[41] Monteagudo, N.C., Rodríguez, D.E.C., Carhuajulca, D.B.G., Moral, J.M.L., & Navarro Martínez, O. (2025). Defining nursing entrepreneurship from the point of view of future professionals: A qualitative study. *Nurse Education Today*, 144, article number 106421. doi: 10.1016/j.nedt.2024.106421.
[42] National Health Service of Ukraine. (n.d.). Retrieved from https://nszu.gov.ua/.
[43] Nie, X. (2022). The 'medical city' and China's entrepreneurial state: Spatial production under rising consumerism in healthcare. *Urban Studies*, 60(6), 1102-1122. doi: 10.1177/00420980221131246.
[44] Order of the Cabinet of Ministers of Ukraine No. 625-r "On approval of the Strategy for the Development of Telemedicine in Ukraine". (2023, July). Retrieved from https://zakon.rada.gov.ua/laws/show/625-2023-%D1%80#Text.
[45] Pagan, R., & Horsfall, D. (2020). Medical tourism markets: Models of sustainability. The case of Spain and The Costa del Sol (Malaga). *Sustainability*, 12(21), article number 8818. doi: 10.3390/su12218818.
[46] Paul, M., Maglaras, L., Ferrag, M.A., & Almomani, I. (2023). Digitization of healthcare sector: A study on privacy and security concerns. *ICT Express*, 9(4), 571-588. doi: 10.1016/j.icte.2023.02.007.
[47] Paunović, I., Apostolopoulos, S., Miljković, I.B., & Stojanović, M. (2024). Sustainable rural healthcare entrepreneurship: A case study of Serbia. *Sustainability*, 16(3), article number 1143. doi: 10.3390/su16031143.
[48] PRECISEU. (n.d.). Retrieved from https://preciseu.eu/.
[49] Report on the work of the hospital for 2024. (2025). *Uman Central City Hospital*. Retrieved from https://uman.lic.org.ua/novyny/zvit-pro-robotu-likarni-za-2024-rik/.
[50] Resolution of the Cabinet of Ministers of Ukraine No. 120 "Some Issues of Providing Subventions from the State Budget to Local Budgets in 2025 for Supporting Individual Institutions and Activities in the Healthcare System". (2025, February). Retrieved from https://zakon.rada.gov.ua/laws/show/120-2025-%D0%BF#Text.
[51] Results of the insurance market of Ukraine. Insurance TOP identified leading insurers for 1K 2024. (n.d.). *Forinsurer*. Retrieved from https://forinsurer.com/news/24/07/23/44053.
[52] Salter, B., Dong, Y., & Hunter, B.M. (2022). Constructing healthcare services markets: Networks, brokers and the China-England engagement. *Globalization and Health*, 18, article number 102. doi: 10.1186/s12992-022-00892-8.
[53] Sánchez-Bayón, A., González-Arnedo, E., & Andreu-Escario, Á. (2022). Spanish healthcare sector management in the COVID-19 crisis under the perspective of Austrian economics and new-institutional economics. *Frontiers in Public Health*, 10, article number 801525. doi: 10.3389/fpubh.2022.801525.
[54] Shevchuk, V., Ivanchov, P., Paryzkyi, I., Lakiichuk, Y., & Oksin, V. (2021). Establishment of a comprehensive system for the provision of medical services in Ukraine on market principles. *Amazonia Investiga*, 10(43), 158-167. doi: 10.34069/AI/2021.43.07.16.
[55] State budget-2025: Health care. (2025). *Ministry of Finance of Ukraine*. Retrieved from https://www.kmu.gov.ua/news/derzhbiudzhet-2025-okhorona-zdorovia.
[56] The National Forum on Modernization of the Hospital Network of Ukraine was held in Kyiv. (2025). *Official website of Zhytomyr Regional State Administration*. Retrieved from https://oda.zht.gov.ua/news/u-kyyevi-vidbuvsya-natsionalnyj-forum-z-modernizatsiyi-gospitalnoyi-merezhi-ukrayiny/.
[57] The World Bank in Ukraine. (n.d.). *World Bank Group*. Retrieved from https://www.worldbank.org/en/country/ukraine.
[58] Tyukhtenko, N., Makarenko, S., Oliinyk, N., & Portugal, E. (2021). Innovative approaches to enterprise competitiveness assessment. *Marketing and Management of Innovations*, 1, 278-289. doi: 10.21272/mmi.2021.1-21.

[59] Ukraine and the World Bank are implementing a new healthcare project THRIVE. Agreements totalling USD 454 million have been signed. (2024). *Ministry of Finance of Ukraine*. Retrieved from https://mof.gov.ua/uk/news/ukraine_and_the_world_bank_are_implementing_a_new_healthcare_project_thrive_agreements_totalling_454_million_have_been_signed-4938.
[60] Ukraine's healthcare sector is being strengthened with World Bank support. (2024). *World Bank Group*. Retrieved from https://www.worldbank.org/uk/news/press-release/2024/12/09/ukraine-health-sector-to-strengthen-with-world-bank-support.
[61] Ukrainian ophthalmologists presented innovations at the leading European congress in Lisbon. (2025). *AILAZ*. Retrieved from https://www.ailas.com.ua/novosti/novosti_akcii_sobyti/ukrajinski-oftalmolohi-predstavili-innovatsiji-na-providnomu-jevropejskomu-konhresi-u-lisaboni.html.
[62] USAID. (n.d.). *U.S. Embassy in Ukraine*. Retrieved from https://ua.usembassy.gov/.
[63] Ustinov, O. (2024). What is planned in the medical industry for 2025. Report of the Minister. *Ukrainian Medical Journal*. Retrieved from https://umj.com.ua/uk/novyna-261253-shho-zaplanovano-u-medichnij-galuzi-na-2025-rik-dopovid-ministra.
[64] Ustinov, O. (2025). The conference "Modernization of the hospital network in Ukraine" began work in Kyiv. *Ukrainian Medical Journal*. Retrieved from https://umj.com.ua/uk/novyna-266445-konferentsiya-modernizatsiya-gospitalnoyi-merezhi-v-ukrayini-rozpochala-robotu-u-kiyevi.
[65] Valakh, V., Rudinska, O., Busel, S., & Kniazkova, V. (2024). Management of medical services in Ukraine in the context of international experience. *Economic Analysis*, 34(2), 94-105. doi: 10.35774/econa2024.02.094.
[66] Vinnychuk, N. (2024). Local budgets 2025: Features, priorities, prospects. *U-Lead*. Retrieved from https://u-lead.org.ua/news/582.
[67] Volkova, Y., Diachenko, O., Novikova, N., & Khmurova, V. (2024). Analysis of modern approaches to financial support of healthcare facilities in Ukraine. *Financial and Credit Activity: Problems of Theory and Practice*, 5(58), 150-162. doi: 10.55643/fcaptp.5.58.2024.4496.
[68] Weimar, S.N., Martjan, R.S., & Terzidis, O. (2025). Conceptualizing the landscape of digital health entrepreneurship: A systematic review and research agenda. *Management Review Quarterly*, 75, 1619-1667. doi: 10.1007/s11301-024-00417-0.
[69] Yao, W. (2022). A case study on the "sinicization" of business development of medical enterprises – medtronic. *BCP Business & Management*, 34, 201-206. doi: 10.54691/bcpbm.v34i.3014.
[70] You, M., Xiao, Y., Yao, H., Tian, X.-Q., Shi, L.-W., & Qiu, Y.-P. (2025). Evaluation and regulation of medical artificial intelligence applications in China. *Chinese Medical Sciences Journal*, 40(1), 3-8. doi: 10.24920/004473.
[71] Zade, M., Tiwade, Y.R., Shahu, S., Bandre, G., & Surkar, S. (2024). Marketing technique in healthcare services: A narrative review. *National Journal of Community Medicine*, 15(6), 496-502. doi: 10.55489/njcm.150620243671.
[72] Zghurska, O., Larina, Y., & Dyma, O. (2023). Features of marketing strategies' formation in the market of medical services. *Economic Innovations*, 25(3), 102-112. doi: 10.31520/ei.2023.25.3(88).102-112.

Роль підприємницького підходу у розвитку медичних сервісів в умовах ринку медичних послуг

Майса Дурдикулиєва
Лікар
Національний медичний університет імені О.О. Богомольця
01601, бульв. Тараса Шевченка, 13, м. Київ, Україна
https://orcid.org/0009-0005-8568-6244

Анотація. Метою даного дослідження було дослідити вплив підприємницького підходу на формування ефективних та конкурентоспроможних медичних сервісів у процесі ринкових змін. Методологія ґрунтувалася на аналітико-теоретичному підході, що включав аналіз динаміки державного та місцевих бюджетів, програм медичних гарантій, міжнародної фінансової допомоги, а також вивчення практичних кейсів окремих закладів охорони здоров'я. Основні результати показали, що у 2023 році державні видатки на охорону здоров'я становили 207 млрд грн, у 2024 році зросли до 238,7 млрд грн, проте у 2025 році скоротилися до 217 млрд грн. Водночас фінансування програми медичних гарантій зросло з 142,7 млрд грн у 2023 році до 175,5 млрд грн у 2025 році. Місцеві бюджети забезпечили 441,9 млрд грн у 2023 році з прогнозованим зростанням на 15 % у 2025 році. Попри це, близько 46 % витрат на медичні послуги покривали пацієнти власними коштами, а середній платіж за амбулаторний візит у 2024 році становив 600 грн. Добровільне медичне страхування у I кварталі 2024 року принесло 1,5 млрд грн премій при рівні виплат 56,8 %, що свідчило про зростання ролі приватного сектора. Міжнародна підтримка також відіграла роль: за 2023-2025 роки Україна отримала понад 1,2 млрд дол. грантів, включаючи проєкт Transforming Health Systems for Resilience and Improved Efficiency з бюджетом 454 млн дол. Це дозволило модернізувати лікарні, закупити обладнання та розвивати телемедицину, охоплення якої до 2025 року мало скласти 80 % медичних закладів. У межах дослідження було проаналізовано діяльність окремих медичних центрів, зокрема Національної дитячої спеціалізованої лікарні «Охматдит», комунального некомерційного підприємства «Уманська центральна міська лікарня» та медичного центру «Айлаз». Практичне значення дослідження полягає у можливості використання його результатів для розробки стратегій підвищення фінансової стійкості та конкурентоспроможності медичних закладів шляхом впровадження підприємницьких підходів, цифрових інновацій та диверсифікації джерел фінансування

Ключові слова: стратегії; пацієнт; фінансування; конкурентоспроможність; маркетинг

ECONOMIC FORUM
Journal homepage: https://e-forum.com.ua/en
Vol. 15, No. 3, 2025, 87-96
Article's History: Received: 02.05.2025 Revised: 07.08.2025 Accepted: 08.09.2025

UDC 339.564:658.7 *DOI: 10.62763/ef/3.2025.87*

Optimisation of logistics costs in the enterprise's foreign trade system

Andriy Dziubynskyi*
PhD in Economic Sciences, Associate Professor
Lutsk National Technical University
43018, 75 Lvivska Str., Lutsk, Ukraine
https://orcid.org/0000-0001-5156-9852

Olena Pakholiuk
PhD in Technical Sciences, Associate Professor
Lutsk National Technical University
43018, 75 Lvivska Str., Lutsk, Ukraine
https://orcid.org/0000-0002-3484-0468

Oksana Dziubynska
PhD in Economic Sciences, Associate Professor
Lutsk National Technical University
43018, 75 Lvivska Str., Lutsk, Ukraine
https://orcid.org/0000-0003-1478-8452

Oksana Peredriy
PhD in Technical Sciences, Associate Professor
Lutsk National Technical University
43018, 75 Lvivska Str., Lutsk, Ukraine
https://orcid.org/0000-0002-5464-2020

Halyna Holodyuk
PhD in Technical Sciences, Associate Professor
Lutsk National Technical University
43018, 75 Lvivska Str., Lutsk, Ukraine
https://orcid.org/0000-0002-9740-5498

Abstract. The purpose of the study was to substantiate effective approaches to the formation and management of logistics costs in the system of foreign economic activity of enterprises. The problems of the functioning of logistics systems of enterprises aimed at foreign economic activity, which required timely solutions through the optimisation of logistics costs and improvement of logistics operations management were considered. The conceptual connection between the optimisation of logistics costs and the increase in the competitiveness of the enterprise, which was implemented through the rational selection of partners, effective planning of distribution channels, modeling of logistics supply chains and the implementation of resource-saving practices was substantiated. The influence of organisational aspects of logistics processes on the efficiency of the functioning of transport and logistics enterprises was analysed by reducing the costs of using labour resources, fixed and circulating means of production. The role of modern logistics systems as key objects of automation, integration and strategic management of material and information flows within business structures was highlighted. It was determined that the problem of optimising logistics costs in manufacturing enterprises remained unexplored. Methods of optimising logistics systems, which were implemented by modern enterprises in order to reduce costs and effectively use resource potential, which ensured increased productivity and improved customer service, had been identified. Global trends required a comprehensive update of the logistics infrastructure, the introduction

Suggested Citation:

Dziubynskyi, A., Pakholiuk , O., Dziubynska, O., Peredriy, O., & Holodyuk, H. (2025). Optimisation of logistics costs in the enterprise's foreign trade system. *Economic Forum*, 15(3), 87-96. doi: 10.62763/ef/3.2025.87.

*Corresponding author

of advanced technological solutions and compliance with environmental principles in logistics activities. Systemic and long-term development of the industry, focused on innovation and effective resource management was a key factor in ensuring sustainable economic progress and competitiveness of the state in the conditions of global interdependence. The developed system of indicators for assessing logistics cost management provided a comprehensive characteristic of the functional state of the logistics system of the enterprise, contributing to increasing the competitiveness of products, as well as increasing the profitability of economic activity. The process of developing measures aimed at optimising costs associated with the processing, storage and transportation of goods had become a key element of managing the logistics costs of the enterprise. Such management was of strategic importance for the company, as it contributed to their reduction, increase in competitiveness and guarantees stability of financial results. The practical value of the research lies in formulating recommendations for optimising logistics costs for enterprises involved in international economic activity

Keywords: foreign economic activity; international logistics; supply chain management; foreign trade operations; digitalisation of logistics; transportation costs

Introduction

Globalisation was radically transforming the world economy, creating new opportunities and challenges for national systems. Transport and logistics infrastructure was a key mechanism for integration into world economic processes, contributing to the growth of foreign trade activity and increasing competitiveness. Optimisation of logistics costs ensured a rational choice of partners, improvement of distribution channels and saving resources, which formed the competitive advantages of enterprises in foreign economic activity. The relevance of the study was determined by the potential for increasing the efficiency of the enterprise's functioning provided that a logistical approach was used to manage material resources, in particular flows and stocks. O. Bondarenko & M. Utkina (2024) noted that a scientific analysis of integration processes in transport logistics in the context of international transport corridors, as well as an assessment of the effectiveness of the application of the latest technological solutions in this area had become urgent. Researchers A. Kawa & W. Zdrenka (2024) formed the idea that logistics costs were a significant part of the total costs of enterprises and depend on their organisational and legal form, scale of activity, geographical location and nature of production or commercial activity, with the above their percentage can vary in the range from 6% to 35%. The rationality of freight planning and the effective use of material and transport resources directly affected the level of logistics costs of the enterprise. The complexity of the economic environment had actualised the problems of optimising costs in the foreign trade system, because the destabilisation of supply chains had increased the financial burden on business entities. Reducing the cost of logistics operations had become a key factor in ensuring the competitiveness of the enterprise in international markets. N. Reznik & S. Verbivskyi (2022) noted that the analysis of logistics costs made it possible to assess the quality of functioning not only of the logistics system, but also of the enterprise as a whole.

An analysis of modern scientific literature indicated an intensification of research on customs regulation, logistics and supply chain management in the context of global challenges, in particular digital transformation. For example, O. Drozd (2023) investigated the adaptation of the customs transit regime to European Union standards, which had become relevant in the context of Ukraine's European integration course. N.M. Alsharari (2022) analysed the institutional aspects of implementing reforms in the field of risk management and trade facilitation, focusing on the impact of isomorphism in the public sector, which was relevant for countries with economies in transition. Y. Trakulsunti *et al.* (2025) presented a comprehensive study of the implementation of operational excellence methodologies in the logistics sector of different countries, which allowed to assess the effectiveness of management approaches in a global dimension. In addition, M. Núñez-Merino *et al.* (2024) highlighted the potential of quantum computing in operational and logistics management, demonstrating an interdisciplinary approach to improving logistics processes using advanced digital solutions. The study by K. Alkaabi (2024) focused on studying the role of logistics providers in supporting the activities of small and medium-sized businesses, as well as large corporations, and the author identified the key advantages and challenges of cooperation in the presented area. The scientist emphasised that effective interaction with logistics operators allowed enterprises to optimise costs, reduce delivery times and improve service quality, while maintaining flexibility in a competitive environment. The work of M.B. Andaloussi (2024) considered logistics outsourcing as a mechanism for increasing the flexibility of supply chains in crisis situations, which was relevant for modern economic conditions. An important aspect of the study was the need for risk management strategies and diversification of logistics services that ensured business resilience in cases of global shocks. The analysis conducted by M. Hrouga & A. Sbihi (2023) demonstrated the impact of the Logistics 4.0 concept on increasing the efficiency of supply chains using the example of retail trade. The authors emphasised that

the introduction of digital technologies, in particular automation, big data and artificial intelligence, contributed not only to reducing costs, but also to creating innovative business models that can quickly adapt to changes in the market environment. The growth of demand for logistics services necessitates the need for a comprehensive solution to a number of tasks, among which the optimisation of logistics costs was a priority, which determined the purpose of this study.

Materials and Methods

The research phasing was presented in the form of six interconnected components that formed a holistic structure of scientific research aimed at improving and optimising logistics processes in the foreign economic activity of enterprises. The first stage was the formulation of research objectives, as well as the identification of key problems and unresolved aspects of customs regulation. The second stage included the collection and systematisation of secondary information: scientific works and analytical materials presented in the format of reviews or conceptual articles. Of decisive importance for the theoretical substantiation of the issue of optimising logistics costs in the system of foreign trade of enterprises were the work of S. Michel *et al.* (2023), which presented methodological approaches to the formation of sustainable supply chain management models in the context of global economic dynamics. The study of B. Nitsche *et al.* (2023) deepened the understanding of the use of digital tools to increase the efficiency of logistics processes and reduced transaction costs in international trade. At the same time, the work of S. Shrivastava (2023) focused on the role of corporate social responsibility in the formation of sustainable and economically balanced logistics strategies, which was an important factor in the competitiveness of enterprises in foreign economic activity. The third stage involved searching for and critically analysing theoretical approaches to customs regulation using the practices of the European Union countries (in particular, Germany, Poland, and France) and other countries, including the United Kingdom and the United States. The fourth stage was devoted to studying practical models for optimising logistics costs and the possibilities of adapting them to Ukrainian realities. The fifth stage involved identifying barriers in the processes of digitalisation and logistics integration, in particular through expert assessment. The sixth stage produced a number of recommendations for the implementation of digital tools, risk-oriented strategies, and adaptive customs regulation mechanisms that will help increase the efficiency of foreign economic activity of enterprises in conditions of global uncertainty.

