UDC 330.3:330.35:338.24:338.2
JEL classification: Q56; Q01; O44; 052; H12; E60; M14; L52
DOI: https://doi.org/10.17721/1728-2667.2026/228-1/8

Yana OLIINYK[1], DSc (Econ.), Assoc. Prof.
ORCID ID: 0000-0001-5895-282X
e-mail: oleynik_yv@ukr.net

Maria KUCHERIAVA[1], PhD (Econ.), Senior Researcher
ORCID ID: 0000-0003-2948-1234
e-mail: piven_maria@ukr.net

Alla ZINCHENKO[2], PhD (History), Assoc. Prof.
ORCID ID: 0000-0002-1193-6109
e-mail: a.zinchenko@ukma.edu.ua

Viktoriia TYSHCHENKO[3], DSc (Econ.), Prof.
ORCID ID: 0000-0002-2530-185X
e-mail: vf_hneu@ukr.net

Svitlana VOROBEI[3], PhD Student
ORCID ID: 0009-0008-3711-9407
e-mail: vorobei.svit@gmail.com

[1]State Educational-Scientific Establishment " The Academy of Financial Management", Kyiv, Ukraine
[2]National University of Kyiv-Mohyla Academy, Kyiv, Ukraine
[3]Simon Kuznets Kharkiv National University of Economics, Kharkiv, Ukraine

INTEGRATION OF CIRCULAR ECONOMY AND RESILIENCE PRINCIPLES INTO STATE ANTI-CRISIS POLICY AND CORPORATE STRATEGIES

Background. *Modern global challenges – from climate change to armed conflicts – have intensified the search for new economic models capable of combining the objectives of sustainable development with the enhancement of the resilience of societies and economies. The purpose of the study is to systematize theoretical approaches to the formation of new economic models of sustainable development and resilience, to determine their potential for strengthening the economic security of the state and enterprises, as well as to substantiate the possibilities of integrating the principles of the circular economy and resilience into state anti-crisis policy and corporate strategies using Ukraine as a case study. At the core of the research hypothesis lies the assumption that the spread of sustainable and resilient development practices among Ukrainian enterprises directly influences the country's economic security, shaping its ability to withstand military and global risks*

Methods. *Analysis and synthesis, generalization; structural and functional analysis method; graphical and tabular methods.*

Results. *In the course of the study, a typology of new economic models (green, circular, frugal, solidarity, creative, etc.) was carried out, and their potential to ensure resilience and post-crisis economic recovery was analyzed. Particular attention was paid to the circular economy principles, which are considered an institutional basis for strengthening anti-crisis regulation and long-term economic security. The empirical part of the study is based on the analysis of sustainable development practices of the 22 largest Ukrainian enterprises from six industries, which demonstrate high adaptability during wartime. Among the most widespread practices are employee and community support, assistance to the Armed Forces of Ukraine, as well as ecological modernization of production. On this basis, key components of sustainable development that directly affect the economic security of the state were identified, and indicators were proposed for assessing the contribution of business to ensuring resilience.*

Conclusions. *The results confirmed the research hypothesis: sustainable development practices in wartime strengthen the economic security of the state and form the foundation for inclusive post-crisis recovery. The study combines the systematization of theoretical models with an applied analysis of corporate strategies, which ensures its scientific novelty and practical significance. Prospects for further research are related to the development of integrated methodologies for assessing economic resilience, digital support for circular practices, and the harmonization of Ukrainian sustainability standards with those of the European Union.*

Keywords: *circular economy, economic security, resilience, regulatory framework, post-war recovery, social responsibility, fiscal regulation, macroeconomic stability.*

Background

Modern global challenges – ranging from climate change to armed conflicts – have intensified the search for new economic models capable of combining the objectives of sustainable development with the enhancement of societal and economic resilience (Zalilo, 2025). Traditional growth-oriented approaches are increasingly giving way to concepts that take into account resource constraints, social inclusiveness, and the capacity of systems to recover after crises. In this context, models such as the green, circular, frugal, solidarity, and creative economies have gained traction, each offering its own mechanisms for achieving resilience and economic security. An important complement to these approaches is the integration of fiscal regulation instruments, designed to smooth economic fluctuations and ensure macroeconomic stability, thereby strengthening the effectiveness of state anti-crisis policies.

These processes are particularly significant for countries operating under extraordinary conditions, such as Ukraine. The full-scale war has created unprecedented challenges for economic development, while simultaneously opening up opportunities to test new approaches to reconciling the objectives of recovery and sustainable growth. The central hypothesis of this study rests on the assumption that the spread of sustainable and resilient development practices among Ukrainian enterprises directly contributes to strengthening national economic security, shaping the state's ability to withstand both military and global risks.

The article seeks to provide both theoretical justification and empirical verification of the interconnection between

ISSN 1728-2667 (Print), ISSN 2079-908X (Online)

new economic models, sustainable development, and economic security. This contribution is significant for advancing scholarly debate as well as informing policy-making in crisis-affected countries. The novelty of the study lies in its combination of the systematization of new economic models with applied analysis of corporate strategies, thereby allowing for an assessment of their tangible contribution to strengthening state resilience.

Purpose and Objectives. The purpose of the study is to systematize theoretical approaches to the formation of new economic models of sustainable development and resilience, to define their role in strengthening the economic security of the state and enterprises, and to substantiate the possibilities for integrating the principles of the circular economy and resilience into state anti-crisis policy and corporate strategies, using Ukraine as a case study.

Achieving this purpose and testing the research hypothesis required addressing the following objectives:

- to examine the role of circular economy and resilience principles in shaping state anti-crisis policy and corporate strategies of Ukrainian enterprises;
- to analyze the main trends in the development of sustainable practices of Ukrainian enterprises during the full-scale war with Russia;
- to identify the core components of enterprise-level sustainable practices that directly influence the economic security and resilience of the state;
- to propose sustainable development indicators (with a focus on employee engagement and support) that demonstrate the contribution of business to the economic security and resilience of the state during wartime.

The object of the study is the process of forming and developing new economic models of sustainable development and resilience, as well as their integration into state anti-crisis policy and enterprise practices under conditions of war and global instability.

Literature review. The analysis of contemporary scholarly research indicates the emergence of new economic models of sustainable development, among which the circular economy occupies a central place as a fundamental model for enhancing economic resilience and security, as well as for adapting the state to crisis challenges.

Research on economic resilience has emerged relatively recently. The earliest studies addressed the conceptual foundations of economic resilience (Rose, 2007) and the resilience of economies following natural disasters (Rose, & Lim, 2002). Since 2020, the concept of regional economic resilience has gained particular prominence (Martin, & Sunley, 2020; Malik, Szewczuk-Stępień, & Bębenek, 2025; Sutton et al., 2023; Tóth et al., 2022). For instance, Malik, Szewczuk-Stępień, and Bębenek (2025) analyze the possibilities of integrating sustainable development principles into the formation of regional resilience plans. The authors argue that sustainability policies should become a fundamental basis for the design of operational measures aimed at strengthening regional resilience. They developed a model of integrated regional resilience, the core element of which is a transformation matrix that enables the translation of strategic sustainable development goals into concrete operational measures and projects, applying the SRP criteria (Safety, Risk, Prevention).

