Methodical Approach to Assessing Economic Security under the Conditions of Ukraine's Economic Restructuring

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Abstract: The article develops a comprehensive methodological approach to assessing the level of Ukraine's economic security in the context of national economic restructuring during wartime and in the post-war period. The study integrates institutional, cluster, and comparative analysis methods to identify the key determinants influencing the stability and transformation of the state's economic system. The proposed methodological framework comprises seven components of economic security – economic development, public administration, industry, science and innovation, education, investment, and infrastructure – the integral values of which are calculated for Ukraine and compared with countries representing three global clusters (Malaysia, Poland, and the Netherlands). The results show that Ukraine's Economic Security Index (0.3962) exceeds the threshold value for low-security countries but remains below the average and high cluster levels. The analysis reveals that the main areas for strengthening economic security include stimulating investment activity, developing infrastructure, modernizing industry, and improving the efficiency of public administration. Three post-war development scenarios are proposed: a realistic scenario (Poland model), an optimistic scenario (Malaysia model), and a long-term scenario (Netherlands model). The scientific novelty of the study lies in enhancing methodological tools for assessing state economic security through a multi-level cluster approach and international comparative analysis. The practical significance is determined by the possibility of applying the proposed methodology to the development of state policy aimed at ensuring economic resilience and effective management of post-war recovery processes.

1 INTRODUCTION

Ensuring economic security is one of the key priorities for strengthening Ukraine's national resilience and defense capability [1]. Russia's full-scale military aggression has caused unprecedented destruction of industrial capacity, infrastructure, logistics chains, and human capital, leading to significant economic losses and a significant transformation of the structure of public spending. According to the Stockholm International Peace Research Institute (SIPRI) [2], in 2022, Ukraine's military spending amounted to 44 billion dollars, or 33.6% of GDP, compared to 5.9 billion dollars in 2021, reflecting a significant reorientation of budgetary resources to the security and defense sector. At the same time, macroeconomic imbalances have intensified.

According to TheGlobalEconomy.com [3], the ratio of public debt to GDP increased from 43.8% in 2000 to 84.4% in 2023, while the share of public spending in GDP almost doubled – from 17.9% to 41.7%. The real sector of the economy suffered significant losses: industrial enterprises, energy facilities, transport infrastructure, agricultural assets were damaged or destroyed [3].

According to estimates by the National Institute for Strategic Studies [4], direct losses in industry amount to 11.4 billion dollars, and in the agricultural sector – 8.7 billion dollars. According to expert calculations by the Kyiv School of Economics [5], the total amount of direct losses in all sectors of the economy reached 169.8 billion dollars, in particular

38.5 billion dollars in the infrastructure sector and 14.6 billion dollars in the energy sector.

According to the updated Rapid Damage and Needs Assessment (RDNA4, 2024) [6], prepared by the Government of Ukraine, the World Bank, the European Commission and the United Nations, the total cost of reconstruction and recovery will be 524 billion dollars in 2024-2034. This figure is almost three times higher than the projected nominal GDP of Ukraine for 2024 [7], which emphasizes the scale of the challenges and the need to develop effective mechanisms for ensuring economic security in the process of national reconstruction and structural reforms. Despite the existence of official methods for assessing economic security (2007, 2013) [8; 9], modern conditions, marked by hybrid warfare, structural shifts in the economy and the need for post-war recovery, require a deep modernization of methodological tools. Existing approaches do not fully take into account the factors of innovative development, investment activity, management efficiency and international integration, which today determine the new architecture of the state's economic security.

Therefore, the scientific problem is to develop an improved methodological approach to assessing economic security in the conditions of war and post-war periods. This will allow for a comprehensive identification of vulnerabilities and threats [10], determine strategic priorities and ensure sustainable economic growth. Solving this problem is of key importance, not only for strengthening the country's defense capabilities, but also for achieving long-term economic resilience and integration of Ukraine into the European and global security space.