The study used an interdisciplinary approach that combined the tools of economic theory, logistics, customs law and public administration. The methodological basis was the implementation of a universal model of optimisation of logistics costs, taking into account the general characteristics typical of enterprises in different industries. The study also analysed the features of financial decisions in the context of foreign economic activity, the specifics of their adoption, in particular in the context of new risks associated with global logistics challenges, martial law and the instability of the trade environment. The content analysis method was used to systematise and critically analyse the literature, which allowed to identify key trends, problems and directions of reforming customs regulation. In study, it was compared approaches to customs logistics in Ukraine and the European Union countries, in particular regarding the use of electronic declaration, the introduction of automated risk management systems, as well as the integration of digital tools into the processes of customs control and support of foreign economic operations. Also, elements of scenario analysis were applied to model alternative strategies for the development of logistics processes in the foreign economic activity of enterprises. Thus, the study covered both the empirical and conceptual levels of analysis, which allowed to form a systematic approach to ensuring the financial stability of enterprises.

Results and Discussion

The transport and logistics system was a key element of international trade, ensuring timely and economically feasible transportation of goods flows between countries. It contributed to reducing transport costs, which directly affected the formation of the final cost of products and increasing its competitiveness in the world market. At the same time, the development of transport infrastructure, in particular seaports, airports, railways and highways, was a basic factor in increasing the efficiency of logistics processes. S. Shrivastava (2023) noted that investments in the modernisation and expansion of modern transport hubs contributed to the optimisation of logistics chains and the reduction of cargo transportation time. Foreign economic activity was usually considered from two positions: as a phenomenon and as a process. In the first case, it was a system of international economic relations between economic entities of different countries, which was formed as a result of the production, exchange and consumption of goods, services and ideas, based on the unlimited needs and resources and the international division of labour, which gone beyond the boundaries of national economies and was aimed at maximising profits (Zakhozhay *et al.*, 2024). In the second case, presented by G. Iefimova & O. Poberezhets (2024), foreign economic activity was considered as a process of transformation of the internal activity of the enterprise into international, which was implemented through access to foreign markets using various forms of connections and procedures.

Russia's full-scale military aggression against Ukraine since February 2022, the destruction of industrial capacity, disruption of logistics routes, and increased

macroeconomic instability have significantly modified the structure of Ukraine's foreign trade. As a result of the crises, default risks have increased and their geographical expansion has occurred: more and more developing countries have found themselves in financial crises; about 60% of low-income countries were in debt distress or at high risk of debt distress at the beginning of 2024 (Petrukha *et al.*, 2024). In the context of a reduction in the physical volume of exports of goods and an increase in critical dependence on imports, in particular in the energy and industrial sectors, the services sector has acquired particular importance. The study by K. Alkaabi (2024) specified the impact of IT services, transport and logistics and business services, which were characterised by high flexibility, adaptability to crisis challenges and the potential for partial compensation of losses in the production sector. The analysis of changes in the dynamics and structure of service exports allowed a comprehensive assessment of the transformational potential of the customs sector in conditions of limited physical and technological resources. The level of digitalisation of customs procedures in the countries of the European Union significantly exceeded the indicators recorded in Ukraine. The average customs clearance time in European countries was 2-2.5 times shorter, while the share of automated operations demonstrated a consistently higher level of efficiency (Petrukha *et al.*, 2024). The results obtained indicated the need for further digital transformation of the national customs logistics system in order to increase its productivity and competitiveness in the field of foreign economic activity of enterprises. Such analysis formed the basis for the development of effective state policy aimed at diversifying foreign exchange earnings, reducing foreign economic risks and restoring trade stability.

Given the multidimensional nature of the crisis, represented by the martial law in Ukraine, which has become more active since 2022, traditional tools for supporting foreign trade activities have lost their effectiveness, which necessitated a systematic rethinking of strategic guidelines in the field of international trade, with an emphasis on stimulating the development of the service sector as one of the key factors in ensuring the export capacity and economic stability of the state. Foreign economic activity has traditionally occupied an important place in the structure of Ukraine's economic growth, ensuring the inflow of foreign exchange earnings and integration into world markets. However, in the context of military conflict, the destruction of production and logistics chains, and the growth of foreign political instability, its functional significance and structural parameters have undergone significant changes (Iefimova & Poberezhets, 2024).

Since 2020, which was represented by the beginning of the pandemic, the functioning of Ukraine's foreign trade system has been shaped by a combination of long-standing institutional imbalances and large-scale crisis challenges. One of the most acute limitations has been the physical damage to strategically important infrastructure, in particular seaports, logistics centres, agricultural storage facilities and key railway junctions. M. Vivaldini (2023) noted that the loss of control over part of the territories significantly complicated the logistics of freight transportation, which led to a significant reduction in export flows, especially in the segments of agro-industrial, metallurgical and chemical products. Under the presented conditions, not only the gradual restoration of physical exports of goods, but also the active expansion of exports of services was becoming increasingly important. It was the export of services that has demonstrated higher adaptability to crisis circumstances and has the potential to play a system-forming role in stabilising the balance of payments and ensuring the currency liquidity of the national economy. Identification of factors and assessment of the impact on logistics costs provided the possibility of effective management of the enterprise's costs, which contributed to reducing the cost of production and increasing its competitiveness in the market. Also, it contributed to increasing the profitability and profitability of economic activity (Yeromenko & Slastyonenko, 2024; Skybinskiy & Syvokhip, 2024). Data on the impact of the main logistics levers on the financial indicators of the enterprise were presented in the form of a schematic model in Figure 1.

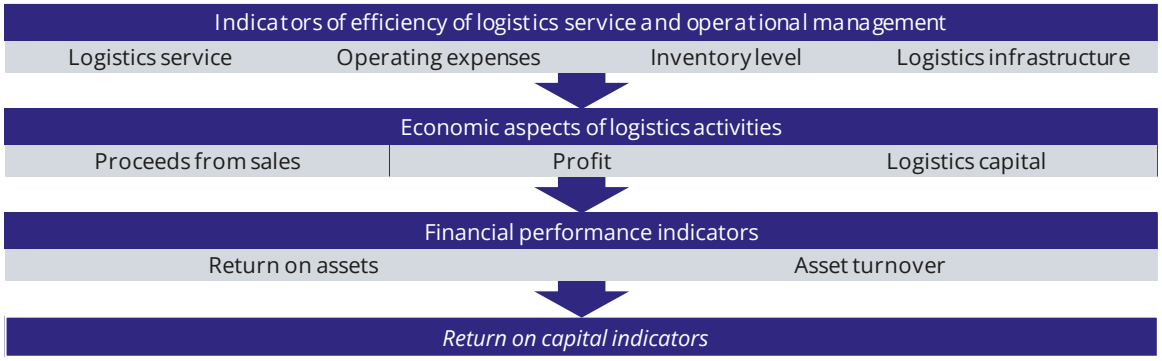

Figure 1. *The role of logistics processes in shaping the profitability of an enterprise*
Source: *based on S. Perotti et al. (2022), O. Drozd (2023), D. Sapozhnyk (2024)*

The management of logistics costs of an enterprise was based on a complex influence that included state regulations that regulated the activities of logistics systems; a set of techniques, principles, methods and approaches to controlling logistics costs; internal regulatory documents that regulated relevant management processes; as well as mechanisms for market regulation of costs in the field of logistics (Núñez-Merino *et al.*, 2024; Trakulsunti *et al.*, 2025). An important element of this process was the use of relevant data that provided timely and accurated analysis of the parameters of the logistics system. Such data served as indicators of the state of individual logistics costs, their structural components, as well as the relationship between the volumes of logistics costs and other indicators of the enterprise's activity, which allowed for a comprehensive and objective assessment of the functioning of the logistics system. Given the importance of streamlining logistics costs in the enterprise management system, the classification approach, which was presented in the form of 10 groups according to relevant characteristics, deserved special attention, which allowed for an in-depth and systematic analysis of logistics processes (Table 1).

Table 1. *Analytical matrix of classifications of logistics costs in the context of optimising the foreign economic activity of an enterprise*

No.	Classification feature	Characteristic	Features of foreign economic activity
1	By the nature of the manifestation	Determined the form of external manifestation of logistics costs	Helped identify visible and hidden costs in foreign economic logistics
2	By the period of receipt of income corresponding to expenses	The time gap between logistics costs and revenue receipt was taken into account	Allowed to assess the effectiveness of logistics costs in foreign economic activity (FEA) operations
3	By the period of incurrence or actual write-off of expenses	Characterised the time of cost accounting	Important for forming payment schedules and planning foreign exchange costs in foreign trade
4	Based on the distribution of costs in the enterprise's activities	Evaluated how costs were distributed between departments or logistics links	Allowed to identify cost-intensive elements of the international logistics chain
5	According to the principles of determining financial results	Determined the relationship between logistics costs and profit	It was taken into account, when modeling the impact of logistics on the overall economic result of the enterprise
6	By the method of reflecting costs in accounting	Regulated how expenses were recorded in internal accounting	Ensured transparency of accounting in the foreign economic activity process and during currency control
7	By phases of spatio-temporal movement of flows	Reflected the stages of movement of goods, finances and information	Allowed to localise costs for transportation, warehousing, and customs clearance
8	By the method of attributing costs to objects	Defined how costs were assigned to product batches or contracts	Important for pricing in foreign economic activity contracts and comparing logistics scenarios
9	According to the indirect cost allocation system (ABC method)	Application of the methodology for distributing indirect costs by activity	Contributed to a more accurate calculation of costs associated with foreign economic logistics
10	By behavioural characteristics of spending	Determined the dependence of costs on the volume and scale of activities	Allowed to predict changes in logistics costs, when expanding or reducing foreign economic activity operations

Source: *based on N.M. Alsharari (2022), H. Bathelt et al. (2023), B.R. Munasinghe et al. (2025)*

Taking into account the general features of the logistics activities of enterprises in various industries, which involved the management of material, information and financial flows, it became advisable to classify logistics costs depending on their relationship with the corresponding flows. Logistics costs arose during the performance of various logistics operations, therefore it was reasonable to group them by functional processes, in particular: supplier search, order processing, transportation, warehousing, inventory management, packaging and after-sales customer service. To ensure correct accounting and analysis of logistics costs, it was necessary to clearly define and structure each of the listed operations (Hrouga & Sbihi, 2023). The logistics costs of a trading enterprise that had a foreign economic nature included: costs of transporting inventories (including intra-business transportation); costs of loading and unloading operations; costs of storing and warehousing products; costs associated with the preparation and execution of orders; costs of customer service; costs of organising logistics activities; costs arising in the process of managing information flows. In the context of management accounting, it was advisable to distribute logistics costs according to the following characteristics (Michel *et al.*, 2023):

- by degree of planning (planned and unplanned);
- by level of regulation (regulated and unregulated);
- by degree of controllability (controlled and uncontrolled).

At the same time, the key principle of organising the management accounting system for logistics costs at a trading enterprise should be their distribution by responsibility centres (Herus, 2024). This meant both structural divisions of the enterprise (departments of supply, sales, logistics, transport, marketing, information support), and individual functional areas of logistics activity (logistics of procurement, sales, transport, warehousing, inventory management, order processing, information flows). According to the proposed methodology, the logistics costs of wholesale trading enterprises should be systematised by responsibility centres, which were also logistics cost centres. Such centres included (Nitsche *et al.*, 2023):

- supply department;
- inventory warehouses;
- sales department;
- transport department (including internal transportation);
- marketing department;
- logistics department;
- information support department.

To improve the efficiency of logistics cost management, it was also important to classify them by their origin (Table 2).

Table 2. *Classification of logistics costs by place of origin*

No.	Place of origin of logistics costs	Specification of costs and investments
1	Transportation of inventory	Moving cargo between suppliers, warehouses and consumers
2	Loading and unloading operations	Loading, unloading, moving goods in transport or in a warehouse
3	Warehousing and storage	Warehouse maintenance, rental, security, and maintenance of warehouse facilities
4	Preparation and fulfillment of orders	Picking, packaging, preparation of accompanying documentation
5	Enterprise management	Organisation of logistics functions in the enterprise management structure
6	Customer service	Organising conditions for providing customers with a decent level of service, through contact services and digitalisation of systems
7	Organisation of logistics infrastructure	Creation and support of warehouse, transport and IT infrastructure
8	Information flow management	Costs for digital systems, analytics, data exchange between logistics links

Source: *based on M.B. Andaloussi (2024)*

Since logistics costs were divided by responsibility centres, there was a need for accurate formation, assessment, planning, accounting and control of costs arising in different structural units, by specific items. Therefore, it was important to determine the list of such items and establish the correspondence of each type of cost to a specific structural unit of the enterprise. Methods for reducing logistics costs included a set of measures aimed at improving key elements of an enterprise's logistics activities. In particular, it included:

- A thorough analysis of supply chains and purchasing procedures, which allowed to reduce the overall costs of logistics operations and increase the efficiency of the logistics system. This approach included the selection of reliable partners with competitive prices, favourable contract terms and a high level of service. Due to the effect of scale and favourable agreements with suppliers, there was a significant reduction in purchasing costs. In addition, a comprehensive analysis of suppliers helped to identify alternative supply channels, which increased the resilience of the supply chain and minimised the risks associated with unforeseen factors.
- Optimising transportation costs involved optimising routes, selecting appropriate vehicles and transportation methods, which results in significant cost savings, while meeting established delivery deadlines. The implementation of transportation management systems (TMS) made it possible to identify inefficiencies, optimise routes and increase transportation productivity to minimise transportation costs. Outsourcing transportation functions allowed to take advantage of specialised knowledge and infrastructure, which contributed to more economical solutions in this area.
- The use of inventory optimisation techniques, such as just-in-time (JIT), demand forecasting, and inventory segmentation, allowed to balance customer service with storage costs. Synchronising inventory levels with forecasted demand and using effective inventory management methods optimise the use of warehouse space and reduce operating costs. In addition, the use of real-time inventory monitoring information systems ensured proactive inventory management and prevented excessive costs.
- Continuous monitoring and analysis of key performance indicators (KPIs) in logistics, such as transportation cost per unit distance, inventory turnover and order fulfillment time, made it possible to assess the effectiveness of operations and identify potential areas for their improvement. The implementation of such systems stimulated continuous process improvement, activated staff creativity and helped find ways to reduce costs. The use of business analytics and big data processing technologies helped make informed decisions and adapt to changing market conditions.

▣ Improving the efficiency of warehouse processes, which included receiving, storing and picking orders, also significantly affected the overall level of logistics costs. Optimisation of warehouse planning, automation of operations and personnel management allowed to increase productivity and save resources, while maintaining high service standards. Implementation of warehouse management systems (WMS) improved order processing, reduced picking time and optimised the placement of goods. Integration of innovative technologies, such as robotics and Internet of Things (IoT) devices, increased operational efficiency, reduced labour costs and reduced the number of errors.

Therefore, effective management of logistics costs was a key condition for achieving operational excellence and ensuring the competitiveness of an enterprise in the conditions of a modern dynamic business environment, which were presented in European countries and the USA. T. Beshlei (2024) noted that the use of comprehensive measures to optimise logistics processes allowed enterprises to reduce costs, increase efficiency and maintain a stable level of profitability. Scientific research had paid attention to logistics approaches and methods for increasing the competitiveness of economic systems and increasing the profitability of enterprises, especially through the use of innovative management models, such as logistics outsourcing. J. Bhattacharjya *et al.* (2022) indicated that logistics outsourcing allowed enterprises to improve product quality, improve operational efficiency and optimise the organisational structure and management system. The term "outsourcing" came from the English language and meant attracting external resources through contracts and business relationships, performing the function of a management tool. Types of outsourcing were IT outsourcing, production, business process, knowledge management, professional and personnel outsourcing. Outsourcing occupies an important place in logistics – transport, production and warehousing. Most development-oriented companies used innovative solutions and IT products, seeking to optimise logistics costs, an example was Germany, Great Britain and France. However, as noted by M. Núñez-Merino *et al.* (2024), unlike Western European countries, logistics outsourcing was used to a limited extent in Ukraine due to the lack of strategic vision of management, difficulties in reducing costs, price increased after cooperation with outsourcing firms, loss of control over processes, lack of established logistics systems and insufficient experience. Logistics outsourcing was usually used by specialised companies that carried out product distribution (warehouses, carriers), inventory control, customer base management and logistics information management. Its essence was to transfer logistics functions to third-party partners, which required a high level of trust. For the successful implementation of outsourcing, enterprises should develop a clear plan that included setting transition goals, assessing their resources, selecting functions for transfer, analysing results and making a decision on implementation. This approach helped reduce logistics costs, increase the flexibility of the enterprise and improve the quality of customer service. Therefore, it was worth noting that effective management of logistics costs in a trading enterprise involved a multidimensional approach, which included their structuring by responsibility centres, detailed classification by place of origin in the logistics chain, as well as the implementation of a system of comprehensive measures aimed at modernising transportation processes, optimising warehouse operations, automating information flows, improving the order and supply management system, and integrating logistics functions. This was done to achieve a synergistic effect and ensure the strategic sustainability of the enterprise in modern conditions, which were represented by growing competition and dynamic changes in the external environment.

Conclusions

Modern foreign trade logistics was aimed at developing solutions that allowed achieving an optimal balance between material costs, inventory volumes and service quality. Among the main and effective measures to optimise logistics costs and increase the functional capacity of logistics systems, it was worth highlighting the coordination of logistics intermediaries; integration of distribution channels and networks with Ukrainian manufacturers of finished products in order to reduce costs; optimisation, planning, control and regulation of finished product stocks within the distribution network, as well as improving the organisational structure and reducing the number of chains in logistics systems. Economic growth in modern conditions largely depended on the effective development of the transport and logistics system, which required focusing strategic policy on three key areas: infrastructure modernisation, integration into international transport networks and the introduction of technological innovations. The renewal of transport infrastructure through targeted investments in the reconstruction of hubs, highways, and logistics centres had become the foundation for increasing transportation productivity and reducing overall logistics costs.

Effective management of logistics processes had become a fundamental condition for ensuring the continuous and competitive functioning of an enterprise in modern market conditions. In addition, to ensure transparency and analytical value of accounting for logistics costs, it was necessary to apply modern methods. Thus, transport logistics will become an integral part of the adaptation of national economies to the challenges of globalisation, contributing to integration into the world economic space, increasing the efficiency of international trade and strengthening competitive advantages. Active involvement in global transport initiatives, such as "One belt – One road", will create new opportunities for

Ukraine's participation in transcontinental cargo flows, which will contribute to strengthening its economic interaction with international markets. A promising direction is a more detailed study of the impact of modern progress on the optimisation of logistics costs of specific enterprises that were aimed at foreign economic activity in conditions of crises, in particular the COVID-19 pandemic and martial law in Ukraine.

Acknowledgements

None.

Funding

None.

Conflict of Interest

None.

References

[1] Alkaabi, K. (2024). Exploring logistics service providers for small and medium-sized enterprises and large corporations: Benefits and challenges. *European Business Review*, 36(3), 293-310. doi: 10.1108/EBR-05-2023-0154.

[2] Alsharari, N.M. (2022). Risk management practices and trade facilitation as influenced by public sector reforms: Institutional isomorphism. *Journal of Accounting & Organizational Change*, 18(2), 192-216. doi: 10.1108/JAOC-11-2018-0117.

[3] Andaloussi, M.B. (2024). Logistics outsourcing to provide supply chain agility in crisis time: An action research. *Journal of Global Operations and Strategic Sourcing*, 17(1), 88-103. doi: 10.1108/JGOSS-06-2023-0050.

[4] Bathelt, H., Buchholz, M., & Cantwell, J.A. (2023). OFDI activity and urban-regional development cycles: A co-evolutionary perspective. *Competitiveness Review*, 33(3), 512-533. doi: 10.1108/CR-03-2022-0037.

[5] Beshlei, T. (2024). Improvement of customs regulation of foreign economic activity. In *Technology and society: Interaction, impact and transformation: Collection of scientific papers based on the materials of the II International scientific conference* (pp. 60-61). Vinnytsia: UKRLOGOS Group LLC. doi: 10.62731/mcnd-26.07.2024.