The issue of regional economic resilience has appeared in policy documents of the OECD (2021), the World Bank (2021), the World Trade Organization (2021), and the European Commission (2020). The EU Strategic Foresight Report of 2020 identifies resilience as a new guiding principle for EU policies, emphasizing not only the ability to withstand threats but also the capacity to undergo transformation in a sustainable, fair, and democratic manner (European Commission, 2020; World bank Group, 2021).

Scholars have also examined the role of financial incentives in promoting the spread of ESG orientation among enterprises. For instance, Gao, Zhou and Wan (2024) demonstrate that the introduction of green finance policies in China contributed to a significant improvement in corporate ESG performance, a reduction of financial constraints, and the stimulation of investments in sustainable practices. The study underscores the importance of combining state regulation with corporate initiative to achieve the broader goals of sustainable development and resilience.

An important strand of the academic literature focuses on resilience through the implementation of new economic models in sectoral contexts, particularly in resource-intensive industries. Blinova, Ponomarenko and (2022) analyze the concept of corporate sustainability in the mining industry, emphasizing the need to integrate elements of the circular economy into management strategies. In turn, Markevych et al. (2022) argue that the adoption of circular economy principles in the use of mineral resources is directly linked to Ukraine's economic security and forms the foundation for energy and industrial stability.

A substantial body of research has been devoted to the transformation of business models in the context of strengthening state economic security through enhanced corporate resilience. Ensign (2022) emphasizes the importance of business model transformation in achieving the SDGs, while Rosário, Lopes and Rosário (2024) systematize contemporary approaches to combining circularity with sustainable business development. Gazzola et al. (2020) examine the perception of circular economy and sustainability principles in the fashion industry, noting significant differences depending on generation and gender. Al Rashid and Koç (2023) highlight the potential of additive manufacturing (3D printing) for recycling polymer waste, which opens up new opportunities for advancing the circular economy in industry and creating decentralized recycling models.

All of the reviewed publications demonstrate that the circular economy is evolving as a new economic model capable of integrating economic, social, and environmental priorities. It is becoming a key instrument of state anti-crisis policy (IER, 2025), as it reduces dependence on external resources and creates new incentives for domestic development. This model forms the very foundation of economic resilience, since it enables production and financial systems to adapt to global shocks. The implementation of the circular economy ensures economic security by strengthening control over strategic industries and resources in conditions of polycrisis.

Despite the existing scholarly achievements, the examined aspects related to the introduction of conceptually new approaches to safeguarding state economic security and resilience at all levels require further systematic academic reflection. The need to examine economic models in the context of state anti-crisis policy and resilience remains highly relevant. In this regard, the circular economy and alternative scenarios acquire strategic importance, moving beyond the tools of corporate governance and transforming into the basis of state economic policy under crisis and post-crisis recovery conditions.

Methods

To achieve the stated objectives and to test the research hypothesis, the study employed a set of interrelated

methods forming a coherent and logically consistent methodological framework. Their sequential application ensured a gradual transition from theoretical generalization to institutional analysis and empirical verification, thereby strengthening the internal validity and reliability of the research findings. At the first stage, the methods of analysis, synthesis, and generalization were applied to systematize theoretical and conceptual approaches to sustainable development and resilience, to identify the essential features of new economic models, and to outline their evolution in response to global and national crises. These methods provided the epistemological foundation for subsequent analytical procedures. At the next stage, the structural and functional analysis was employed to examine how the principles of the circular economy and resilience can be incorporated into the institutional framework of state anti-crisis policy and mechanisms of economic security. This method made it possible to trace causal linkages between theoretical constructs and the instruments of public regulation, revealing the functional complementarity of economic, social, and environmental dimensions of resilience. At the final stage, graphical and tabular methods were utilized to visualize the interconnections among components of economic security, summarize empirical data on the sustainable practices of Ukrainian enterprises, and ensure clarity and consistency in the presentation of results.

Overall, the methodological design of the study constitutes an integrated system combining theoretical synthesis, structural-functional analysis, and data visualization. The complementarity of these methods allowed for a comprehensive substantiation of the interdependence between sustainable development practices, resilience, and economic security, thus empirically confirming the research hypothesis concerning the integration of circular economy and resilience principles into state anti-crisis policy and corporate strategies.

Results

Integrating Circular Economy and Resilience into State Anti-Crisis Models. In today's conditions of global turbulence driven by wars, economic crises, climate change, and technological transformations, traditional models of economic development are increasingly losing their effectiveness. The resilience of economies depends not only on their ability to withstand shocks but also on their capacity to adapt swiftly, recover, and simultaneously advance along the path of sustainable development. For this reason, a new generation of economic models is emerging in global scholarly and policy discourse, aimed at ensuring a balance between economic performance, social justice, and environmental security.

The importance of considering these models lies in their ability to provide states and enterprises with new frameworks for building anti-crisis strategies and recovery mechanisms. For instance, the circular economy focuses on closed cycles of production and consumption, prioritizing reuse and waste minimization. The green economy relies on low-carbon technologies and resource efficiency, laying the foundation for "green growth." The frugal economy emphasizes innovations that enable affordable solutions under resource constraints. The social and solidarity economy underscores the significance of collective action, the democratization of economic relations, and the prioritization of social goals over commercial profit. Alongside these, the relevance of creative, blue, purple, and other models is increasing, as they integrate cultural, gender, and environmental dimensions into development strategies.

For economies in transition, such as Ukraine, the systematization of these approaches has both theoretical and practical significance (Sereda, Nahachevska, & Hryhorova, 2024). It enables the identification of models most relevant in the context of post-war recovery, strengthening economic security, and shaping state policies oriented toward resilience. An analysis of the typology of new economic models provides a foundation for selecting effective trajectories of economic development that combine anti-crisis instruments with long-term strategies of sustainability and innovation.

Building on existing scholarly work, the central assumption of this study is that the principles of circularity can serve as an integrative tool for the implementation of new economic concepts of sustainable development (NESD). They provide a practical mechanism for combining ecological, social, and economic dimensions of development, creating conditions for strengthening the resilience of economic systems and their ability to recover after crises. Overall, all the models presented in Table 1 can, within a systems approach, be classified according to their functional orientation as: environmentally oriented models, socially inclusive models, and culturally innovative models (see Fig. 1).

Fig. 1. Classification of new economic models of sustainable development by functional orientation

Source: developed by the author.