2 LITERATURE REVIEW

The issue of ensuring national and economic security occupies a significant place in modern scientific literature. The circle of leading researchers includes foreign scientists (A. Ávila-Zúñiga-nordfjeld et al. [11], Yu-W. Luo et al. [12], M. Mennen and M. Van Tuyll [13], M. Seeba et al. [14], B. Sun [15]) and Ukrainian scientists (A. Kachynskyi [16], Ye. Kobko [17], G. Kozachenko et al. [18], O. Korchenko et al. [19], K. Oriekhova and I. Kucheriavenko [20], R. Prymush [21], O. Reznikova [22], H. Kharlamova [23], M. Shevchenko et al. [24], I. Yarova [25]). Their works laid the theoretical and methodological foundation for further research into the mechanisms of ensuring the national and economic stability of the state.

In Ukraine, the formation of a system for assessing economic security has gone through several stages. In 2003, specialists from the National Institute for International Security Problems of the National Academy of Sciences of Ukraine proposed the first methodology, which included six groups of indicators [26]. On its basis, in 2007, the Methodology for calculating the level of economic security of Ukraine [8] was approved, which contained 117 indicators and was based on a sequence of stages: selection of indicators → definition of thresholds → normalization → weighting → calculation of the integral index. In 2013, it was replaced by Methodological Recommendations [9], which provide for nine sub-indices (production, investment and innovation, financial, social, energy, etc.) and over 130 indicators. Both approaches received critical comments regarding the complexity of calculations, duplication of indicators and limited access to data.

Further research is aimed at improving official methods. In particular, Y. Kharazishvili and E. Dron [27] proposed a multiplicative form of the integral index, a single system of normalization of indicators and a formalized definition of weight coefficients, which ensures a more correct comparison of results. V. Baranova [28] developed a target approach, where security is assessed through the achievement of forecast benchmarks, and G. Kozachenko et al. [18] – through the expansion of the system of institutional and political indicators. The work of T. Zubko [29] focuses on international comparisons using foreign economic indicators (export/import dependence, comparative solvency, trade concentration, etc.).

A separate area of research is related to the assessment of economic security in the context of restructuring [30] and post-war economic recovery. The works (I. Berend [31], J. Guo [32], R. Hudson [33], W. Liu [34], X. Mao [35], G. Oliveira [36], V. Thomas [37], Y. Wei [38] et al.) are devoted to modeling structural changes and adaptation of national economies to shocks. Their experience confirms the need to integrate the scenario approach and comparative analysis in the formation of economic security policy.

The literature review shows that, despite a significant number of studies, the methodological basis for assessing Ukraine’s economic security remains fragmentary. Existing approaches are characterized by excessive complexity, uneven coverage of security dimensions, and limited

adaptability to wartime challenges. These gaps highlight the need for a more flexible and analytically consistent framework that would integrate both structural and institutional determinants of resilience. Such a framework should not only measure the current level of economic security but also enable the modelling of future trajectories under conditions of post-war reconstruction.

To address these limitations, the study incorporates recent international research on economic resilience, including OECD (2022-2024) analytical frameworks, EU crisis-response and resilience instruments, and UNDP post-crisis recovery assessments. These sources strengthen the conceptual foundation of the proposed methodology by introducing globally recognised resilience indicators and comparative evaluation tools. Their integration reduces dependence on national assessment models, broadens the analytical perspective, and improves the international comparability of the results.

Accordingly, the purpose of this study is to develop and substantiate an improved methodological approach to assessing Ukraine's economic security based on the integration of indicator, cluster, and comparative analyses. This approach aims to provide a scientifically grounded basis for strategic planning, structural transformation, and strengthening the country's resilience in the post-war period. The following section presents the methodological framework of the study.

3 METHODOLOGY

The methodological basis of the study is a system-analytical approach that combines indicator, cluster and comparative methods for quantitative assessment of the level of economic security of Ukraine in the context of economic restructuring.