[6] Bhattacharjya, J., Tripathi, S., Gezdur, A., Sutton-Brady, C., & Bell, M. (2022). Logistics and supply chain around the world. In M. Attard & C. Mulley (Eds.), *Transport and pandemic experiences* (Vol. 17, pp. 149-162). Leeds: Emerald Publishing Limited. doi: 10.1108/S2044-994120220000017008.

[7] Bondarenko, O., & Utkina, M. (2024). Martial law and smuggling of goods: The search for the optimal model of legal liability. *Journal of Financial Crime*, 31(1), 63-75. doi: 10.1108/JFC-01-2023-0014.

[8] Drozd, O. (2023). Customs transit regime: Adaptation to European customs regulations. *Legal Position*, 3, 155-159. doi: 10.32782/2521-6473.2023-3.30.

[9] Herus, O. (2024). Peculiarities of investment support for industries in the current environment. *Economics, Entrepreneurship, Management*, 11(1), 57-66. doi: 10.56318/eem2024.01.057.

[10] Hrouga, M., & Sbihi, A. (2023). Logistics 4.0 for supply chain performance: Perspectives from a retailing case study. *Business Process Management Journal*, 29(6), 1892-1919. doi: 10.1108/BPMJ-03-2023-0183.

[11] Iefimova, G., & Poberezhets, O. (2024). Foreign economic activity of Ukraine under martial law. *Economic Synergy*, 2, 63-84. doi: 10.53920/ES-2024-2-5.

[12] Kawa, A., & Zdrenka, W. (2024). Logistics value in e-commerce and its impact on customer satisfaction, loyalty and online retailers' performance. *The International Journal of Logistics Management*, 35(2), 577-600. doi: 10.1108/IJLM-02-2023-0078.

[13] Michel, S., Bootz, J.-P., & Bessouat, J. (2023). Possible futures of crowd logistics for manufacturers: Results of a strategic foresight study. *Journal of Business & Industrial Marketing*, 38(10), 2019-2029. doi: 10.1108/JBIM-12-2021-0548.

[14] Munasinghe, B.R., Ali, A., Habib, F., & Khan, M.F. (2025). Adopting Industry 4.0 technologies in the UK manufacturing supply chains. In P. Kumar, S. Dadwal, R. Verma & S. Kumar (Eds.), *Digital transformation for business sustainability and growth in emerging markets* (pp. 135-170). Leeds: Emerald Publishing Limited. doi: 10.1108/978-1-83549-109-620251006.

[15] Nitsche, B., Brands, J., Treiblmaier, H., & Gebhardt, J. (2023). The impact of multiagent systems on autonomous production and supply chain networks: Use cases, barriers and contributions to logistics network resilience. *Supply Chain Management: An International Journal*, 28(5), 894-908. doi: 10.1108/SCM-07-2022-0282.

[16] Núñez-Merino, M., Maqueira-Marín, J.M., Moyano-Fuentes, J., & Castaño-Moraga, C.A. (2024). Quantum-inspired computing technology in operations and logistics management. *International Journal of Physical Distribution & Logistics Management*, 54(3), 247-274. doi: 10.1108/IJPDLM-02-2023-0065.

[17] Perotti, S., Bastidas Santacruz, R.F., Bremer, P., & Beer, J.E. (2022). Logistics 4.0 in warehousing: A conceptual framework of influencing factors, benefits and barriers. *The International Journal of Logistics Management*, 33(5), 193-220. doi: 10.1108/IJLM-02-2022-0068.

[18] Petrukha, N., Petrukha, S., & Miakota, R. (2024). Debt policy in the conditions of the war economy and post-war recovery. In *Transformation of the economic system in the context of information technology challenges* (pp. 87-107). Riga: Izdevnieciba "Baltija Publishing". doi: 10.30525/978-9934-26-437-5-5.

[19] Reznik, N., & Verbivskyi, S. (2022). Customs regulation of logistics processes in conditions of digitalization. *Young Scientist*, 12, 117-121. doi: 10.32839/2304-5809/2022-12-112-21.
[20] Sapozhnyk, D. (2024). Customs regulation of foreign economic activity in the context of the development of integration processes. In *Actual problems of commodity science, biotechnology, expertise and customs affairs: Collection of materials of the International scientific and practical internet conference* (pp. 283-288). Poltava: PUET.
[21] Shrivastava, S. (2023). Recent trends in supply chain management of business-to-business firms: A review and future research directions. *Journal of Business & Industrial Marketing*, 38(12), 2673-2693. doi: 10.1108/JBIM-02-2023-0122.
[22] Skybinskiy, O., & Syvokhip, P. (2024). Features of customs regulation in Ukraine. *Economy and Society*, 62. doi: 10.32782/2524-0072/2024-62-108.
[23] Trakulsunti, Y., Antony, J., Garza-Reyes, J.A., Tortorella, G.L., Chuayjan, W., & Foster, M. (2025). An exploration of operational excellence methodologies implementation in the logistics sectors: A global study. *The TQM Journal*, 37(3), 709-725. doi: 10.1108/TQM-10-2023-0313.
[24] Vivaldini, M. (2023). The effect of logistical immediacy on logistics service providers' (LSPs') business. *Benchmarking: An International Journal*, 30(3), 899-923. doi: 10.1108/BIJ-09-2021-0562.
[25] Yeromenko, A., & Slastyonenko, O. (2024). The influence of martial law on the customs regulation of the transit of goods across the border of Ukraine. In *Innovative approaches to the progressive solution of scientific research problems: XVI International scientific and practical conference* (pp. 80-82). Valencia, Spain.
[26] Zakhozhay, K., Rudyk, N., & Syvulska, N. (2024). Customs regulation in Ukraine in the prewar and the wartime periods. *Problems of the Economy*, 1, 112-120. doi: 10.32983/2222-0712-2024-1-112-12.

Оптимізація логістичних витрат у системі зовнішньоекономічної торгівлі підприємства

Андрій Дзюбинський
Кандидат економічних наук, доцент
Луцький національний технічний університет
43018, вул. Львівська, 75, м. Луцьк, Україна
https://orcid.org/0000-0001-5156-9852

Олена Пахолюк
Кандидат технічних наук, доцент
Луцький національний технічний університет
43018, вул. Львівська, 75, м. Луцьк, Україна
https://orcid.org/0000-0002-3484-0468

Оксана Дзюбинська
Кандидат економічних наук, доцент
Луцький національний технічний університет
43018, вул. Львівська, 75, м. Луцьк, Україна
https://orcid.org/0000-0003-1478-8452

Оксана Передрій
Кандидат технічних наук, доцент
Луцький національний технічний університет
43018, вул. Львівська, 75, м. Луцьк, Україна
https://orcid.org/0000-0002-5464-2020

Галина Голодюк
Кандидат технічних наук, доцент
Луцький національний технічний університет
43018, вул. Львівська, 75, м. Луцьк, Україна
https://orcid.org/0000-0002-9740-5498

Анотація. Метою дослідження стало обґрунтування ефективних підходів до формування й управління логістичними витратами в системі зовнішньоекономічної діяльності підприємств. Розглянуто проблеми функціонування логістичних систем підприємств, що направлені на зовнішньоекономічну діяльність, які вимагають своєчасного вирішення через оптимізацію логістичних витрат та вдосконалення управління логістичними операціями. Обґрунтовано концептуальний зв'язок між оптимізацією витрат на логістику і підвищенням конкурентоспроможності підприємства, що реалізується через раціональний підбір партнерів, ефективне планування розподільчих каналів, моделювання логістичних ланцюгів постачання та

впровадження ресурсозберігаючих практик. Проаналізовано вплив організаційних аспектів логістичних процесів на ефективність функціонування транспортно-логістичних підприємств за рахунок зниження витрат на використання трудових ресурсів, основних і оборотних засобів виробництва. Виокремлено роль сучасних логістичних систем як ключових об'єктів автоматизації, інтеграції та стратегічного управління матеріальними і інформаційними потоками в рамках бізнес-структур. Визначено, що проблема оптимізації логістичних витрат у виробничих підприємствах залишається недослідженою. Ідентифіковано цілі та методи оптимізації логістичних систем, які впроваджуються сучасними підприємствами з метою зниження витрат і ефективного використання ресурсного потенціалу, що забезпечує підвищення продуктивності роботи та покращення рівня обслуговування клієнтів. Глобальні тенденції вимагають комплексного оновлення логістичної інфраструктури, впровадження передових технологічних рішень і дотримання екологічних принципів у логістичній діяльності. Системний і довгостроковий розвиток галузі, орієнтований на інновації та ефективне ресурсне управління, є ключовим фактором забезпечення стійкого економічного поступу та конкурентоспроможності держави в умовах глобальної взаємозалежності. Розроблена система індикаторів оцінювання управління логістичними витратами забезпечує всебічну характеристику функціонального стану логістичної системи підприємства, сприяючи підвищенню конкурентоспроможності продукції, а також зростанню прибутковості господарської діяльності. Процес розробки та впровадження заходів, спрямованих на оптимізацію витрат, пов'язаних із обробкою, зберіганням і транспортуванням товарів, стало ключовим елементом управління логістичними витратами підприємства. Таке управління має стратегічне значення для компанії, оскільки сприяє їх зменшенню, підвищенню конкурентоспроможності та гарантує стабільність фінансових результатів. Практична цінність дослідження полягає у формулюванні рекомендацій та прикладного сценарію оптимізації логістичних витрат для підприємств, залучених до міжнародної економічної діяльності

Ключові слова: зовнішньоекономічна діяльність; міжнародна логістика; управління ланцюгами поставок; зовнішньоторговельні операції; цифровізація логістики; транспортні витрати

ECONOMIC FORUM
Journal homepage: https://e-forum.com.ua/en
Vol. 15, No. 3, 2025, 97-111
Article's History: Received: 14.04.2025 Revised: 11.08.2025 Accepted: 08.09.2025

UDC 338.2:614.2:330.8:159.9 DOI: 10.62763/ef/3.2025.97

Integration of behavioural insights into a general theory of health economic policy

Serhiy Inozemtsev*
Postgraduate Student
National University of Kyiv Mohyla Academy
04070, 2 H. Skovoroda Str., Kyiv, Ukraine
https://orcid.org/0009-0005-2534-9158

Abstract. The study aimed to conceptualise the role of behavioural economics mechanisms as a component of the modern theory of economic policy in the healthcare sector. The paper used the methods of modelling the cause-and-effect chain "tool – mechanism – behaviour – change – clinical outcomes – economic effect", content analysis of international research materials, abstraction of the system of indicators (behavioural, clinical, economic), systematic analysis of performance indicators (Incremental Cost-Effectiveness Ratio and return on investment, budgetary impact analysis). The findings demonstrated that structured reminders, scheduling prompts, social norms, and comparative feedback to providers reduced delayed visits, increased adherence, and reduced unnecessary procedures, which translated into lower intensity of costly episodes of care, more consistent quality of care, and reduced indirect productivity losses. The macroeconomic and fiscal implications of integrating behavioural insights into the general theory of economic policy were identified, including improved public health, which affected life expectancy and morbidity. Also, it was increased attendance and productivity, impact on the macroeconomy, which meant higher output, employment growth, as well as increased tax revenues, and lower disability benefits. A roadmap for implementation was proposed, which combined ethical principles of using behavioural tools, requirements for data infrastructure and mechanisms for regular monitoring ("planning – collection – analysis – feedback – correction"), allocating funding on results (key performance indicators: prevention coverage, proportion of healthy population, frequency of over-prescribing). The practical value was determined by an economically sound basis for reallocating resources towards preventive healthcare, increasing cost-effectiveness of expenditures and strengthening long-term fiscal sustainability through the channels of attendance, productivity and employment

Keywords: healthcare financing; default options; social norms; message framing; assessment indicator system; budgetary impact; public policy

Introduction

The integration of behavioural economics insights into the general theory of health economic policy determined the ability to redirect financial flows from volume-dependent procedures to measurable outcomes and increase the cost-effectiveness of expenditures. With significant institutional capacity, the national healthcare system faced the challenges of uncoordinated incentives for providers, insufficient preventive care, and fragmented routes to care. Therefore, the development and implementation of coherent approaches to embedding behavioural mechanisms into the economic cycle was crucial to both reduce costs and productivity losses, and to strengthen and improve the competitiveness of the system.

In Ukraine, there was a gap between the declared outcomes-based orientation of healthcare policy and the actual logic of the instruments, where volume-dependent incentives and fragmented initiatives dominated,

Suggested Citation:
Inozemtsev, S. (2025). Integration of behavioural insights into a general theory of health economic policy. *Economic Forum*, 15(3), 97-111. doi: 10.62763/ef/3.2025.97.

*Corresponding author

and behavioural factors of patient and physician choice remained outside the core of regulatory decisions. At the same time, performance measurement focused on process indicators and initial costs, while indicators of intention, adherence, sensitivity to default options and protocol adherence were not integrated into a single monitoring model. The uncertainty of Key Performance Indicators (KPIs) for providers, including the lack of an explicit focus on the proportion of the population that was healthy, hinders the transition to a preventive model and made it impossible to verify the long-term effects of government programmes on employment, productivity and fiscal sustainability. D.D. Reed *et al.* (2022) conducted a systematic review of the transition of behavioural economics ideas from laboratory experiments to public health policy tools. The focus was on the guided choice design within the full policy cycle. The study demonstrated that defaults, the way messages were formulated, and planning cues had a sustainable effect only, when integrated with barrier diagnosis, piloting, measurement, and subsequent correction. Instead, the study by O. Kovtun *et al.* (2024) proposed to estimate the size of key and transitional groups using the network extrapolation method, which was relevant for behavioural risk infections. In the context of integrated economic policy, this meant that behavioural insights became quantitative benchmarks for resource allocation. Accordingly, the performance measurement system should include not only outcome indicators, but also intermediate markers of behavioural change in targeted networks to link financial decisions to real channels of influence on morbidity and costs.

In the context of the national healthcare system, K. Dorykevych & Y. Kremin (2022) analysed the attitudes of Ukrainian citizens towards vaccination, revealing a range of factors that shaped the intention to get vaccinated, from trust in medical institutions to the influence of the immediate environment. This gave grounds for including behavioural indicators, including intention, expectations, and risk perception, in the economic policy evaluation system. At the same time, the study by V. Fardhdiani *et al.* (2025) demonstrated that the combination of innovative models with systemic adherence support can ensure sustainable recovery trajectories even in a difficult environment. The study found a practical link between simple adherence support tools, reduction of barriers to care, and clinical and economic outcomes. A. Atif (Nurzhynska) *et al*. (2024) compared several communication approaches to increasing vaccination adherence (social and normative messages, loss-oriented formulation of non-vaccination risks) and showed that the result was determined not only by the content, but also by the form of presentation and source of the message. Experts had shown that communication architecture was a component of economic policy, along with prevention financing and service organisation. According to the experts, effectiveness evaluation should not only record vaccination coverage, but also intermediate behavioural indicators of intention and attitude change.

At the same time, the study by K. Hook *et al.* (2021), using the example of healthcare professionals in Kyiv, revealed the perception of training in evidence-based approaches in psychiatry, as well as the limiting factors that prevented clinical behaviour change. The analysis made it possible to evaluate behavioural decisions at the provider level: checklists, simple clinical prompts at the time of decision-making, and comparative feedback. Researchers P. Yeboah *et al.* (2025) focused on the main vaccination hesitations among young people. The authors demonstrated that vaccination decisions were shaped by a combination of trust in sources, risk perception, sense of collective responsibility, and accessibility of the service. The findings highlighted the need to combine organisational and financial decisions with behavioural components of communication, where the form and medium of the message were as relevant as its content. I. Pinchuk *et al*. (2025) highlighted the role of predictable channels of access and continuity of care. The analysis of psychiatric care during the war revealed a persistent need for services amidst prolonged stress and disrupted life trajectories. The findings set the benchmarks for the indicator system: the assessment should cover not only the volume of visits and costs, but also the parameters of the choice architecture, continuity of care and their economic consequences.

Existing research on the integration of behavioural approaches into health economic policy was dominated by a focus on individual tools and local pilots, while a holistic model that combined behavioural indicators of intention, adherence and compliance with clinical and budgetary indicators in a single policy evaluation cycle remained underdeveloped. Issues related to the integration of administrative data sources to build robust metrics, evaluate the effectiveness of financing designs, and assess insurance defaults were not fully addressed in research. The study aimed to substantiate the conceptual foundations of behavioural economics in the general theory of healthcare economic policy. To achieve this goal, a set of tasks had been identified: to develop a conceptual model of the causal chain "tool – mechanism – behaviour – change – clinical outcomes – economic effect"; to form a system of indicators for policy evaluation that combined behavioural, clinical and budgetary indicators; to assess the potential macroeconomic and fiscal impact of behavioural programmes.

Materials and Methods

The study used a descriptive approach to systematise modern practices of integrating behavioural insights into healthcare economic policy in the context of constant institutional and technological change. The analysis was based on theoretical models of behaviour change management and policy design used in international practice. The empirical materials used in the study

include data from the Organisation for Economic Co-operation and Development (2022) and International Bank for Reconstruction and Development/The World Bank & World Health Organization (2024). In particular, the paper considered frameworks that provided a systematic assessment of the "mechanisms of action" of interventions and their alignment with health outcomes and costs, including the behaviour change wheel approach, nudge tools, and the principles of phased policy development. These models were selected for their focus on strategic planning, alignment with evidence-based requirements, and suitability for integration into the digital health environment. The features of soft interventions based on a research case study of a randomised cluster clinical trial in the United States were explored (Bachhuber *et al.*, 2021). A descriptive method was used to assess the economic effect of implementing behavioural interventions. The essence of the cost – effectiveness and cost-benefit analysis methods were defined, and the role of the Incremental Cost-Effectiveness Ratio (ICER) was clarified (Lytvynenko *et al.*, 2018). Formula 1 was investigated:

$$ICER = \frac{(DC_1 + IC_1) - (DC_2 + IC_2)}{E_{f1} - E_{f2}}, \quad (1)$$

where $DC_1 + IC_1$, $DC_2 + IC_2$ – direct and indirect costs, when using the first and the second solutions, respectively; E_{fl} and E_{f2} – the quantitative treatment effectiveness indicators, when using the first and second solutions, respectively.

The essence of the concept of ROI (Return on Investment) was defined, which reflected, how much additional income or savings were generated for each invested monetary unit (Yurchyk, 2024):

$$ROI = \frac{Net\ profit}{Investments} \times 100\%. \quad (2)$$

Examples of the use of soft healthcare interventions were studied based on the case of England, on the example of modelling colorectal cancer screening using the cost-effectiveness model (Murphy *et al.*, 2017) and the case of Spain on the example of preoperative smoking cessation programmes using the cost-benefit model (Jiménez-Ruiz *et al.*, 2020). Based on the research of S. Michie *et al.* (2014), National Institute for Health and Care Excellence (2022), and International Bank for Reconstruction and Development/The World Bank & World Health Organization (2024), a "map of correspondences" of the causal chain "tool – mechanism – indicator – expected effect" was built. A structural and functional analysis of different groups of interventions and operational tools for their implementation at different levels of the system was conducted. In particular, the study addressed standard preventive care appointments, reminders with specific actions, personal commitment tools and game-based motivation elements at the patient level; checklists, clinical prompts at the point of decision, comparative feedback and prescription appropriateness protocols at the provider level; transparency of routes and prices, standardisation of insurance options and simplification of transaction barriers at the system level. These mechanisms were chosen due to their scalability, low specific cost of implementation, ability to target vulnerable groups, and compatibility with existing data infrastructure.