New economic models (Fig. 1) integrate the principles of circularity and create prerequisites for ensuring resilience and the recovery of economic systems.

One of the key concepts increasingly regarded as an instrument for shaping new economic models is the circular economy. Its principles – Refuse, Rethink, Reduce, Reuse, Repair, Refurbish, Remanufacture, Repurpose, Recycle, and Recover – not only reduce environmental pressures but also enhance the adaptive capacity of economic systems.

Within the framework of state anti-crisis policy, the circular economy acquires particular importance. It allows not only for resource savings in times of scarcity but also for the creation of institutional preconditions for long-term resilience – that is, the ability of the state and society to respond rapidly to challenges, minimize the consequences of shocks, and at the same time use crises as a driver for structural transformations.

The relevance of studying the integration of circular economy principles into state anti-crisis models is reinforced by the fact that they have become part of major contemporary policy initiatives, such as the European Green Deal and the Ukraine Facility program, both aimed at

recovery and modernization. These initiatives lay the groundwork for the use of circular mechanisms as tools of economic stabilization and recovery.

Thus, the circular economy can be considered not only as an environmental or resource-based approach but also as a systemic instrument for designing new economic models that strengthen state resilience during crises and create the foundation for long-term economic security and innovative growth.

The logical next step is to demonstrate how circular economy principles – particularly the 10R model – can be integrated into the system of state anti-crisis regulation in the context of ensuring economic security (Table 1).

Table 1

Integration of the 10R Principles into the System of State Anti-Crisis Regulation in the Context of Economic Security

Component of Economic Security	Integrated 10R Principles	Significance in the Context of Anti-Crisis Regulation
Macroeconomic	Refuse (abandonment) of environmentally hazardous industries; Rethink (reconsideration) of consumption models; Reduce (reduction) of resource use in the public sector	Reducing budget expenditures on eliminating the consequences of crises, and shaping resource-efficient state policy
Financial	Reuse of financial instruments; Repair of banking mechanisms; Refurbish of insurance models	Strengthening financial resilience, ensuring access to liquidity under crisis conditions
External economic	Remanufacture for exports; Repurpose (repurposing) of production under external demand	Diversification of foreign trade, reducing dependence on imports of critical resources
Production	Recycle of production waste; Recover (energy recovery) in industrial cycles	Reducing production costs, strengthening the resilience of industries in crisis conditions
Investment and innovation	Redesign of products and processes; Refurbish of technologies	Stimulating innovation and enhancing efficiency during a crisis period
Social	Rethink employment models; Reuse of skills through retraining	Ensuring employment, adapting the labor market to crisis shocks
Food	Reduce food waste; Reuse of production leftovers	Guaranteeing food security and reducing the risk of shortages during a crisis

Source: developed by the author.

The integration of circular economy principles under the 10R model into the system of state anti-crisis regulation significantly expands the potential of traditional economic security instruments. While classical mechanisms are mainly aimed at short-term stabilization and overcoming the consequences of crises, the application of circular economy principles makes it possible to simultaneously ensure resilience and long-term modernization of the economy.

At the macroeconomic level, the combination of principles such as Refuse and Rethink promotes the abandonment of environmentally and resource-inefficient practices and the formation of new models of consumption and public spending, thereby reducing the fiscal burden during a crisis. In the financial sphere, the principles of Reuse and Refurbish transform banking and insurance instruments into more adaptive forms suited to crisis conditions, ensuring the availability of liquidity and financial services.

For external economic security, the integration of Remanufacture and Repurpose principles enables diversification of exports and reduces dependence on imports of critical resources, thus strengthening economic autonomy. In the production sector, the principles of Recycle and Recover increase resource efficiency and minimize losses during crises, while in the field of innovation and investment, Redesign and Refurbish create the foundation for structural renewal of the economy even in times of instability.

Social and food security, in turn, benefit from the principles of Rethink, Reuse, and Reduce, which support labor market adaptation, enhance labor mobility, and ensure a basic level of food supply. This forms a basis not only for minimizing risks but also for creating new development opportunities in the recovery phase.

Thus, the application of circular economy principles in state anti-crisis regulation transforms it from a "firefighting" mechanism into an instrument of comprehensive transformation that simultaneously addresses current problems and sets the course for long-term resilience and innovative development.

The next step of the research is to clarify how circular economy principles are integrated into the system of state anti-crisis regulation at the institutional level. This is particularly important since institutional mechanisms determine the effectiveness of policy implementation, their alignment with international commitments, and their ability to ensure economic security in crisis conditions. The experience of the European Union, which has embedded the normative foundations of the circular economy within the framework of the European Green Deal, and of Ukraine, which is implementing relevant reforms under the Ukraine Facility in crisis conditions, makes it possible to trace the interrelation between European and national strategic approaches and to assess their potential for shaping a sustainable model of economic recovery (Table 2).

The integration of circular economy principles within the framework of the European Green Deal and the Ukraine Facility reflects the consistent transfer of European practices into the national context through their consolidation in the format of specific reforms. The EU sets the strategic benchmarks – industrial mobilization, eco-design, the right to repair, waste reduction in critical sectors, enhanced transparency of ESG reporting, and process digitalization – while Ukraine ensures the implementation of these approaches through a comprehensive set of measures in climate policy, industrial emissions regulation, waste management, reporting development in the extractive sector, and digital transformation.

The synergy of these two strategic frameworks generates a range of positive effects: reducing the energy intensity of production, diversifying foreign economic relations, strengthening industrial resource efficiency, developing repair and service industries, and establishing an institutional foundation for transparent and controlled post-war reconstruction. Importantly, this approach not only reflects the adaptation of Ukrainian reforms to European standards but also creates new opportunities for integration into the EU internal market, which is directly linked to the country's long-term economic resilience and innovative development.

Table 2

Integration of Circular Economy Principles in the European Green Deal and the Ukraine Facility: Implications for Economic Resilience and Post-War Recovery of Ukraine

European Green Deal	Ukraine Facility (European Parliament, 2024)	Circular Economy Principles (EU)	Significance of Implementation for Ukraine (Resilience and Recovery)
Mobilization of industry for a climate-neutral economy; Circular Economy Action Plan (2020)	Section 15 "Green Transition". Reforms 2–4: climate policy, carbon pricing, resource protection	Eco-design	Reduction of energy intensity in production, integration into the EU market, creation of "green" jobs
Control of industrial pollution, strict standards for Environmental Impact Assessment (EIA/SEA)	Section 15. Reforms 1 and 6: industrial emissions, regulation of EIA/SEA exemptions	Right to Repair	Extension of product life cycles, development of repair services, and reduction of household and business costs
Focus on energy-intensive sectors: steel, chemicals, cement, textiles, electronics	Section 15. Reform 5: Circular Economy strategy and action plan; National Waste Management Plan	Waste reduction in critical sectors	Decreasing dependence on raw material imports, resource efficiency in industrial reconstruction
Consumer policy: durable and repairable products; reliable information (ESG transparency)	Section 13. Management of critical raw materials. Reform 3: ESG reporting in the extractive sector	Principles of sustainable consumption and ESG disclosure	Harmonization with European standards, prevention of "greenwashing", integration into global value chains
Digitalization as a driver of the circular economy: digital product passports	Section 14. Digital transformation	Digital CE	Building digital infrastructure for resource management, accelerating recovery through transparency and control

Source: European Commission (2019; 2020).