To ensure methodological transparency, the selection of indicators and components was based on three criteria. First, the variables had to be statistically available for Ukraine and the benchmark countries over a sufficiently long time horizon to ensure comparability. Second, each indicator needed to be conceptually linked to recognised sources of economic vulnerability and resilience in accordance with international frameworks such as the OECD Resilience Toolkit, EU Civil Protection Mechanism, and the World Bank's post-crisis recovery guidelines. Third, the indicators had to capture structural features relevant for wartime and post-war reconstruction, including governance efficiency, industrial competitiveness, innovation capacity, investment activity and infrastructure resilience. This approach makes it possible to operationalise economic security across seven domains and to obtain an integral assessment that reflects both institutional capacity and structural development imbalances.

Within the framework of the study, a phased methodology was developed, which includes the following stages:

1) Conceptualization of the study – the goal, objectives and components of economic security were determined, including: economic development, public administration, industry, science and innovation, education, investments, infrastructure.
2) Identification of clusters of countries of the world – based on previous scientific calculations, three clusters of states were identified by the level of economic security (high, medium, low). The average values of the components were taken as threshold benchmarks.
3) Calculation of the Integrated Index of Economic Security (IIES) – the indicators were normalized and the weighted sum of seven components was calculated: economic development, public administration, industry, science and innovation, education, investments and infrastructure.
4) Comparative analysis – Ukraine compared with three benchmark countries: Malaysia, Poland and the Netherlands, representing different levels of economic security.
5) Formation of development scenarios – three scenarios for increasing economic security have been developed: realistic (orientation to Poland), optimistic (to Malaysia) and long-term (to the Netherlands).

The clustering of countries was carried out using a k-means algorithm based on the normalised values of the seven components of economic security. Three clusters were selected because this configuration provided the highest conceptual interpretability and corresponded to the distribution of countries by institutional maturity: high, medium and low levels of economic security. The Euclidean distance was used as a similarity measure, while the stability of the resulting clusters was verified through repeated initialisations of the algorithm. Although the aim of clustering was not predictive accuracy, but analytical grouping, internal

consistency tests showed stable separation between country groups. The average values of each component within the clusters were subsequently used as threshold benchmarks for international comparison.

Table 1 shows the methodological scheme of the study. The proposed methodological approach provides a comprehensive assessment of economic security, taking into account the interrelationship of socio-economic, institutional and investment and infrastructure factors and can be used for strategic planning of the post-war reconstruction of the economy of Ukraine.

Despite its analytical completeness, the proposed methodological approach has several limitations. First, the weighting coefficients of the components are fixed and may not fully reflect changes in the structure of the national economy during wartime. Second, the availability and reliability of statistical data for individual indicators remains constrained because many official datasets were not updated during martial law. Third, the comparison of Ukraine with structurally different economies requires careful interpretation, as differences in institutional settings and the stages of economic development influence the relative scale of each component. These limitations do not undermine the validity of the approach but highlight the need to treat the results as structural benchmarks rather than precise forecasts.

4 RESULTS

To substantiate the methodological approach to assessing the economic security of Ukraine, the methodology for assessing the country's economic model, published in the monograph [39], was taken as a basis. The components of this model include public administration, industry, science and innovation, education, investment and infrastructure development. This is explained by the fact that these components directly affect the country's economic security and characterize its level.

Table 1: Methodological framework of the study.

Stage	Description	Tool / Method	Output
1. Problem statement and conceptualization	Defining the goal, objectives, and structure of economic security (economic development, governance, industry, science and innovation, education, investment, infrastructure)	Systemic and institutional approach; literature review	Components and indicators of economic security identified
2. Development of the methodological approach	Selection of criteria and indicators for the integrated assessment of economic security	Indicator method; normalization and weighting of parameters	Analytical basis created for calculating the Integrated Index of Economic Security (IIES)
3. Clustering of world countries	Grouping countries by the level of economic security (high, medium, and low levels)	Cluster analysis (based on data [41])	Threshold (benchmark) values for comparative analysis determined
4. Calculation of the Integrated Index of Economic Security (IIES)	Quantitative assessment of the level of Ukraine’s economic security	Weighted sum method, indicator normalization	Integrated value of Ukraine’s IIES obtained
5. Comparative analysis	Comparison of Ukraine with countries from different clusters (Malaysia, Poland, the Netherlands)	Comparative analysis, benchmarking	Strengths and weaknesses of Ukraine’s economic security identified
6. Scenario development	Designing options for enhancing the level of economic security in the post-war period	Scenario analysis, extrapolation method	Three scenarios formulated: realistic, optimistic, and long-term
7. Verification and interpretation of results	Validation of the obtained results, synthesis of conclusions and recommendations	Expert evaluation, synthesis, and logical interpretation	Generalized conclusions and practical recommendations formulated