Cases were also analysed on increasing vaccination and screening coverage through standardised records and patient navigation; reducing unnecessary prescriptions through checklists and comparative feedback; and improving adherence to treatment through scheduling prompts and multi-channel reminders, illustrating the "tool – mechanism – behaviour – outcome correlation". This approach characterised the criteria for selecting tools based on context (age, socioeconomic and cultural characteristics, level of digital accessibility) and built a "map of relevance" that combined behavioural, clinical and economic indicators. Based on this, practical recommendations were developed on the sequence of implementation: from behavioural diagnostics and pilot projects to scaling up with constant monitoring and correction based on the results.

Results

Theoretical and methodological foundations for the integration of behavioural approaches

Everyday decisions of patients and healthcare providers were made under conditions of asymmetry of information and limited cognitive resources, which led to distortions in risk perception, dominance of urgent actions over prevention, and excessive focus on the volume of procedures. Behavioural economics as a scientific field offered a model for analysing such distortions through the concepts of bounded rationality, heuristic approaches and the influence of the context of choice, providing opportunities for constructive complementation of healthcare economic policy. The key behavioural mechanisms that can be integrated into economic policy, their methodological foundations and theoretical premises served as the basis for a model of performance measurement using indicators that reflected behaviour, clinical outcomes and economic impact (Saposnik, 2019).

Decisions by healthcare actors were shaped by cognitive, time and financial constraints, which led to deviations from the assumptions of classical rationality. Patients often tended to prioritise immediate benefits and postpone decisions related to long-term health, which results in underestimation of preventive measures and delayed care seeking (Patel *et al.*, 2018). At the same time, the way information was presented has a significant impact on behaviour: clear wording, properly configured default choices, and timely reminders increase the willingness to follow medical recommendations and reduce the risk of undesirable deviations from treatment protocols. For providers (healthcare

professionals), decisions were also shaped by limited attention, time, and protocol complexity, which increased the likelihood of diagnostic and procedural errors and variability in practice (Hoenink *et al.*, 2020). Behaviour was also strongly influenced by professional guidelines and peer examples: clear clinical reminders at decision-making points, standardised checklists, and comparative feedback increase adherence to protocols and reduce overprescribing (Saposnik, 2019). Combined with transparent criteria for evaluating the results of protocol adherence, treatment adherence, and avoidance of duplication of procedures, such tools contribute to a more consistent quality of care and more efficient use of resources.

Notably, these factors led to a situation, where choices often reflected neither real preferences nor socially optimal outcomes. Patients, guided by short-term benefits, postpone preventive measures, neglect screening, and discontinue treatment after symptoms disappear, which, in the long term, increased the financial burden on the system and productivity losses. Providers, due to cognitive simplifications and peer influence, often deviate from protocol standards, prescribing excessive or duplicative procedures, thereby increasing transactional and medical costs. Health economics research shown that incorporating behavioural mechanisms such as default options, clear messages, reminders and comparative feedback can change decision-making trajectories, reduced error rates and created incentives to adhere to treatment protocols (Thaler & Sunstein, 2021; Organisation for Economic Co-operation and Development, 2022). Therefore, bounded rationality was not just a descriptive characteristic, as it defined the practical scope for integrating behavioural tools into the design of health economic policy aimed to reduce irrational costs and increase the effectiveness of public programmes.

The essence of bounded rationality determined both individual patient behaviour and professional practices of providers, creating the basis for systemic deviations from economically and clinically optimal solutions. At this stage, it became necessary to analyse the specific mechanisms, by which healthcare decisions were formed and adjusted. Default options, framing effects, and social norms all form the core of behavioural tools that provided a realistic explanation for deviations from classical rationality and can be used for targeted use in policy making (International Bank for Reconstruction..., 2024). One mechanism to adjust the behaviour of healthcare actors was default options, which, through choice design, can significantly alter patient or provider choices without directly changing financial incentives or regulations. For example, research on the behavioural dynamics of physicians has shown that changing default settings and providing social references consistently increase professional compliance with treatment standards (Hoenink *et al.*, 2020). The way messages were presented, and the accessibility of information had a significant impact on risk attitudes and willingness to take preventive action. Well-designed messages help to reduce common risk factors, such as tobacco use, physical inactivity, and unhealthy diets.

Social norms were an effective tool for changing the clinical behaviour of healthcare professionals. Interventions with comparative feedback on peer practices and support from an authoritative source consistently increased adherence to protocols and reduced prescribing variability (Patel *et al.*, 2018). It was possible to add that social comparison became more effective, when accompanied by cues and rewards, which created external reinforcement for the transition from intention to action. The analysis of such mechanisms shown that, when scaling up their use, it was necessary to consider the context of the type of healthcare service, provider type, and communication channel, as the effect depends on how much the reference group is perceived as authoritative, as well as the relationship between the message and the usual decision-making environment.

Loss aversion, another key mechanism of behavioural economics, was that people seek to avoid losses to a greater extent than to gain similar benefits. In the International Bank for Reconstruction and Development/ The World Bank & World Health Organization (2024) data on health behaviour change, this mechanism was manifested in messages that emphasised the possible costs of poorer health, increased costs, or the risk of complications if preventive measures were not taken. Such language can encourage a faster response to recommendations and accelerate the uptake of screenings and vaccinations, especially among high-risk groups. In practical terms, this meant that health economic policy can be much more effective if its instruments included not only positive incentives and information, but also the triggering of fear of loss, with mandatory compliance with ethical standards and transparency. The framing of messages determined, how people perceive the likelihood of risk and benefit: the same information can lead to different decisions depending on whether it was presented in terms of potential losses or gains. In the health sector, this was evident in the fact that messages that emphasised the risks of not vaccinating or not adhering to therapy, for example, stimulate a higher willingness to act than neutral or exclusively positive language (Organisation for Economic Co-operation and Development, 2022). In addition, planning prompts created a clear link between intention and actual behaviour. Patients, who formulated a specific plan of action ("when and where to get tested") were much more likely to follow their doctor's recommendations. Taken together, these mechanisms demonstrated that integrating behavioural tools into health policy design can reduce delayed prevention, increase treatment adherence, and create indicators that reflected not only the outcome, but also the process of behaviour change (International Bank for Reconstruction..., 2024).

These mechanisms demonstrated that even minor changes in the way information was presented, or the structure of choices can influence the behaviour of patients and providers. This meant that the healthcare system responded not only to financial incentives or administrative regulations, but also to the specifics of the decision architecture, which determined, which options will be chosen more often, faster and more consistently. A policy based on choice design principles combined price incentives and soft interventions to improve healthcare efficiency without significantly increasing the budgetary burden. For example, a U.S. healthcare network conducted a randomised cluster clinical trial in which standard electronic prescription templates for outpatient procedures reduced the "default" value for the amount of opioid-based painkillers (Bachhuber *et al.*, 2021). While medical staff were still free to change this amount, the initial setting shifted the "inertial" decision to a safer limit: the average number of pills dispensed decreased significantly without any signs of worsening pain control or increased repeat visits. This was a good example of a "soft" intervention: it was not prohibited or penalise, but adjusted the context of choice so that the typical scenario became more cautious and cost-effective. A similar approach had been replicated in other emergency departments, with similar results of lower opioid prescribing without adverse patient outcomes. Taken together, these findings suggested that setting "defaults" in routine processes can be a low-cost tool for improving the quality and safety of care.

The U.S. case study identified the boundaries that behavioural interventions can push: the need for ethics commissions, data protection regulations, and rules on information manipulation; the absence or weak regulation in these areas increased the risk of abuse and undermines trust. Thus, the integration of behavioural instruments into economic policy should be based on the legal environment, ethical standards, and public perception to ensure a balance between efficiency and safeguards for system actors. The use of behavioural insights in public health policy was not without ethical issues: changing choices through default settings or message framing can limit patient autonomy if information and the ability to refuse were not ensured (Organisation for Economic Co-operation and Development, 2022). It should be emphasised that all stages, from diagnosing the problem to scaling up interventions, should be transparent and comply with the principles of fairness, privacy and accountability. It was possible to conclude that the classical rational choice model was not explain the actual practices of patients and providers: cognitive limitations, information asymmetry, and time barriers led to avoidance of optimal decisions. This created room for the use of behavioural tools that can reduce transaction and medical costs, increase treatment adherence, and improve preventive behaviour. Key mechanisms, including default options, framing effects, social norms, and loss aversion, determined the sensitivity of subjects to the choice architecture and form the basis for behavioural interventions in healthcare. The combination of price incentives and soft nudges provided a more sustainable effect than using each approach separately. At the same time, behavioural tools can affect autonomy of choice, so their use should be based on the principles of transparency, voluntariness and data protection.

Conceptual model and system of performance evaluation indicators

Building a health policy that was strengthened by behavioural approaches required not only a description of the tools, but also a clear logic for measuring them: how a management decision changed the behaviour of patients and providers, through what mechanisms it translated into clinical outcomes, and what the final economic impact was (International Bank for Reconstruction..., 2024). Therefore, there was a need to formalise the causal chain and develop a coherent system of indicators that covered behavioural changes, operational and clinical indicators of quality of care, and economic metrics of costs and productivity. Such an approach can be used not only to state the existence of an effect, but also to identify the channel of its occurrence and ensure policy adjustments based on valid, attributable and change-sensitive data.

Behavioural indicators captured the "drivers" of policy effects, those changes in decision-making and implementation that immediately preceded clinical outcomes. The basic distinction was between typical intention, which reflected the willingness to take an action (to be screened, to start therapy), and implementation, which was responsible for specifying, when, where and how it will be done. In practice, this measurement was combined with indicators of adherence to treatment (regularity of appointments, timely refills of prescriptions, completion of the course) and response to default options and reminders: the proportion of those automatically enrolled, who did not opt out; the proportion of those, who responded to the message within a specified time window; the speed of transition from intention to action (International Bank for Reconstruction..., 2024). Sensitivity to social norms was monitored through indicators that compared the behaviour of an individual with a reference group (deviation from the median practice in the department, level of compliance with protocols in the team), as well as through changes after providing comparative feedback. Such indicators should be recorded in short intervals, stratified by age, gender and socioeconomic characteristics, and accompanied by a baseline to attribute the impact of the policy instrument, considering external factors.

The behavioural block was logically completed into clinical and operational indicators, as changes in intentions and implementation determined coverage of

preventive services, timeliness of referrals, and sustainability of treatment (International Bank for Reconstruction..., 2024). At this level, the key indicators were coverage (proportion of the target group that has undergone screening or preventive examination within the recommended interval), hospitalisations and their structure (neglected complications, emergencies, planned episodes), readmissions (repeat hospitalisations or relapse within a specified time window), delayed visits (overdue screenings or missed visits as an indicator of access barriers), and sustainability of the effect (maintenance of improvements over several follow-up cycles without additional reinforcement). Operational metrics, such as time to service, episode duration, and workload at the point of care, can be used to assess whether behavioural changes were translating into predictable clinical trajectories and whether policy instruments were creating undesirable "spillovers" of demand between types of care. Alignment of behavioural and clinical measures increased the validity of causal inferences. For example, an increase in the proportion of screening intentions that were realised should be associated with a decrease in late readmissions and re-admissions.

Instead, economic indicators translated the effects of these changes into costs and welfare. To determine the incremental economic costs of achieving more clinical outcomes, a cost-effectiveness analysis was used. This approach compared both the cost and effectiveness of alternatives in the same units of outcome to determine, which solution delivered a given effect at a lower cost, and the main goal was to calculate the unit cost of the effect and the additional amount needed to obtain the increase in the result (Lytvynenko *et al.*, 2018). The requirements for the correct application of the method included a clear choice of outcome indicators, identification and monetary valuation of costs, as well as adjustments for time and uncertainty, which ensured comparability of alternatives and validity of conclusions for policy. The solution that was found to be more effective than the other options was identified as the dominant solution. If no solution was identified as dominant, an incremental analysis was carried out, in which the ICER was calculated. The ICER value (Formula 1) shown the cost of an additional unit of effectiveness, when switching to a more effective solution (treatment).

An example was the case of England, where the best way to organise colorectal cancer screening in a national programme was evaluated (Murphy *et al.*, 2017). The researchers compared old occult blood tests with a new immunochemical test, modelling different thresholds and health and cost implications. As a result, they built a model of the course of the disease and screening for a large group of patients and calculated, how many additional years of life, incorporating the quality of life, the new approach brings, and what the additional cost was of each unit of such effect. The study noted that the immunochemical test was superior to the previous one: at any threshold, it provided more health benefits, but at the same time reduced the total costs of the system, although it required more colonoscopies at lower thresholds. This was an example of the cost-benefit analysis model in action: a management decision was evaluated by the health outcome and by the unit cost of achieving it, which can be used to choose a programme configuration that delivered more health for every UAH invested.

Once a decision has been made, the question of whether it was feasible to implement it arises. For this purpose, a cost-benefit analysis was applied, which compared the expected economic return from the implemented solution with the costs of its launch and support within a given budget. The assessment was based on an agreed set of indicators that can be used for ranking alternatives and justifying the allocation of resources, among which the basic indicator was ROI (Formula 2), which reflected how much additional income or savings were generated for each invested monetary unit (Yurchyk, 2024). At the same time, higher values indicated a greater attractiveness of implementation. This combination of metrics not only provided a statement of the effect, but also formed a transparent criterion for choosing between competing solutions. An illustrative example of the use of cost-benefit analysis in clinical policy was the case of Spain, where the feasibility of funding smoking cessation programmes for patients before elective surgery was assessed (Jiménez-Ruiz *et al.*, 2020). The intervention combined medical counselling and prescription of smoking cessation products in advance of hospitalisation. The benefits were calculated as the costs avoided due to fewer postoperative complications in those, who stopped smoking. Comparing the full costs of implementation with the monetised benefits showed a positive balance and a significant economic return for the public health system: the programme increased the proportion of smokers, who quit, while reducing the costs associated with complications, i.e. the "benefits" outweigh the "costs". The result can be used to rank the alternatives (to leave things as they were or to fund smoking cessation support) and justified the allocation of resources in favour of pre-surgical prevention, as it reduced clinical risks and budget burden simultaneously.

The budgetary impact shown, how expenditures change in the short and medium horizons under the implementation scenarios, including the redistribution between outpatient and inpatient care. Unproductive days and lost productivity were also considered as indicators of macroeconomic impact, as reduced sickness absence and premature disability were expected consequences of increased prevention coverage, timely treatment and sustained adherence. The combined consideration of ICER, ROI, budgetary impact, and lost productivity provided a complete evaluation cycle from behaviour change to long-term fiscal and economic feasibility. In the context of the analysis, it was advisable

to model a conceptual framework, within which the system of performance evaluation indicators clearly reflected the logic of the transition from a management decision to a measurable impact. A causal chain of "tool – mechanism – behaviour – change – clinical outcomes – economic impact" can be formed, which comprehensively described the sequential comparison of management interventions with behavioural changes, their clinical continuation and the final economic impact, which created a basis for valid monitoring and timely policy adjustment.

The starting point was a policy instrument (e.g., a default appointment for a preventive checkup or modification of reimbursement rules) that activated a specific mechanism of action to simplify choices, reduced barriers to access, changed expectations, or strengthened social norms. The mechanism of action was materialised in a shift in decision-making processes to reduce barriers, increase the visibility of useful options, change expectations, or align professional practice norms (National Institute for..., 2022). It was at the level of the mechanism that short-term behavioural indicators were determined: the proportion of people, who have kept a default record, the timeliness of the first visit, adherence to appointments, and compliance with protocols. These indicators should be recorded with high frequency, be comparable to the baseline, and stratified by key characteristics to ensure that the effect of the instrument was attributed to the instrument, rather than to random fluctuations or external shocks.

At the same time, behavioural changes were translated into clinical outcomes through predictable trajectories: increased preventive care coverage, reduced late visits, stabilised adherence to treatment, and reduced prescription variability. At this stage, indicators of the average hospitalisation horizon and their structure, repeat cases in a fixed observation window, timeliness and continuity of care, and sustainability of the achieved effect without additional reinforcement were considered (Michie *et al.*, 2014). Consistency of dynamics between behavioural and clinical metrics increases the validity of causal conclusions and can localise problem areas in the chain. These clinical outcomes were then translated into economic benefits through reduced direct costs per episode of care, avoided complications, and reduced indirect productivity losses. For a complete picture, complementary metrics were used: marginal cost-effectiveness to compare alternative approaches in a common target population, discounted return on investment to assess the attractiveness of the programme to payers, budgetary impact analysis for short- and medium-term costs, and measurement of sick days and lost productivity as a macroeconomic extension of clinical improvements (Michie *et al.*, 2014). The combination of these metrics completes the cycle from tool design to fiscal sustainability. Table 1 offered a "map of correspondences": how a particular policy instrument (what is it?) triggers a mechanism of action (how?) that produced measurable shifts in behaviour, clinical outcomes, and ultimately economic impact.

Table 1. *"Correspondence map" of the causal chain "tool – mechanism – indicator – expected effect"*

Policy tool	The main mechanism of action	Behavioural indicators	Clinical indicators	Economic metrics
Default appointment for preventive screening	The tool simplifies the choice and reduces transaction barriers, as the patient already has a record and only confirms or refuses	The proportion of people, who saved a pre-existing appointment, the timeliness of attendance at screening, and the average time between invitation and visit are tracked	Increased screening coverage in target groups, reduced proportion of late-stage detection and reduced emergency hospital admissions related to advanced cases	Reduced complication costs, improved cost-effectiveness compared to modern practices, and positive payback for the payer are assessed
Reminders with a specific action plan (emails)	The tool increases the visibility of the task and helps to move from intention to execution by recording the time, place and method of action	Measures the proportion of people, who responded to messages, the proportion of completed prevention or treatment episodes, and the punctuality of visits	There is an increase in completion of therapy courses, a decrease in missed visits and more uniform follow-up schedules	Reduced readmissions and unproductive days by major nosologies, as well as a neutral or positive impact on the budget in the short term
Comparative feedback for doctors	The tool activates social norms by establishing reference points and reducing the variability of practices in teams	The proportion of prescriptions that comply with the protocols and the deviation of individual indicators from the median of the department or facility are assessed	Reduced redundant and duplicate procedures, lower complication rates and more uniform compliance with treatment standards	Measures the reduction of direct costs per episode of treatment, improvement of cost-effectiveness indicators and cost savings in inpatient care
Checklists and clinical prompts at the point of decision	The tool reduces cognitive load and increases the accuracy of decisions at the moment of contact with the patient	It tracks the proportion of prompts used, the proportion of correct assignments, and the average decision time	There has been an increase in protocol compliance, a decrease in procedural errors and repetition of diagnostic procedures	Reduction of costs associated with errors and formation of a positive payback of the implementation in the near-term horizon are estimated

Table 1, Continued

Policy tool	The main mechanism of action	Behavioural indicators	Clinical indicators	Economic metrics
Modification of reimbursement with reference to the result (performance KPIs)	The tool aligns provider incentives with health outcomes, shifting the focus from volume to performance	Measures the proportion of patients with a completed clinical cycle, adherence to treatment and timeliness of referrals within the route	Reduced complications, reduced readmissions and increased coverage of preventive services	Analyses the gradual reduction of complication costs, positive budgetary shift and increased payback of programmes in the medium term
Transparency of routes and prices (patient navigators)	The tool reduces information asymmetry and simplifies the route to care, reducing navigation errors	The time from the onset of symptoms to the first visit, the proportion of correct referrals on the first attempt and the number of disrupted appointments are assessed	There is a decrease in late applications, a reduction in unnecessary consultations and an increase in the timeliness of service provision	Reduced patient routing costs, stabilised budget figures and reduced unproductive days
Standardisation of insurance options	The tool reshapes the architecture of coverage plan selection by encouraging preventive packages and predictable out-of-pocket costs	Measures the share of plans with enhanced preventive coverage and the frequency of plan changes during the year	There is an increase in the use of preventive services and a reduction in access barriers for vulnerable groups	Analyses the reduction of long-term costs, improvement of the total cost efficiency of the portfolio and a positive budgetary effect in the medium term
Simplification of the therapy route (co-location of services, "one-stop clinics")	The tool reduces transaction costs and losses at the route stages by combining the necessary procedures in one visit	The proportion of patients, who complete a full episode in one visit and the proportion of losses at intermediate stages of the route are tracked	There is an increase in continuity of care, a decrease in deferred visits and a reduction in repeat episodes	The reduction of total costs per episode and the reduction of unproductive days are determined, which forms a positive payback of the implementation

Source: *based on S. Michie et al. (2014), National Institute for Health and Care Excellence (2022), International Bank for Reconstruction and Development/The World Bank & World Health Organization (2024)*

The Table 1 served as a matrix of responsibilities between chain elements and monitoring metrics. For each tool, the leading mechanism of action (e.g., acceptance of default options; increased visibility of a healthy alternative; route standardisation), behavioural indicator, relevant clinical outcome and expected economic impact were indicated. The integration of indicators into the policy evaluation cycle was built as a continuous process of "planning – collection – analysis – feedback – correction". At the planning stage, the target behaviour was defined, the tool was selected, and its mechanism of action was described; a set of indicators for each link was formed, and baselines and success criteria were established. At the data collection stage, regular data was extracted from primary sources at a specified frequency and with quality control, including protocols for identifier matching and privacy protection. The analytical stage involved checking the internal logic of the chain: whether the behaviour change was consistent with the expected mechanism, whether there was a consistent transition to clinical and economic changes; stratification was used, and the sensitivity and robustness of the results were checked. Feedback was provided to policymakers, payers, and providers in a format that identified problem areas along the chain (e.g., high levels of intent without implementation or improvements in process metrics without changes in clinical outcomes). The correction stage involved point changes to the tool: clarifying messages and communication channels, reconfiguring defaults, modifying reimbursement or routing rules, and then repeating the cycle with an updated baseline. Such an organisation ensured causal transparency between the instrument and the consequences and can be used for the timely transfer of resources to the most effective policy components.