The analysis has demonstrated that the integration of circular economy principles into the system of state anti-crisis regulation creates opportunities for the profound transformation of institutional mechanisms for ensuring economic security. The evolution of circular economy principles – from the basic 3R model to the modern 10R paradigm and the EU's political frameworks – illustrates the expansion of instruments capable of simultaneously reducing crisis-related risks and fostering long-term resilience. The synchronization of these principles with the institutional instruments of macroeconomic, financial, production, investment-innovation, social, and food security establishes the foundations for the comprehensive modernization of state anti-crisis policy. The experience of the European Union and Ukraine's Recovery Plan (Ukraine Facility) demonstrates that combining circular approaches with anti-crisis instruments not only enhances the economy's adaptability to shocks but also sets the trajectory for sustainable growth and integration into the European economic space.

At the same time, the institutional level reflects only the potential framework for integrating circular economy principles. To assess their practical effectiveness, it is necessary to turn to the empirical analysis of the activities of economic agents at the micro level in ensuring economic security and resilience.

Empirical Assessment of Ukrainian Enterprises in Ensuring Economic Security and Sustainability. In scientific research, economic resilience – both at the state (macroeconomic) level and at the level of individual enterprises (microeconomic) – is generally understood as the ability to adapt and continue development after internal and external shocks. The foundations of scholarly approaches to resilience analysis are rooted in the works of Rose and Krausmann (2013), who defined resilience as the capacity of a system to maintain functioning during shocks (static resilience) and to accelerate recovery after shocks (dynamic resilience). Scholars largely interpret resilience as the inherent capacity of an economic system (at either macro- or micro-levels) to adjust and recover following the impact of various disruptions. There is also an alternative perspective that views resilience not as a property of the system but as a potential that must be developed. This approach highlights the importance of fostering the potential for "response, monitoring, learning, and anticipation," particularly in the context of long-term crises such as climate change or war.

At the beginning of the full-scale war, as noted by Bohomaz (2025), the value profile of enterprises began to play an even more significant role for stakeholders. According to Bohomaz, particular importance is now attached to the element of business support for the state during this difficult period and to the absence of active ties with the aggressor country. Numerous studies of Ukrainian business practices indicate that in corporate sustainability policies, the social dimension has come to the forefront – support for employees, vulnerable groups of the population, the state, and the Armed Forces of Ukraine. For example, according to a study conducted by CSR Ukraine and *The Page*, in the period from February 24, 2022, to December 31, 2022, the majority of Ukrainian businesses concentrated their efforts on ensuring employee safety, supporting the combat capability of the Armed Forces of Ukraine, and assisting local communities (CSR Ukraine) (Fig. 2).

According to the 2024 study on the resilience of Ukrainian business, almost 100% of respondents emphasized that their role as businesses was to support the state through tax payments and to strengthen the Armed Forces of Ukraine in this war through corporate social and charitable activities directed toward supporting the military and employees currently defending the country on the front lines (One Philosophy). Furthermore, according to a study on the state and needs of business conducted by the Center for Innovation Development, the Office for Entrepreneurship and Export Development, and the national project Diia.Business, and AdvanterGroup in November–December 2024, 70.4% of companies reported providing assistance to the Armed Forces of Ukraine, allocating on average 1.9% of their turnover for this purpose (Center for Innovation Development, 2024). The study also revealed that half of the enterprises (50.4%) assisted employees and their families, nearly one-third (29.6%) to internally displaced persons, 17.2% participated in social initiatives, and almost one in ten enterprises contributed to community recovery (Center for Innovation Development, 2024).

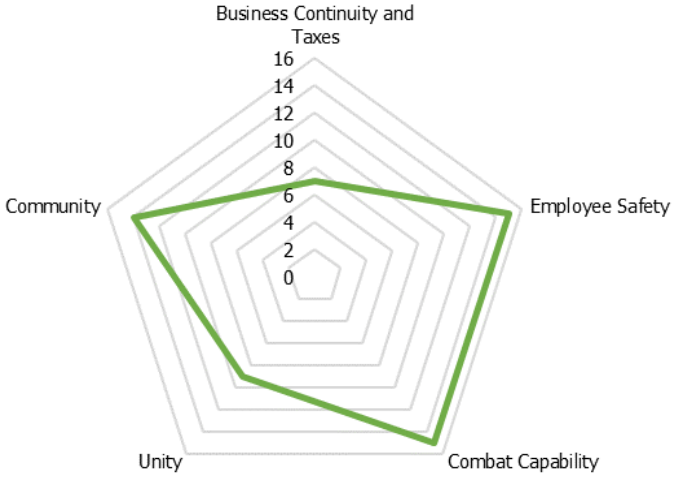

Fig. 2. The most widespread practices of Ukrainian business in 2022

Source: Center for Innovation Development (2024).

One of the main challenges faced by Ukrainian businesses during the war, which directly affects enterprise resilience, is the shortage of qualified personnel. According to the 2024 business resilience survey, 80% of respondents reported experiencing a lack of human resources (One philosophy, 2024). Furthermore, a study conducted by the Institute for Economic Research (IER) in February 2025 found that for 63 enterprises, labor shortages had become the most acute obstacle to business development.

The shortage of skilled personnel is linked to significant migration processes caused by the full-scale invasion and active hostilities, mobilization, and the loss of both military and civilian lives. Experts emphasize that this shortage may negatively affect post-war recovery, as the share of migrants planning to return to Ukraine after the war is decreasing annually. Most enterprises, recognizing the importance of qualified personnel for business resilience, are developing strategies for employee recruitment and retention. According to the 2025 resilience survey, such strategies include: ensuring competitive wages and social benefit packages; training women for professions historically dominated by men; creating internal corporate career pathways; involving staff in corporate volunteering and social projects; digitalization and optimization of internal processes; employee upskilling and reskilling programs; strategic efforts to prepare future personnel; and fostering intergenerational collaboration (One philosophy, 2024).

The shortage of qualified personnel has become not only the main obstacle to the development and resilience of Ukrainian companies but also a threat to the resilience of the economy as a whole. Among the most likely threats to economic security in terms of both impact and probability of occurrence in 2026–2028, the report *"Economic Security of Ukraine under High War Risks and Global Instability"* by the Center for Economic and Social Research of the National Institute for Strategic Studies identified: a shortage of skilled labor (a reduction in labor potential due to intensive migration abroad, a significant share of internally displaced persons, civilian losses caused by hostilities, and a deepening labor deficit in agricultural production); a substantial deterioration in the socio-economic situation of vulnerable groups of the population; severe environmental degradation (including war-related pollution) caused by military actions; and underfunding of certain budget expenditures due to the state's limited financial capacity (Zhalilo, 2025).