At the first stage of the study, we will calculate the components of economic security of the countries of the world, which are grouped into 3 clusters [39] (Table 2). It should be noted that countries included in cluster 1 may be characterized by a high level of economic security or above average. Countries included in cluster 2 may have an average or below average level of economic security. And countries included in cluster 3 are mostly characterized by a low level of economic security or below average. Therefore, the average value of economic security of the countries of the world included in the 3 clusters can vary from 0 to 1, i.e. $0.5 \leq IES \leq 1$.

The calculations show that the average value of economic security of cluster 1 is 0.639. That is, cluster 1 has a sufficiently high level of economic security (or above average), since the average value of this indicator is above 0.6. For the most part, the high level of economic security of the countries of the world included in cluster 1 is due to the effective development of public administration (0.1651), proper infrastructure support for the economy (0.1456), and the intensification of activities in the educational sector (0.1009).

The average value of economic security of cluster 2 is 0.458. Therefore, cluster 2 is characterized by a level of economic security below average, since the value of the indicator is below 0.5. The development of the sphere of educational services (0.1258) and public administration (0.1178) has a significant impact on the level of economic security. Cluster 3 has a low level of economic security, since the average value is 0.346. At the same time, the highest values are such components of economic security as investments (0.1635) and education (0.1021).

The values of the components of economic security of the 3 clusters will be considered thresholds for further comparative analysis with the values of Ukraine, which is included in the third cluster.

At the second stage, we will calculate the value of Ukraine's economic security by components (Fig. 1). The value of economic security is 0.3962, which exceeds the value of cluster 3. But it is lower than the values of economic security in clusters 2 and 3.

As can be seen from Fig. 1, Ukraine has higher values compared to cluster 3 for such components as economic development (by 162.5%), public administration (by 130.4%), industry (by 325%), science and innovation (by 215.6%), education (by 241.6%).

However, the components of “Investment” and “Infrastructure” in cluster 3 are higher than in Ukraine. Thus, the value of the component of “Investment” in cluster 3 is higher by 339.9% compared to Ukraine, and “Infrastructure” is higher by 101.9% (Table 3). That is, the level of economic security of Ukraine is weakened due to the insufficient level of investment and inefficient infrastructure support for the development of the national economy.

In the third stage of the study, we will calculate the economic security values of Malaysia (part of cluster 2) (Fig. 2), Poland (part of cluster 2) (Fig. 3), and the Netherlands (part of cluster 1) (Fig. 4).

And then we will compare Ukraine with the values of these countries (Table 4). This is necessary to determine the vector and possible scenarios for further development of Ukraine in the post-war period to achieve the level of economic security of Malaysia (Table 5), Poland (Table 6) and the Netherlands (Table 7).

Table 2: Values of economic security components in world countries grouped by clusters [39].

Cluster	Values by Components						
	EcD	Gov	Ind	SI	Edu	Inv	Inf
Cluster 1	0.0796	0.1651	0.0474	0.0309	0.1009	0.0698	0.1456
Cluster 2	0.0079	0.1178	0.0138	0.0102	0.1258	0.0923	0.0896
Cluster 3	0.0008	0.0480	0.0012	0.0032	0.1021	0.1635	0.0272

Notes: Economic Development (EcD); Governance (Gov); Industry (Ind); Science and Innovation (SI); Education (Edu); Investment (Inv); Infrastructure (Inf).