Behavioural policy instruments and levels of influence

The deployment of behavioural approaches to health economic policy should be structured around three levels of influence: patient, provider, and system, with constant adaptation to the context (European Vaccination..., n.d.). This approach can be used for linking specific tools to mechanisms of action (simplifying choices, reducing barriers, relying on social norms) and tracking the pathway from behaviour change to clinical and economic outcomes. Coherence with policy planning, monitoring and adjustment cycles was ensured by including behavioural indicators in the evaluation system alongside clinical and cost indicators.

At the patient level, the basic element was automatically generated ("default") appointments for preventive services, reminder systems and methods that can encourage people to commit to action (Levesque *et al.*, 2013). Automatic pre-registration with the right to refuse increased the acceptance of preventive interventions, as it reduced the time spent on searching and planning. The effects of such "default options" for

vaccinations and screenings have been confirmed in several local studies. Simple reminders (messages, phone or mail) significantly increased attendance and adherence to treatment regimens, and effectiveness increases with clear "when and where to act" (Gidengil *et al.*, 2016). Communication interventions should be based on clear, culturally appropriate messages and transparent sources of trust. It should also be added that these interventions can be combined with moderate game mechanics and social incentives (goals, feedback, "teams"), if necessary, which have been shown to increase physical activity and adherence to routine activities in controlled trials.

At the provider level, standardised checklists, clinical prompts at the point of decision and comparative feedback were substantial. Implementation of validated checklists has been associated with reduced complications and mortality in surgery, while regular anonymised ratings indicating "best practice" reduce unnecessary prescribing (e.g., the behavioural intervention antibiotic stewardship in primary care, which was used to influence clinical decisions by physicians) (Ely & Graber, 2015). To reduce diagnostic and procedural errors, simple "hard-wired" defaults in electronic systems (basic dose or pathway settings) that preserved physician autonomy, but push for protocol decisions were effective. Aligning these tools with performance metrics shifted the focus from "procedure volumes" to quality and safety. At the system level, reducing transaction barriers and streamlining choices was fundamental (Bao & Bardhan, 2024). Increasing transparency of routes, simplifying insurance options, and standardising basic packages reduced choice overload and improves plan fit. The experience of insurance plan choice programmes shown that without guidance and standards, people systematically overpay and underestimate long-term costs, and a combination of information, smart defaults, and limiting plan complexity improved the quality of choice. Additionally, measurable access (geographic, financial, organisational eligibility) should build on recognised affordability and universal coverage frameworks to adjust policies not only for clinical, but also for social outcomes.

It should be noted that adaptation to the context was a necessary condition for scalability. Segmentation of target groups (by age, gender, socioeconomic status), digital accessibility and cultural relevance of messages increase the sensitivity to interventions without increasing the budget. Elements of social marketing in the health sector, such as audience research, value exchange, and message testing, were used in everyday practice by international organisations for systematic planning of prevention campaigns and are compatible with behavioural nudges (Ely & Graber, 2015). At the level of procurement and financing, it is beneficial to combine soft instruments with price signals (subsidies/franchises), as the combination of price changes and nudges often has a stronger and more uniform effect across different social groups than either approach alone. Enshrining a preventive focus required accountability metrics that reflected the health status of the population, not just the volume of services (Bao & Bardhan, 2024). The practice of organisations with shared accountability for results shown that combining quality and cost indicators (in the spirit of the "triple bottom line": population outcomes, patient experience, per capita costs) aligned the incentives of providers and planners and focused resources on preventing complications and avoiding hospital admissions.

Macroeconomic and fiscal implications: Implementation roadmap

The mechanism of improving the health of the population works as a productive asset of the economy: fewer absences from work, higher rates of working hours and labour efficiency, and more stable employment. In terms of economic impact, this generated added value and a tax base. A European review had shown that poor health undermined economic growth through reduced labour market participation and longer periods of disability, while investments in prevention and early detection reduced these losses and support national gross domestic product (GDP) and employment (Thaler & Sunstein, 2021). Figure 1 shown the economic impact of improving the healthcare system.

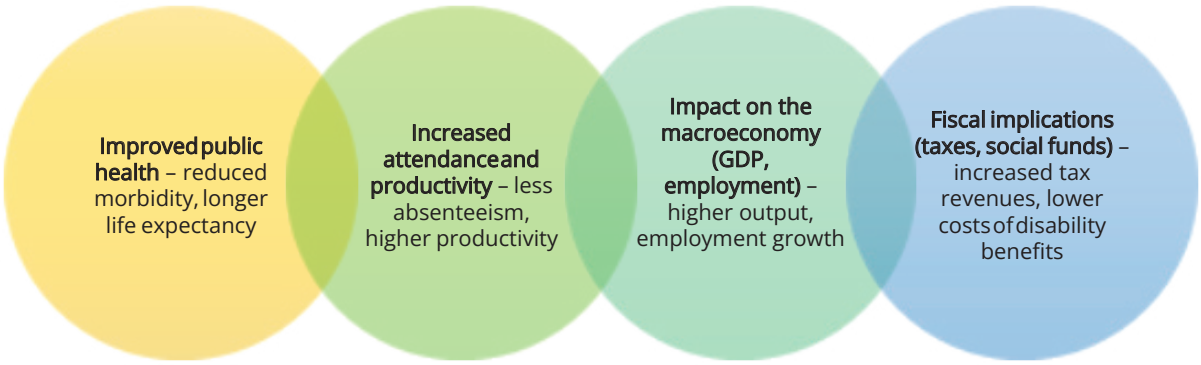

Figure 1. *Economic effects of population health improvement*

Source: *developed by the author*

The budgetary implications of integrating behavioural tools have a two-level dynamic. In the short term, the national healthcare system needs to implement modernised solutions, including digital analytics, IT tools, communication, and training, while in the medium and long term, financial pressure was reduced due to avoided complications, hospitalisations, and readmissions, as well as a redistribution of demand from expensive inpatient episodes to outpatient prevention (Organisation for Economic Co-operation and Development, 2022). This approach correlated with the international health technology assessment framework, which required the analysis of budgetary impact alongside cost-effectiveness. To formalise the choice between a basic (standard) and a "behaviourally enhanced" design, a generalised public benefit function was used, where the welfare gains can be estimated as the difference between the economic effects on health values combined with the fiscal and incremental costs of implementation (International Bank for Reconstruction..., 2024). At the toolkit level, this was specified through standard metrics: the incremental cost-effectiveness ratio considered in this study to compare additional costs per unit of additional outcome, the return on investment with discounted cash flows, and the budgetary impact analysis for a given horizon and payer. The toolkit was used for scenario analysis: comparing baseline and behaviourally enhanced options, incorporating coverage, intervention acceptance and response elasticity.

The transmission channels from policy to economy work through a sequential chain: "tool – mechanism – behaviour – change – clinical outcomes – economic impact". Default recordings, patient navigation, notifications and feedback to clinicians increased preventive care attendance, adherence to therapy and compliance with protocols, which reduced late readmissions and reoccurrences, and thus reduced costs and unproductive days, boosting productivity and tax revenues (Thaler & Sunstein, 2021). Alignment of this chain with monitoring indicators (behavioural, clinical, economic) ensured attribution of effects and programme manageability. The institutional conditions for scaling up required a reliable data infrastructure (unified identifiers, timely analytics), transparent ethics and privacy rules, and operational frameworks for local experiments with subsequent scaling up of working solutions. From the perspective of public finance, fiscal sustainability assessment should exceed the scope of medical expenditures and cover costs and benefits at the level of the entire economy: changes in the wage bill, tax base, and social disability payments (Roshylo, 2023).

The implementation roadmap should include five steps. First, a behavioural diagnosis of barriers for patients and providers, with hypotheses of the tool, mechanism, and indicator. Next, pilot trials with an integrated system of indicators (behavioural, clinical, economic) and ethical oversight. The next step was an analysis of ICER/ROI and budgetary impact to select the optimal configuration. The fourth step was scaling up based on the principles of responsible use of behavioural approaches and built-in monitoring. And lastly, the final step was regular "follow-up audits" of procedures and updating of incentives to prevent the effects from fading. For providers, key KPIs should focus on outcomes, not just volumes: proportion of healthy people in the assigned population, coverage of preventive care within recommended timeframes, rate of unnecessary procedures, adherence to protocols, and rate of avoidable hospitalisations. Such indicators combine behavioural markers (intention, compliance) with health outcomes and costs, creating an incentive for preventive medicine and risk management at the population level. Given the risks of unequal impacts, policies should include stratification by age, gender, socioeconomic group, and digital access to target groups with lower health-literacy linkages and higher barriers to access (Organisation for Economic Co-operation and Development, 2022). This improved both efficiency and equity and stabilised the fiscal impact through wider coverage and smaller gaps in outcomes.

In summary, investment in integrated behavioural tools was not just a mechanism for improving communication, but also a regulator of changing the trajectories of supply and demand for healthcare, which translated into higher productivity and sustainable public finances. Sustainable implementation required a combination of evaluation methods (ICER, ROI, budgetary impact), a mature data infrastructure, and a clear ethic of applying behavioural approaches in public policy. It was necessary to ensure that management steps were benchmarked against a standard and that the criteria for termination or scaling up were predefined. The monitoring system should include the intention and implementation of the action, timeliness of referrals, recurrence, adherence to protocols, ICER, ROI, and budgetary impact.

Discussion

The principle of behavioural tools was primarily to reduce the "cost of inaction" and operational barriers. Automatic appointments for preventive services and reminders with clear details of the time, place and circumstances of the action consistently increased attendance at check-ups and vaccinations. It was possible to conclude that the presence of reminders increased attendance compared to no reminders, and at the same time was a more cost-effective solution than phone calls, i.e., it had a better effect at a lower cost to the payer. A. Barbaroux & I. Serati (2022) demonstrated in their study, how a behavioural tool can simultaneously increase coverage and maintain an ethical balance of soft power. The authors conducted an analysis among medical interns in Nice, applying an "opt-out" approach to flu vaccination: participants were immediately offered a specific time and place, with the right to refuse or reschedule. As a result, the study found that the group that was nudged

had higher immunisation rates and, at the same time, high acceptability of the intervention in terms of autonomy of choice. The design and size of the sample, as well as the analysis of acceptability (including the sense of control), provided good reasons to consider the opt-out method relevant for other professional groups.

Default options (when a visit or vaccination was scheduled automatically, and refusal required an additional action) increased coverage without coercion. Analysing local experiments in large practices, it was possible to see an increase in vaccination rates from simply introducing default appointments without displacing vaccinations to other channels. This shown that choice architecture can change behaviour even without financial incentives. A randomised comparison of emails with a ready-made customised appointment versus a standard invitation to self-booking by K. Tentori *et al.* (2022) showed a statistically significant increase in reach in the "default appointment" group. The study explained the effect by reducing behavioural inertia and minimising operational barriers, and emphasised that some of the indecisive were not "convinced opponents", but rather tended to postpone action. This meant that a choice architecture can deliver gains without price or regulatory coercion. This directly supported the thesis that default records were effective in prevention policy.

At the level of treatment adherence, simple planning prompts and regular reminders bridge the gap between intention and action. This, in turn, was subsequently reflected in clinical trajectories: timely referrals, completed courses of therapy, and fewer "lost" patients. According to I. Gurol-Urganci *et al.* (2013), patient navigation programmes have been shown to have higher screening completion rates and shorter time to diagnosis, meaning that behavioural changes translated into earlier detection of disease and potentially lower intensity of further treatment. Behavioural interventions were also changing providers' clinical decisions. Cluster randomised trials with "comparative feedback", rationale for prescribing and suggested alternatives had demonstrated a significant reduction in the proportion of unnecessary antibiotics in primary care without compromising patient outcomes. The study by U. Konradt *et al.* (2022) was a classic example of how social norms adjust practice at a low cost of intervention. In clinical medicine, it was also possible to observe, how default tools influence prescribing and the scope of interventions. According to G. Saposnik (2019), this led to systematically lower prescribed doses without an increase in repeat visits. It was worth noting that this also reduced the risks and costs associated with overprescribing.

Reducing transaction costs should be considered as a separate channel of influence. L. Tian *et al.* (2022) noted that simplified access routes, standardised options, and transparent "next step" steps reduce missed appointments and delayed hospitalisations. Pre-appointment reminders and clear recording interfaces directly reduced patient time wastage, as evidenced by improved turnout and time performance in navigation apps. At the same time, K. Werner *et al.* (2023) emphasised the heterogeneity of effects and the importance of context (type of service, time interval, message wording), which required local testing and customisation. From a policy perspective, this supported the thesis of "reducing transaction costs" as a separate channel of influence on access and timeliness of care. The study presented a systematic review and meta-analysis of behavioural interventions to reduce no-shows. The generalised estimates shown a steady positive effect of reminders and nudges (messages/letters, messages with clear instructions, simple comment mechanisms), and the cost of such measures, especially for digital channels, was usually lower than for phone calls or additional staff.

The meta-analysis by H.D. Nelson *et al.* (2025) summarised the evidence on "patient navigation" in the context of breast and cervical cancer screening. The study determined that navigation services increased the likelihood of getting screened and completing the steps of the screening process compared to alternatives. From the perspective of behavioural economics, navigation reduced the so-called "friction" process (searching, coordinating, recording, reminding), translated intentions into action, and, as a result, shifted clinical trajectories towards early detection, which had reasonable economic consequences (fewer complications, lower intensity of treatment). The study provided quantitative support for the assertion of a separate channel of influence for reducing transaction costs of access. Sustainability and scalability depend on reinforcement. Some of the effects of nudges faded without repetition of the stimulus. At the same time, programmes with booster sessions or social support elements demonstrated better longevity of impact on behaviour and sometimes on health events in the long term, as evidenced by D.D. Reed *et al.* (2022). This implied the need to design interventions as cyclical processes with planned "feeding" of the effect. Instead, a randomised trial by J.F. Steiner *et al.* (2018) assessed, how the number and timing of automated reminders affect missed appointments in primary care. Compared to a single reminder three or one day before the appointment, a combination of two reminders (three days and one day) statistically reduced the proportion of no-shows without compromising satisfaction with the visit. From the perspective of behavioural economics, this supported the thesis of "feeding" intention: the first reminder removed planning barriers and gave time to adjust the schedule, while the second kept the action in the field of attention at a time close to the event. Operationally, the intervention should be low-cost and provide additional gains, where the costs to the system were greatest in groups at risk of no-shows; this made the strategy attractive for scaling up, although the authors caution about external generalisability outside the integrated system, where the study was conducted.

At that time, M. de Gier *et al.* (2023) investigated the effectiveness of a "booster" support programme after cognitive behavioural therapy in patients with multiple sclerosis-related fatigue in a randomised controlled trial. The addition of mixed booster components helped to better maintain the effect achieved in the long term compared to usual care: fatigue and related functioning scores deteriorated more slowly, and the difference between the groups was maintained. From the perspective of behavioural economics, this empirically supported the "sustaining" thesis: even effective initial interventions need cyclical support to avoid fading, and this support can be organised in low-cost components (short sessions/digital reminders), which have direct implications for scaling up and budget planning. Robustness of conclusions required attention to external generalisability and variation in coverage. Even for widely implemented instruments (including checklists), the impact varies by individual subjects. According to C. Bao & I.R. Bardhan (2024), multicentre studies have linked checklist implementation to lower complications and mortality, indicating the importance of organisational context, team culture, and quality of implementation. Scientists K. Bielka *et al.* (2023) evaluated the effectiveness of the World Health Organisation checklists for the safety of surgery and anaesthetic equipment in war-affected, resource-limited settings in a prospective two-group, multicentre study. The introduction of standardised checklists was associated with improved process indicators (completeness of preoperative checks, compliance with key safety steps) and a reduction in the incidence of complications/critical incidents compared to control units. The study was relevant for its external generalisability: even in stressful, low-resource contexts, hardwired tools such as checklists align practice and deliver measurable benefits, which was consistent with a priority on tools that reduced variability and unnecessary costs.

A study of insurance behaviour and plan selection by J.W. Ely & M.A. Graber (2015) found that people with lower insurance literacy were more likely to make poor choices, overpaying or choosing dominantly worse options. Low-cost "tip sheets" and changes in the architecture of choice (ordering, grouping of options) reduced such mistakes and increased transitions to the best plans for a particular group. This became a relevant lesson for targeting communications and information presentation formats in health programmes. A study conducted in the UK by N. Gold *et al.* (2022) found no decrease in antibiotic prescribing after the mailing to practices with a tendency to increase prescriptions. This was a substantial clarification for policy, as it suggested that "social feedback" alone does not guarantee an effect in any context. What matters was the targeting (who was addressed), the timing of the intervention, the intensity and the combination with other elements (checklist, clinical guidelines, rationale for prescribing). This was a cautionary marker: social norms were a powerful, but not universal tool, and their effect depended on the underlying dynamics of practice and the quality of implementation. So, it was worth noting that, when the "tool – mechanism – behaviour change – clinical outcome – economic impact" chain was built correctly, behavioural approaches pay a double dividend: better health outcomes and more efficient costs. Standardised records and reminders increase preventive care coverage, comparative feedback and checklists made clinical decisions more consistent, and simplified routes reduce patient time. Together, this translated into lower costs for complications, fewer readmissions, and better economic metrics for payers, provided that vulnerable groups were targeted and the effect was sustained over time.