Based on these threats and the components of resilience of Ukrainian enterprises and organizations, the key components of corporate sustainable development that have a direct impact on the economic security and resilience of the state were identified (see Table 3).

These components of sustainable development formed the basis for examining the impact of Ukrainian enterprises on ensuring the country's economic security and resilience during the full-scale war. Using the proposed components of sustainable development, the activities of 22 enterprises from six sectors (agriculture, retail, energy, IT, metallurgy, and telecommunications) were analyzed. These companies were selected from the *Top 200 Largest Private Companies in Ukraine by Turnover in 2023,* ranking published by *Forbes*. For each selected sector, up to five enterprises from the first 100 companies on the list were chosen for analysis. The study reviewed sustainable development practices for which information was publicly available – in sustainability reports, on company websites, or in interviews of company representatives with business media. The enterprises analyzed included: Kernel, MHP, Eridon, Ukrlandfarming, Astarta, ATB, Fozzy Group, Epicenter K, Rozetka, Comfy, DTEK, SoftServe (SoftServe, 2024), EPAM Ukraine, Genesis, GlobalLogic, Metinvest, ArcelorMittal Kryvyi Rih, Interpipe, Nikopol Ferroalloy Plant, Kyivstar, Vodafone, and Lifecell.

The analysis of sustainable development practices demonstrated that the most widespread initiatives are those aimed at supporting society and employees. Environmental protection practices, meanwhile, were implemented by just over half of the enterprises during the war (Fig. 3).

Among the practices of supporting society and employees, the most widespread are assistance to the Armed Forces of Ukraine (AFU), community support and development, employee upskilling and reskilling programs, employee support programs, and employee safety programs (Table 4). All enterprises provide financial and material assistance to the AFU. For example, Metinvest established the production of special steel for armor plates used to manufacture bulletproof vests and shields for equipment protection, as well as materials and equipment for the construction of fortifications and trenches. A large quantity of equipment and gear was also purchased and delivered to defenders, including drones, thermal imagers, communication devices, backup power systems, and various types of transport (Metinvest, 2023).

Table 3

Components of Corporate Sustainable Development and Their Impact on the Challenges and Threats to Ukraine's Economic Security

№	Components	Elements of Sustainable Development	Challenges and Threats to Ukraine's Economic Security
1	Employee safety (relocation programs, shelters, flexible work schedules)	Social. Employee support and development	Shortage of qualified labor
2	Employee support (psychological support programs, financial assistance, health insurance programs, additional leave [childcare], support for mobilized employees)	Social. Employee support and development	Shortage of qualified labor
3	Inclusion of women, internally displaced persons (IDPs), people with disabilities, and veterans in company employment	Social. Employee support and development	Shortage of qualified labor
	Employee training and retraining	Social. Employee support and development	Shortage of qualified labor
4	Volunteering programs	Social. Employee support and development	Underfunding of certain budget expenditures due to the state's limited financial capacity
5	Career guidance programs for youth and cooperation with higher education institutions	Social. Employee support and development	Shortage of qualified labor
6	Community support and development	Social. Community support and development	Substantial deterioration of the socio-economic situation of vulnerable population groups
7	Support for internally displaced persons (IDPs)	Social. Community support and development	Substantial deterioration of the socio-economic situation of vulnerable population groups
8	Support for the Armed Forces of Ukraine (AFU)	Social. Community support and development	Underfunding of certain budget expenditures due to the state's limited financial capacity
9	Assistance to the government and municipalities	Social. Community support and development	Underfunding of certain budget expenditures due to the state's limited financial capacity
10	Resource conservation	Environmental	Significant environmental degradation caused by hostilities
11	Waste management	Environmental	Significant environmental degradation caused by hostilities
12	Reduction of CO_2 emissions	Environmental	Significant environmental degradation caused by hostilities
13	Environmental modernization of production facilities	Environmental	Significant environmental degradation caused by hostilities
14	Biodiversity protection	Environmental	Significant environmental degradation caused by hostilities

Source: developed by the author.

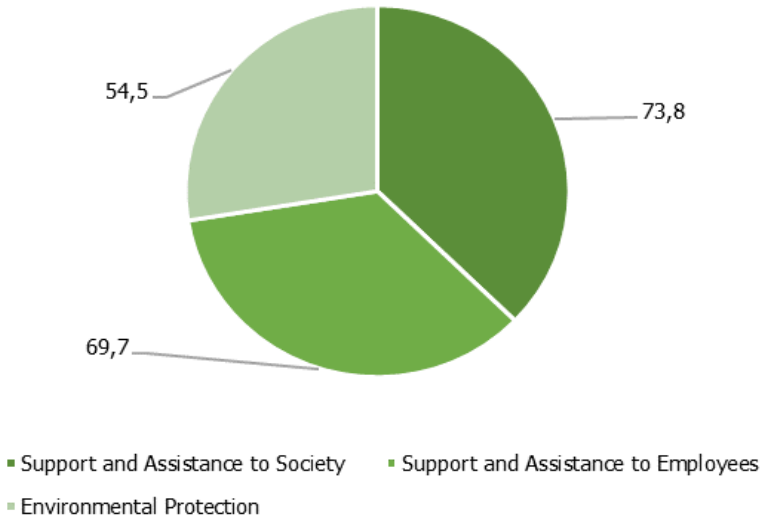

Fig. 3. The most widespread practices of Ukrainian business in 2024

Source: developed by the author based on the data of the analyzed enterprises.

Table 4

Dissemination of Sustainable Development Practices among Ukrainian Enterprises during the Full-Scale War with Russia

Components	Elements of Sustainable Development	Share of Enterprises Implementing, %
Employee safety (relocation programs, shelters, flexible work schedules)	Social. Employee support and development	72.7
Employee support (psychological support programs, financial assistance, health insurance programs, support for mobilized employees)	Social. Employee support and development	81.8
Inclusion of women, internally displaced persons (IDPs), people with disabilities, and veterans in company employment	Social. Employee support and development	63.6
Employee training and retraining	Social. Employee support and development	86.4
Volunteering programs	Social. Employee support and development	63.6
Career guidance programs for youth and cooperation with higher education institutions	Social. Employee support and development	50.0
Community support and development	Social. Community support and development	95.5
Support for internally displaced persons (IDPs)	Social. Community support and development	54.5
Support for the Armed Forces of Ukraine (AFU)	Social. Community support and development	100.0
Assistance to the government and municipalities	Social. Community support and development	45.4
Resource conservation	Environmental	63.6
Waste management	Environmental	68.1
Reduction of CO_2 emissions	Environmental	40.9
Environmental modernization of production facilities	Environmental	59.0
Biodiversity protection	Environmental	40.9

Source: developed by the author based on the data of the analyzed enterprises.