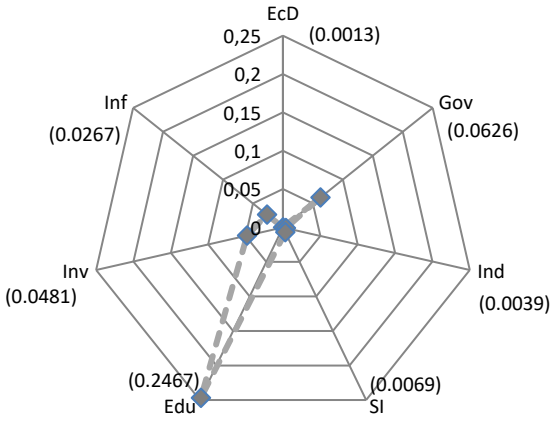

Figure 1: The value of Ukraine's economic security by components.

Table 3: Comparison of the components of Ukraine's economic security and cluster 3.

Component	Ukraine	Cluster 3	Change	
			+/–	%
Economic Development	0.0013	0.0008	+0.0005	162.5
Governance	0.0626	0.0480	+0.0146	130.4
Industry	0.0039	0.0012	+0.0027	325.0
Science and Innovation	0.0069	0.0032	+0.0037	215.6
Education	0.2467	0.1021	+0.1446	241.6
Investment	0.0481	0.1635	–	–
Infrastructure	0.0267	0.0272	–	–

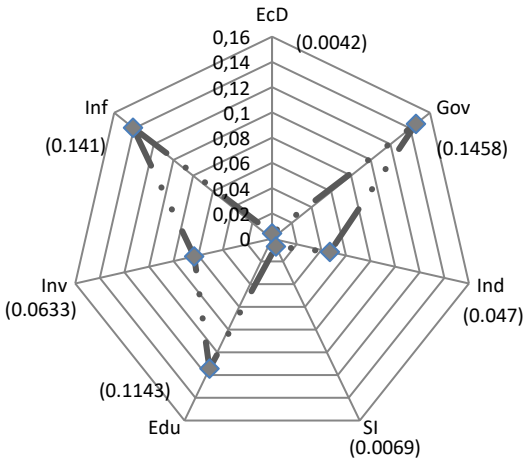

Figure 2: The value of Malaysia's economic security by components.

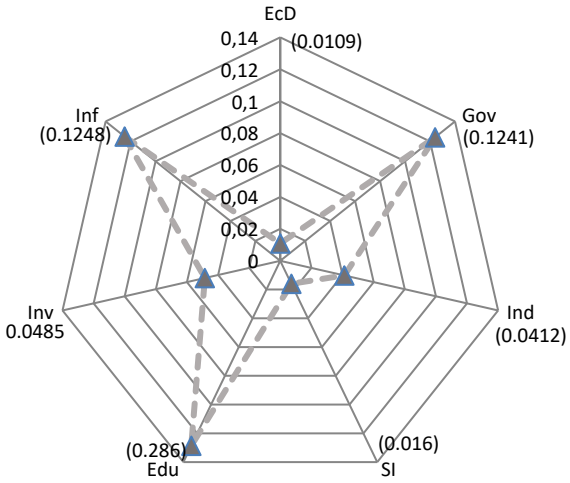

Figure 3: The value of Poland's economic security by components.

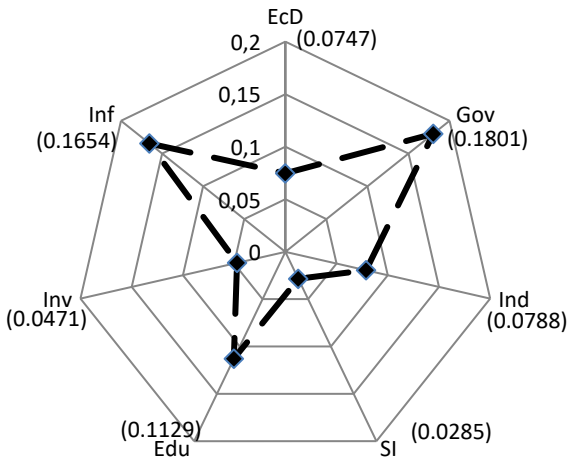

Figure 4: The value of economic security in the Netherlands by components.