Conclusions

The study provided a holistic view of the integration of behavioural instruments into health economic policy and confirmed their effectiveness as a channel for reducing wasteful spending and improving programme performance. In particular, the analysis of empirical data showed that standardised records, clear messages and reminders consistently increased the coverage of preventive examinations and vaccinations, while the use of social norms and comparative feedback reduced the share of unjustified prescriptions. Clinical outcomes confirmed the improvement in quality of care, including increased adherence to treatment, reduced readmissions, and decreased operational errors using checklists and structured prompts. At the system level, transactional barriers were reduced through transparent routes and digital recording interfaces, which lowered patient time and increased the timeliness of appointments.

The economic dimension of the interventions was equally significant: Incremental Cost-Effectiveness Ratio indicator showed that even low-cost interventions were economically feasible due to avoided complications and improved quality of life. On average, the Return on Investment of the programmes exceeded the cost of implementation, and the analysis of the budgetary impact showed that resources could be reallocated from inpatient to outpatient care without increasing overall spending. At the same time, the reduction of unproductive days and the decrease in productivity losses confirmed the positive impact of behavioural mechanisms on macroeconomic indicators. The proposed conceptual model combined the causal chain of "tool – mechanism – behavioural – change – clinical outcome – economic effect" with an integrated system of indicators covering behavioural, clinical and financial metrics. This ensured that results can be attributed and policy adjustments can be made based on validated data. The recommendations included launching pilot behavioural interventions with a tool – mechanism – indicator logic and a monitoring system that combined behavioural, clinical and economic indicators, with regular feedback. At the same time, it would be advisable to shift funding incentives to results,

using Key Performance Indicators and soft instruments, and to introduce booster components to maintain the effect. The final step would be to institutionalise the "plan – analyse – correct" cycle as a sustainable management practice. A limitation of the study was the dependence of the conclusions on the assumptions in the evaluation parameters (Incremental Cost-Effectiveness Ratio, Return on Investment, budgetary impact), which may limit their direct transferability to other institutional and clinical contexts. Further research should focus on testing the sustainability of effects in the long term, developing scaling-up scenarios, and integrating behavioural indicators into the official monitoring system of government programmes. Attention should also be paid to segmenting target groups according to age, socioeconomic and cultural differences, which would improve the targeting and effectiveness of health interventions.

Acknowledgements

None.

Funding

None.

Conflict of Interest

None.

References

[1] Atif (Nurzhynska), A., Chappell, P., Sukhodolska, A., & Sanders, J.G. (2024). Examining the impact of six pro-vaccination messages on MMR vaccine hesitancy among mothers in Ukraine: A randomised controlled trial. *European Journal of Health Communication*, 5(1), 46-66. doi: 10.47368/ejhc.2024.103.

[2] Bachhuber, M.A., Nash, D., Southern, W.N., Heo, M., Berger, M., Schepis, M., Thakral, M., & Cunningham, C.O. (2021). Effect of changing electronic health record opioid analgesic dispense quantity defaults on the quantity prescribed: A cluster randomized clinical trial. *JAMA Network Open*, 4(4), article number e217481. doi: 10.1001/jamanetworkopen.2021.7481.

[3] Bao, C., & Bardhan, I.R. (2024). Measuring value in health care: Lessons from accountable care organizations. *Health Affairs Scholar*, 2(3), article number qxae028. doi: 10.1093/haschl/qxae028.

[4] Barbaroux, A., & Serati, I. (2022). Effectiveness and acceptability of an opt-out nudge to promote influenza vaccination among medical residents in Nice, France: A randomized controlled trial. *MedRxiv*. doi: 10.1101/2022.09.09.22279772.

[5] Bielka, K., Kuchyn, I., Frank, M., Sirenko, I., Kashchii, U., Yurovich, A., Fomina, H., Lisnyy, I., & Semenko, N. (2023). WHO Surgical Safety Checklist and Anesthesia Equipment Checklist efficacy in war-affected low-resource settings: A prospective two-arm multicenter study. *Anaesthesiology Intensive Therapy*, 55(4), 291-296. doi: 10.5114/ait.2023.132531.

[6] de Gier, M., Beckerman, H., Twisk, J.W., Knoop, H., & de Groot, V. (2023). Effectiveness of a blended booster programme for the long-term outcome of cognitive behavioural therapy for MS-related fatigue: A randomized controlled trial. *Multiple Sclerosis Journal*, 30(1), 71-79. doi: 10.1177/13524585231213258.

[7] Dorykevych, K., & Kremin, Y. (2022). Study of the attitude of Ukrainian citizens to vaccination: The results of an online survey. *Annals of Mechnikov Institute*, 1, 51-56. doi: 10.5281/zenodo.6350180.

[8] Ely, J.W., & Graber, M.A. (2015). Checklists to prevent diagnostic errors: A pilot randomized controlled trial. *Diagnosis*, 2(3), 163-169. doi: 10.1515/dx-2015-0008.

[9] European Vaccination Information Portal. (n.d.). *Vaccination communication toolkit*. Retrieved from https://vaccination-info.europa.eu/en/resources/vaccination-communication-toolkit.

[10] Fardhdiani, V., *et al.* (2025). End of treatment and 12-month post-treatment outcomes in patients treated with all-oral regimens for rifampicin-resistant tuberculosis in Ukraine: A prospective cohort study. *PLOS Global Public Health*, 5(5), article number e0003983. doi: 10.1371/journal.pgph.0003983.

[11] Gidengil, C.A., Mehrotra, A., Beach, S., Setodji, C., Hunter, G., & Linder, J.A. (2016). What drives variation in antibiotic prescribing for acute respiratory infections? *Journal of General Internal Medicine*, 31, 918-924. doi: 10.1007/s11606-016-3643-0.

[12] Gold, N., Ratajczak, M., Sallis, A., Saei, A., Watson, R., van Schaik, P., Bowen, S., & Chadborn, T. (2022). Provision of social-norms feedback to general practices whose antibiotic prescribing is increasing: A national randomized controlled trial. *Journal of Public Health*, 30, 2351-2358. doi: 10.1007/s10389-021-01645-4.

[13] Gurol-Urganci, I., de Jongh, T., Vodopivec-Jamsek, V., Atun, R., & Car, J. (2013). Mobile phone messaging reminders for attendance at healthcare appointments. *Cochrane Database of Systematic Reviews*, 12, article number CD007458. doi: 10.1002/14651858.CD007458.pub3.

[14] Hoenink, J.C., Mackenbach, J.D., Waterlander, W., Lakerveld, J., van der Laan, N., & Beulens, J.W.J. (2020). The effects of nudging and pricing on healthy food purchasing behavior in a virtual supermarket setting: A randomized experiment. *International Journal of Behavioral Nutrition and Physical Activity*, 17, article number 98. doi: 10.1186/s12966-020-01005-7.

[15] Hook, K., *et al.* (2021). Evaluating context and interest in training in evidence-based mental health care: A qualitative investigation among healthcare providers in Kyiv, Ukraine. *BMC Research Notes*, 14, article number 373. doi: 10.1186/s13104-021-05786-3.
[16] International Bank for Reconstruction and Development/The World Bank & World Health Organization. (2024). *Behavioral science around the world* (Vol. 3). Geneva: World Health Organization. doi: 10.2471/B09046.
[17] Jiménez-Ruiz, C.A., *et al.* (2020). Cost-benefit analysis of funding smoking cessation before surgery. *British Journal of Surgery*, 107(8), 978-994. doi: 10.1002/bjs.11506.
[18] Konradt, U., Nath, A., Krys, S., & Heblich, F. (2022). Longitudinal effects of a sit-stand desk intervention – persistence, fade-out, and psychological momentum: A randomized controlled trial. *BMC Psychology*, 10, article number 246. doi: 10.1186/s40359-022-00948-9.
[19] Kovtun, O., Paniotto, V., Sakhno, Yu., & Dumchev, K. (2024). Size estimation of key populations and 'bridge populations' based on the network scale-up method in Ukraine. *BMC Public Health*, 24, article number 979. doi: 10.1186/s12889-024-18501-1.
[20] Levesque, J.-F., Harris, M.F., & Russell, G. (2013). Patient-centred access to health care: Conceptualising access at the interface of health systems and populations. *International Journal for Equity in Health*, 12, article number 18. doi: 10.1186/1475-9276-12-18.
[21] Lytvynenko, O., Sincha, N., Dondyk, N., Demchenko, V., & Kravchenko, T. (Eds.). (2018). *Pharmacoeconomics*. Zaporizhzhia: Zaporizhzhia State Medical University.
[22] Michie, S., Atkins, L., & West, R. (2014). *The behaviour change wheel: A guide to designing interventions.* London: Silverback Publishing.
[23] Murphy, J., Halloran, S., & Gray, A. (2017). Cost-effectiveness of the faecal immunochemical test at a range of positivity thresholds compared with the guaiac faecal occult blood test in the NHS Bowel Cancer Screening Programme in England. *BMJ Open*, 7(10), article number e017186. doi: 10.1136/bmjopen-2017-017186.
[24] National Institute for Health and Care Excellence. (2022). *NICE health technology evaluations: The manual.* Retrieved from https://www.nice.org.uk/process/pmg36.
[25] Nelson, H.D., Cantor, A.G., Pappas, M., Blackie, K., Yu, Y., & Fu, R. (2025). Patient navigation services for breast and cervical cancer screening and follow-up: A meta-analysis. *JAMA Internal Medicine*, 185(8), 976-985. doi: 10.1001/jamainternmed.2025.1590.
[26] Organisation for Economic Co-operation and Development. (2022). Good practice principles for ethical behavioural science in public policy. *OECD Public Governance Policy Papers, No. 20*. doi: 10.1787/e19a9be9-en.
[27] Patel, M.S., Volpp, K.G., & Asch, D.A. (2018). Nudge units to improve the delivery of health care. *The New England Journal of Medicine*, 378(3), 214-216. doi: 10.1056/NEJMp1712984.
[28] Pinchuk, I., Yachnik, Yu., Goto, R., & Skokauskas, N. (2025). Mental health services during the war in Ukraine: 2-years follow up study. *International Journal of Mental Health Systems*, 19, article number 11. doi: 10.1186/s13033-025-00667-9.
[29] Reed, D.D., Strickland, J.C., Gelino, B.W., Hursh, S.R., Jarmolowicz, D.P., Kaplan, B.A., & Amlung, M. (2022). Applied behavioral economics and public health policies: Historical precedence and translational promise. *Behavioural Processes*, 198, article number 104640. doi: 10.1016/j.beproc.2022.104640.
[30] Roshylo, V. (2023). Specific features of the financial system of Ukraine in the conditions of war. *Scientific Bulletin of Mukachevo State University. Series "Economics"*, 10(2), 31-41. doi: 10.52566/msu-econ2.2023.31.
[31] Saposnik, G. (2019). Applying behavioral economics and neuroeconomics to medical education and clinical care. *Canadian Journal of Neurological Sciences*, 46(1), 35-37. doi: 10.1017/cjn.2018.371.
[32] Steiner, J.F., Shainline, M.R., Dahlgren, J.Z., Kroll, A., & Xu, S. (2018). Optimizing number and timing of appointment reminders: A randomized trial. *American Journal of Managed Care*, 24(8), 377-384.
[33] Tentori, K., Pighin, S., Giovanazzi, G., Grignolio, A., Timberlake, B., & Ferro, A. (2022). Nudging COVID-19 vaccine uptake by changing the default: A randomized controlled trial. *Medical Decision Making*, 42(6), 837-841. doi: 10.1177/0272989X221101536.
[34] Thaler, R.H., & Sunstein, C.R. (2021). *Nudge: The final edition.* London: Penguin Books.
[35] Tian, L., Huang, L., Liu, J., Li, X., Ajmal, A., Ajmal, M., Yao, Y., & Tian, L. (2022). Impact of patient navigation on population-based breast screening: A systematic review and meta-analysis of randomized clinical trials. *Journal of General Internal Medicine*, 37, 2811-2820. doi: 10.1007/s11606-022-07641-y.
[36] Werner, K., Alsuhaibani, S.A., Alsukait, R.F., Alshehri, R., Herbst, C.H., Alhajji, M., & Lin, T.K. (2023). Behavioural economic interventions to reduce health care appointment non-attendance: A systematic review and meta-analysis. *BMC Health Services Research*, 23, article number 1136. doi: 10.1186/s12913-023-10059-9.
[37] Yeboah, P., *et al.* (2025). Hesitant minds in vulnerable times: COVID-19 vaccine hesitancy among university students in Ukraine. *COVID*, 5(8), article number 122. doi: 10.3390/covid5080122.

[38] Yurchyk, A. (2024). Evaluation of the economic efficiency of digitalisation of management processes. In *XXV International scientific and practical conference "Universities and schools: Methods of distance learning"* (pp. 39-40). Boston: International Science Group. doi: 10.46299/ISG.2024.1.25.

Інтеграція поведінкових інсайтів у загальну теорію економічної політики у сфері охорони здоров'я

Сергій Іноземцев
Аспірант
Національний університет «Києво-Могилянська академія»
04070, вул. Г. Сковороди, 2, м. Київ, Україна
https://orcid.org/0009-0005-2534-9158

Анотація. Метою дослідження було концептуалізувати роль механізмів поведінкової економіки як складової сучасної теорії економічної політики у сфері охорони здоров'я. У роботі використано методи моделювання причинно-наслідкового ланцюга "інструмент – механізм – зміна поведінки – клінічні результати – економічний ефект", контент-аналізу матеріалів міжнародних досліджень, абстрагування системи індикаторів (поведінкові, клінічні, економічні), систематичного аналізу показників оцінювання ефективності (показник Incremental Cost-Effectiveness Ratio та рентабельності інвестицій, аналіз бюджетного впливу). Отримані результати продемонстрували, що структуровані нагадування, планувальні підказки, соціальні норми та порівняльний зворотний зв'язок для провайдерів зменшують відкладені звернення, підвищують прихильність до лікування та скорочують надмірні процедури, що відображається у нижчій інтенсивності дорогих епізодів догляду, стабільнішій якості послуг і скороченні непрямих втрат продуктивності. Визначено макроекономічні та фіскальні наслідки інтеграції поведінкових інсайтів у загальну теорію економічної політики, серед яких покращення здоров'я населення, яке впливає на тривалість життя та захворюваність, зростання відвідуваності та продуктивності, вплив на макроекономіку, що означає більший обсяг виробництва. Також, до них належало зростання зайнятості та податкових надходжень, менші витрати на допомогу по непрацездатності. Запропоновано дорожню карту впровадження, яка поєднувала етичні принципи використання поведінкових інструментів, вимоги до інфраструктури даних і механізми регулярного моніторингу ("планування – збір – аналіз – зворотний зв'язок – корекція"), орієнтуючи фінансування на результати (ключові показники ефективності: охоплення профілактикою, частка здорового населення, частота надмірних призначень). Практична цінність полягає у наданні економічно-обґрунтованих підстав для перерозподілу ресурсів у бік превентивної медицини, підвищення вартісної ефективності видатків та посилення довгострокової фіскальної стійкості через канали відвідуваності, продуктивності праці та зайнятості

Ключові слова: фінансування охорони здоров'я; опції за замовчуванням; соціальні норми; фреймінг повідомлень; система індикаторів оцінювання; бюджетний вплив; державна політика

ECONOMIC FORUM
Journal homepage: https://e-forum.com.ua/en
Vol. 15, No. 3, 2025, 112-122
Article's History: Received: 27.03.2025 Revised: 29.07.2025 Accepted: 08.09.2025

UDC 330.341.4:352/354 DOI: 10.62763/ef/3.2025.112

Social capital in the digital economy: Transforming hromada project financing models using RWA tokenisation

Maryna Riabokin*
PhD in Economic Sciences, Associate Professor
Kyiv Institute of Business and Technology
04078, 1/5 Zoryany Ln., Kyiv, Ukraine
https://orcid.org/0000-0002-6724-9498

Yevgen Kotukh
PhD in Technical Sciences, Associate Professor
Dnipro University of Technology
49005, 19 Dmytro Yavornytsky Ave., Dnipro, Ukraine
https://orcid.org/0000-0003-4997-620X

Abstract. The relevance of this study lied in the implementation of innovative financing mechanisms for Ukraine's territorial hromadas in the context of post-war recovery, focusing on the significant untapped potential of household savings. This study aimed to assess the feasibility of using Real World Asset tokenisation as a tool to mobilise internal financial resources by activating social capital. According to expert estimates, Ukrainian household savings held outside the formal banking system were estimated at between 70 billion USD and 120 billion USD. Scenario modelling showed that even a conservative mobilisation of 1% of these funds (1.2 billion USD) would enable the implementation of over 2,000 infrastructure projects. Under a realistic scenario (2.5% or 3 billion USD), hromadas could carry out up to 6,000 large or 20,000 smaller initiatives, including school renovations, water supply upgrades, and solar power plants. The study proposed a conceptual framework that integrated social capital (trust, networks, and shared values), blockchain tools (tokens and smart contracts), and economic incentives (dividends, savings, governance rights). A typology of projects eligible for tokenisation was presented, along with an investment distribution structure and expected financial and social outcomes. The research also outlined a multi-level benefits system for household investors – ranging from dividends to participation in decision making through Data Access Object platforms. It emphasised the reciprocal relationship between social capital and Real World Asset tokenisation: trust and local networks enabled investment, while successful implementation reinforced civic engagement and community cohesion. The practical value of this study is that it offers territorial hromadas a replicable model for converting passive savings into active capital for sustainable development through digital infrastructure

Keywords: decentralised finance; blockchain; local economic development; digital infrastructure; investment instruments; sustainable development; savings

Introduction

Attracting financial resources for territorial hromada development in Ukraine remains a major challenge amid decentralisation reforms and the pursuit of sustainable regional development. This challenge has been exacerbated by extensive war-related destruction, limited budgetary capacity, infrastructure deterioration, and the need for innovative models of local economic recovery. In this context, the mobilisation of household savings – particularly those kept outside the formal banking system – emerges as a critical strategic opportunity. Social capital, understood as networks of trust, cooperation, and shared norms, can serve as a powerful driver for

Suggested Citation:

Riabokin, M., & Kotukh, Ye. (2025). Social capital in the digital economy: Transforming hromada project financing models using RWA tokenisation. *Economic Forum*, 15(3), 112-122. doi: 10.62763/ef/3.2025.112.

*Corresponding author

mobilising such internal financial resources. Social capital, when conceptualised as a combination of interpersonal trust, civic engagement, and collective values, provides a foundation for community-driven investment mechanisms (Fukuyama, 2001). Converting dormant financial assets into productive investments requires innovative tools – with Real World Asset (RWA) tokenisation offering a particularly promising solution. By representing ownership rights to physical assets as blockchain-based digital tokens, RWA tokenisation democratises access to investment opportunities, enhances transparency in resource management, and creates liquidity for financing local infrastructure projects.

Academic and industry research has emphasised the transformative role of blockchain technologies in modern finance. F. Schär (2021) analysed decentralised financial markets based on blockchain and smart contracts, arguing that tokenisation enables fractional ownership, enhances transparency, and increases liquidity of traditionally illiquid assets – such as real estate and infrastructure. In the Ukrainian context, Yu. Holynskyy & V. Nuriyeva (2023) explored the financial capacity of territorial communities during the full-scale war in 2022, highlighting the growing importance of self-sufficiency and innovative funding tools. The authors argued that social capital – including trust-based networks and civic engagement – plays a vital role in sustaining local economies in times of crisis. Similarly, V. Yemets (2022) examined regional and local development aspects in Ukraine's post-war recovery, emphasising the need for investment mechanisms grounded in internal household savings and enabling greater fiscal autonomy. Digital financial inclusion was another relevant consideration. According to the State Statistics Service of Ukraine (n.d.), progress on Sustainable Development Goals remained uneven, with persistent disparities in access to financial services, particularly in rural areas. These conditions necessitated tools that bypassed traditional banking infrastructure, while preserving transparency and accountability – a role that blockchain-based tokenisation was well-suited to fulfil.