Among corporate practices of assisting communities and the state, the most widespread are material support for hospitals, assistance to communities in accommodating internally displaced persons, implementation of pro bono projects, and the provision of equipment and other resources. For example, DTEK (DTEK, n. d.) provided free electricity to the military, hospitals, and critical infrastructure facilities in Kyiv, Dnipropetrovsk, and Donetsk regions (more than 100 infrastructure facilities). SoftServe, within the framework of the global EmpowerU program (SoftServe, 2024), offers free IT courses through the SoftServe Academy, providing career development opportunities for newcomers to the IT sector – primarily for people from vulnerable groups, including women, persons with disabilities, veterans, refugees, and others. Additionally, EPAM volunteers (EPAM, 2023), at the request of the Ministry of Foreign Affairs of Ukraine, developed and implemented substantial improvements to the *E-Queue* electronic system, which ensures online booking for Ukrainian consulates and prevents fraud.

Corporate programs for employee support and development are aimed at creating safe working conditions. These include relocation programs launched in 2022 (for example, ArcelorMittal Kryvyi Rih temporarily evacuated 1,000 family members of employees to Western Ukraine and Poland (Yermolenko, 2024); MHP [Myronivsky Hliboproduct] evacuated 600 employees and their families from Irpin, Bucha, and Hostomel, as well as partially relocated employees to Western Ukraine), programs supporting mobilized employees, and psychological assistance initiatives (for instance, MHP operates "Resilience School 3.0") (Forbes Ukraine, 2022).

In recent years, companies have also actively introduced programs for the employment and support of women in traditionally male professions (ArcelorMittal Kryvyi Rih); employment and support of veterans (programs covering physical and psychological rehabilitation, retraining, and individual adaptation initiatives are in place at Interpipe, Vodafone Ukraine, Kernel, and others); and hiring of employees aged 60+ (for example, Astarta has increased the share of employees aged 60+ by 5% and is implementing the project *"Active and Healthy Longevity"* (Astarta, 2024).

The analysis of Ukrainian enterprises' practices in the field of employee engagement and support during the war made it possible to develop sustainability indicators (component – employee engagement and support) that demonstrate business contributions to the country's economic security and resilience during wartime. These include the share of preserved or newly created jobs, the share of hired internally displaced persons (IDPs) and veterans, the share of employees covered by psychological support programs, the share of employees who completed upskilling and reskilling programs, the number of shelter places, and the share of employees who completed training in first aid and emergency response.

Regarding the environmental practices of Ukrainian enterprises, only about half have implemented environmental protection programs, many of which were deprioritized at the onset of the war. However, their renewal and active implementation may begin in the near future. The driving force behind this process will be the implementation of the Ukraine Recovery Plan, which is synchronized with the European Green Deal and sets a target of reducing CO_2 emissions by 65% by 2032 compared to 1990 levels. This implies that enterprises must adapt their business models to the requirements of the European Green Deal, including the complete phase-out of coal in energy production; shifting freight transport from road to rail and waterways; developing renewable energy sources; reusing materials; and designing products for long-term use (e.g., electronics) with the potential for repair and recycling.

Discussion and conclusions

The conducted study not only makes it possible to record the transformation of economic models and corporate strategies under polycrisis conditions but also to formulate sustainability indicators that can serve as a tool for assessing business contributions to strengthening national resilience.

The obtained results are consistent with existing scholarly contributions in the field of economic resilience (Rose, 2007; Martin, & Sunley, 2020; Malik, Szewczuk-Stępień, & Bębenek, 2025), yet this study goes a step further by applying a comprehensive methodology for assessing sustainable development practices at the level of Ukrainian enterprises during wartime. Thus, the research expands the scope of previous studies, which largely focused on the macroeconomic level, and demonstrates the practical dimension of the interrelation between corporate sustainability practices and national economic security.

Importantly, the analysis made it possible to test and confirm the scientific hypothesis of the study: the spread of sustainable and resilient development practices among Ukrainian enterprises directly contributes to strengthening the state's economic security, enhances its ability to withstand military and global risks, and provides the foundation for post-war recovery. Empirical findings indicate that the most critical aspects for economic resilience are the social dimensions of sustainable development – employee support, job retention, community development, and assistance to the Armed Forces of Ukraine. These function as "core practices" that preserve the integrity of the economic system in conditions of prolonged crisis.

The consistency of the findings with current EU approaches regarding the integration of circular economy principles and ESG reporting into public policy and corporate practices confirms that the chosen research trajectory is not only relevant but also strategically important for post-crisis and post-war recovery. Thus, the results of this work not only systematize theoretical models but also prove their effectiveness through the case of Ukrainian enterprises under crisis conditions, thereby addressing the stated research objective and providing a basis for the further development of sustainability indicators across all dimensions – social, economic, and environmental.

The research on the integration of circular economy and resilience principles into state anti-crisis policy confirmed their key role in transforming institutional mechanisms for ensuring economic security. The use of the 10R model enables the transformation of anti-crisis regulation from a tool of short-term stabilization into a means of profound economic modernization. The case of Ukraine, which is implementing relevant reforms within the Ukraine Facility and aligning them with the European Green Deal, demonstrates the feasibility of this approach.

The empirical analysis of Ukrainian enterprises during the full-scale war revealed that business demonstrates high adaptability and develop sustainable strategies even under crisis conditions. The most widespread practices were socially oriented – employee support, community assistance, and contributions to strengthening the combat capability of the Armed Forces of Ukraine. Environmental aspects of sustainable development have remained less prioritized, but their significance is expected to increase in the process of post-war recovery and adaptation to the requirements of the European Green Deal.

Of particular importance is the identification of key components of corporate sustainable development that directly affect the economic security and resilience of the state. These include measures to preserve and develop human resources, social support for vulnerable groups, and corporate engagement in meeting the critical needs of society and the military. At the same time, ecological modernization of production capacities and the introduction of circular practices create an additional reserve for strengthening the resilience of the national economy.

Based on the conducted analysis, sustainability indicators (component – employee engagement and support) were developed, allowing for the quantitative assessment of business contributions to economic security and resilience under wartime conditions. Their application will support the creation of a monitoring system for enterprise resilience and enable the integration of corporate efforts into nationwide recovery and development strategies.

Thus, the results of the study confirmed the scientific hypothesis formulated in the introduction: the spread of sustainable and resilient development practices among Ukrainian enterprises directly contributes to strengthening the economic security of the state, enhances its ability to withstand military and global risks, and lays the foundation for inclusive and sustainable post-crisis recovery.