Table 4: Values of economic security components in selected countries and clusters [39].

Components	Ukraine	Cluster 3 (*Threshold Value*)	Malaysia	Poland	Cluster 2 (*Threshold Value*)	Netherlands	Cluster 1 (*Threshold Value*)
EcD	0.0013	0.0008	0.0042	0.0109	0.0079	0.0747	0.0795
Gov	0.0626	0.0480	0.1458	0.1241	0.1178	0.1801	0.1651
Ind	0.0039	0.0012	0.0470	0.0412	0.0138	0.0788	0.0474
SI	0.0069	0.0032	0.0069	0.0160	0.0102	0.0285	0.0309
Edu	0.2467	0.1021	0.1143	0.1286	0.1258	0.1129	0.1009
Inv	0.0481	0.1635	0.0633	0.0485	0.0923	0.0471	0.0698
Inf	0.0267	0.0272	0.1410	0.1248	0.0896	0.1654	0.1456

Table 5: Comparison of the components of economic security between Ukraine and Malaysia.

Component	Ukraine	Malaysia	Change	
			+/–	times
Economic Development	0.0013	0.0042	0.0029	3.23
Governance	0.0626	0.1458	0.0832	2.33
Industry	0.0039	0.0470	0.0431	12.05
Science and Innovation	0.0069	0.0069	–	–
Education	0.2467	0.1143	–	–
Investment	0.0481	0.0633	0.0152	1.32
Infrastructure	0.0267	0.1410	0.1143	5.28

Table 6: Comparison of the components of economic security between Ukraine and Poland.

Component	Ukraine	Poland	Change	
			+/–	times
Economic Development	0.0013	0.0109	0.0096	8.38
Governance	0.0626	0.1241	0.0615	1.98
Industry	0.0039	0.0412	0.0373	10.56
Science and Innovation	0.0069	0.0160	0.0091	2.32
Education	0.2467	0.1286	–	–
Investment	0.0481	0.0485	0.0004	1.01
Infrastructure	0.0267	0.1248	0.0981	4.67

Table 7: Comparison of the components of economic security between Ukraine and the Netherlands.

Component	Ukraine	Netherlands	Change	
			+/–	times
Economic Development	0.0013	0.0747	0.0734	57.46
Governance	0.0626	0.1801	0.1175	2.88
Industry	0.0039	0.0788	0.0749	20.21
Science and Innovation	0.0069	0.0285	0.0216	4.13
Education	0.2467	0.1129	–	–
Investment	0.0481	0.0471	–	–
Infrastructure	0.0267	0.1654	0.1387	6.19

Large numerical gaps between Ukraine and benchmark countries in several components – particularly industry, infrastructure and economic development – should not be interpreted as immediate quantitative targets. These values represent institutional and structural distances that characterise the trajectory of convergence rather than required short-term growth rates. The comparison illustrates how far Ukraine is from the institutional and infrastructural models typical of Poland, Malaysia or the Netherlands. Thus, the calculations form directional development benchmarks that highlight priority reform areas, not precise forecasts of economic dynamics.

In the post-war period, Ukraine should pay attention to the implementation of the strategy for ensuring economic security, using the example of Malaysia (Table 5).

First, to ensure economic security in Ukraine, it is necessary to focus on changing the structure of industry (making it export-oriented), infrastructure development, growth in GDP per capita, and the efficiency of public administration. In order to achieve the level of economic security of Malaysia (0.5226), Ukraine needs to increase the following indicators of security components: industrial competitiveness by 12.1 times; infrastructure development by 528.1%; economic development by 323.1%; public administration by 232.9%; investments by 131.6%.

To achieve the level of economic security of Poland, Ukraine needs to increase the following indicators of security components: industrial competitiveness by 10.6 times; economic development by 838.5%; infrastructure development by 467.4%; innovation and scientific and technical spheres by 231.9%; efficiency of public administration – by 198.2% (Table 6).