The scientific rationale of the study also drawn on both fundamental and applied publications that highlighted the conceptual foundations of decentralised finance and the role of digital technologies in transforming economic models. In particular, Y. Chen & C. Bellavitis (2020) explored the impact of blockchain technologies on the emergence of decentralised business models and the growth of the DeFi sector. J.S. Coleman's (1988) work was essential for understanding social capital as a factor in the formation of human capital, which was significant in the context of engaging communities in innovative investment mechanisms. P. De Filippi & A. Wright (2018) analysed the legal and regulatory challenges associated with the implementation of blockchain, emphasising the need to adapt legal frameworks to the notion of "code as law". These sources deepened the analysis of the institutional and social preconditions for implementing RWA tokenisation at the local level. Practical use cases further confirmed the relevance of tokenisation mechanisms. M. Riabokin & Ye. Kotukh (2024) presented a detailed conceptual model of RWA tokenisation for infrastructure development, highlighting the interaction between trust-based community structures and digital financial tools. Their research emphasised the scalability of token-based investment schemes for public projects.

Thus, RWA tokenisation had the potential to become both a financial innovation and a tool for social transformation. It offered a way to convert passive household savings into active capital, aligned with principles of transparency, inclusivity, and shared ownership. However, successful implementation depended on adequate digital infrastructure, appropriate legal frameworks, and the strength of social capital – all increasingly recognised as important elements of Ukraine's post-war recovery strategy. This study aimed to assess the potential of RWA tokenisation at the level of Ukrainian territorial hromadas to attract household savings as a form of social capital for advancing community well-being and sustainable development. The central hypothesis was that blockchain-based RWA tokenisation can activate significant volumes of unused financial resources and channel them into local investment projects, thereby stimulating socio-economic growth and inclusive territorial development.

Materials and Methods

The methodological framework of this study was grounded in the integration of social capital theory, the concept of decentralised finance (DeFi), and models of household financial behaviour in transitional economies. The first stage of the study involved estimating the potential of Ukrainian household savings held outside the banking system. Based on statistical and expert data – including reports such as "Ukrainians increased their cash savings by nearly 12 billion dollars in cash over the past year" (2024), "Population and business savings grew by almost 12 billion USD in cash over the year. Is everything so with NBU statistics" (2024), and "Ukrainians increased their savings abroad by over 8 billion USD in six months" (2024) – the estimated volume of extra-banking savings is assessed at between 70 billion USD and 120 billion USD. To simulate possible investment inflows into local development projects, three scenarios were developed: conservative (1% of total savings), realistic (2.5%), and optimistic (5%). The second stage focused on classifying typical local infrastructure projects by average implementation cost. Six basic categories were identified: renovation of educational and healthcare facilities, water supply and sewerage systems, street lighting, small-scale solar power plants, social housing and coworking spaces, and digital Data Access Object (DAO) platforms. A comparative analysis of project costs and projected investment volumes under each scenario provided estimates of the number of potential projects that could be implemented by local communities.

The third stage involved the development of a conceptual model of RWA tokenisation as a mechanism for mobilising internal financial resources of local communities, grounded in the interaction between social capital (trust, social networks, shared values) and blockchain technologies. The information base of the study included open data from international and national analytical institutions such as USAID DOBRE programme data (Kryzhanivskyi, 2022), "How to rebuild Ukraine – sociological survey of citizens and business representatives" (2023), and data from the State Statistics Service of Ukraine (n.d.). The methodological approach applied in this study aligned with prior research on decentralised finance and asset tokenisation. In particular, it reflected the modelling framework used by R. Chamria (2021) and F. Schär (2021), who applied similar simulation-based methods to assess the impact of tokenised infrastructure investment and decentralised financial mechanisms. Data processing and scenario modelling were carried out using Microsoft Excel and programming tools for statistical analysis. The proposed methodology was transparent, logically structured, and reproducible, and can be adapted to other territorial contexts with similar socio-economic structures, using equivalent data inputs, analytical instruments, and evaluation criteria.

Results and Discussion

Social capital consists of mutual trust, social norms, horizontal networks, support mechanisms, and participation in collective initiatives. In local development contexts, it provided the foundation for collective action, reduces transaction costs, improves communication effectiveness, and created conditions for sustained commitment. This social capital was a determinative factor in local investment success, particularly in relation to internal resource mobilisation. Empirical evidence showed that hromadas with robust social capital demonstrated stronger self-organisation, cooperation, and co-financing of locally significant projects. When households perceived local initiatives as honest, competent, and transparent, they showed greater willingness to invest in tokenised assets that benefited hromadas. This investment propensity derived from confidence in purposeful resource use and stakeholder commitment fulfilment. Additionally, social networks played a crucial role in disseminating investment opportunities and fostering support for collective initiatives. Hromadas with well-developed horizontal tied facilitate the accelerated diffusion of successful investment practices and increase resident participation in collaborative projects.

RWA tokenisation involved the digital representation of ownership rights to physical or non-financial assets (e.g., infrastructure, land, utilities) as blockchain-based tokens. This mechanism enabled fractional ownership, transaction transparency, simplified rights transfer, and broadens investor participation. Blockchain technology ensured immutable ownership records, automated income distribution, and provided robust safeguards against manipulation. In environments characterised by diminished trust in conventional financial institutions, such technological assurances are of particular importance. For territorial hromadas, RWA tokenisation offered a mechanism to aggregate resident funding through token issuance that represented fractional project participation. Such projects can included historical building restoration, public space development, infrastructure modernisation, and social facility establishment. A significant advantage of this approach was the democratisation of the investment process – project participation became accessible to a broad range of residents rather than being limited to institutional investors. This fosters a sense of collective ownership and responsibility for territorial development. As noted by R. Chamria (2021), tokenised assets were reshaping traditional approaches to asset management, primarily by eliminating intermediaries and enabling broader investor access to financial instruments. Among the key advantages of tokenised instruments, the author highlighted their programmability and traceability, which provided conditions for increased transparency, efficiency, and trust in investment processes. In the study by J. Cole (2024), examples were provided of tokenising "green" real-world assets to finance sustainability initiatives, demonstrating the potential to channel capital into small-scale, but high-impact environmental projects. O. Kurchenko (2021) emphasised the transformative potential of asset tokenisation for traditional capital markets, particularly in terms of opening investment opportunities to the general public and enabling direct citizen participation in financing socially significant projects.

The synergistic relationship between social capital and RWA tokenisation was manifested through mutual reinforcement. Trust among participants, the presence of opinion leaders, and established communication channels facilitate successful RWA project implementation. Social capital supported tokenisation by disseminating project information, validating initiative legitimacy through social networks, encouraging resident willingness for microinvestment, and establishing oversight mechanisms for fiscal accountability. Concurrently, successful RWA tokenisation project execution strengthens hromada social capital, raising trust levels and establishing positive precedents for collective action. An effective model for mobilising household investment through RWA tokenisation follows a sequential process, beginning with the identification of hromada infrastructure facilities (Fig. 1). Subsequent phases include comprehensive project cost evaluation, issuance of tokens linked to anticipated facility revenue, implementation of a blockchain platform to provide tokenisation infrastructure, and token distribution to household investors. Accumulated capital finances infrastructure development, followed by project execution and operational management (Herus, 2024). The

critical cycle component was revenue generation from the operational facility, enabling proportional dividend distribution to investors according to their participation stake. This created a closed economic cycle, wherein hromadas acquired essential infrastructure, while households gain stable investment returns.

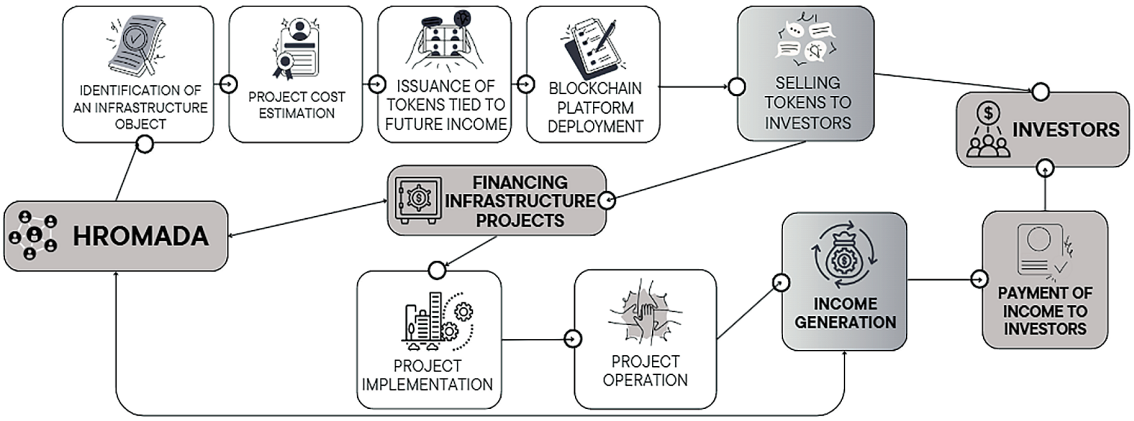

Figure 1. *Method of using tokenisation to finance infrastructure projects*
Source: *based on M. Riabokin et al. (2025)*

Smart contracts, as integral components of RWA tokenisation, enable automated income distribution (when stipulated by project economics), fiscal oversight, and stakeholder governance through digital voting mechanisms. This establishes a distinctive democratic asset-governance model that balances economic efficiency with social inclusivity. Resident-investors receive multifaceted benefits: financial returns, enhanced infrastructure access, and elevated social standing as hromada asset co-owners. RWA tokenisation, when grounded in hromada social capital, offers novel opportunities for mobilising latent household financial resources for local infrastructure development. Activating even minimal portions of these resources through tokenisation mechanisms can substantially accelerate hromada infrastructure modernisation, improve residents' quality of life, and create catalysts for territorial economic development. Notably, this approach transcends purely economic objectives by strengthening social cohesion, raising trust levels, and fostering civic engagement. The conceptual framework presents an integrated RWA tokenisation implementation model as a social capital activation mechanism supporting sustainable territorial hromada development (Fig. 2).

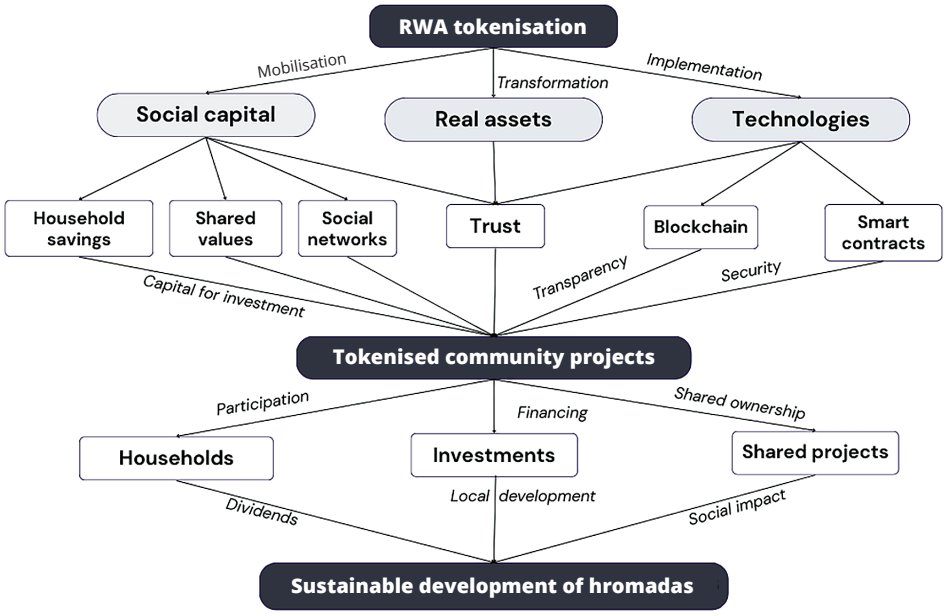

Figure 2. *Conceptual model for implementing RWA tokenisation as a mechanism for activating social capital for sustainable hromada development*
Source: *developed by the authors*

This model's central element – RWA tokenisation – exerts a tripartite influence on local socioeconomic system components. It mobilised social capital, encompassing material elements (household savings), axiological components (communal values), and structural dimensions (social networks). Simultaneously, it converted hromada's physical assets into digital tokens, ensuring transparent accounting and property rights documentation. The third critical process was practical implementation through technological instruments, particularly blockchain as the infrastructural foundation and smart contracts as automated obligation-fulfilment mechanisms. Trust functions as the integrative element across system components, established through shared values and social networks, and enhanced by blockchain transparency and smart contract security. This convergence of social, material, and technological factors creates an environment conducive to tokenised hromada project development. Population savings played a pivotal role, transitioning through tokenisation from passive resources to active investment capital (Osisanwo *et al*., 2024). This transformation ensured more efficient utilisation of existing hromada financial resources, while establishing a novel financial interaction model based on transparency, inclusivity, and decentralisation principles.

Tokenised hromada projects operate through a tripartite mechanism: household participation, investment financing, and collective ownership formation. This approach resolves the traditional individual-collective interest dichotomy, creating a model where personal benefit aligns with collective welfare. The resultant synergistic effect is evident in sustainable hromada development through interconnected processes: households receive project dividends, investments stimulate local economic development, and collective projects generate positive social externalities. This conceptual model demonstrates a paradigmatic shift in local development financing, marking a transition from centralised resource allocation mechanisms to a decentralised system, wherein social capital, amplified by technological innovation, serves as the critical factor transforming latent household savings into an instrument for sustainable territorial hromada development.

A multi-scenario approach was employed to assess the investment potential of RWA tokenisation, accounting for socioeconomic process variability and differing social capital activation capacity. The model's fundamental parameter was Ukrainians' extra-banking savings, estimated at approximately 70-120 billion USD. Considering the complex interaction of factors influencing household investment behaviour, three RWA tokenisation fund attraction scenarios were developed. Economic data analysis revealed substantial household savings outside formal banking systems. Over 70 per cent of individual savings remain outside savings and credit institutions, predominantly in physical currency. According to sociological data presented by G. Lopushnyak & A. Shandar (2020), 33 per cent of citizens avoided banking institutions for savings, 49 per cent maintained minimal bank deposits, 7 per cent allocated half their savings to bank accounts, and 11 per cent entrusted most savings to banks. Households capable of generating savings increased to 11.2 per cent in 2019.

Key determinants of non-bank savings included: diminished trust in institutional banking, macroeconomic and political instability, and limited accessibility of financial instruments, particularly in rural and small urban areas. These factors led to a concentration of savings in physical currency. This reflected reduced institutional trust, counterbalanced by elevated interpersonal trust, consistent with R.D. Putnam's (2000) bonding-bridging social capital equilibrium concept. Expert estimates of extrabanking savings vary significantly: from 120 billion USD to 60 billion USD, according to Shapran, with 10-20 billion USD (Ukrainians increased their cash savings..., 2024) attributed to individual households. Additionally, approximately 716 billion UAH (19 billion USD) remained outside banking institutions. Consequently, aggregate Ukrainian extra-banking savings are estimated to range between 70-120 billion USD (Population and business savings grew by almost..., 2024). Taking into account the available empirical data and theoretical concepts of social capital, three basic scenarios for the potential mobilisation of savings through RWA tokenisation mechanisms were developed: conservative scenario – projects the mobilisation of 1 per cent of total household savings, equivalent to 1.2 billion USD. This estimate was derived from the research of A. Barba & M. Pivetti (2009), which examined the initial phases of innovative financial instrument implementation in Eastern and Central European contexts, complemented by an analysis of Ukrainian technological readiness and financial inclusion. Distributing this sum across 1,460 Ukrainian territorial hromadas yields an average potential hromada investment of approximately 822,000 USD. Infrastructure cost analysis at the small-hromada scale indicated that this magnitude suffices for relatively low capital-intensity local initiatives: renovation of educational and healthcare facilities, modernisation of street lighting, development of co-working spaces, and implementation of localised energy-efficiency projects. The efficacy of such investments was validated by analysis of DOBRE and U-LEAD projects in Ukraine (Kryzhanivskyi, 2022), where successful local initiatives averaged between 500,000 USD and 900,000 USD.

Realistic scenario – anticipates the mobilisation of 2.5 per cent of total savings, equivalent to 3 billion USD. This projection was substantiated through analysis of successful blockchain implementation cases in public utility and infrastructure financing across EU member states (Fernandez-Vazquez *et al.*, 2019), coupled with the projected enhancement of trust in decentralised financial instruments amid gradual regulatory framework development and pilot project implementation. Under

this scenario, the average potential hromada investment would approximate 2 million USD, substantially expanding the viable project scope. According to data from Regional development funding (2025), this investment magnitude facilitated medium-capital project implementation, including local road reconstruction, integrated public space development, water supply system modernisation, and support for municipal innovation initiatives. The socioeconomic efficacy of such investments was confirmed by infrastructure project impact studies conducted in Visegrad Group communities (Nyikos *et al*., 2020). These studies demonstrated that community-driven infrastructure initiatives – co-financed through local and external sources – contributed to measurable improvements in quality of life, increased local business activity, and strengthened citizen trust in municipal governance structures. The experience of Visegrad Group communities highlighted the importance of participatory financing models and decentralised decision-making mechanisms in achieving sustainable local development outcomes. The optimistic scenario projects the mobilisation of 5% of total savings, equivalent to 6 billion USD. This scenario's theoretical foundation drew on research on the long-term effects of financial market institutional transformation (Acemoglu & Robinson, 2013) and analysed of blockchain technology's potential to enhance trust in the medium term (Schär, 2021). Under this scenario, the estimated average potential investment per hromada was approximately 4.1 million USD, establishing prerequisites for the implementation of comprehensive territorial modernisation programmes. According to the regional development investment potential assessment methodology, such an investment magnitude would enable not only the resolution of local infrastructure deficiencies, but also the development of territorial strategic competitive advantages: industrial park construction, modern social infrastructure establishment, and large-scale environmental modernisation – interventions collectively enhancing business conditions and mitigating outmigration. Based on the integration of data on savings volume and differentiated attraction scenarios through RWA tokenisation, a generalised table of potential investments was developed (Table 1).

Table 1. *Scenarios for investment attraction through RWA tokenisation*

Scenario	Total amount (billion USD)	Fraction	Potential investments (billion USD)
Optimistic	120	5%	6
Realistic	120	2.5%	3
Conservative	120	1%	1.2

Source: *based on Population and business savings grew by almost 12 billion USD in cash over the year. Is everything so with NBU statistics (2024), Ukrainians increased their savings abroad by over 8 billion USD in six months (2024)*

The results obtained align with data from sociological surveys on the willingness of the population to participate in local development projects. In particular, the study "How to rebuild Ukraine – sociological survey of citizens and business representatives" (2023) showed that 94% of Ukrainians believed the government should consult the public and business in reconstruction processes, while 79% emphasised the importance of maximum transparency in all stages of the country's recovery. From a social capital theoretical perspective, the proposed RWA tokenisation model enabled the transformation of passive social capital components (household savings) into active forms through collective participation and joint investment governance mechanisms. This transformation occurred through the formation of institutional trust in blockchain-based decentralised financing instruments. Social capital, as conceptualised by R.D. Putnam (2000), constituted a determinative factor in successful collective action toward shared objectives. Within RWA tokenisation contexts, social capital manifested in two dimensions: as a prerequisite for project initiation (through established trust networks and communication channels) and as an implementation outcome (through enhanced social cohesion and the emergence of novel collective action paradigms).