The prospects for further research involve an in-depth analysis of sustainability indicators based on an expanded sample of enterprises and consideration of sectoral specificities, as well as the development of integrated methodologies for assessing economic resilience in wartime and post-war periods. Particularly relevant is the study of opportunities for the systemic integration of circular economy principles into state anti-crisis policy, fiscal and tax mechanisms, and corporate strategies. Future research should also combine macroeconomic and microeconomic levels of analysis, develop scenarios for digital support of circular practices, and adapt European sustainability standards to Ukrainian conditions. This will contribute to establishing a methodological foundation for modernizing economic policy and enhancing Ukraine's economic security under polycrisis conditions.

Authors' contribution: Yana Oliinyk – writing (review and editing); Alla Zinchenko – formal analysis, writing (original draft); Maria Kucheriava – conceptualization, methodology, writing (original draft); Viktoriia Tyshchenko – writing (review and editing); Svitlana Vorobei – formal analysis.

Sources of funding. This study did not receive any grant from a funding institution in the public, commercial, or non-commercial sectors. The funding is covered by the authors' own expense.

References

Al Rashid, A., & Koç, M. (2023). Additive manufacturing for sustainability and circular economy: Needs, challenges, and opportunities for 3D printing of recycled polymeric waste. *Materials Today Sustainability*, 24, 100529. https://doi.org/10.1016/j.mtsust.2023.100529

Astarta. (2025). Annual report 2024. https://astartaholding.com/wp-content/uploads/2025/04/2024-annual-report.pdf

Blinova, E., Ponomarenko, T., & Knysh, V. (2022). Analyzing the concept of corporate sustainability in the context of sustainable business development in the mining sector with elements of the circular economy. *Sustainability*, 14(13), 8163. https://doi.org/10.3390/su14138163

Bohomaz, O. (2025). Analysis of current trends in corporate social responsibility of business in Ukraine amid global challenges. *Sustainable Development of Economy*, 4(51), 396–402. [in Ukrainian]. [Богомаз, О. (2025). Аналіз сучасних тенденцій корпоративної соціальної відповідальності бізнесу в Україні в умовах глобальних викликів. *Сталий розвиток економіки,* 4(51), 396–402]. https://doi.org/10.32782/2308-1988/2024-51-55

Center for Innovation Development, Office for Entrepreneurship and Export Development, Diia.Business National Project, & AdvanterGroup. (2024). *Business situation in Ukraine. December 2024.* [in Ukrainian]. [Центр розвитку інновацій, Управління з питань підприємництва та розвитку експорту, Національний проект Дія Бізнес, AdvanterGroup. (2024). *Ситуація в бізнесі України. Грудень 2024 року*]. https://advanter.ua/#gallery-3

DTEK. (n. d.). *Standing with Ukraine.* https://dtek.com/about/standing/

Ensign, P. C. (2022). Business models and sustainable development goals. *Sustainability*, 14(5), 2558. https://doi.org/10.3390/su14052558

EPAM. (2023). *700 days of resilience: EPAM's support for Ukraine during the full-scale war.* https://careers.epam.ua/company/news/2023/700-days-of-full-scale-war

European Commission. (2019). *The European Green Deal (COM(2019) 640 final).* https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52019DC0640

European Commission. (2020). *Strategic foresight report.* https://commission.europa.eu/strategy-and-policy/strategic-foresight/2020-strategic-foresight-report_en

European Parliament (2024). *Regulation (EU) 2024/792 of the European Parliament and of the Council of 29 February 2024 establishing the Ukraine Facility.* https://eur-lex.europa.eu/eli/reg/2024/792/oj/eng

Forbes Ukraine. (2022, August 25). *Top management goes to production: MHP's decisions that helped save the business.* https://forbes.ua/company/topmenedzhment-ide-na-virobnitstvo-rishennya-mkhp-shcho-dopomogli-zberegti-biznes-24082022-7868

Gao, D., Zhou, X., & Wan, J. (2024). Unlocking sustainability potential: The impact of green finance reform on corporate ESG performance. *Corporate Social Responsibility and Environmental Management*, 31(3), 776–789. https://doi.org/10.1002/csr.2801

Gazzola, P., Pavione, E., Pezzetti, R., & Grechi, D. (2020). Trends in the fashion industry. The perception of sustainability and circular economy: A gender/generation quantitative approach. *Sustainability*, 12(7), 2809. https://doi.org/10.3390/su12072809

Malik, M., Szewczuk-Stępień, M., & Bębenek, P. (2025). Rethinking sustainable development (policy) towards integrated resilience (action plan): Regional level. *Economics and Environment*, 91(4), 959. https://doi.org/10.34659/eis.2024.91.4.959

Markevych, K., Maistro, S., Koval, V., & Paliukh, V. (2022). Mining sustainability and circular economy in the context of economic security in Ukraine. *Mining of Mineral Deposits*, 16(1), 101–113. https://doi.org/10.33271/mining16.01.101

Martin, R., & Sunley, P. (2020). Regional economic resilience: Evolution and evaluation. In G. Bristow, & A. Healy (Eds.), *Handbook on regional economic resilience* (pp. 10–35). Edward Elgar. https://www.elgaronline.com/edcollchap/edcoll/9781785360855/9781785360855.00007.xml

Metinvest. (2023). Annual report 2023. *"Unbreakable"*. https://metinvestholding.com/ua/ar2023/pdf/ua/22%20Support%20for%20Ukraine%20and%20Communities_UA.pdf

OECD. (2021). Strengthening economic resilience following the COVID-19 crisis. https://doi.org/10.1787/2a7081d8-en

One Philosophy. (2024). *#Resilient. In it for the long haul* (62 pp.). https://resilience.one-philosophy.com/2024-year

Rosário, A. T., Lopes, P., & Rosário, F. S. (2024). Sustainability and the circular economy business development. *Sustainability*, 16(14), 6092. https://doi.org/10.3390/su16146092

Rose, A. (2007). Economic resilience to natural and man-made disasters: Multidisciplinary origins and contextual dimensions. *Environmental Hazards*, 7(4), 383–398. https://doi.org/10.1016/j.envhaz.2007.10.001

Rose, A., & Krausmann, E. (2013). An economic framework for the development of a resilience index for business recovery. *International Journal of Disaster Risk Reduction*, 5, 73–83. https://www.sciencedirect.com/science/article/pii/S221242091300040X

Rose, A., & Lim, D. (2002). Business interruption losses from natural hazards: Conceptual and methodological issues in the case of the Northridge earthquake. *Global Environmental Change Part B: Environmental Hazards*, 4, 1–14.