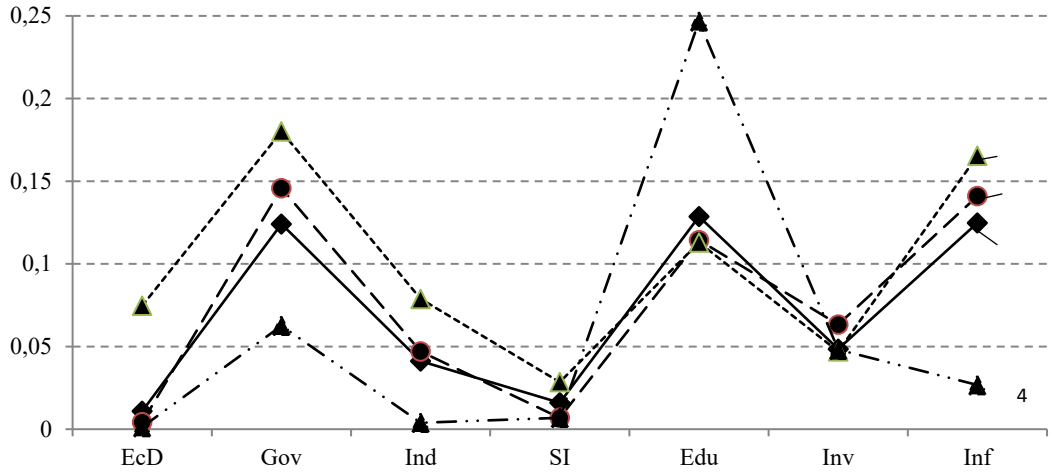

Figure 5: Possible Scenarios for Ensuring Ukraine's Economic Security in the Post-War Period. *Legend:* 1 – Scenario 1 (Poland); 2 – Scenario 2 (Malaysia); 3 – Scenario 3 (Netherlands); 4 – Current state (Ukraine).

In the long term, Ukraine should try to achieve the level of economic security of the Netherlands (Table 7). To do this, Ukraine needs, first of all, to pay attention to increasing the following indicators of economic security components: economic development – by 57.5 times; industrial structure – by 20.2 times; infrastructure provision of the economy – by 6.2 times; scientific and innovative activity – by 4.1 times; efficiency of public administration – by 2.9 times.

However, as the analysis shows, in Ukraine the value of the component "Education" is higher compared to Malaysia (by 215.8%), Poland (by 191.8%) and the Netherlands (by 218.5%). In addition, the Netherlands has a lower level of economic investment compared to Ukraine. Thus, the value of the component "Investment" in Ukraine is 102.1% higher than in the Netherlands.

So, after the end of the war in Ukraine, 3 scenarios for ensuring economic security are possible (Fig. 5):

- Scenario 1 (realistic) - achieving the level of economic security of Poland (0.4942);
- Scenario 2 (optimistic) - achieving the level of economic security of Malaysia (0.5226);
- Scenario 3 (moderately optimistic) – achieving the level of economic security of the Netherlands (0.6877).

The choice of Poland, Malaysia and the Netherlands as target models is justified by their distinct pathways of economic security formation. Poland represents a realistic benchmark for Ukraine due to geographical proximity, similar post-transition challenges and successful EU integration. Malaysia illustrates a dynamic model of industrial upgrading and diversification relevant for Ukraine's transformation of production capacity. The Netherlands embodies a highly institutionalised, innovation-driven system with advanced governance and infrastructure quality, serving as a long-term aspirational reference. Together, these trajectories provide a structured basis for modelling strategic scenarios of Ukraine's post-war economic security.

5 CONCLUSIONS

The conducted research made it possible to develop and test a methodological approach to assessing Ukraine's economic security in the context of economic restructuring, which integrates indicator, cluster, and comparative analyses. This approach provides a comprehensive understanding of the state of the economic system, taking into account the dynamics of internal and external threats, structural transformations, and institutional constraints.