RWA tokenisation established a "digital infrastructure of trust", transforming traditional local development financing models (Tapscott & Tapscott, 2016). This marked a shift from centralised resource redistribution toward distributed participation mechanisms, repositioning residents from passive service recipients to active co-investors and co-owners of public assets. This model enhanced the efficiency of financial resource utilisation, while establishing sustainable civic participation practices – a foundational prerequisite for democratic development at the local level. Research by Z. Liu *et al*. (2022), analysing user incentive mechanisms in a blockchain-based online community, demonstrated how decentralised reward structures can effectively stimulate active participation and content generation. These findings highlighted the potential of blockchain-based systems to foster user engagement, trust, and sustained collaboration – factors that may be transferable to local development contexts, particularly in designing token-based community financing models. To systematise potential investment areas, an analysis of typical local development projects, their cost characteristics, and their correlation with the volume of potential investments was carried out. This analysis enabled the development of a typology of infrastructure projects of local importance with corresponding cost characteristics (Table 2).

Table 2. *Local project types and average cost analysis*

Project type	Average cost (USD)	Note
School/hospital major renovation	500,000	Medium facility for 1,000-3,000 people
Street lighting in the hromada	150,000	LED, self-powered
Water supply/sewerage system	300,000	A small village/settlement
Grid-connected solar power plant (SPP)	250,000	50-70 kW for infrastructure facilities
Social housing/coworking	70,000	Modular or renovation
Creating a digital hromada platform	50,000	DAO, RWA registry, dashboard

Source: *developed by the authors*

The typology presented in Table 2 identifies six priority project types relevant to the development of Ukrainian hromadas. These comprise: school and hospital renovations, estimated at 500,000 USD per facility, targeting institutions serving 1,000-3,000 residents; street lighting modernisation, with an average cost of 150,000 USD using self-powered LED systems; water supply and sewerage networks, typically requiring 300,000 USD for full coverage in a small village; grid-connected solar power plants, estimated at 250,000 USD for 50-70 kW installations supporting critical infrastructure; social housing and coworking spaces, which may be developed or renovated for 70,000 USD on average; and digital community platforms, such as DAO tools and RWA registries, estimated at 50,000 USD per deployment. These categories reflected both basic service needs and the integration of innovative, participatory governance tools. Comparing the volumes of potential investments with the cost characteristics of typical projects made it possible to estimate the number of feasible projects under different scenarios (Table 3).

Table 3. *Quantitative assessment of project implementation potential under different scenarios*

Scenario	Available volume (USD million)	Number of projects at 500,000 USD each	Number of small projects at 150,000 USD each	Combined option (60% large/40% small)
Optimistic (6 billion USD)	6,000	12,000	40,000	~7,200 large/~16,000 small
Realistic (3 billion USD)	3,000	6,000	20,000	~3,600 large/~8,000 small
Conservative (1.2 billion USD)	1,200	2,400	8,000	~1,440 large/~3,200 small

Source: *based on G. Lopushnyak & A. Shandar (2020), R. Chamria (2021), Ukrainians increased their cash savings by nearly 12 billion dollars in cash over the past year (2024), Population and business savings grew by almost 12 billion USD in cash over the year. Is everything so with NBU statistics (2024), Ukrainians increased their savings abroad by over 8 billion USD in six months (2024)*

Based on the average costs outlined in Table 2, a scenario-based modelling approach was applied to estimate the number of projects that could be implemented under varying levels of household savings mobilisation. The values presented in Table 3 were calculated by dividing hypothetical investment volumes – 1.2 billion USD (conservative), 3 billion USD (realistic), and 6 billion USD (optimistic) – by the unit costs of large projects (500,000 USD) and small projects (150,000 USD). These scenarios reflected potential outcomes derived from expert estimates of extra-banking savings volumes (Ukrainians increased their cash savings..., 2024; Population and business savings grew by almost..., 2024). Prior research on household investment behaviour also supported these assumptions, particularly the analysis of the dynamics and challenges of household savings in the context of the new socio-economic reality presented by G. Lopushnyak & A. Shandar (2020). For the realistic scenario of 3 billion USD, a diversified investment distribution was prepared based on the structure of typical local projects relevant to hromadas. Table 4 presented the projected allocation of funds across infrastructure and digital initiatives. The quantity of each project type was determined by dividing the available budget share by the respective unit cost, using the values established in Table 2. An additional 21% was allocated for audit, risk reserve, and programme management, in line with standard practice in donor-funded municipal development programmes.

Table 4. *Detailed investment distribution analysis under the realistic scenario*

Project	Quantity	Average cost (USD)	Total budget (USD)
2,000 schools/hospitals	2,000	500,000	1 billion
1,300 water supply systems	1,300	300,000	390 million
2,000 solar stations	2,000	250,000	500 million
1,000 social housing units	1,000	70,000	70 million

Table 4, Continued

Project	Quantity	Average cost (USD)	Total budget (USD)
2,400 street lights	2,400	150,000	360 million
1,000 digital DAO platforms	1,000	50,000	50 million
Total	—	—	**2,370 billion**
Audit/management/risk reserve (21%)	—	—	**630 million**

Source: *based on V. Kryzhanivskyi (2022), NBU sustainable finance development policy 2025 (n.d.)*

This distribution illustrated significant potential for comprehensive local infrastructure modernisation even within realistic investment attraction parameters. The proposed investment allocation in the realistic scenario laid the foundations for systematic infrastructure modernisation. However, sustainable development required not only effective resource distribution, but also robust mechanisms for invested capital recovery. A diversified project portfolio amounting to 2.37 billion USD, complemented by a 630 million USD audit, governance, and risk mitigation reserve, formed a structured investment strategy. The viability of this strategy depended directly on stable cash flow generation capacity and adequate investment return provision. Consequently, the logical analytical progression was to examine economic mechanisms that ensured investment returns and profitability, thus facilitating the transformation of one-off capital injections into self-perpetuating local development financing systems. To ensure the economic efficiency of investments and create incentives for households to participate in financing local projects, a diversified system of sources of benefits for investors was developed (Table 5).

Table 5. *Sources of benefit for investors within the framework of RWA tokenisation*

Source of benefit	Implementation mechanism through tokenisation
Financial profitability	Receiving dividends from project income (e.g., fees for using solar power plants, coworking space rental)
Savings on utility bills	Discounts or cost compensation based on token volume (e.g., energy from solar power plants is 20% cheaper)
Token value growth	Tokens with limited issuance may increase in price on the secondary market
Social benefit	Improvement of local infrastructure → increase in real estate value, comfort of living
Participation in management	DAO voting mechanisms, collaborative decision-making
Guaranteed buyback	The hromada redeems tokens at a fixed rate after 3-5 years

Source: *developed by the authors*

This diversified benefit structure established an attractive value proposition across investor categories, from financially oriented households seeking monetary returns to civic-minded hromada members primarily motivated by social externalities. M. Riabokin & Ye. Kotukh (2024) noted that, despite RWA tokenisation's promising potential, several implementation barriers exist in Ukraine: digital literacy deficiencies, particularly in small hromadas and among elderly demographics; widespread scepticism towards innovative financial technologies; inadequate tokenisation regulatory frameworks; and insufficient institutional support from local government. Overcoming these obstacles requires a comprehensive approach integrating educational initiatives, regulatory framework development, and demonstration projects to prove the efficacy of these mechanisms. For the practical implementation of RWA tokenisation at the hromada level, a coherent strategy should be developed and followed. This begins with the identification of socially valuable assets that possess strong tokenisation potential. Once such assets are selected, it is essential to conduct a comprehensive audit and prepare their digital representation. This includes compiling technical documentation, analysing utilisation history, and performing a detailed value assessment. On this basis, a transparent tokenomics model must be developed – one that aligns with the interests of all stakeholders and incorporates effective incentive mechanisms to engage citizeninvestors. To support implementation and ensure trust, decentralised information platforms should be established, enabling transparent communication and active interaction among participants. Finally, the success of the initiative depends on initiating a structured multi-stakeholder dialogue involving hromada representatives, local authorities, and regulatory bodies to coordinate project execution and develop the necessary legal frameworks.

Conclusions

The analysis confirmed the high potential of RWA tokenisation as an innovative mechanism for mobilising internal household savings to finance local development projects in Ukraine. Even under the conservative scenario (1.2 billion USD), the model enabled the implementation of approximately 1,440 large-scale projects (500,000 USD each) or 3,200 smaller initiatives (150,000 USD each). The realistic scenario (3 billion USD) allowed for 6,000 large or 20,000 small projects, ranging from school and hospital renovations to the installation of street lighting, solar power plants, water systems, and

DAO-based digital governance tools. The key advantage of the proposed approach lies in its ability to transform social capital into real investment flows through a transparent, decentralised, and participatory financing infrastructure. This met the public demand for transparency (79%) and inclusive engagement (94%). The model also provided a diversified system of financial and non-financial incentives – such as dividends, reduced utility costs, and participatory governance rights – forming a sustainable motivational basis for civic coinvestment. The developed methodology not only illustrated the technical feasibility of implementing RWA tokenisation, but also aligned with modern theoretical concepts of economic decentralisation, trustbased financing, and digital transformation. Social capital, when activated through tokenised instruments, became both a developmental and institutional resource for hromadas, enhancing fiscal autonomy and resilience. It was worth piloting this model in selected communities, assessing legal integration pathways, and quantifying the long-term socio-economic impacts of tokenised local finance mechanisms. The findings suggested a promising avenue for accelerating reconstruction, fostering innovation, and strengthening civic ownership in Ukraine's post-war recovery strategy.

Acknowledgements

None.

Funding

None.

Conflict of Interest

None.

References

[1] Acemoglu, D., & Robinson, J.A. (2013). *Why nations fail: The origins of power, prosperity, and poverty*. New York: Crown Currency.
[2] Barba, A., & Pivetti, M. (2009). Rising household debt: Its causes and macroeconomic implications – a long-period analysis. *Cambridge Journal of Economics*, 33(1), 113-137. doi: 10.1093/cje/ben030.
[3] Chamria, R. (2021). Tokenization of assets – how blockchain is rewriting the asset management. *Zeeve*. Retrieved from https://www.zeeve.io/blog/tokenization-of-assets-how-blockchain-is-rewriting-asset-management/.
[4] Chen, Y., & Bellavitis, C. (2020). Blockchain disruption and decentralized finance: The rise of decentralized business models. *Journal of Business Venturing Insights*, 13, article number e00151. doi: 10.1016/j.jbvi.2019.e00151.
[5] Cole, J. (2024). Green assets: Tokenizing sustainable Real World Assets. *Blockapps*. Retrieved from https://blockapps.net/blog/green-assets-tokenizing-sustainable-real-world-assets/.
[6] Coleman, J.S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94(1), 95-120.
[7] De Filippi, P., & Wright, A. (2018). *Blockchain and the law: The rule of code*. Cambridge: Harvard University Press.
[8] Fernandez-Vazquez, S., Rosillo, R., De La Fuente, D., & Priore, P. (2019). Blockchain in FinTech: A mapping study. *Sustainability*, 11(22), article number 6366. doi: 10.3390/su11226366.
[9] Fukuyama, F. (2001). Social capital, civil society and development. *Third World Quarterly*, 22(1), 7-20. doi: 10.1080/713701144.
[10] Herus, O. (2024). Peculiarities of investment support for industries in the current environment. *Economics, Entrepreneurship, Management*, 11(1), 57-66. doi: 10.56318/eem2024.01.057.
[11] Holynskyy, Yu., & Nuriyeva, V. (2023). Financial capacity of communities during a full-scale war. *Economy and Society*, 55. doi: 10.32782/2524-0072/2023-55-41.
[12] How to rebuild Ukraine – sociological survey of citizens and business representatives. (2023). *Transparency International Ukraine*. Retrieved from https://surl.li/etcnht.
[13] Kryzhanivskyi, V. (2022). *Report on the results of USAID DOBRE program "How consolidated communities can improve engagement and support for local business development"*. Kyiv: USAID; Global Communities Ukraine.
[14] Kurchenko, O. (2021). Traditional stock market may become a thing of the past. How does asset tokenization work? *Nv.ua*. Retrieved from https://biz.nv.ua/ukr/experts/shcho-take-tokenizaciya-aktiviv-i-navishcho-ce-potribno-biznesu-ostanni-novini-50175190.html.
[15] Liu, Z., Li, Y., Min, Q., & Chang, M. (2022). User incentive mechanism in blockchain-based online community: An empirical study of steemit. *Information & Management*, 59(7), article number 103596. doi: 10.1016/j.im.2022.103596.
[16] Lopushnyak, G., & Shandar, A. (2020). Household investments of Ukraine: Analysis of dynamics and challenges in the conditions of the new socio-economic reality. *Actual Problems of Economics*, 9, 106-115. doi: 10.32752/1993-6788-2020-1-231-106-115.
[17] NBU sustainable finance development policy 2025. (n.d.). *National Bank of Ukraine*. Retrieved from https://bank.gov.ua/admin_uploads/article/Policy_rozvytok-stalogo-finansuvannja_2025_en.pdf?v=4.
[18] Nyikos, G., Béres, A., Laposa, T., & Závecz, G. (2020). Do financial instruments or grants have a bigger effect on SMEs' access to finance? Evidence from Hungary. *Journal of Entrepreneurship in Emerging Economies*, 12(5), 667-685. doi: 10.1108/JEEE-09-2019-0139.

[19] Osisanwo, B.G., Maku, O.E., & Ajayi, F.O. (2024). Effects of trade and financial openness on inflationary pressure in Nigeria. *Economics of Development*, 23(1), 30-37. doi: 10.57111/econ/1.2024.30.
[20] Population and business savings grew by almost 12 billion USD in cash over the year. Is everything so with NBU statistics. (2024). *Minfin*. Retrieved from https://minfin.com.ua/ua/2024/02/01/120724952/.
[21] Putnam, R.D. (2000). Bowling alone: The collapse and revival of American community. In *Proceedings of the 2000 ACM conference on computer supported cooperative work* (p. 357). New York: Association for Computing Machinery. doi: 10.1145/358916.361990.
[22] Regional development funding. (2025). *Ministry for Development of Communities and Territories of Ukraine*. Retrieved from https://mindev.gov.ua/diialnist/polityka-rehionalnoho-rozvytku/finansuvannia-rehionalnoho-rozvytku.
[23] Riabokin, M., & Kotukh, Ye. (2024). RWA-tokenization as a tool for attracting investments and developing post-war Ukraine. *Global Scientific and Academic Research Journal of Economics, Business and Management*, 3(11), 64-77.
[24] Riabokin, M., Kotukh, Ye., & Aredo, J.C.V. (2025). Methods of optimizing financial flows of territorial hromadas using RWA tokenization. *Actual Problems of Economics*, 1, 57-70. doi: 10.32752/1993-6788-2025-1-283-57-70.
[25] Schär, F. (2021). Decentralized finance: On blockchain- and smart contract-based financial markets. *Federal Reserve Bank of St. Louis Review*, 103(2), 153-174. doi: 10.20955/r.103.153-74.
[26] State Statistics Service of Ukraine. (n.d.). *The Global Goals for Sustainable Development*. Retrieved from https://sdg.ukrstat.gov.ua/uk/goals/.
[27] Tapscott, D., & Tapscott, A. (2016). *Blockchain revolution: How the technology behind bitcoin is changing money, business, and the world.* New York: Portfolio. doi: 10.5555/3051781.
[28] Ukrainians increased their cash savings by nearly 12 billion dollars in cash over the past year. (2024). *Karpat.in.ua*. Retrieved from https://economic.karpat.in.ua/?lang=uk&p=45571.
[29] Ukrainians increased their savings abroad by over 8 billion USD in six months. (2024). *RBC-Ukraine*. Retrieved from https://www.rbc.ua/rus/news/ukrayintsi-pivroku-zbilshili-svoyi-zaoshchadzhennya-1722491950.html.
[30] Yemets, V. (2022). Economic development in the post-war period in Ukraine: Regional and local aspects. *Economy and State*, 5, 68-72. doi: 10.32702/2306-6806.2022.5.68.

Соціальний капітал в цифровій економіці: трансформація моделей фінансування проектів громад за допомогою RWA-токенізації

Марина Рябокінь
Кандидат економічних наук, доцент
Київський інститут бізнесу та технологій
04078, пров. Зоряний, 1/5, м. Київ, Україна
https://orcid.org/0000-0002-6724-9498

Євген Котух
Кандидат технічних наук, доцент
Національний технічний університет «Дніпровська Політехніка»
49005, просп. Дмитра Яворницького, 19, м. Дніпро, Україна
https://orcid.org/0000-0003-4997-620X

Анотація. Актуальність цього дослідження полягала у впровадженні інноваційних механізмів фінансування для територіальних громад України в контексті післявоєнного відновлення, з акцентом на значний нереалізований потенціал заощаджень домогосподарств. Метою дослідження стала оцінка доцільності використання токенізації реальних активів як інструменту мобілізації внутрішніх фінансових ресурсів шляхом активізації соціального капіталу. За експертними оцінками, обсяг заощаджень українських домогосподарств, що перебували поза межами формальної банківської системи, становив від 70 до 120 млрд дол. США. Моделювання сценаріїв показало, що навіть консервативна мобілізація 1 % цих коштів (1,2 млрд дол. США) уможливить реалізацію понад 2,000 інфраструктурних проєктів. За реалістичного сценарію (2,5 % або 3 млрд дол. США) громади зможуть здійснити до 6,000 масштабних або 20,000 дрібніших ініціатив, включаючи реконструкцію шкіл, модернізацію водопостачання та будівництво сонячних електростанцій. У дослідженні запропоновано концептуальну модель, яка інтегрувала соціальний капітал (довіра, мережі та спільні цінності), блокчейн-інструменти (токени та смарт-контракти) та економічні стимули (дивіденди, заощадження, права участі в управлінні). Представлено типологію проєктів, придатних до токенізації, структуру розподілу інвестицій та очікувані фінансові й соціальні результати. Також окреслено багаторівневу систему вигод для домогосподарств-інвесторів – від дивідендів до участі у прийнятті рішень через платформи Data Access Object. Підкреслено взаємозв'язок між соціальним капіталом і токенізацією реальних активів: довіра та локальні мережі стимулювали інвестиційну активність, а успішна реалізація проєктів посилила громадянську залученість і згуртованість спільноти. Практичне значення дослідження полягає у запропонуванні для територіальних громад відтворюваної моделі трансформації пасивних заощаджень у активний капітал для сталого розвитку за допомогою цифрової інфраструктури

Ключові слова: децентралізовані фінанси; блокчейн; місцевий економічний розвиток; цифрова інфраструктура; інвестиційні інструменти; сталий розвиток; заощадження

Journal
“ECONOMIC FORUM”

Volume 15, No. 3
2025

Managing Editor:
I. Kravchuk

Signed to the print with the original layout
Conventional Printed Sheet 14.5
Circulation 100 copies

Address for contacts:
Lutsk National Technical University
43018, 75 Lvivska Str., Lutsk, Ukraine
Tel.: (0332)746103
E-mail: info@e-forum.com.ua
https://e-forum.com.ua/en

Журнал
«ЕКОНОМІЧНИЙ ФОРУМ»

Том 15, № 3
2025

(Англійською мовою)

Відповідальний редактор:
І. Кравчук

Підписано до друку з оригінал-макета
Ум. друк. арк. 14,5
Наклад 100 прим.

Контактна адреса:
Луцький національний технічний університет
43018, вул. Львівська, 75, м. Луцьк, Україна
Тел.: (0332)746103
E-mail: info@e-forum.com.ua
https://e-forum.com.ua/uk