SoftServe. (2024). *Sustainability report.* https://www.softserveinc.com/files/csr/softserve-corporate-social-responsibility-report-2024.pdf

Sutton, J., Arcidiacono, A., Torrisi, G., & Arku, R. N. (2023). Regional economic resilience: A scoping review. *Progress in Human Geography*, 47(4), 500–532. https://doi.org/10.1177/03091325231174183

Tóth, G., Elekes, Z., Whittle, A., Lee, C., & Kogler, D. F. (2022). Technology network structure conditions the economic resilience of regions. *Economic Geography*, 98(4), 355–378. https://doi.org/10.1080/00130095.2022.2035715

Ukrainian Institute for Economic Research and Policy (IER). (2025). *Ukraine's economy on the eve of URC2025 and the new budget cycle.* http://www.ier.com.ua/files/Projects/2025/UA/IER_June 26_2025_UK.pdf

Sereda, V., Nahachevska, T., & Hryhorova, A. (2024). Transformation of approaches to forming and implementing the EU and Ukraine's sustainable development strategies during war and post-war recovery. *Bulletin of Taras Shevchenko National University of Kyiv. Economics*, 2(225), 69–80 [in Ukrainian]. [Середа, В., Нагачевська, Т. & Григорова, А. (2024). Трансформація підходів до формування та реалізації стратегії сталого розвитку ЄС та України в умовах війни та повоєнної відбудови. *Вісник Київського національного університету імені Тараса Шевченка. Економіка,* 2(225), 69–80]. https://doi.org/10.17721/1728-2667.2024/225-2/7

World Bank Group. (2021). *Resilience rating system: A methodology for building and tracking resilience to climate change.* http://hdl.handle.net/10986/35039

World Trade Organization. (2021). *World trade report 2021: Economic resilience and trade.* https://www.wto.org/english/res_e/publications_e/wtr21_e.htm

Yermolenko, H. (2024, March 4). *"ArcelorMittal Kryvyi Rih" allocated over UAH 650 million to support Ukraine during the war.* GMK Center. https://gmk.center/ua/posts/arselormittal-krivij-rig-za-chas-vijni-vidiliv-ponad-650-mln-grn-na-pidtrimku-ukraini/

Zalilo, Y. (Ed.). (2025). *Economic security of Ukraine under high war risks and global instability (Expert-analytical report*). National Institute for Strategic Studies. https://doi.org/10.53679/NISS-analytrep.2025.03

Отримано редакцією журналу / Received: 19.09.25
Прорецензовано / Revised: 14.10.25
Схвалено до друку / Accepted: 01.11.25

Яна ОЛІЙНИК[1], д-р екон. наук, доц.
ORCID ID: 0000-0001-5895-282X
e-mail: oleynik_yv@ukr.net

Мар'я КУЧЕРЯВА[1], канд. екон. наук, ст. досл.
ORCID ID: 0000-0003-2948-1234
e-mail: piven_maria@ukr.net

Алла ЗІНЧЕНКО[2], канд. іст. наук, доц.
ORCID ID: 0000-0002-1193-6109
e-mail: a.zinchenko@ukma.edu.ua

Вікторія ТИЩЕНКО[3], д-р екон. наук, проф.
ORCID ID: 0000-0002-2530-185X
e-mail: vf_hneu@ukr.net

Світлана ВОРОБЕЙ[3], асп.
ORCID ID: 0009-0008-3711-9407
e-mail: vorobei.svit@gmail.com

[1]Державна навчально-наукова установа "Академія фінансового управління", Київ, Україна
[2]Національний університет "Києво-Могилянська академія", Київ, Україна
[3]Харківський національний економічний університет імені Семена Кузнеця, Харків, Україна

ІНТЕГРАЦІЯ ПРИНЦИПІВ ЦИРКУЛЯРНОЇ ЕКОНОМІКИ Й РЕЗИЛІЄНТНОСТІ У ДЕРЖАВНУ АНТИКРИЗОВУ ПОЛІТИКУ ТА КОРПОРАТИВНІ СТРАТЕГІЇ

В с т у п . ***Сучасні глобальні виклики – від кліматичних змін до воєнних конфліктів – полягають в актуалізації пошуку нових економічних моделей, здатних поєднувати завдання сталого розвитку та підвищення резилієнтності суспільств і економік. Метою дослідження є систематизація теоретичних підходів до формування нових економічних моделей сталого розвитку та резилієнтності, визначення їхнього потенціалу для зміцнення економічної безпеки держави й підприємств, а також обґрунтування можливостей інтеграції принципів циркулярної економіки та резилієнтності у державну антикризову політику й корпоративні стратегії на прикладі України. У центрі наукової гіпотези роботи – припущення, що поширення практик сталого резилієнтного розвитку серед українських підприємств безпосередньо впливає на економічну безпеку держави, формуючи її здатність протистояти воєнним і глобальним ризикам.***

М е т о д и . ***Методи налізу та синтезу, узагальнення; метод структурно-функціонального аналізу; графічний і табличний методи.***

Р е з у л ь т а т и . ***У процесі дослідження проведено типологізацію нових економічних моделей (зеленої, циркулярної, ощадливої, солідарної, креативної тощо), проаналізовано їхній потенціал у забезпеченні стійкості й економічного відновлення після криз. Особливу увагу приділено еволюції принципів циркулярної економіки (від 3R до 10R), що розглядаються як інституційна основа для посилення антикризового регулювання та довгострокової економічної безпеки. Емпіричний блок дослідження побудовано на аналізі практик сталого розвитку 22 найбільших українських підприємств із шести галузей, які демонструють високу адаптивність у період війни. Серед поширених практик – підтримка співробітників, громад, допомога Збройним силам України, а також екологічна модернізація виробництва. На цій основі виокремлено ключові компоненти сталого розвитку, що безпосередньо впливають на економічну безпеку держави, та запропоновано індикатори оцінювання внеску бізнесу у забезпечення стійкості.***

В и с н о в к и . ***Результати підтвердили наукову гіпотезу: практики сталого розвитку в умовах війни зміцнюють економічну безпеку держави та формують основу для інклюзивного післякризового відновлення. Робота поєднує систематизацію теоретичних моделей із прикладним аналізом корпоративних стратегій, що забезпечує її наукову новизну та практичну значущість. Перспективи подальших досліджень пов'язано з розробленням інтегральних методик оцінювання стійкості економіки, цифровою підтримкою циркулярних практик і гармонізацією українських стандартів сталого розвитку з європейськими.***

К л ю ч о в і с л о в а : ***циркулярна економіка, економічна безпека, резилієнтність, нормативно-правове забезпечення, повоєнне відновлення, соціальна відповідальність, фіскальне регулювання, макроекономічна стабільність.***

Автори заявляють про відсутність конфлікту інтересів. Спонсори не брали участі в розробленні дослідження; у зборі, аналізі чи інтерпретації даних; у написанні рукопису; в рішенні про публікацію результатів.

The authors declare no conflicts of interest. The funders had no role in the design of the study; in the collection, analyses or interpretation of data; in the writing of the manuscript; in the decision to publish the results.