The calculation of the integral index of economic security (0.3962) showed that Ukraine belongs to the group of countries with a lower than average level of economic security, although in terms of individual components (education, public administration, scientific and innovative sphere) it has the potential for faster recovery. The investment, infrastructure and production components remain the most vulnerable, which necessitates the need for structural reforms and increasing the efficiency of state policy.

Comparative analysis with benchmark countries (Malaysia, Poland, and Netherlands) allowed us to

identify three target benchmarks for the development of Ukraine's economic security:

1) Realistic scenario – approaching the level of Poland (index ≈ 0.49), which involves increased investment activity and improved quality of governance.
2) Optimistic scenario – reaching the level of Malaysia (index ≈ 0.52) through modernization of industry, digitalization and development of an innovative economy.
3) Long-term scenario – gradual convergence to the level of the Netherlands (index ≈ 0.69), which involves a deep transformation of the institutional environment, increased competitiveness and integration into the European economic space.

Based on the results of the study, a set of practical proposals for state administration, economic planning and development institutions has been formulated:

For the Government of Ukraine and the Ministry of Economy of Ukraine:

- develop a single national system for monitoring economic security, which will be based on an integral index, which should be updated annually;
- introduce a standard for assessing investment and infrastructure security in regional development programs;
- improve the system of state forecasting of macroeconomic risks based on cluster analysis of international data.

For the industry and innovation sector:

- stimulate the creation of innovation recovery clusters (industrial and scientific parks, technology transfer centers), which reduce the risks of production concentration and contribute to the diversification of the economy;
- expand enterprises' access to green financing instruments, EU grants and international financial institutions (EIB, EBRD, World Bank).

For the financial and banking sector, it is recommended to:

- implement a risk-based financial security assessment system that incorporates key macroprudential indicators such as debt burden, investment attractiveness, and banking stability;
- strengthen mechanisms for guaranteeing and insuring investments in critical infrastructure sectors.

For the academic and analytical environment:

- expand the use of cluster-comparative methods in forecasting studies;
- create an open database of economic security indicators for the regions of Ukraine, which will increase the validity of regional strategies.

The interpretation of the obtained results confirms that Ukraine possesses strong human capital potential – reflected in the high value of the education component – yet suffers from institutional constraints that limit investment inflows and infrastructure development. These two components create structural bottlenecks for economic security and require coordinated reforms. The comparative analysis demonstrates that improvements in governance efficiency, industrial competitiveness and innovation capacity play a central role in narrowing the gap between Ukraine and benchmark countries. Strengthening these areas will accelerate convergence with the realistic and optimistic scenarios outlined in the study.

It should be noted that despite the complexity of the proposed methodology, the study has a number of limitations. These include:

1) limited statistical data during the martial law period, which affects the accuracy of estimates of individual indicators;

2) the use of fixed weighting coefficients, which may not reflect the dynamics of changes in the structure of the economic system;

3) orientation to the aggregate level of the national economy without detailed regional differentiation;

4) limited time horizon of modeling (until 2035), which does not take into account potential shocks of a longer term (energy or climate crises).

These factors do not reduce the scientific value of the work, but indicate the directions of further developments to improve the proposed methodological approach to assessing economic security in the conditions of post-war reconstruction of the economy of Ukraine.

In this regard, it is advisable to focus future scientific research on:

- dynamic modelling of economic security, which will take into account time lags, institutional changes and integration effects;
- building regional monitoring subsystems that will allow assessing development imbalances within the country;
- integration of digital technologies (AI, Big Data, GIS) into the processes of assessing and forecasting the level of security;

- international comparative analysis of the effectiveness of economic resilience policies to adapt the best practices of the EU and OECD countries.

Therefore, the proposed methodological approach is a flexible tool for quantitative and qualitative analysis of economic security, capable of adapting to the conditions of war and post-war development of Ukraine. Its practical implementation can become the basis for creating an integrated strategic planning system that combines risk assessment, scenario forecasting and policy formation for national stability and resilience of the economy in the context of European integration and state reconstruction.

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